The Program for Economic Development in Myanmar

FINAL REPORT

September 2015

Japan International Cooperation Agency（JICA）
Japan International Cooperation Center（JICE）

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Contents

Setting the Conditions for Stable Economic Development

— Reflections on the Outcomes of an Economic Policy Support Project for Myanmar* —

by

Konosuke Odaka

1. Project Objective and Overview

From FY2011 to FY2015, I have led a small group of Japanese economists in conducting an economic policy support project for Myanmar, which is in the middle of economic development. As outsider academics, our objective has been to investigate and reflect on the more important issues facing the Myanmar economy in close association with Myanmar citizens and come up with suggestions for resolving these issues.

We have selected finance, agriculture and forestry, and manufacturing as the fields that are essential for achieving the project objective. For the financial field, we have conducted a joint study with Myanmar specialists

* Financed by the Japanese government through the Japan International Cooperation Agency (JICA).

(staff members of the Myanmar Development Resource Institute and the Central Bank of Myanmar) and put together some ideas for resolving major policy issues concerning private and public finance. For the agriculture and forestry field, we have conducted five field surveys[1], each of which has yielded notable outcomes. For the manufacturing field, we held 16 business-promotion workshops, mainly targeting the government officers who would be involved in executing the country's industrial policy. At these workshops, which were attended by a cumulative total of approximately 160 people, participants deepened their understanding of the situation in which the nation's manufacturing industry finds itself. We have made a special effort to conduct field surveys on small- and medium-sized machine and textile companies by visiting them and interviewing their owners and/or executive staff[2].

The remainder of the present paper will offer some insights that the present writer has gained during the course of the present project with regard to the social economic issues facing Myanmar.

2. Market Development

Economic development means market development[3]. A market forms and develops whenever and wherever economic transactions are made between free and independent modern citizens whose private ownership of assets (including the means of production) is guaranteed[4].

Mutual trust among members of society is an important condition for smooth and desirable market development, as it facilitates substantial reductions in transaction costs. However, this matter is hardly ever mentioned in modern economics textbooks as it is assumed to be a matter

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[1] (1) A demonstrative study on agricultural productivity improvement, (2) a statistical survey on the rural economy, (3) fact-finding surveys on the rubber industry (in Myanmar and Thailand), (4) socio-cultural surveys on villages, and (5) fact-finding surveys on community forests.

[2] Although an estimated total of 90 people attended the workshops, the cumulative number of participants was close to 160, as some people attended the workshops multiple times. Company visits were held in Myanmar, Japan, Thailand, and Indonesia. We would like to express our heartfelt gratitude to the Myanmar nationals who helped with these surveys. We are also indebted to JICA for providing financial support for these activities.

[3] Ishikawa, S. *Kaihatsu Keizai no Kihon Mondai* [Fundamental Issues on Development Economy]. Iwanami Shoten, Publishers, 1990, p. 3.

[4] Market development, however, does not assume a specific economic system, nor is it a synonym for a pure (meaning classical) capitalist system. In fact, a market economy may develop to some extent even in a feudal society or a planned economy. In a modern market economy, though, public corporations may have important roles to play in areas where the market fails to meet its expected level of performance.

of course. While some have argued that the market has no heart with which to sympathize[5], Adam Smith wrote *The Theory of Moral Sentiments* before *The Wealth of Nations*, Max Weber's historical theory on the development of capitalism presupposes the prevalence of Christian ethics, and epistemological neo-Kantianism was the inspiration behind Alfred Marshall's 'new classical economics'. Similarly, the spirit of mercy and forgiveness advocated by Buddha is not completely unrelated to market development. A society with the tradition (or spirit) of reciprocity will not only minimise psychological costs, but also promote market development by furthering the benefits of invisible reciprocity. Support activities in times of unexpected epidemics or disasters are, quite rightly, highly evaluated in this respect. The establishment and implementation of a policy of national welfare promotion originates in a unique economic welfarism, which is beyond simple utilitarianism.

It seems to the present writer that there are eight key points to keep in mind for successful market development in Myanmar: (i) formation of a vision for development that will be jointly owned by the public at large, (ii) expansion of social overhead capital, (iii) financial development, (iv) collection and diffusion of information, (v) increase of educational investment, (vi) agrarian and forestry growth, (vii) industrial development, and (viii) the role of government in economic development. These points are briefly touched upon in the following pages.

3. Formulation of a Vision for Development to Be Jointly Owned by the Public

The government and the private sector should work together to formulate an ambitious but practical vision for economic development. Ideally, they would share the goal and the means for its realisation, as well as the necessity for creating step-by-step plans based on the vision. Doing so will increase the transparency of the policy decision-making process and bring the government and the private sector closer psychologically. Moreover, the above-mentioned process would create a social environment in which the public (private company owners in particular) feels involved in establishing, deciding on and executing the policy. When the grand design for development and the means that make it feasible are jointly owned by the public at large, a social energy may ensue that makes social reforms possible. This is why I consider the formation of a development vision to be important.

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[5] Shigeto Tsuru. *Shijo ni wa Kokoro ga Nai: Seicho Nakushite Kaikaku wo Koso* [The Market has no Soul: Reform without Growth]. Iwanami Shoten, Publishers, 2006.

Just like each person has a unique personality, each country has unique features developed through its history and cultural heritage. While countries around the globe share the same theoretical foundation for economic growth, how the development process starts and proceeds depends critically on the country's condition at the start of the process. Given this, the development vision, the plan for its implementation, and the actual economic policies that follow vary from country to country, with the realization of the vision also being dependent on the timing of these factors and the international environment. The (so-called) ethnic minority problem is an especially important historical and political issue that needs to be addressed in Myanmar[6]. The development vision should include, in an easy-to-understand manner for the public, how the economic problems of the ethnic minorities can be resolved and their requests be met. Since the development vision must be agreed upon and shared by the entire citizenry, the Myanmar government and the citizens themselves (including the ethnic minorities) should become aware of the current economic state of the country and the needs arising from it.

4. Social Overhead Capital: An Indispensable Prerequisite for Development

Setting and maintaining social overhead capital (SOC) is an important condition (it can even be described as a prerequisite) for concretely and geopolitically securing market development. Such capital can be broken down more specifically into physical SOC (e.g., developing and improving the means of communication, transportation, and information transmission[7], supplying a large amount of energy and water, and building and operating a sewer system) and non-physical SOC (e.g., ensuring property rights, forming and systemizing a legal system, and establishing an institutional framework for various markets (i.e., product, funds, labour, and land)). Most of them need to be publicly implemented (i.e. by the government) in the relatively early stages of economic development.

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[6] In other words, the issue is how to form a nation state while carefully focusing attention on ethnic minority demands for autonomy.

[7] It is known empirically that the tertiary sector (service industry) accounts for a relatively large portion of the GDP and labour force in the initial (and also the mature) stages of economic development. This also applies to Myanmar, as the underdeveloped state of its means of communication and transportation incurs higher transaction costs (i.e., higher than is generally understood) in the economy's tertiary sector.

5. Financial Development

The analysis of modern economic growth (MEG) in the style used by Simon Kuznets involves examination and analysis of various aspects of an economy at the macro level in real terms[8]. In the analyses conducted by Kuznets, the monetary aspects of economic development, with the exception of price behaviour, played a relatively minor role. This analytical stance of Kuznets seems to be a natural consequence of his interest in looking back on and examining past growth performance in real terms.

In contrast, from the perspective of present-day policies, close attention needs to be paid to financial development and financial inclusion. Financial development in this context refers to the development of a securities market and a network of private financial institutions. This development would substantially improve the nation's social capacity to mobilise national savings, which could then be channelled into the provision of productive services—such as for the financing of new businesses at lower rates of interest—subject to the control and monetary policy of the central bank.

Financial inclusion, on the other hand, refers to the formation of a system for reserving a loanable fund for use by particular business sectors, such as farmers and other small- and medium-sized enterprises, whose fund-raising capabilities tend to be restricted although their quick development is judged to be desirable.

The logic behind financial economics is common to all nations, but the initial phases of market development are significantly influenced by a nation's history and cultural conditions. As a result, special professional care and advice that is suited to the needs of the economy in question is required. In particular, bankers in charge of financing new businesses must be adequately trained in financial economics and have a wealth of professional experience. Being placed in an appropriate work environment allows them to take the time required to screen loan applications efficiently and effectively. One possible place to achieve such conditions may be a semi-official institution that employs private bankers but is financed by public funds, thereby allowing the professionals to spend sufficient time and energy on loan screening.

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[8] *Modern economic growth: rate, structure, spread*, New Haven: Yale University Press, 1966. Kazushi Okawa was the most prominent macro growth analyst in Japan.

6. Collection and Diffusion of Information

In the early stages of market development, both the private sector and the government are often in need of extensive and precise information. The private sector would benefit from securing help from the government to compensate for its lack of a macro perspective, while members of the public sector need the help of the private business community to keep well-informed about the day-to-day problems that production sites have to face.

At the same time, it is important for the government to regularly conduct a statistical survey based on modern statistical theory and to then announce its results[9]. A survey with randomly selected samples would suffice, and the transparency and fairness of the government's policy would improve if the survey was continued on a semi-permanent basis, a long-term cohesive social economic database was created, and policy decisions were regularly made by referring to that database. In addition, participation in the international statistical information network will bring with it highly beneficial byproducts. If cost economizing is desirable, the implementation of simple statistical survey methods (e.g., a mail survey) is a possible option.

An internal or domestic commercial exhibition can be held as a means of disseminating information on new products or production technologies. Such exhibitions act as, among other things, (1) a showcase to let visitors know of innovative commodities and products created with new technologies, etc., collected from all over the world and/or numerous regions in the host country; (2) an incentive for the development of new products or the proposal of new technologies and the improvement of logistics; and (3) a convenient social device for promoting research and development activities. The official rating of exhibited items and the awarding of medals to presenters of excellent exhibits at the conclusion of exhibitions promotes the dissemination of information on new products or technologies and drives technological development and product innovation[10]. Such events also serve as excellent entertainment for the public, albeit only for a short time.

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[9] Needless to say, this requires a substantial government budget.

[10] In the late 19th century, Japan was exposed to and stimulated by the information associated with the new technologies and products at the London and Paris expos as well as domestic exhibitions; this experience motivated the country to move more strenuously toward economic modernization.

7. Formation of Human Capital

A country that is rich in natural resources, Myanmar is undoubtedly equipped with favourable conditions for economic progress. However, although a wealth of natural resources is a sufficient condition for economic development, it is not an essential one[11]. What is essential for development is highly motivated human resources. This simple fact is exemplified by a few past cases of delayed or unsuccessful industrialization that have occurred in spite of the presence of rich natural resources (e.g., Brazil and South Africa at some points in history) and by the relatively fast economic progress made by countries with limited natural resources (e.g., Korea and Japan).

Adequate improvements in health and hygiene is a basic requirement for securing promising human resources. Assuming that this requirement has already been met, the human resources essential for economic development include the following: company executives who are committed to entrepreneurship; broad-minded engineers who are willing to develop and/or introduce new technologies; and a blue and white collar workforce that possesses basic reading, writing, and arithmetic abilities. Instead of a formal education record, it often suffices for them to have experienced success in addition to basic academic achievement[12]. However, the establishment of a system of formal education and occupational training is considered desirable, since a certain amount of standardization in social customs is needed to meet the required level and content of basic training (including the importance of trust and basic social manners). Given this, substantial investment in education is required to successfully build up human resources who will be able to contribute to economic development.

It is important to note that it takes time to secure the quality and quantity of necessary human resources[13]. Furthermore, it should be remembered

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[11] Since around 2004, Myanmar's natural gas has played an extremely important role in providing it with a new national energy source as well as an export income. Too much reliance on income from rich natural resources, however, may delay the industrialization that serves as the driving force for sustainable economic growth. In order to avoid this situation (the so-called 'Dutch disease'), a proposal has been made to save part of the income from natural resources in a special Resource Fund. Irrespective of this, transparency concerning the amount and uses of revenue from natural gas is essential in the case of present-day Myanmar (as of July 2015).

[12] Some believe that the experience of personal success (and *not* formal education alone) is the most important condition for producing a motivated individual. The experience of success (however small it may be) makes the individual feel 'I can do it, if only I try', as psychological insecurity is dispelled and personal confidence is built up.

[13] For this reason, the invitation of foreign experts can be a practical option. When doing so, however, it is necessary to make clear in advance that the host organization retains the right to make final decisions in all matters concerning production.

that those who are motivated and skilled enough to create a new era in human development are often very critical of present-day institutional setups, as well as social customs. In such cases, it may be necessary for the younger and older generations to join together in establishing a new style of social living.

According to the 2014 census, the population of Myanmar increased between 1983 and 2014 at a moderate rate of slightly over 1.2% per annum (assuming that the census figures are reasonably accurate). If this growth rate continues, the national population will start declining at some point, which would not be a desirable turn of events for the country. On the contrary, the country will in all likelihood need to increase its potential supply of labour in order to meet its new requirement for relatively labour-intensive industrialization. It is therefore necessary to explore the causes of its low population growth rate and implement appropriate countermeasures. Aside from this, the nation will probably need to implement market-friendly measures to encourage the return of the approximately four million Myanmar nationals who are reportedly working overseas. This may happen anyway, of course, if domestic wage levels and working conditions start improving as a natural consequence of the country's early achievements in economic progress.

8. Agrarian and Forestry Growth

From the perspective of economic development, the relative importance of agriculture, forestry, and fisheries cannot be over-emphasized. It is necessary for Myanmar's agricultural sector to implement measures to (1) increase its self-sufficiency rate in terms of food supply by improving agricultural productivity; (2) further develop its ability to produce and export processed natural materials such as food, textiles, and rubber; and (3) improve the real standard of living of rural households. Affluent rural areas contribute to an increase in effective demand and an expansion in the domestic market. Also, it is expected that when labour productivity in this sector is improved, it will be possible to supply the resultant redundant workforce to non-agricultural sectors, which will be increasingly engaged in relatively labour-intensive manufacturing, thereby contributing further to raising per-capita real income.

Some of the European and American professionals that Japan invited during the initial stage of its economic modernization process (at the end of the 19th century) earned more than the Japanese prime minister at that time. However, a Japanese bureaucrat with less experience, less knowledge, and a considerably lower salary (and probably younger) than the foreign experts always had the authority to make the final policy decision; some British experts were apparently unhappy about this arrangement (cf. a study by Checklund).

The agricultural sector survey conducted under the present project has reconfirmed that Myanmar farmers are capable of saving despite their low real income and that they need to keep borrowing simply to continue working in agricultural production[14]. According to the survey results, most farming households seem to hold their savings in the form of gold ingots, which, if used for capital formation in manufacturing, would contribute substantially to the realisation of national economic development and the increase of the nation's economic wealth.

9. Industrial Development

Focusing policy discussions on choosing which industry should be targeted for manufacturing development would be a profitable exercise, although it is the market that makes the final choice. This exercise will make it clear what the country's industrial policy should target and will also identify where the country's comparative advantages lie.

By the same token, an examination of the substantive content of the nation's industrial policy and measures for its implementation can be profitably divided between (1) business areas involved in the production of indigenous products that offer product competitiveness through the use of traditional production technologies (or through a combination of both indigenous technologies and technologies borrowed from overseas) and (2) business areas that make use of production technologies that are completely new to the country and whose production methods need to be newly learned. In either of these two cases, but especially in the second case, the introduction of a policy for protecting infant industries is called for. In order to do this, international opinions supporting the idea should be pursued. In other words, it seems likely that, with the cooperation of ASEAN nations and East Asian countries (Korea and Japan in particular), Myanmar will need to obtain a special grace period (e.g., five to ten years) during which the nation will be permitted to protect certain products in accordance with internationally agreed rules and procedures.

Reserving financial capital and securing a workforce are not sufficient for successful development of the manufacturing industry. To meet the needs of a modern economy, it is necessary to assure the best output quality (ease of use, safety, durability, and convenience of repair and maintenance), by adopting modern methods of production control, labour management, and

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[14] It is indeed surprising to learn from the economic survey of farmers that was conducted under the present project that farmers have made a substantial amount of household savings despite their generally low standards of living. The fact that agrarian real income is low can be confirmed by the relative paucity of household furniture and equipment, which was also confirmed by this survey.

cost accounting. Dissemination of such new methods of management and the accompanying need to train personnel may be profitably led by the manufacturing associations. The government may also contribute to innovation in business administration by establishing nationwide workplace safety rules, etc., as well as by introducing institutional devices such as nationwide qualification systems for professional skills and relevant know-how.

10. The Role of the Government in Economic Development

Respect for the autonomy and independence of the market economy forms the foundation for the economic policy of any modern government. During the early stages of economic development, however, it is important that the government helps the market with the creation of its rules and institutions, as well as with the building of physical SOC[15]. In order for the government to perform all of these functions well, it must stay fully informed of the current condition and needs of the market. In theory, the government holds a unique position that cannot be matched by the private sector in that it commands a broad overview of the national economy's performance both domestically and overseas. This suggests that the government is best positioned to evaluate the need for macroeconomic and industrial policies on the basis of its macro perspective of the entire economy's performance both domestically and overseas, and thus is capable of formulating the relevant policies for economic development, of deciding the appropriate timing for their implementation, and acting bravely (meaning in a moderately risk-taking manner) with a medium- to long-term outlook for the future.

Government ministries are often highly knowledgeable about the areas that they oversee, but not necessarily about areas outside of their jurisdiction, and this can lead to what could be referred to as 'verticalism' (i.e., excessively narrow but powerful sectionalism that is vertically oriented). In this context, the term 'knowledgeable' applies only to the administrative side of the areas for which the ministries concerned are responsible; they may actually have little knowledge or even be indifferent to new orientations adopted in other ministries, private business conditions, or the economic needs of the private sector[16].

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[15] Public trust in government behaviour is an essential prerequisite for a public policy to be fully effective in a market-oriented economy. As of 2015, it seems to the present writer that the Myanmar government still has some way to go before it will be able to meet this prerequisite.

[16] This situation probably dates back to the top-down organizational operation developed in the socialist era and under the military administration that followed.

However, the bureaucracy of verticalism must be overcome. There are two possible ways to do this. Firstly, it is possible to attempt to add on to the verticalism a fresh, new way of thinking. This, while closely related to the original vertical outlook, still introduces an entirely new outlook, thereby forcing bureaucrats to widen their perspective by introducing a fresh, new orientation into their ministerial decision-making procedures, for instance. For this to be done, the verticalism must be restructured into a matrix-form by adding perspectives such as 'horizontalism', which will help the bureaucracy to combat the sectionalism axis and to design new, creative policy proposals with the help of the frequent adoption of entirely different approaches that co-exist in the office[17].

Secondly, it is possible to create a policy based on an understanding of the micro needs of production sites. For this purpose, the need for a policy and its desired effects may well be predicted by asking relevant private businesses to form an industrial association and provide relevant information regarding the actual needs of the industries concerned. When formulating the necessary policy design and deciding on its implementation, it is desirable to give the authority for making final budgetary decisions to a government division that is relatively well informed about the various policy matters from a broad perspective (e.g., Ministry of National Planning and Economic Development) and to put them in charge of closely evaluating the outcomes. Doing this will allow the government to ascertain the overall state of matters related to the government economic policies being executed[18].

It is often difficult to measure the effectiveness (or significance) of a government's economic policy[19]. In the opinion of the present writer, however, the most important role of the government with regard to economic development lies in its taking the lead in implementing its grand design and motivating the public to be actively engaged in developmental activities in accordance with the development vision; the true significance

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[17] I have discussed a matrix in organization management using examples of Toyota Motor Corporation and the Japanese government (the Ministry of International Trade and Industry) in the past (Konosuke Odaka, 'Conditions of corporate progress as seen through post-war Japanese business history', in Koichi Hamada, Keijiro Otsuka, Gustav Ranis, and Ken Togo, eds. *Miraculous growth and stagnation in post-war Japan*, London and N.Y.: Routledge, 2011, ch. 7).

[18] The Ministry of National Planning and Economic Development is likely to be in charge of the creation of a policy vision and taking the lead in its implementation.

[19] Some scholars have argued that the Japanese government has had limited capabilities in terms of developing industrial policy (e.g., Yoshiro Miwa & J. Mark Ramseyer. *Sangyo Seisaku Ron no Gokai; Kodo Seicho no Shinjitsu* [Misunderstanding about Industrial Policy Theory; Truth about the High-Growth Period]. Toyo Keizai, Inc., 2002).

of government policy making and its execution is likely to lie beyond simple analytical measurement, statistical or otherwise.

And yet the fact remains that economic development (market development) is a joint, collaborative act undertaken by the government and the private sector. It should be noted, however, that the role played by the government in market development gradually loses significance as the economy's development progresses. The contribution of the government to economic development is greatest perhaps in the initial stages, as it helps the market to lay the basic foundation for development, while actively engaging in the setting up and maintaining of the tangible and intangible requirements for economic development, both of which are beyond the reach of ordinary, private individuals and of private corporations[20].

[20] Autonomy and independence as a country — including acquisition of tariff autonomy — is the first step. This is, of course, rhetoric. For example, before March 1910, Japan was 'forced' to develop international competitiveness (and barely managed it) because it was not allowed to have tariff autonomy. This case represents an example where the absence of tariff autonomy led to economic development.

Final Report

Economy and Finance Working Group

Complete Version at 31 August 2015

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Representative Editor
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Table of Contents

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Executive Summary

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1. Introduction

The work undertaken by the Economy and Finance Working Group was carried out mainly in the form of a collaborative research program coordinated by Dr. Fumiharu Mieno (Professor, Kyoto University) and Dr. Takuji Kinkyo (Professor, Kobe University) on the Japan side and by Dr. Zaw Oo (economic advisor to the president and director of the Centre for Economic and Social Development, Myanmar Development Resource Institute (CESD-MDRI) on the Myanmar side. The 15 participants contributed 10 policy research papers and 2 memorandums. The group members held discussions at mini-workshops held five times between Septembers 2013 and March 2015. The economists at the forefront of financial regulation at the Central Bank of Myanmar also participated in the program and contributed a paper under the supervision of Dr. Sandar Oo, Director General. The JICA Myanmar office was also involved in the research and contributed a paper. This collaborative research covers various economic reform issues with regard to the fundamental structure of the financial and fiscal sectors. These issues can basically be broken down into three categories. The first category consists of issues associated with the country's macroeconomic structure in relation to its fiscal sector (part I). This includes fiscal management of foreign exchange revenue originating from natural gas exports, which have become a significant policy issue since the mid-2000s in Myanmar. It also includes the issue of reforming state owned enterprises (SOEs; more commonly known as state economic enterprises (SEEs)) in Myanmar, which have played a significant role in the economy in line with the gradual change in their function under the junta regime.

The second category consists of issues associated with the financial sector, which has played a key role in the efficient allocation of capital. In this report, we focus on two aspects of this: (1) financial system development in the context of economic structure (Part II) and (2) Industry of banking sector and policy-based finance with a particular focus on financial inclusion and microfinance (Part III).

The third category consists of specific policy issues in the marginal field among the fiscal sector, financial sectors and macroeconomy, that have been researched from multiple perspectives: (1) social security issues concerning which fundamental discussions have recently begun in Myanmar and (2) the issue of overseas migration and foreign remittances from the viewpoint of foreign worker problems as well as the macroeconomy.

During the initial stage of the program, the Japanese side raised two main concerns: (1) reform of the macroeconomic structure and (2) reform of the financial system. Based on this line of approach, details concerning the policy research topics have been developed through mutual discussions among all members of the working group from both sides.

2. Conclusion and Recommendation

While the importance of these policy issues is well understood in Myanmar, the most significant impediment to developing an appropriate reform strategy is a lack of basic information concerning each of the issues. Therefore, in the course of conducting the collaborative research, we primarily aimed to obtain detailed information on the actual situation. Based on the outcome of our observations and analysis, we put forward the following four propositions as policy challenges for the economic reform of Myanmar over the mid- to long-term.

Proposition 1: Myanmar's macroeconomy contains an element of vulnerability common to many countries that export resources. Although the industrialization process is gradually moving forward, the Myanmar economy will for the time being remain largely dependent on the export of natural gas through the government sector, as well as the export of precious metals and other mining products through the private sector. It is fortunate that from 2011 until just recently, the resource export sector in Myanmar benefited from the relatively high commodity prices on the world market. However, an economy that is heavily dependent on the export of natural resources usually runs the risk of changes in world market conditions having a severe impact on the domestic economy as a result of uncontrollable fluctuations in fiscal expenditure and money supply. This, in turn, seriously harms the country's development[1].

A fundamental challenge for Myanmar in this regard is to improve the ability of its treasury department to ascertain the exact inflow of revenue from natural gas exports, and to manage it with transparency. In fact, the process by which money flows from natural gas exports into fiscal revenue remains complicated and unclear even for most government officials[2]. It is important to accelerate work on strengthening transparency and management through schemes—such as the Extractive Industry Transparency Initiative (EITI) and Public Financial Management (PFM)—that are conducted in cooperation with the international community and major donner institutions. At the same time, the quality of statistics on the export of precious metals and other mining products is not sufficiently high, so improving trade statistics to cover cross-border trade is crucially important.

Given that transparency and management capacity are of fundamental importance, one policy option is to establish a resource fund or a stabilization fund. A notable example of this is Chile's stabilization fund. Based on revenue from the export of copper, this fund has provided a successful means of controlling the influence that the foreign exchange inflow has on domestic macroeconomic conditions, thereby contributing to the nation's stable economic growth. Similar practices employed in Myanmar's Asian neighbors, such as Indonesia or Malaysia, might also be useful references[3]. Furthermore, such a policy framework can prove especially beneficial in developing economies as such funds can be utilized for not only macroeconomic stabilization, but also infrastructure investment or education. Nowadays, numerous sovereign wealth funds throughout the world invest in foreign assets, but those in Singapore or Malaysia are actively utilized for domestic industrial development, as well.

Needless to say, however, such resource funds need to be designed carefully. There

1 Chapter 1 (Demachi and Kinkyo)
2 Appendix 1 (Min Zar Ni Lin)
3 Chapter 1 (Demachi and Kinkyo)

are plenty of examples of where resource funds have failed as a result of corruption or unclear management rules. Generally speaking, developing countries tend to seek to achieve multiple goals through the use of resource funds, but this is a common cause of their failure.

Proposition 2: For SOE reform, visualizing a ground strategy for the overall direction and timeframe is essential. Just before the launch of Myanmar’s SOE reform, management of a substantial number of state factories under the control of the Ministry of Industry was entrusted to private businesses, and in some cases ownership was even transferred to joint ventures with foreign capital. After the reform, larger-scale foreign joint-venture operations are attempted in the sectors previously monopolized by SOEs in particular sectors, such as telecommunications or agricultural exports. Since SOE reform is a fundamental policy issue in terms of Myanmar’s economic structure, a specific overall strategy is required in order to outline the scope, timeframe and approach, beyond these segmented attempts by individual ministries.

With regard to this issue, the experiences of transition economic reform by Myanmar’s Asian neighbors may prove to be helpful for reference purposes. For example, the scope of SOEs to be privatized in Myanmar has not yet been clearly determined. In China, though, the government adopted a strategy during the early stages of the reform process that was designed to allow large sized SOEs to remain state owned but small and medium-sized SOEs to be privatized ("Grasp the large, liberalize the small" policy), and to gradually widen the scope of privatization to large-sized SOEs in "non-strategies sectors."

In terms of the country’s legal and regulatory framework, SOEs in Myanmar are defined as being departmental enterprises under the control of their line ministries. China also started out with the same system, before gradually promoting corporatization with retained state ownership as a first step and then transforming healthy SOE subsidiaries into joint stock companies while the process of complete privatization for major SOEs was suspended until the securities markets had matured. A timeframe such as that in the case of China can be easily visualized and this will be crucial for Myanmar too[4].

The largest problem in Myanmar with regard to SOE reform is that it is not yet widely known how many economic entities exist that meet the definition of an SOE, and to which government departments they are affiliated[5]. The capacity and authority of the Directorate of Investment and Company Administration (DICA), part of the Ministry of National Planning and Economic Development (MNPED), needs to be strengthened to promote SOEs reform. The idea of employing a corporatization process as the first step should be driven under the highest authority and by enacting the relevant legal framework.

In the process of economic reform that has been undertaken since 2011, a large amount of foreign capital has been seen entering fields operating by SOEs. Although such an opening up of the market to foreign capital is desirable over the long term, it is important to consider the historical lesson that introducing foreign capital too quickly under a weak legal framework can result in serious confusion. A ground design for SOE reform is urgently required on these grounds too.

The establishment of a stock market is now underway, with its launch expected to be by the end of 2015. As the second step in the SOE privatization process, a discussion on how to utilize the securities market to introduce private capital to SOEs will be important.

Proposition 3: The reform of the financial system is vital as one of the fundamental steps in bringing about industrialization-based growth. Although private capital has grown substantially during the twenty years of junta rule, a large part of the financial sector is made up of state banks that have their origins in the mono-bank system employed under the socialist regime. This is partly due to the necessity for foreign exchange controls. The share of state banks scaled by asset in the whole banking sector is still tremendously high. However, state banks—which are positioned as being the departmental enterprises of ministries (the Ministry of Finance for four state banks and the Ministry of Agriculture for one)—have not yet realized their full potential, particularly in terms of deposit mobilization and of loan provision (in the Myanmar

4 Chapter 3 (Hattori)
5 Chapter 2 (Phoo Pwint Phyu)

Economic Bank (MEB)). It is clear that there is a need to redefine the roles played by the Myanma Foreign Trade Bank (MFTB) and the Myanma Investment and Commercial Bank (MICB), both of which played an important role in foreign exchange control prior to early 2012[6].

The private bank sector has experienced extensive growth since 2012. As a result of the confusing development process undertaken since the 1990s, the private bank sector contains (1) purely private banks and (2) quasi-state banks (usually called as ‘semi-government’ banks) that are under the ownership or strong control of line ministries, including the army. Some of these purely private banks have grown rapidly to become major players of a level comparable to that of the state banks. Some quasi-state banks, having outgrown of their line ministries, are now transforming themselves by moving into 100% private ownership and management, while others have strengthened the policy-based aspect of their operations by directly shoulder credit programs for particular policy purposes, such as SME. Some quasi-state bank groups have been found to remain very inactive[7], or the government has acquired the shares of those banks. In addition, since mid-2014, a few new banks have been established by line ministries for particular policy purposes, which has made the banking sector a little confused[8].

To ensure the healthy and stable development of the private banking sector, clear institutional frameworks need to be prepared. It is also necessary to introduce a strict rule requiring that the purposes of the private banking industry be kept separate from those of policy-based finance so that the authorities can guarantee that the private banking industry is strictly insulated from politics. To this end, the financial regulation authorities need to be further clarified and strengthened.

At present, in June 2015, a new financial institution law is being deliberated in parliament. A financial master plan is being drafted by the government and the central bank in cooperation with the World Bank. While designing visions for reform is, needless to say, important, it is important that such visions reflect the key problems identified in the current real circumstances of the sector.

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[6] Chapter 4 (Mieno) and Chapter 5 (Inada)
[7] Chapter 7 (Mieno)
[8] Refer to the case of the Construction and Housing Development Bank in Appendix 2 (Ngu Wah Win).

Proposition 4: The concept of financial inclusion is crucially important when considering financial reform. This concept covers concerns with regard to improving financial access for people living in remote or rural areas or for the agricultural and SME sectors. Under the junta regime, the responsibility for providing financial services to rural areas was mainly borne by the Myanma Agricultural Development Bank (MADB) and partially by a few quasi-government banks. Coverage was very low during that period, but it has rapidly expanded since 2012. However, the fundraising side of their agricultural credit program is largely dependent on subsidy loans from the MEB, who are absorbing the cost by their profit. This means that the current agricultural loan program being undertaken by MADB-MEB is inappropriate in the long run[9]. The role of the MADB within the state banking system should, therefore, be redefined. This is an urgent matter both in the context of financial inclusion and the financial system itself.

The microfinance sector has already played a central role in financial inclusion. Legally established as a sector in 2012, this sector has developed rapidly. In the long run, the sector is expected to become a major player in terms of the practice of financial inclusion, taking the position of policy-based institutions such as the MADB. At the same time, the sector appears to have been in a state of confusion recently, with a mushrooming in the number of profit-seeking microfinance institutions and the creation of a new bank specializing in microfinance (Microfinance Bank)[10]. Careful regulation and supervision of this sector are necessary to ensure the stable development of microfinance.

With regard to credit for small rural entrepreneurs or SMEs, policy-based private banks, such as the Small and Medium Industry Development Bank (SMIDB) or the Rural Development Bank (formerly the Sibin Tharyar Yay Bank), under the control of line ministries have performed well so far, though the size of their operations is very small. Currently, these banks are successfully extending loans and gaining profit based on operating with tight business networks and a monopolistic position in small, specialized fields. Developing such private banks further or transforming them into

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[9] Chapter 7 (Mieno)
[10] Chapter 8 (Ni Lei Win)

directed credit institutions could potentially be a vital policy challenge[11].

Another important factor in improving financial inclusion is the development of branch networks throughout the country by both state and private banks. Currently, the MEB maintains by far the largest number of branches and the amount of mobilized deposits, but its banking operations are not very active. Meanwhile, a few private banks have extended their branch networks remarkably in recent years. Consistent policies concerning the engagement of branch operations by state banks and the promotion of more private bank branches in rural areas under competitive conditions are vital for enhancing Myanmar's financial infrastructure.

Government initiatives are important in this field since financial inclusion is hardly likely to be achieved through market competition alone. The government can play a significant role by not only running its own direct credit programs, but also providing private institutions with incentives to enter the market.

3. Overview of the chapters

This report consists of five parts. "Part I: Macroeconomic Management and State-Owned Enterprise Reform" analyzes issues concerning fiscal policy. Chapter 1 and Appendix 1 deal with tasks relating to fiscal policy and macroeconomic arrangement in Myanmar's economy, which is highly dependent on natural gas and mining exports. "Chapter 1: Macroeconomic Management in Resource Rich Developing Economies: Some Lessons for Myanmar" (Takuji Kinkyo and Kazue Demachi) explains that Myanmar shares the same problems as those experienced by other economies that are dependent on natural resource, and discuss possible political schemes for minimizing the effects that changes in international commodity prices have on a domestic economy and details the limits of such schemes by looking at the experiences of other countries. They maintain that counter-cyclical fiscal policy is important as a principle means of buffering fluctuations in international prices, and point out the validity and limitations of a natural resource fund for economic stabilization. They also discuss the possibility of promoting domestic investment by using a natural resource fund, but argue that the following are prerequisites for the sound management of natural

[11] Chapter 7 (Fumiharu Mieno)

resource revenue: control of such revenue, improved transparency with regard to extractive industries, and enhancement of the institutional capacity of the government.

"Appendix 1: Myanmar’s Fiscal Regime for Extractive Industries and Transparency in Extractive Industries" (Min Zar Ni Lin) discusses a scheme for controlling natural resource revenue, as presented in Chapter 1. This appendix focuses on the need for a clear understanding of how the natural gas revenue flows through the public sectors, and identifies the remaining tasks needed to achieve transparency in the revenue flow. As explained in the report, the revenue flow is extremely complex and still not fully controlled. Speaking as a national representative for the Myanmar Extractive Industry Transparency Initiative (Myanmar EITI), the author explains the capital flow from gas exports, which had been largely unknown prior to the enactment of the reforms, but he suggests that further consolidation of the scheme for promoting transparency is required.

Chapters 2 and 3 address the issue of state-owned enterprises (SOEs). “Chapter 2: Myanmar’s State Economic Enterprise Reform: Present Situation and Agendas" (Phoo Pwit Phyu) analyses the weight and coverage of state enterprises in the domestic economy, and also explains the case and policy direction for the reforms. The author recognizes that the progress made in pursuing these reforms has, to a certain extent, been mainly in communications and information, transportation and water, and construction. Enterprises in these industries are now gradually being granted autonomy and some state-run factories are receiving an infusion of private capital. However, the author also suggests that further reform and privatization will require a general policy and legal framework to promote the process.

“Chapter 3: Myanmar’s State-Owned Enterprise Reform: A Comparative Study of Asian Transition Economies" (Ryozo Hattori) presents details of the Chinese experience of reforming state enterprises as a reference point for Myanmar. The author discusses the following as a possible reform model for Myanmar: employee stock distributions in small and medium-size enterprises, corporatization and the introduction of private capital, as well as the reorganization and public listing of large enterprises.

Parts II and III analyze issues regarding the financial sector. “Part II: Economic Structure and Financial Systems" discusses problems with regard to a system acting as the integral platform for effective capital allocation. "Chapter 4: Key Challenges in the

Development of Better Corporate and Financial System: Historical Context since 1990s" (Fumiharu Mieno) scrutinizes existing information on Myanmar's financial system, explains the history and characteristics of the distortion that occurred in the corporate and financial systems under the military regime, and generally discusses the requirements for financial development. The author recognizes the root causes for the underdevelopment of the corporate system in Myanmar as being distorted growth that was dependent on domestic capital in the late 1990s and weak governance of the corporations in the early stages of their establishment. The author argues that the private banks established under the military regime have long been failing to function as financial intermediaries.

"Chapter 5: Developing a Robust Financial System for Myanmar's Sustainable Growth" (Kyosuke Inada) reviews financial system reforms enacted since the Thein Sein government took office in terms of the theory of development finance and the experiences of other Southeast Asian countries. It also discusses central issues such as the following with a view to identifying possible directions for future financial sector reform: gaps between the required financial development and current reforms; regulations and policies for resolving the issue of the credit constraints suffered by prudent corporations; foreign capital as a supplement for infrastructure investment and the foreign currency gap; and effective utilization of public capital.

"Part III: Banking Sector and Financial Inclusion" covers the important issues on the banking sector as industry, and on the extending inclusive financing in a developing economy, such as microfinance and related policy-based finances. "Chapter 6: Banking Sector, Policy-based Finance and Financial Inclusion of Myanmar" (May Toe Win and Lalyar Nay Tun) discusses financial issues from the standpoint of financial regulation and policy implementation. It addresses issues regarding financial assets (including bank deposits), financial institutions, bank branches and accessibility to financial services, and highlights the issue of financial inclusion, and the role of microfinance.

"Chapter 7: Some Perspectives on Banking Sector in Myanmar: Based on the Banking Sector Survey" (Fumiharu Mieno) presents the current ownership and management characteristics in the banking sector to provide an overview of the structure of the banking industry. In Myanmar, the Myanmar Economic Bank (MEB) and other state banks still hold an exclusive share of the market, but some of the stronger private banks are growing rapidly. The author reports on the structure of state banks, focusing in particular on the fact that the MEB covers a considerable amount of cost for large-scaled subsidized credit to the Myanmar Agricultural Development Bank (MADB) as a substitute for uncollected interest. The private banks, on the other hand, consist of a mixture of purely private banks and quasi-state banks, the latter of which are owned and controlled by the government. Some of the small quasi-state banks function as a form of policy finance. The author points out that prompt reforming of state banks and a redefinition and categorization of private banks is required.

"Chapter 8: Microfinance as a tool for financial inclusion and poverty reduction in Myanmar" (Ni Lei Win) discusses tasks required for financial inclusion in Myanmar based on an analysis of existing microfinance institutions. The financial services offered by private banks in rural areas are still limited today. Given that the MADB is not fully functioning as a credit supplier for farmers, small-scale financial institutions, including microfinance ones, are expected to act as substitutes. However, such activities are currently inadequate in both size and quantity, and there is also confusion with regard to regulation due to institutions entering this sector from a variety of fields.

"Appendix 2: Corporate Governance System for Policy-Based Banks: A Case Study of the Construction and Housing Development Bank" (Ngu Wah Win) elaborates on the Construction and Housing Development Bank as a case study. This bank was established in 2014 as a quasi-state private bank operating under the supervision of the Ministry of Construction (MoC), at which point regulations for the financial sector had yet to be settled. A system for the establishment of an institution for policy finance within the scheme for private banks was inherited from the military regime, but as several other banks were established during the same period, the real figures and functions of this bank are entirely unknown. The author reports that the Construction and Housing Development Bank aims to manage unusual combinations of tasks under the full control of the MoC, the provision of finance for infrastructure construction for constructors, and the provision of housing finance for individual households, and that the latter task seems to be outweighed so far. The differentiation between these two functions is unclear, but such functions should be carried out by using independent policy-based finances, and this report provides an important platform for a discussion of the appropriate policies and schemes.

Closely related to the discussion mentioned above, "Part IV: Socio-Economic Systems and Redistribution" covers two topics related to socio-economic systems, including redistribution. "Chapter 9: Expanding Social Security Scheme: An Alternative Health Financing Approach toward UHC in Myanmar" (Mi Ein Thida) analyzes the social security system, with a particular focus on medical insurance based on a review of the current situation. The social security system is reported to be already under discussion inside the government, and this report assumes that a public universal-insurance-type system will be established. While a discussion has not yet been had on the system's feasibility—including the issue of how it will be financed—this report provides a crucial platform for further discussion.

Finally, in "Chapter 10: Myanmar Migration and Their Remittances" (Tun Min Sndar), the employment and safety issues faced by Myanmar expatriates are discussed. The number of Myanmar expatriates living overseas as asylum seekers and refugees increased under the military regime. The author extends the discussion to discuss the importance of remittances to the domestic economy. This well-organized report highlights Myanmar-specific problems that are critical not only socially, but also economically.

Part I. Macroeconomic Management and State-Owned Enterprise Reform

Chapter 1

Macroeconomic Management in Resource-Rich Developing Economies: Some Lessons for Myanmar

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Abstract

Stabilization of macro economy thorough management of natural resources and the revenue derives from it is an urgent task for a low income country with weak institutions, including Myanmar, which is largely dependent on the revenue from natural gas export. The macroeconomic operation needs to focus on (1) buffering government budget and domestic economy from the shocks from international price volatility, (2) sustainable management of natural resource revenue and achievement of equality between generations. Regarding the first point, there is a renewed discussion whether the resource revenue should be invested domestically or insulated from domestic economy. In this analysis, some experiences of other countries which invested domestically through a national fund is discussed, but we maintain that the management of the fund needs to be strictly profit-oriented, and sufficiently segregated from political influences. We also introduce the cases where natural resource revenue is invested domestically but not in a form of Sovereign Wealth Fund. The international society is strengthening its involvement to support the macroeconomic management in resource rich developing countries, but several tasks are left to be tackled. To avoid the boom-and-bust cycle of natural resource dependent economy, rules and systems to support the economic stabilization need to be established.

Contents

1. Background

Since the start of the new millennium, international resource prices have been pushed up by increased worldwide demand for natural resources. Higher prices and higher demand have promoted new investments in resource exploration and in development in resource-rich developing economies (RRDEs). With this trend, many low-income countries have suddenly become resource exporters, and natural resource revenue as foreign exchange inflow has become the strong driving forth for growth. While many African countries are named as examples of such resource-led growth economies, several Asian countries, including Myanmar, are experiencing a strong economic boost from natural gas exports (Figure 1).

Natural resource exports, however, not only lead to greater export earnings, but also cause many problems among RRDEs. Rapid economic expansion led by natural resource exports and high prices often result in a consumption boom, but little investment in the development of the economic and social infrastructure of the exporting countries; foreign direct investment into extractive industries, meanwhile, does not generate many employment opportunities in economies already suffering from high levels of unemployment. Especially, natural resource price development and fluctuations in international markets can complicate RRDE governments' ability to stabilize their macroeconomies. Especially in present-day Myanmar, the stabilization of the domestic economy in the medium and long term through the management of natural resources themselves and the resulting resource revenue is a critical issue. The current study reviews and discusses the facts and issues pertaining to resource revenue management and macroeconomic stabilization in RRDEs, and it seeks to draw some key lessons from which Myanmar may benefit.

2. Problems that resource-rich developing economies face[12]

2.1. The "resource curse"

[12] The discussion in Sections 2 and 3 draws heavily from the work of Demachi and Kinkyo (forthcoming, a).

Natural resource discoveries or price increases are "blessings" for a developing country, especially when the resulting resource revenues fill a government's revenue gap or trade gap through an influx of abundant foreign currency. However, the sheer amount of foreign currency earnings as well as the unstable nature of the inflows can induce a number of problems, all of which are exacerbated by institutional weakness or low government capacity. The paradoxical situation found within RRDEs is often termed a "resource curse," because despite this source of wealth, they often experience slower growth, unstable macroeconomies, or domestic conflict.

Economic analyses of the resource curse cover a wide scope. Gelb et al. (1988) comprehensively analyzed the economies of oil-producing countries after the oil price hikes in the 1970s and highlight various problems that stemmed from the oil windfall inflows, as well as the boom and bust cycle. Auty (1990) highlight the difficulties and risks that developing countries face in promoting resource-based industrialization. Sachs and Warner (2001) undertook a cross-country analysis to reveal the slower economic growth rate of countries that are highly dependent on natural resource exports. On the other hand, Collier and Hoeffler (2000) argue that the possibility of earning natural resource revenue increases a country's conflict risk and prolongs the conflicts that do arise. Karl (1997) discusses how opportunities to access the rents associated with natural resources tend to induce government corruption, and Ross (2012) argues that societies whose economies depend on crude oil exports tend to be undemocratic and feature societies where women have a lower status. Additionally, analyses Dutch disease, changes in domestic resource allocation and production structure, can also be categorized as falling within the scope of the resource curse argument (Corden and Neary 1982, Corden 1984, Cuddington 1989, Van der Ploeg and Venables 2013).

Another element that further complicates problems associated with resource curse is the volatility of natural resource prices. Resource price movements are affected by both economic and geopolitical factors, and their fluctuation and uncertainty in turn negatively affect the national budgets and economies of resource-exporting countries. For RRDEs to manage their resource revenues and stabilize their macroeconomies, buffering their economy from the risks inherent in price volatility is a critical task.

2.2. Volatility and uncertainty of international resource prices

Natural resource prices in international markets are highly volatile. However, crude oil's price reflects various international economic factors, and its price movements strongly influence oil consumers and producers alike (Apergis and Miller 2009, Hamilton 1983; 1996; 2003; 2008, Kilian 2009, Kim and Roubini 2000, Chen et al. 2014). On the other hand, while natural gas prices reflect regional market characteristics—given the absence of an integrated international market—they are still affected by the price movements of crude oil. Mineral resources also seem to be affected by the price movements of crude oil.

Economies dependent on natural resource revenue face the possibility of radical changes in revenue due to price movements; difficulties in forecasting price movements lead to current account deficits, debt accumulations, and exchange rate problems. The root cause of RRDEs' problems lies in the procyclical nature of their policies, which are frequently formulated under weak institutions. These procyclical policies—namely, budget expansions in boom periods and austerity when prices fall—exacerbate the influence of price movements. Moreover, tightening government expenditures are often complicated by multiyear investment planning, or resistance to reductions in the number of government sector employees (Frankel 2011a). Government attempts to smooth its intertemporal consumption by borrowing in the downturn and repaying in the boom appear to be reasonable; however, in the 1980s, the debt incurred by RRDE governments while filling "temporal" revenue gaps turned into debt accumulation problems. In this scenario, establishing a fund that is based on natural resource revenue is suggested as an effective policy tool, as doing so allows for counter-cyclical macroeconomic management among RRDEs.

3. Natural resource revenue management through a fund

3.1. The role of fiscal policy in inclusive growth

Nonrenewable resources, regardless of type and endowment level, will someday dry up. Hotelling (1931) discusses the optimal timing and pace of extracting limited resources—a topic that has attracted the interest of many economists, including Solow

(1974) and Stiglitz (1974) during the oil crisis in the 1970s. Recent increases in the international demand for natural resources, and resulting price hikes, have led to renewed attention to this issue. On the other hand, international society has been converging toward the view that economic development should feature "inclusive growth."[13] This view suggests that RRDEs' economic growth should also be inclusive, with natural resource revenue being allocated so as to narrow domestic income gaps and alleviate economic inequalities. To achieve inclusive growth, natural resource revenue can be effectively reallocated through policies that, among other things, promote the private sector, as doing so would lead to new job creation, the development of the agricultural sector (and a concomitant investment in rural infrastructure), and investment in basic social services such as health care and sanitation. Additionally, RRDEs should develop alternative industries to resource extraction, since extractive industry is basically highly capital intensive and creates few jobs. Ultimately, poverty reduction needs to be achieved by offering job opportunities to a wider range of people (Auty 2001).

Ensuring the appropriate government management of natural resource revenues is critical to activating policies by which to promote inclusive growth. One of the policy tools recommended for RRDEs in achieving this aim is the natural resource fund (NRF).

3.2. Natural resource funds

The NRF's aims as well as its name differ among countries, from "oil fund" and "stabilization fund" to "trust fund" and "future generation fund" (Table 1). The core three functions of the NRF are being economic stabilization against price movements, saving for future generations, and funding economic and social development (IMF 2012). Among these, the first function seeks to buffer against fluctuations in resource revenue flows, with an eye to stabilizing a government's budget and macroeconomy. This function assumes that resource revenue is consumed by the current generation. On the other hand, the remaining functions object to the retention of wealth gained from

[13] The definition of "inclusive growth" is discussed by the Economic Policy and Debt Department of the World Bank (PRMED 2009). The UN System Task Team (2012) also examined inclusive growth as an alternative to the post-Millennium Development Goals.

natural resource sales as man-made capital or socioeconomic assets, in favor of transferring them to future generations. This adds weight to the fair allocation of wealth between generations, wherein the preservation of asset values is critical. Depending on which function is prioritized, the fund management approach also changes.

These NRFs are considered sovereign wealth funds (SWF), as long as they are managed by central or regional governments and invested internationally and strategically.[14] SWFs have been established in many countries, including countries that do not hold resources. The International Working Group of Sovereign Wealth Funds (IWG) was established in 2008, and it formed an agreement called the "Santiago Principles" (IWG 2008). In 2009, the IWG established the International Forum of Sovereign Wealth Funds (IFSWF); a total of 25 countries currently participate, with some being resource-rich countries. However, those engaging in strategic investing are ones with relatively high government capacity, such as Norway, Kuwait, Oman, Botswana, and Chile.

When considering the use of NRFs as policy tools in macroeconomic management among RRDEs, the tasks inherent in resource revenue management arise in two different time-frames: dealing with high price volatility and stabilizing the macroeconomy, in the *short and medium term*; and sustaining the revenue from limited and unrenewable resources, in the *long term*.

3.3. Managing short and medium term price volatility

International society has accumulated knowledge regarding effective policy tools, so that it may preclude the boom and bust cycles experienced in many resource-rich countries in the 1970s and 1980s. The International Monetary Fund (IMF) recommends that each resource-rich country establish a stabilization fund—that is, an NRF especially intended to insulate the macroeconomy from price shocks and uncertainty (Davis et al. 2001). A stabilization fund functions by accumulating government savings when the resource price is above the benchmark; these savings are subsequently withdrawn when

[14] IWG defines SWFs as "special purpose investment funds or arrangements, owned by the general government…investing in foreign financial assets…. The SWFs are commonly established out of balance of payments surpluses, official foreign currency operations, the proceeds of privatizations, fiscal surpluses, and /or receipts resulting from commodity export" (IWG 2008: 27).

the price falls below the benchmark. Some oil producers, such as Kuwait, established this type of fund in the early phase of their oil production; however, the most renowned funds of this type are Chile's copper stabilization fund and the counter-cyclical fiscal policy pursued by the Chilean government.

In Chile, two panels of specialists are set up to analyze the copper price to form a medium-term fiscal policy that enables the government to control overspending during booms and which offers disbursements to stimulate the economy during economic downturns (Frankel 2011b, IMF 2012). While Chile's success in resource revenue management can serve as a model for other RRDEs, setting up panels of experts independent of political pressure is not viable in many RRDEs with weak institutions. Moreover, Chile's success stems from its government's voluntary commitment to counter-cyclical policy. However, the most serious limitation of stabilization funds is that large-scale funds need to be managed outside the country, so as to insulate the economy from price movement shocks. Thus, the strict operation of a stabilization fund means that resource-scarce RRDEs in need of investment cannot directly benefit from capital that accumulates from current natural resource revenue.

3.4. Long-term fiscal sustainability

The exportation of nonrenewable natural resources to gain revenue is now considered an act of transforming a natural underground national asset into a manmade asset. National assets need to be managed to benefit not only the current but future generations, equally; for this reason, sustaining natural resource revenue as a national asset becomes a focus of resource management. A basic approach that bears in mind this purpose can be constructed on the basis of Friedman's permanent income hypothesis (Barnet and Ossowski 2002, IMF 2012). According to this hypothesis, revenue from nonrenewable resources is considered transitory income, and its consumption by governments and people in resource-rich countries needs to be based on permanent income earned from nonresource production. As transitory income, resource revenue needs to be saved first, and its consumption needs to be distributed over the long term, across generations that extend beyond the resource's exhaustion.

To leave sufficient assets for future generations, the current population is urged to consume or invest only the interest gained from the management of the NRF. On the basis of this thinking, the IMF recommends that resource-rich countries distinguish resource revenue from other forms of government revenue (Leigh and Olters 2006). Norway is often cited as a successful case of resource fund management, based on its very careful and sustainable asset management (i.e., “bird-in-hand”) approach, whereby the country consumes only secure investment profits earned through NRF management. This oil-producing country invests its oil revenues into its national pension fund, and the pension fund’s profits are integrated into government revenue. Its nonoil budget account is distinguished from its oil account, and the budget deficit is controlled so as not to exceed the amount of investment profit gained from the national pension fund (Norwegian Ministry of Finance 2014).

The idea that fiscal management should be based on nonresource revenue is rational in countries like Norway that have sound institutions, mature government capacity, transparency, and a developed domestic economy. Again, the stabilization fund approach is not very realistic for most RRDEs, who tend to suffer from resource curse: the establishment of such a fund means giving up current poverty-reduction programs and improvements in living conditions in favor of future generations’ welfare. Given those fund management limitations among RRDEs, there is indeed the view that the permanent income hypothesis is a theory of consumption, but investments must also be taken into consideration in the context of RRDEs (IMF 2012). Moreover, there has been an obvious shift regarding the view that resource revenue must be insulated from the domestic economy, as discussed in detail below.

4. Dilemma of resource-rich developing economies: consumption-smoothing versus domestic investment

4.1. A new trend, and lessons from the 1980s

As seen in previous sections, having a very conservative type of natural resource fund management is indeed unrealistic for RRDEs, as such a fund requires that current resource revenues be reserved for future generations, regardless of poverty levels in the current generation. On this point, Takizawa et al. (2004) analyzed how consumption levels at the steady state vary, depending on the timing of resource revenue consumption. According to the results of their analysis, increases in current public expenditure will lead to higher private investment, and the current generation's consumption level will increase. However, because the profitability of capital declines over time, future generations will find that their consumption level is lower than would have been the case had resource revenue consumption been distributed over generations based on the permanent income hypothesis.

A reconsideration of the possibility and appropriateness of current consumption and domestic investment that uses natural resource revenue seems to have recently gained an impetus. This trend is closely linked to recent discussions of global imbalances, an excess liquidity and saving glut among some non-Western countries, and increasing needs for long-term investment in infrastructure in less-developed countries. An increasing number of analyses have studied the theoretical applicability of current and domestic investment and consumption from resource revenue, and discuss alternative theoretical bases to support large-scale current consumption and investment. Sachs (2007) argues that the resource revenue of RRDEs should be invested in domestic economies; he mentions that associated concerns such as the Dutch disease would not be problematic, as long as public expenditures are allocated not to consumption but to investment. Collier et al. (2010) also argue that RRDEs should invest resource revenue into the capital-scarce domestic economy, or pay back current debt, rather than accumulate revenues outside the country and postpone the benefits to the far future. It is especially noteworthy that these studies mention the importance of RRDEs maintaining high levels of public investment. Van der Ploeg and Venables (2011) and Berg et al. (2013) theoretically study and simulate the possibility of current and domestic investment though an NRF, especially for capital-scarce RRDEs. On the other hand, Gelb et al. (2014a; 2014b) discuss the validity of a SWF as a vehicle for long-term domestic investment, but their discussion takes a more cautious tone.

Separate from the permanent income hypothesis or other theories, the importance of insulating natural resource revenue from small and immature economies has been recognized through analyses of experiences of RRDEs during the 1970s and 1980s. Many governments at that time had insufficient fiscal management capacity, and thus were incapable of making the right decisions when choosing investment projects; they also lacked capacity in terms of project evaluation, which resulted in hasty, substantial, and ineffective investments in domestic economies with low absorption capacities. As a result, a large proportion of resource revenues was wasted on incomplete projects, or dispersed through inappropriate consumption and corruption. Based on this view, RRDEs have been counseled not to invest resource revenue into their domestic economies, but rather to set it aside as foreign reserves until their domestic absorption capacities have been sufficiently developed.

While the argument to “save natural resource revenue away” is based on the experienced realities of RRDEs, the view of “investing domestically” seems to be led by changes in global economic situations. These contrasting views reflect the dilemma of RRDEs that “NRFs are least needed when institutions are strong; but they are least likely to work in precisely those institutionally weak environments where they appear to be most needed” (Humphreys and Sandbu 2007: 226).

The core of this problem boils down to the institutional quality of RRDEs’ governments and the implementation of laws by which to segregate funds from political influence. On this point, Chile and Norway are again frequently cited as good examples of resource revenue management with sound institutions, through an NRF or a pension fund; in these cases, funds are managed outside the respective economies. On the other hand, there are indeed countries that invest domestically through public funds and have achieved economic development in this way.

4.2. Domestic investment through a sovereign wealth fund

While very conservative theories on public fund management seem to dominate policy recommendations for developing countries, in reality, the urgent need for cash and investment in local economies have been sometimes fulfilled by investments through sovereign investment vehicles that were established by their own government. Famous examples are Temasek Holding Private Limited (Temasek, established in 1974) of Singapore, or Khazanah Nasional (Khazanah, established in 1994) of Malaysia. While some studies refer to these as SWFs, we prefer to use terms such as “national investment company” and “government-linked company” (GLC), since they invest domestically; strictly speaking, they do not fall into the SWF category as defined in the

Santiago Principles, which see SWFs as funds invested and managed outside their own local economies.

Neither Temasek nor Khazanah is based on natural resource revenue; rather, both are founded on trade surplus. On this point, establishing a GLC is not necessarily an ideal model for an RRDE to follow, and it should be noted that funds such as Temasek and Khazanah can play only a limited role in macroeconomic stabilization as a policy tool that supports the counter-cyclical fiscal management required of RRDEs. Nonetheless, the experiences of Singapore and Malaysia suggest a critical point in public fund management, regardless of the fund source (natural resource revenue versus trade surplus) or target economy (domestic versus international).

Temasek and Khazanah were primarily established as sovereign investment vehicles that target domestic economic development, but they have since strengthened their involvement in and exposure to international investment (Lai 2012, Ng 2010). However, Temasek's share of domestic investment, for example, still exceeds 30%, and the capital is allocated to domestic listed companies (Heaney et al. 2011).

Temasek has been considered an entity that operates as a commercial investment firm that prioritizes profitability, although Ng (2010) does point out that it has both commercial and noncommercial goals that coexist. While Temasek has been seen as relatively little affected by political influence, Khazanah has acted in line with national policy, and it has been directly influenced by Malaysia's prime minister. International criticism arose during the Asian financial crisis when it was suggested that public funds allocated through Khazanah were used to bail out failing financial corporations operated by government cronies (Lai 2012). Recently, Khazanah has been transforming itself to become an active international investor, and it has improved its transparency as an investing corporation (ibid.).

4.3. Profit-oriented investment

As the cases above clearly illustrate, the primary motivator in managing resource revenue through a public fund is to insulate the fund from political influences that may create a channel of resource dispersion. The selection of investment projects must be made on an exclusively commercial basis, and if funds are invested domestically, this raises the issue of fostering private companies as investees that will see positive future returns. The fact that investment capital has been allocated to domestic listed companies though these GLCs in Singapore and Malaysia also suggests the importance of domestic financial market functioning, including the establishment of stock exchange markets.[15] Several infrastructure investments have been undertaken by GLCs in Singapore and Malaysia, but the management of each fund, on the whole, is still grounded in profitability.

The importance of profit-based investment decisions strongly relates to the efficiency of investment. Sala-i-Martin and Artadi (2002) analyzed the relationship between a relatively slow growth ratio and the investment ratio in resource-rich countries in the Middle East, and point out that while the investment ratios of those countries are relatively higher than those of other countries, a large share of those investments is undertaken by government. They suggest that the important factor is not the quantity of investment, but rather the quality, and that large share of government investment negatively influence investment efficiency. Inefficiency and risk resulting from reliance on the judgment of the government are already suggested, given the experience of RRDEs in the 1980s; this highlights the role of private financial intermediations. The existing theoretical and empirical literature suggests that the development of financial intermediation can promote economic growth; however, in resource-dependent countries, the growth-promoting effect of financial development can be hampered by weak institutions (Demachi and Kinkyo, forthcoming, b).

4.4. The experiences of Indonesia and Malaysia

With respect to the long-term preservation of natural resource revenue, the above discussion is based mainly on the assumption that national wealth from natural resources is first converted into capital assets and invested somewhere. However, in reality, not many resource-rich countries have developed their economy based on the current principle of fund management. Collier (2010) suggests that RRDEs learn from the experiences of middle-income countries such as Indonesia and Malaysia in terms of their resource management, rather than from the likes of Norway. Indonesia and

[15] In Malaysia, there were only six listed companies when Khazanah started making investments (Lai 2012).

Malaysia benefited from exports of their rich natural resources in the early phase of their economic development, but escaped the resource curse, achieved industrialization, and promoted agricultural development by utilizing resource revenue to bring about sustainable development.

In the 1970s, in tandem with the Green Revolution, Indonesia directed oil revenues to rural infrastructure, investments in irrigation, and rural development (Auty 1990). The Indonesian government also used oil revenues to implement large-scale projects and build 61,000 schools in 1973–74 and 1978–79. Duflo (2001) determined that this school project had positive effects on the enrollment ratio, and that local wages ultimately benefited from this project. Investment in schools and education can be considered the establishment of sustainable assets in the forms of social infrastructure and human capital; in terms of inclusive growth, the reallocation of natural resource revenue funded this school project and allowed unenrolled children from poor households to receive an education; this eventually lead to long-term poverty reduction. It should be noted, however, that in recent discussions on resource revenue management, projects such as school construction are thought to be disbursed through government budgets, rather than through a fund. This is especially true for projects in which a fund can function as a supplementary budget. Off-budget spending often escapes the control and scrutiny of parliament and can easily become bloated, as the experiences of RRDEs in the 1980s show (Gelb et al. 2014b). From this viewpoint, the projects and investment field should not overlap with any area that ought to be managed by the government budget, where medium and long-term needs and recurrent costs should be taken into account (ibid.).

Malaysia, on the other hand, achieved resource-based industrialization by directly allocating natural resource revenue to investment in heavy industries (Auty 1990). Today, approximately 30% of the Malaysian government's revenue is derived from tax revenues and dividends paid by the national oil company, Petronas. In the 1970s, 80% of Petonas's payment was oil sales tax, but the company grew and its operations became profitable, and in 2007 its net profits and dividend amounted to 45% of its payment to the government. In 2008, reflecting international oil price increases, Petronas made a special payment to the government equivalent to USD 18 billion (Yusof 2011). Just as some national oil companies—such as Statoil of Norway—have expanded their operations beyond their home countries, Petronas has also invested in foreign projects, and expanded its activities into the international sphere. Malaysian resource management can be considered a process by which national assets in the form of crude oil and natural gas are converted into a corporation that sustainably produces profits.

5. Challenges to macroeconomic and natural resource management in Myanmar

The roles and limitations of public funds as policy tools reveal the difficulties inherent in managing resource revenues. Regardless of the tool applied—be it an NRF, stabilization fund, or GLC—having certain levels of government capacity and institutional quality is a prerequisite for sound macroeconomic management. In reality, however, the institutions and governmental capacities of RRDEs—including those of Myanmar—have yet to be improved. Moreover, enhancing the transparency of revenue from natural resources and its expenditure is also a basic premise in planning resource revenue management.

The Extractive Industry Transparency Initiative (EITI), an international initiative, supports the management of natural resource revenue, especially in RRDEs.[16] The Myanmar government committed itself to the implementation of EITI, assuming it as a neutral support in taking hold of resource revenues—revenues whose current management is strongly influenced by the Myanmar Oil and Gas Enterprise (MOGE), a state-owned corporation. While Myanmar now qualifies as an EITI candidate country,[17] it does not seem easy for it to proceed to the next step of becoming a Compliant Country. As the bargaining power of RRDE governments against international companies is usually not strong, contract schemes that feature confidentiality agreements tend to act as a bottleneck in improving transparency of resource revenue flows; this is the case in Myanmar (Adam Smith International 2015). The availability of revenue information is a prerequisite for sound resource revenue management, but it is one not easily fulfilled; its fulfillment depends on the attitudes and commitments of international private investors in resource development.

[16] See the EITI web site, http://eiti.org/ (Accessed on May 30, 2014).
[17] Myanmar was admitted as an EITI Candidate Country on July 2, 2014.

The building of government capacity cannot be achieved within a short period. On this point, taking resource fund management away from struggling governments and entrusting it to experts should be considered a prospective and credible option. However, the validity of a resource fund needs to be consolidated through the enactment of consistent government policy and pertinent laws, to secure the independence of resource funds from political influence.

While recent discussions on resource revenue management have tended to focus on the establishment of SWFs, the effect of establishing such funds should not be exaggerated. The setting up of a fund does not in itself preclude the illegal acquisition and dispersion of resource wealth through corruption, since it does not directly affect government activities and judgments that are part of the budgetary process. For example, Nigeria—which has problems with oil management—saved oil revenues in NRFs, but fund resources were illegally withdrawn. In fact, many RRDEs in Africa have established SWFs, but funds are reportedly “regularly withdrawn” to fulfill the budget deficit (Sovereign Investment Lab 2013: 34). This finding clearly indicates that, in the absence of laws that restrict tempted governments, the establishment of an NRF or SWF is like putting money in a safe that does not have a lock.

While the management of natural resources and resource revenues through public funds seems to be part of international mainstream policy, decisions on how they are used are national decisions. Nonetheless, governments must not overestimate their own fiscal management abilities. Many RRDE governments with good will but poor institutional power have lost opportunities to develop their countries through the use of resource windfalls. The recent experience of Ghana, which started the commercial production of oil in 2007, has added itself to a number of examples.

The above discussions can be summarized in terms of two priority tasks. By fulfilling these tasks, Myanmar can mobilize resource revenues as a means of fostering growth.

- Get a “big picture” sense of how natural resource revenues flow, and implement laws regarding audits and the disclosure of information
- Legislate laws to ensure the insulation of resource revenues from political access and influence

In most poor countries—resource-rich and otherwise—weak institutions are both the results and causes of poverty, and governments often face macroeconomic management difficulties. The existence of natural resources, however, complicates their problems. The governments of resource-rich countries need to understand the problems associated with revenue management, and avoid repeating the past failures of RRDEs. Recent high international resource prices bring the prospect of resource booms among RRDEs, and such booms often mask fundamental problems such as weak institutions and unsound fiscal management. The resource curse can reappear once resource prices decrease, and its cost is substantial. As such, the institutionalization of sound resource management and economic diversification should be prioritized.

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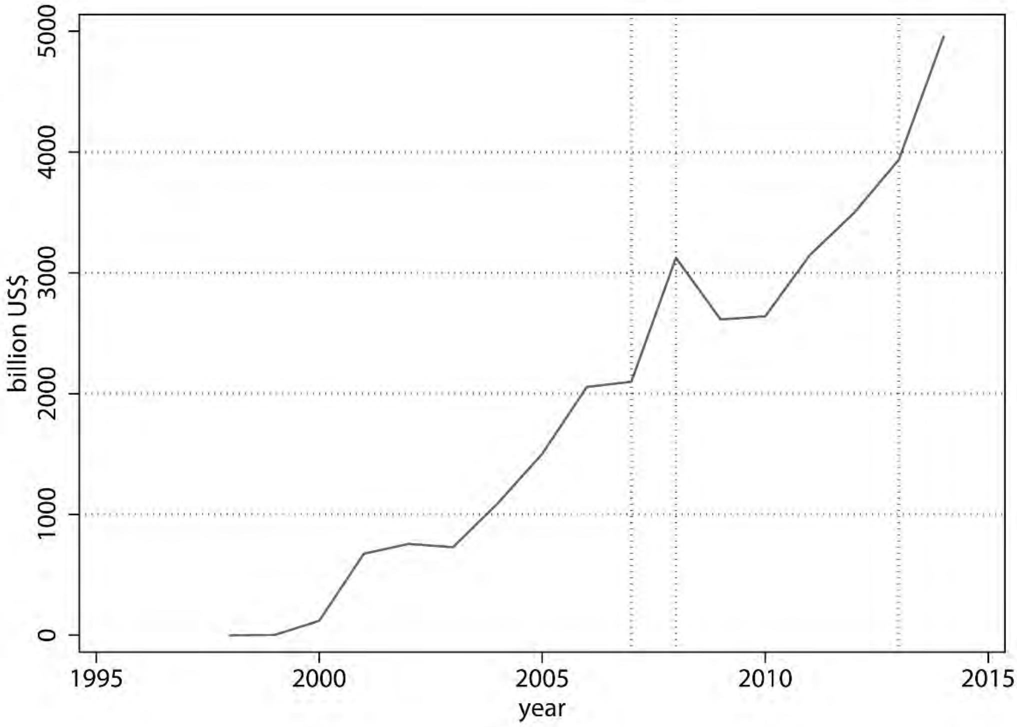
Figure 1. Natural gas exports from Myanmar



Note. The export values are calculated as the sum of HS code category 27 (Mineral fuels, mineral oils and products of their distillation) imports to China, India, and Thailand from Myanmar, based on the UN Comtrade Database.

Table 1. Names and objectives of natural resource funds of selected countries

Country	Funding	*Fund name* Object	Resource
Alberta (Canada)	1976	*Alberta Heritage Savings Trust Fund* Saving, economic, and social development	Oil and gas
Alaska (United States)	1976	*Alaska Permanent Fund* Saving	Oil
Chile[1] (activated in 1987)	1985	*Copper Stabilization Fund** Saving	Copper
	2007	*Economic and Social Stabilization Fund** Saving	
Kuwait	1960	*General Reserve Fund* Stabilization and saving	Oil
	1976	*Future Generation Fund* Saving	
Kiribati[2]	1956	*Revenue Equalization Reserve Fund* Stabilization and saving	Phosphate
Norway (activated in 1995)	1990	*State Petroleum Fund* Stabilization and saving	Oil
Oman[3]	1980	*State General Reserve Fund* Saving	Oil
	1993	*Oil Fund** Investment in oil sector	
	2006	*Oman Investment Fund** Domestic and foreign investment	
Papua New Guinea (wound up in 2001)	1974	*Mineral Resources Stabilization Fund* Stabilization	Minerals
Azerbaijan	1999	*State Oil Fund* Saving	Oil and gas
Botswana	1993	*Pula Fund* Saving	Diamond

Notes: 1. Ministry of Finance, Chile HP (http://www.hacienda.cl/english/sovereign-wealth-funds/economic-and-social-stabilization-fund.html, last accessed on May 27, 2014).
2. Phosphate stock exhausted in 1979.
3. Sovereign Wealth Fund Institute HP (http://www.swfinstitute.org/swfs/oif/, last accessed on May 27, 2014).
* integrated into new fund, due to changes in objectives and relevant laws.
Data source: Davis et al. (2001) Table 3.1 and IWG (2008), except for Chile and Oman.

Chapter 2

Myanmar State Economic Enterprise (SEE) Reform: Present Situation and Agendas

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Abstract

While tax revenue to GDP ratios is around 6 or 7 percent, SEEs play an important role in Myanmar Economy since the revenue of government mainly depends on the SEEs revenue (55% SEE revenue out of total revenue in FY 2015-16). However, there are inefficient SEEs and loss making SEEs. In the framework of Economic and Social Reform (FESR) under President U Thein Sein government, to improve the operational efficiency of core SEEs and reduce the fiscal burden, Government of Myanmar (GOM) outlined the reform agenda of State Economic Enterprises (SEEs) which stated “prepare step by step corporatization and privatization plan due to vast public welfare and possibility of natural monopoly. The reform policy of SEEs includes limiting budget and SEEs running as autonomous, corporatization and privatization (in which public private partnerships method include). However there are SEEs operating under natural monopoly which are under Rail transport, Electrical Power. Taking into account of profit maximization, social efficiency, and welfare of the public, the reform agenda of SEEs is one of the important issues under the new government.

Contents

1. Introduction

1.1. Rationale of the study

The pace of reform in Myanmar has been evolving in terms of a range of economic and political reform. In the framework of Economic and Social Reform (FESR) under President U Thein Sein government, Government of Myanmar (GOM) outlined the reform agenda of State Economic Enterprises (SEEs) which stated "prepare step by step corporatization and privatization plan due to vast public welfare and possibility of natural monopoly. This also covers setting hard-budget constraints on existing State Economic Enterprises (SEEs) and strengthening the capacity of governance, law and authority to oversee corporatization and privatization plans. Moreover, as a part of public expenditure review (PER) with the help of the World Bank, Government of Myanmar (GOM) has been improving the fiscal flow of the government. Separation of SEE expenditure and revenue from the revenues and expenditures of ministries has begun only since 2012-13 fiscal year. Thus, the extent and trend of previous situations cannot be analyzed.

SEEs has been privatized and made reform even since the Military Regime. Despite of market-oriented development, SEE has remained a crucial part of the economy especially important sectors because more than 50% of government revenue has come from State Economic Enterprises (SEEs) while tax revenue to GDP ratio is 6 or 7 percent. Many questions can be raised to policy makers since the reform agenda of SEE is explicitly related to other government policies such as commitment of improving tax revenue, long-term sustainability of government budget and effective public service delivery: Should GOM continue to keep control of important SEEs for the sake of government revenue and public welfare, or should it continue corporatization or privatization? Can the government manage to keep track the performance of non commercial SEEs and how they are subsidized?

1.2. Current legal and institutional framework for SEE in Myanmar

The state-owned Economic Enterprise Law was enacted in State Law and Order Restoration Council Law No.8/89) on 31st March, 1989 including 12 sections under six chapters. This law was amended at section 8 on 4th March, 1997 adding that 8.1 a) the government can undertake the economic enterprises not from Government Budget but from the stuff fund for the sake of contributing country economic development under government notifications. 8.2 b) the notification shall cover types of business, management board, capital structure, financing, auditing and others. The amendment of this law let the government own business such as Myanmar Economic Corporation and Union of Myanmar Economic Holdings.

1.3. Objectives of the study

The objective of the paper is to identify the scope of SEEs in Myanmar through fiscal management perspective. It will further explore the current dynamics of SEE transformation and identifies the prevailing challenges in on-going current SEE reform process. This paper aims to shed light on the challenges and issues which are embedded with the reform of SEEs in Myanmar. Lessons learnt from other countries' experiences and possible policy implications are then outlined.

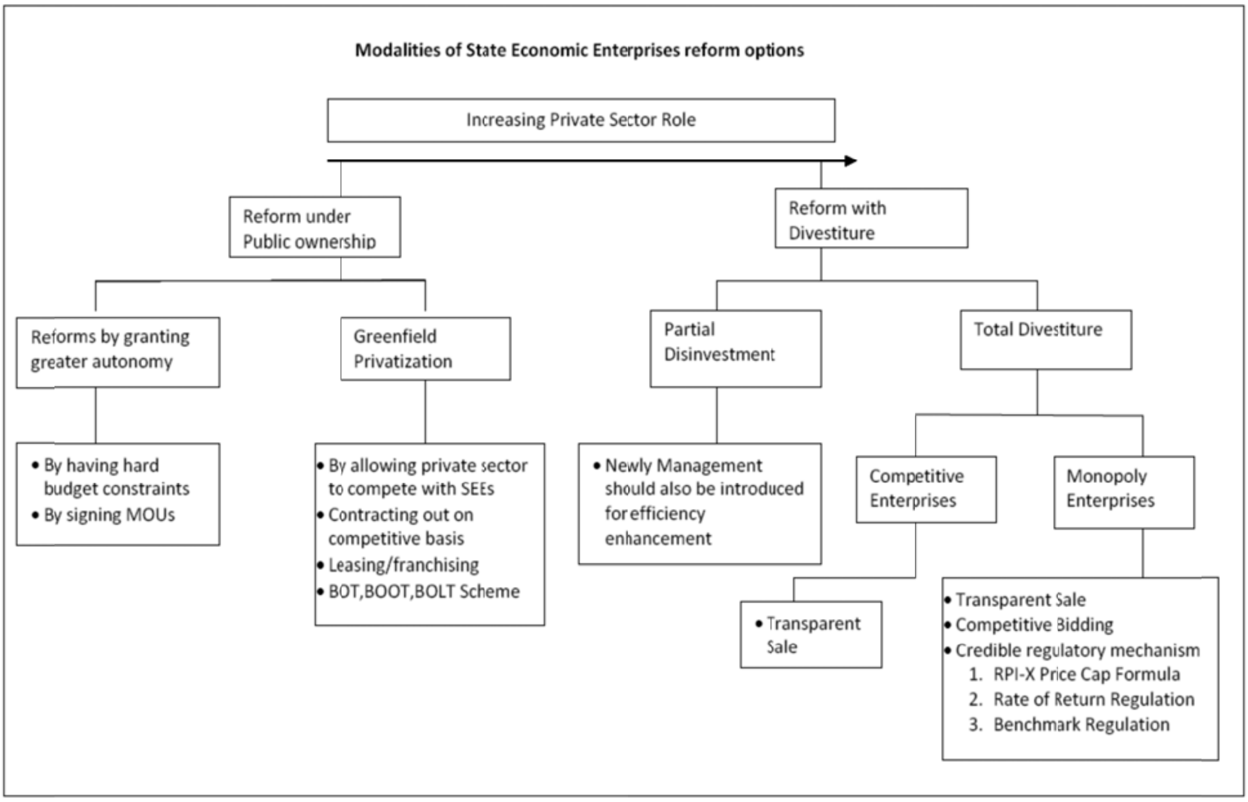
1.4. Research Methodology

This study reviews the revenue and expenditure pattern of union government in order to highlight the importance of Myanmar SEE on Union level Government budget. For this purpose, the fiscal data from Union Budget Law from 2012-13 FY to 2015-16 FY have been used. However, the analyses are limited to the data since they are obtained from Union Budget law and they are estimates rather than actual budget executed figure. Moreover, at the point of analysis, the supplementary expenditure of 2015-16 FY is excluded. Before 2012-13 FY, the revenue and expenditure of SEEs were not separately published and thus, the previous trends of SEEs on union budget cannot be examined.

2. SEE's Reform options and consideration of private sector participation

SEE have been made use of achieving social and economic development goals of the country. SEE were enjoying success in most of the countries till around 1970s. But, in the 1980s, SEE were growing weakness in inefficiency due to protection from competition. Early privatization in U.K underlined the burden of public enterprises, deregulation sectors monopolized by public sector and create enabling environment for private sector to develop. A wide range of measure can be taken into account for transformation of SEEs. Kaur (2003) describes the reform options of state economic enterprises as in the Figure (1.1).

Figure 1.1. Modalities of State Economic Enterprises (SEE) reform options



Source: Kaur (2003)

From the left corner to the right corner, the role of private sector increases. At the left corner, the reform can be done under government ownership by giving greater autonomy. It includes imposing harder budget constraints and signing MOUs which is referred to as Cold Privatization. It is freely negotiated performance agreement between SEEs and the government. This performance agreement clearly specifies their commitments, objectives and responsibilities. Greenfield Privatization means allowing private sector to compete with SEEs which are also needed to be upgraded and restructured. Such kinds of Private Public Partnership (PPP) arrangements occur in infrastructure sector such as telecommunications, power generation, transmission, railways, roads, aviation, ports, and shipping. The basic options of Private Public Partnership (PPP) are as follows;

1) Service contract
2) Management contract
3) Lease contract
4) BOT and similar arrangements
5) Concessions
6) Joint ventures

BOT and similar forms of arrangements can be seen in table (1.1) which are the basic Public Private Partnership (PPP) options.

Table 1.1. Basic PPP options

Arrangement	Ownership of Assets	Operator of the Facility during the concession period	Transfer of Assets after concession period	Project
BOO	Private	Private	No	Mobile Phone network
BOT	Public	Private	To Public	Toll Road Project
BOLT	Private	Private/ Government	To Public	
BOOT	Private	Private	To Public	Railways, Power Generation, Roads, mass rapid transport
DCMF	Private/Public	Private	No	Prisons, Public Hospital

BOO=build-operate-own, BOT=build-operate-transfer,
BOLT=build-operate-lease-transfer, BOOT=build-own-operate-transfer, DCMF= design-construct-manage-finance
Source: Kaur (2003), ADB (Public Private Partnership Handbook)

At the right corner of the figure (1.1), public enterprises are sold to the private sector, employees or general public in a transparent and competitive manner. These types of enterprises are under competitive market such as manufacturing or natural monopoly such as utilities and infrastructure. If enterprises are operating as natural monopoly, there are important considerations which include 1) natural monopoly is separated into regional monopolies or separating one activity from the other if possible (power generation, transmission and distribution) and 2) credible regulatory framework is needed in order to overlook the price cap regulation or benchmark regulation in order for the private monopolist not to charge higher price.(Kaur,2003). If the government is unable to divest in a transparent and competitive manner and is unable to regulate private monopolies, enhancing efficiency can be achieved through management contracts between the government and private managers managing SEEs and through restructuring existing ownership and management.

There is no specific framework that can guarantee the success of SEE's reform. However, other countries' experiences and literature shows the fundamentals that could enhance the probability of success. The consideration of reform options starts the fact that the country is ready to absorb it.

3. SEEs' Reform Dynamics and Impacts from other countries experiences

This section shows the reform dynamics of SEEs from some selected countries which might be useful for the SEE reform agenda of Myanmar.

3.1. China

SEE reform in China has been going on since 1978. But, SEEs remain critical for Chinese economy. The literature shows that the distinction of SEEs in China is categorized into the competitive market and the strategic market. The competitive market includes manufacturing of consumer products and the strategic market entails energy, infrastructure building and financial services. The numbers of SEEs have declined in the competitive sector through intensive privatization and accumulation of assets can be found in the strategic sector.

Transformation of Chinese SEEs can be fallen into three phases. The first step between 1978-1984 focused on increasing SEEs managerial autonomy to maximize profit and growth. Delegation of managerial autonomy from government bureaucracy to SEEs managers began to differentiate between the State and enterprises. The second phase between 1985 and 1993 concentrated on transforming SEEs into independent economic entities. Managers of SEEs took responsibility for profit and losses by signing a contract with the relevant ministries. The drawback of this responsibility system is that management teams are likely to focus on short term interests than long term growth since they have the responsibility and rights of operating SEEs rather than no ownership of any assets or property. The third phase starting from 1993 till now has stressed that SEEs has been transformed into modern corporations. Further process of corporatization and listing of SEEs at stock exchange has come along with corporate governance reforms and exposure to competition.

In short, China SEE's reform has been through a comprehensive experiment of large scale selling off loss-making SEEs and keeping the majority shares in large SEEs in order to avoid falling tax revenue and social and political instability.

3.2. Vietnam

Restructuring SEEs in Vietnam have been launched since economic reform (doi moi) 1986. Due to different market environments, SEE in Vietnam is classified into three types. The first one is non traded sector such as telecommunications, transportation, construction and public utilities which are sort of monopolistic SEEs. The other two types are 1) heavy industries such as steel, cements, machinery and etc., and 2) small and medium SEEs managed by local government. The reform of SEEs can be seen as reform without Privatization and reform with privatization. Reforms without privatization emphasized on the efficiency of SEEs by giving autonomy and harden budget constraints and by restructuring SEEs. The Law on State Economic Enterprises in Vietnam was enacted in 1995. According to the Law, SEEs are categorized into two. They are profit-seeking SEEs and non-profit SEEs. The objective of the first category is making profit and contributing to the State revenue while that of the latter is producing public service delivery. In addition, the roles of line ministries and local governments in managing SEEs, the relationship between Ministry of Finance and the controlling agencies of SEEs, their discretion of operational targets and objectives, investment decisions and allocation of net income into welfare, reward and business development fund are identified in the law.

3.3. Chicago

The experiences of privatization of parking meters and Midway airport in Chicago show the consideration of short term and long term benefits and mismatch of government terms and leasing period. In 2013, the process of Chicago's Midway airport privatization was impeded by the experiences of agreement to give control to a private corporation for Chicago's 36,000 parking meters. Although there are a lot of opportunities on making money at the airport, only six investment firms submitted the expression of interest. Only one firm was left and there was no competitive bidding. The reason is that at the time of financial crisis in 2008, the budget deficits kept higher and government needed quick sources of cash to close the deficit. Privatizing some services is somehow to meet the budget requirement. The bidding in which the private corporation operates and collects fees from the parking meters for 75 years lease term was won by the consortium led by Morgan Stanley. The local government got 1.15 Billion USD as a quick cash to lower down the budget deficit. On the other hand, the parking fees at Chicago became the highest in the States. From that experience, the process of privatizing Midway airport was subject to comparatively short term leased period not more than 40 years, long term profit sharing with the local government and setting up the board to make assessment of the process. These constraints are aimed to protect the public interest but they prevent the private investors' interest on the bidding process.

Not only short term benefits but also long term benefits have to be taken into account. There are short-term and long-term costs. Due to time mismatch of the leasing period and the government terms, in the above case, the politicians only focus on the short terms' wins rather than looking at the future benefits.

3.4. India

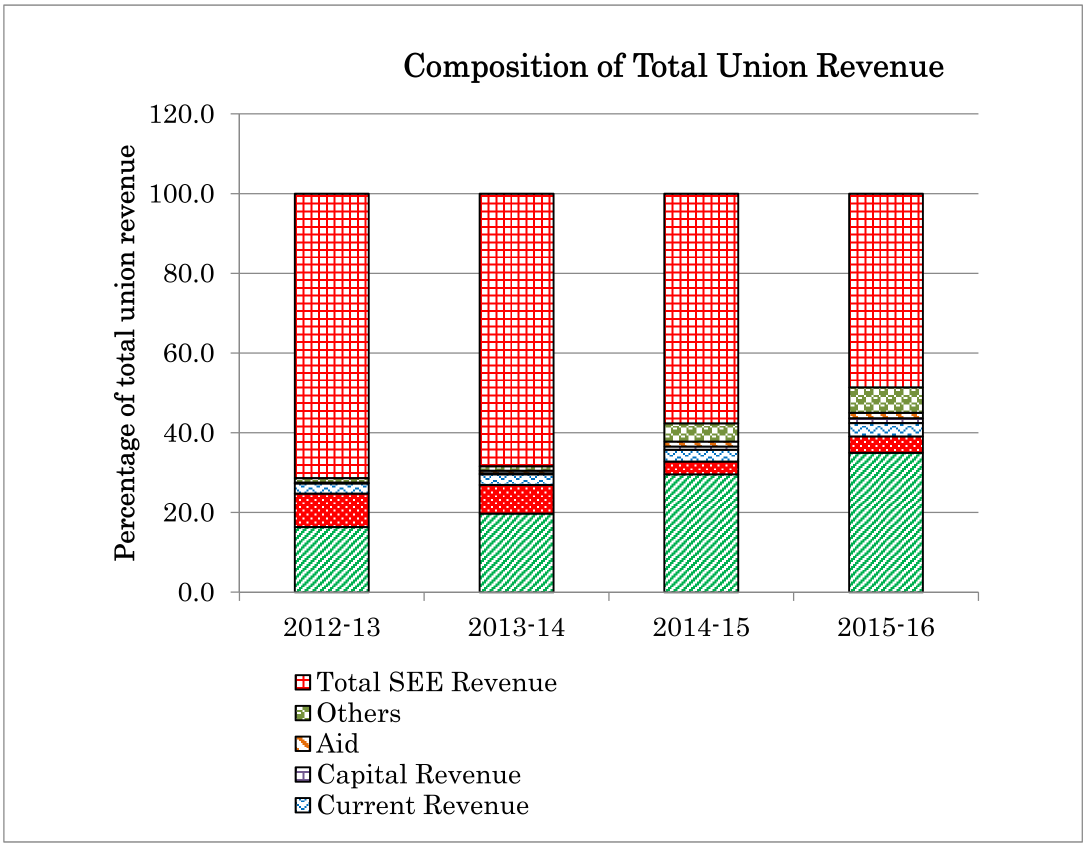
Reform of State Economic Enterprises (SEEs) in India has been initiated since 1990s as a part of economic reform agenda. In 1991, there was negative balance of payment and fiscal deficits which made restructuring the role of government and giving a larger role for the private sector. Kaur (2004) says that a wide range of SEE reform options such as disinvestment, Greenfield privatization and Cold Privatization were adopted in India. Disinvestment or Divestiture means to mobilize revenue for the government budget expecting that private investors shall invest in publicly owned enterprises. Cold Privatization means giving greater autonomy to managers of SEEs by using Memorandum of Understanding to improve the performance of SEEs. Until late 1980s, the public sector played an important role in the development of India economy. Indian privatization focused on disinvestment (selling government minority shares to the public) from 1991 to 2000. Since 2000, the privatization has emphasized upon strategic sales to private sector.

4. Scope of SEEs in Myanmar through Union Budget (2012-13 to 2015-16)

The section examines the scope of SEEs in Myanmar by using the data from Union Budget law during 2012-13 FY to 2015-16 FY which is announced in the gazette and newspaper. All the data are estimates rather than actual budget execution data. Expenditure data include both budget estimate and supplementary budget data except FY 2015-16. At the time of the analysis, the supplementary budget law for FY 2015-16 does not come out. Revenue data are only budget estimated data.

Figure (4.1) shows the composition of total revenues for the years 2012-13 to 2014-15. It can be interestingly seen that the revenue from SEEs to union government is a major contribution to total revenue. Generally, SEE revenue have constituted between 50-70 percent of the total. But the declining trend of its contribution can be observed over the four fiscal years which has dropped from 71 percent to 49 percent of total revenue. The small dotted grid in the figure (4.1) explains the tax revenue from SEE which also highlights falling share of SEE revenue in the total union revenue.

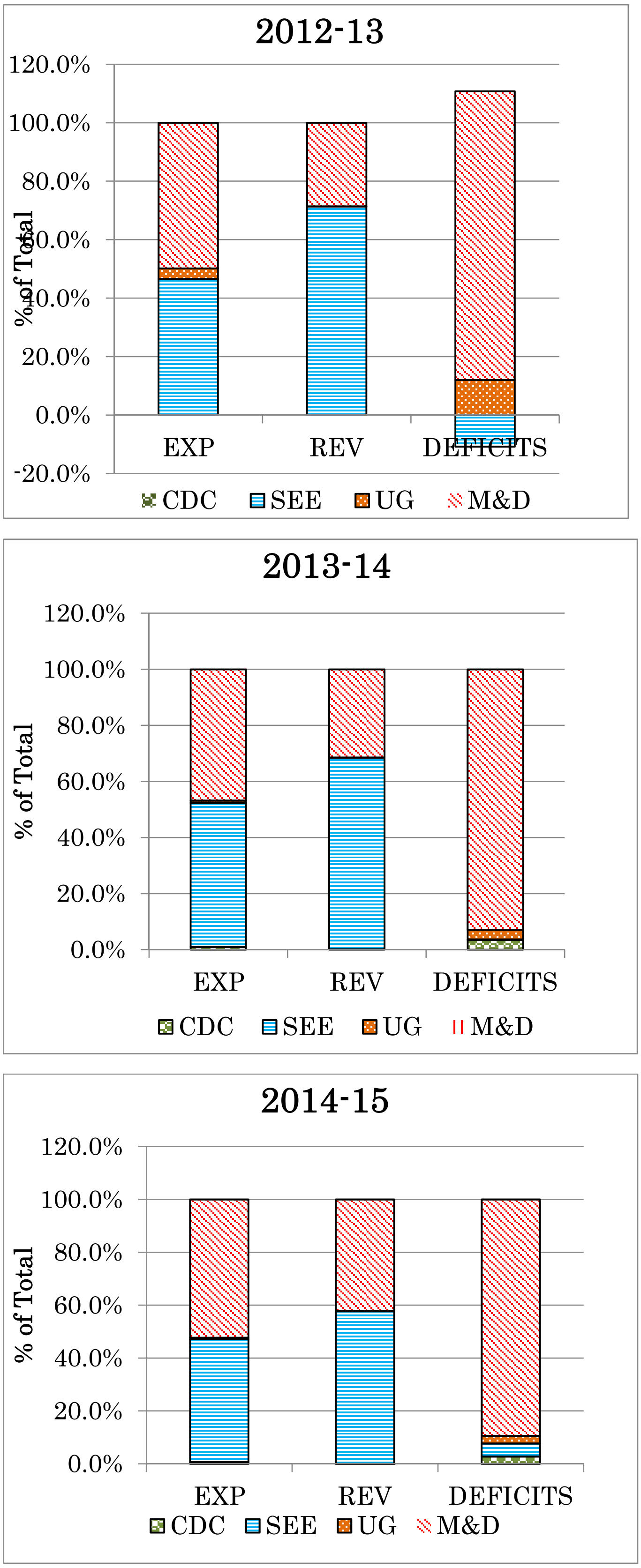
Figure 4.1. Composition of Total Revenue (% of Total) 2012-13 to 2015-16

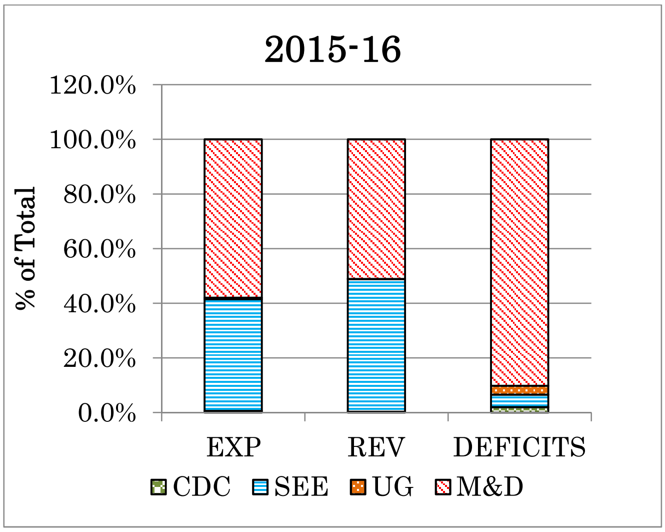


Source: Union Budget Law of Myanmar (2011, 2012, 2013, 2014 & 2015)

Figure (4.2) illustrates the composition of Union Budget. As mentioned above, the contribution of SEE into revenue and expenditure is crucial for government revenue and the contribution of SEE into total government deficit is less than that of Ministries and Departments (M&D). The contribution of SEE into total deficit has dropped from 10% of total to 5% of total. On average, the share of M&D into total deficit is around 90%.

Figure 4.2. The composition of Union Budget (FY 2012-13 to FY 2015-16)



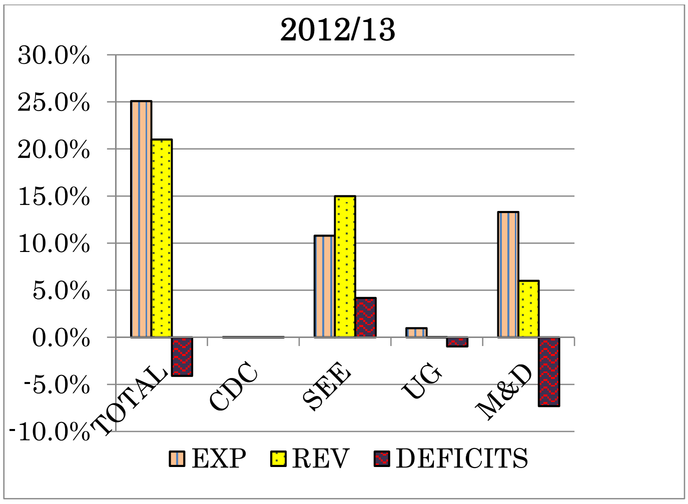


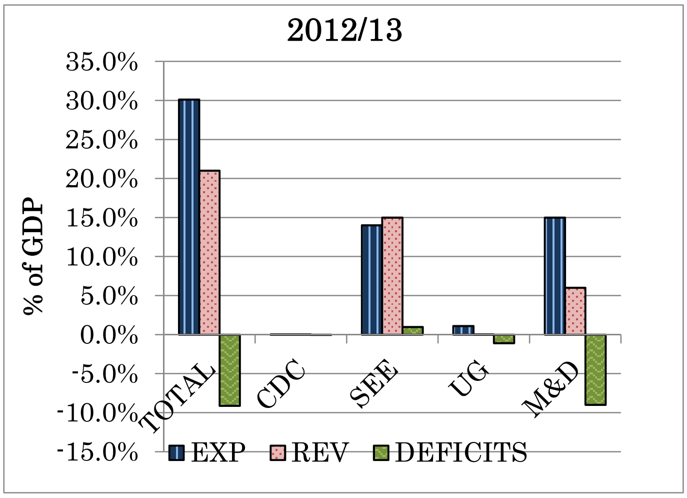
Source: Union Budget Law of Myanmar (2011, 2012, 2013, 2014 & 2015)

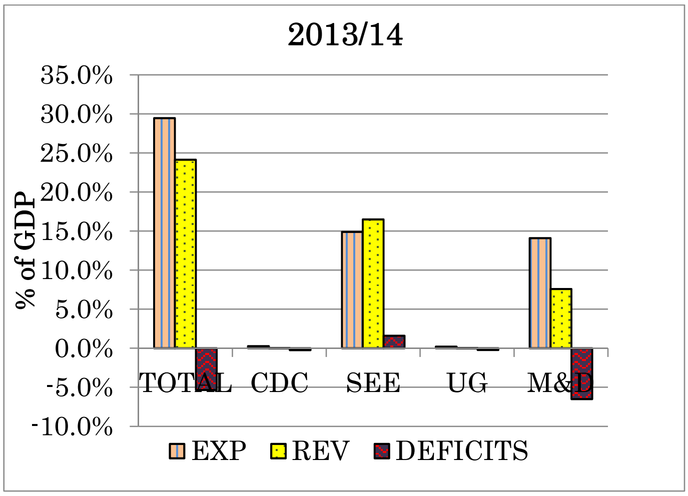
Figure (4.3) demonstrate the fiscal trend (% of GDP) with supplementary budget data and without supplementary data. As described above, the revenue data is limited to estimated figure only while the expenditure data includes the supplementary data. The total revenue of government union budget is around 21% to 26 % of GDP while the total expenditure is around 28% to 33% of GDP. The overall fiscal deficit has decreased from 9% to 5% (with supplementary expenditure data) and without supplementary expenditure data, the deficit is around 4% to 5% of GDP. The revenue of SEE are on average 11% to 17% of GDP but it can be noticed that the trend has decreased to 11% of GDP in 2015-16 FY. Without supplementary data, the expense of SEE are 11%, 15%, 14% and 12% of GDP in 2012-13, 2013-14, 2014-15 and 2015-16 respectively while with supplementary data, they are 14%, 16%, 15% in 2012-13, 2013-14 and 2014-15. 2015-16 data covers only estimated data at the point of this analysis. The SEE contribution to union budget deficit is on average around 0.2% to 0.3% of GDP. As mentioned earlier, the analyses in this study are able to reflect from estimated figure rather than executed budget data. Therefore, the data discrepancy can be observed with government analysis which is done from actual realized data.

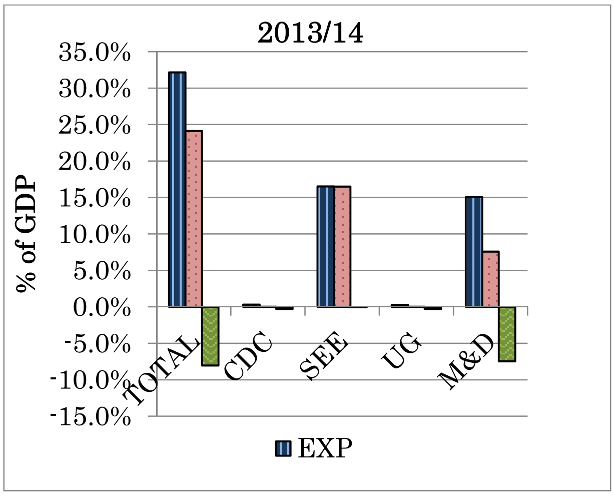
Figure 4.3. Fiscal Trend (% of GDP) from 2012-13 to 2015-16

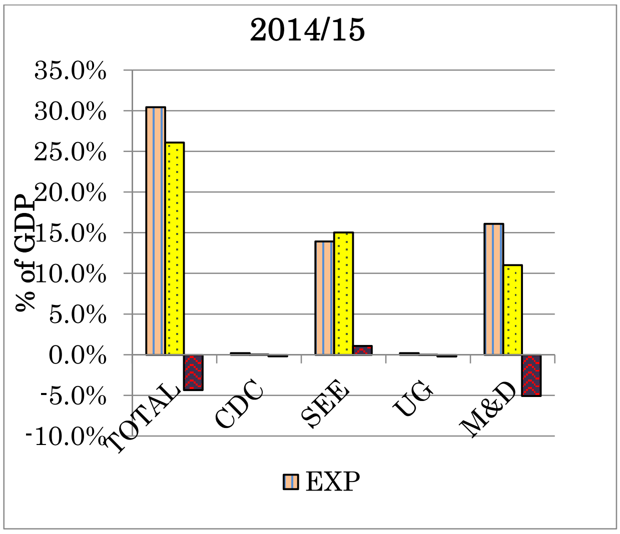
Without Supplementary Data

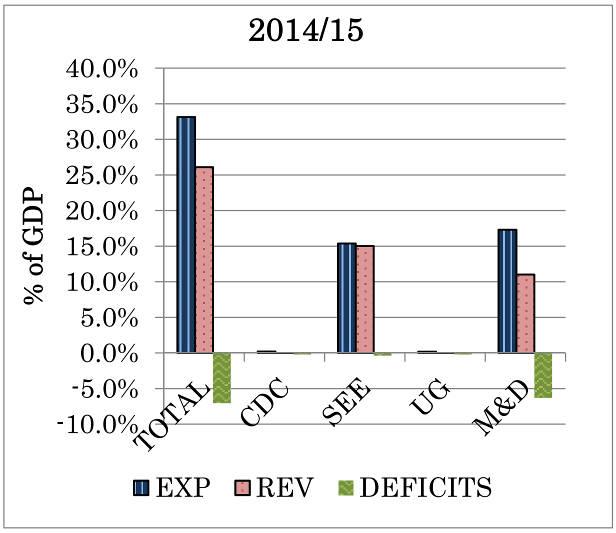


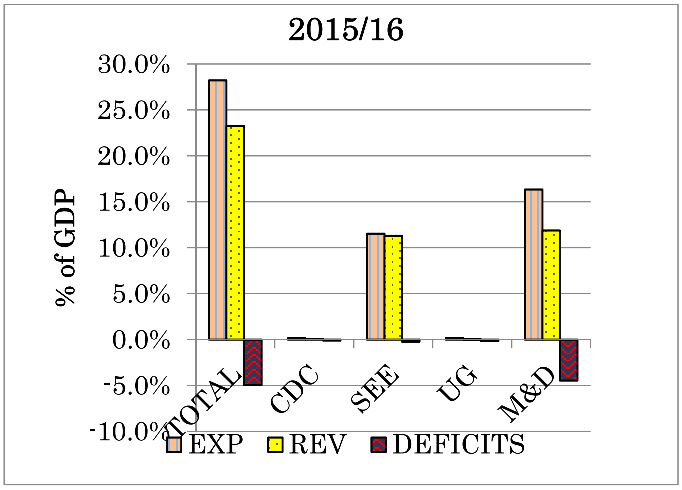





2013/14
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
-5.0%
-10.0%
-15.0%
% of GDP
TOTAL
CDC
SEE
UG
M&D
EXP


2014/15
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
-5.0%
-10.0%
% of GDP
TOTAL
CDC
SEE
UG
M&D
EXP

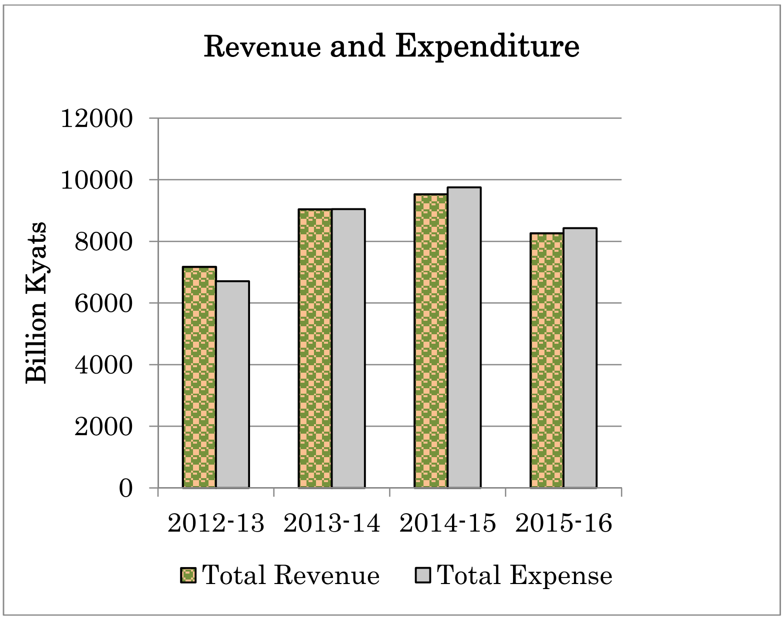

2014/15
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
-5.0%
-10.0%
% of GDP
TOTAL
CDC
SEE
UG
M&D
EXP
REV
DEFICITS



Source: Union Budget Law of Myanmar (2011, 2012, 2013, 2014 & 2015)

The revenue and expenditure trend of SEE from 2012-13 to 2015-16 FY can be seen in figure (4.4). The net loss of SEE of can be observed. As per the union budget data, the net losses of SEEs are 7 billion Kyats, 220 billion Kyats and 166 billion Kyats in 2013-14, 2014-15 and 2015-16 respectively.

Figure 4.4. Revenue and Expenditure of SEE from 2012-13 to 2015-16

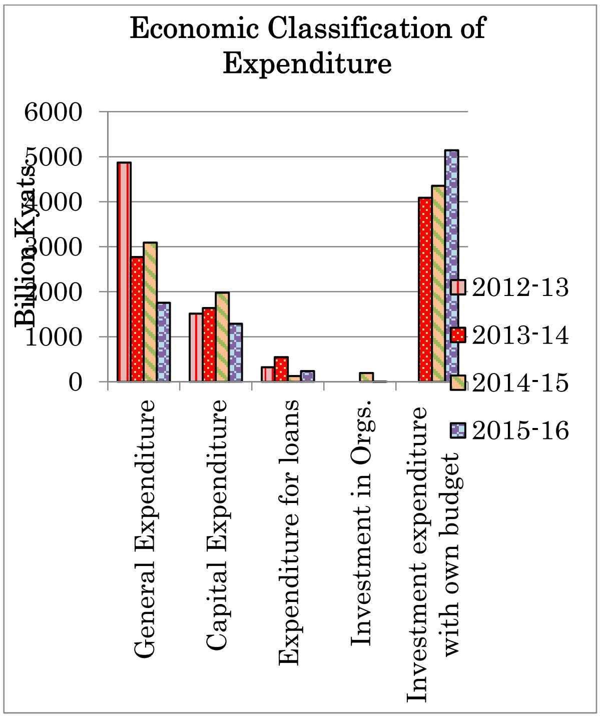


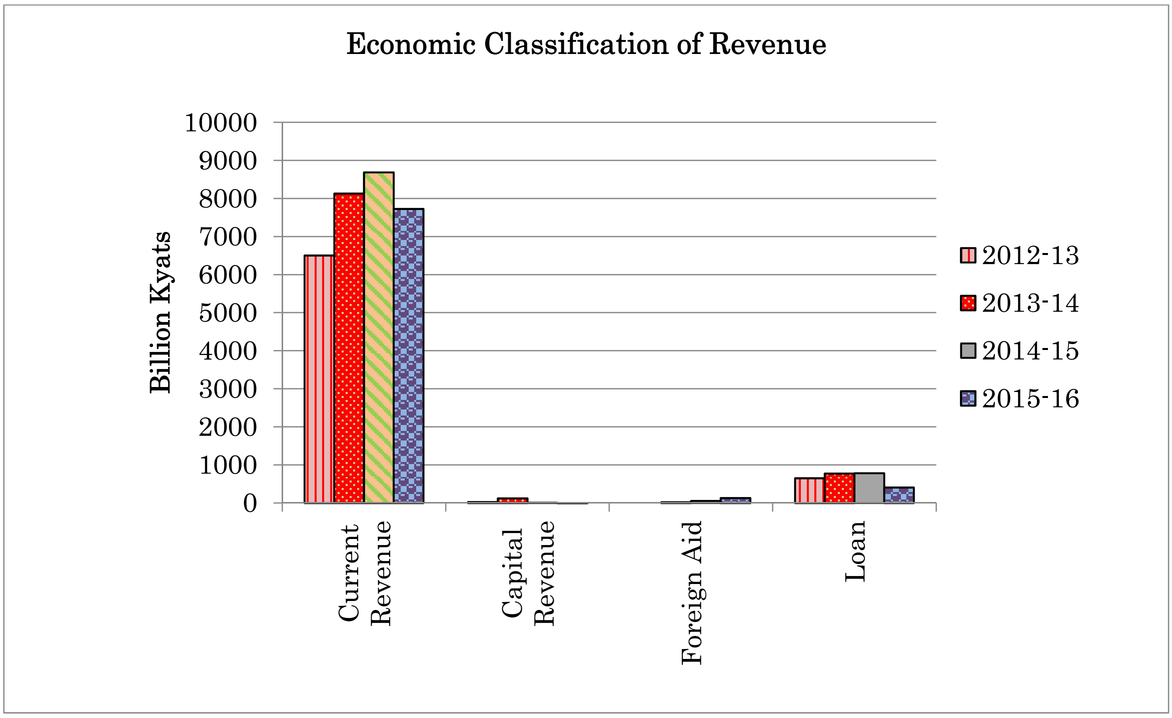
Source: Union Budget Law of Myanmar (2011, 2012, 2013, 2014 & 2015)

Figure (4.5) illustrate the economic classification of expenditure and revenue of

SEE. The expenditures are classified into general expenditure, capital expenditure, expenditure for loan, investment in other organizations, and investment expenditure with their own budget into their enterprises. New expenditure category (investment expenditure with own budget) has been introduced since 2013-14 FY. SEEs are required to cover (%) of their working capital by themselves. It is aimed at the autonomy of SEEs in the future. The revenues are categorized into current revenue, capital revenue, foreign aid and loan. Current revenue is the major source of SEE.

Figure 4.5. Economic Classification of Expenditure and Revenue of SEE





Source: Union Budget Law of Myanmar (2011, 2012, 2013, 2014 & 2015)

From Table (4.1) which shows the budget of SEE, the overview of eliminating SEEs under ministries can be observed. Under the SEE budget in Union Budget Law, it can be seen as two or three separate tables. The objective of this arrangement is that the SEEs under these separate tables autonomously manage their revenue and expenditure to improve the operational efficiency of the enterprises.

At 2013-14 FY, SEEs under ministry of Labor and Commerce did not run anymore. SEEs under ministry of industry (1) and (2) were integrated. At 2014-15 FY, SEEs budget under Ministry of Livestock, fisheries and rural development and hotel and industry are no longer existed. Central Bank of Myanmar was also introduced as SEE in 2014-15 fiscal year. At 2015-16 FY, SEEs' budget under ministries of cooperatives and ministries of construction seems abolished or integrated within the ministry but no official announcements and notifications can be done. The core SEEs which make most revenue contribution to union budget are under ministry of mines, energy and communications and information technology. The SEEs which delivers public utilities such as electricity, rail transportation and transportation are going through the reform process in terms of corporatization and public private partnership. Electricity Supply

Board (ESB) is one of the SEE under Ministry of Electricity which is also loss-making SEE. The corporatization process of Yangon Electricity Supply Board (YESB) is now in progress assisted by International Finance Corporation (IFC)/ the World Bank group.

Table 4.1. Revenue and Expenditure of SEE from 2012-13 to 2015-16

MMK (Billion)	2012-13		2013-14		2014-15		2015-16	
SEE under line ministries	Revenue	Expenditure	Revenue	Expenditure	Revenue	Expenditure	Revenue	Expenditure
Information	23.44	18.94	25.32	34.44	21.92	32.59	31.71	34.96
Co-operative	0.24	0.29	0.31	0.34	0.31	0.34	-	-
Agriculture and Irrigation	41.20	41.59	32.20	48.60	57.50	45.75	39.00	36.69
Livestock and Fisheries	36.36	14.39	20.39	19.58	-	-	-	-
Communication and Information Technology	914.00	567.90	623.00	568.08	772.03	786.37	448.86	402.81
Environmental Conservation and Forestry	287.36	384.42	384.88	329.46	173.82	278.81	251.28	337.27
Electricity Power	153.58	355.02	1,318.59	1,845.48	2,086.22	2,423.72	2,072.28	2,305.14
Energy	3,158.43	2,211.63	4,341.11	3,631.38	4,070.67	3,373.08	3,635.19	3,259.36
Industry	303.28	831.86	609.88	858.91	443.93	734.77	212.69	573.74
Mines	283.54	210.50	303.11	163.97	317.68	190.78	320.34	160.81
Finance	645.16	876.17	707.32	722.01	327.23	494.01	382.90	401.19
Construction	226.93	142.66	352.00	374.05	308.84	315.08	-	-
Rail Transportation	185.09	324.03	212.48	341.86	129.82	306.01	179.57	341.00
Transportation	78.83	68.34	99.23	101.13	376.62	407.61	301.05	293.02
Hotel and Tourism	8.92	4.59	9.19	7.35	-	0.91	-	-
Labour	5.41	5.31	-	-	-	-	-	-
Commerce	7.89	7.44	-	-	-	-	-	-
Industry 2	814.49	639.30	-	-	-	-	-	-
Central Bank of Myanmar	-	-	-	-	442.35	359.76	388.85	284.42
Total	7,174.14	6,704.39	9,039.02	9,046.65	9,528.94	9,749.58	8,263.72	8,430.39

Source: Union Budget Law of Myanmar (2011, 2012, 2013, 2014 & 2015)

5. Case Studies of transformation of SEE under some selected ministries

This section briefly illustrates the current reform dynamics and transformation of SEE from some selected ministries within a period of 2011 to beginning of 2015. It is done by making semi-structured interview with officials and by doing desk reviews on official reports, proceedings of government workshops and seminars, newspapers and journals.

5.1. Ministry of Industry

Under Ministry of Industry, there are 6 main enterprises namely 1) No.1 Heavy Enterprises, 2) No. 2 Heavy Enterprise, 3) No. 3 Heavy Enterprise, 4) Textile Industry, 5) Pharmaceutical and Food stuff industries and 6) Paper and Home Utilities Industries. No. 1 Heavy Industries Enterprise includes factories producing vehicles, earthmoving equipment, construction equipment and steel. No. 2 Heavy Industries Enterprise composes of factories manufacturing household electrical goods, machine tools, batteries, transformers, tires and other items. No.3 Heavy Industries Enterprise is responsible for producing cement, bricks, ceramics, glass and agricultural equipment. Textile industries include factories producing textile and ginning factories.Paper and Home Utilities Industries has been producing pulp, papers, footwear, plastics, stainless steel, enamel housewares and hospital furniture and equipment. Pharmaceutical and Food stuff industries include two pharmaceutical factories, a horse and sheep breeding farm, factories manufacturing soft drinks, soap, drinking water, alcohol, palm oil and other items, sugar mills and sugar plantation.

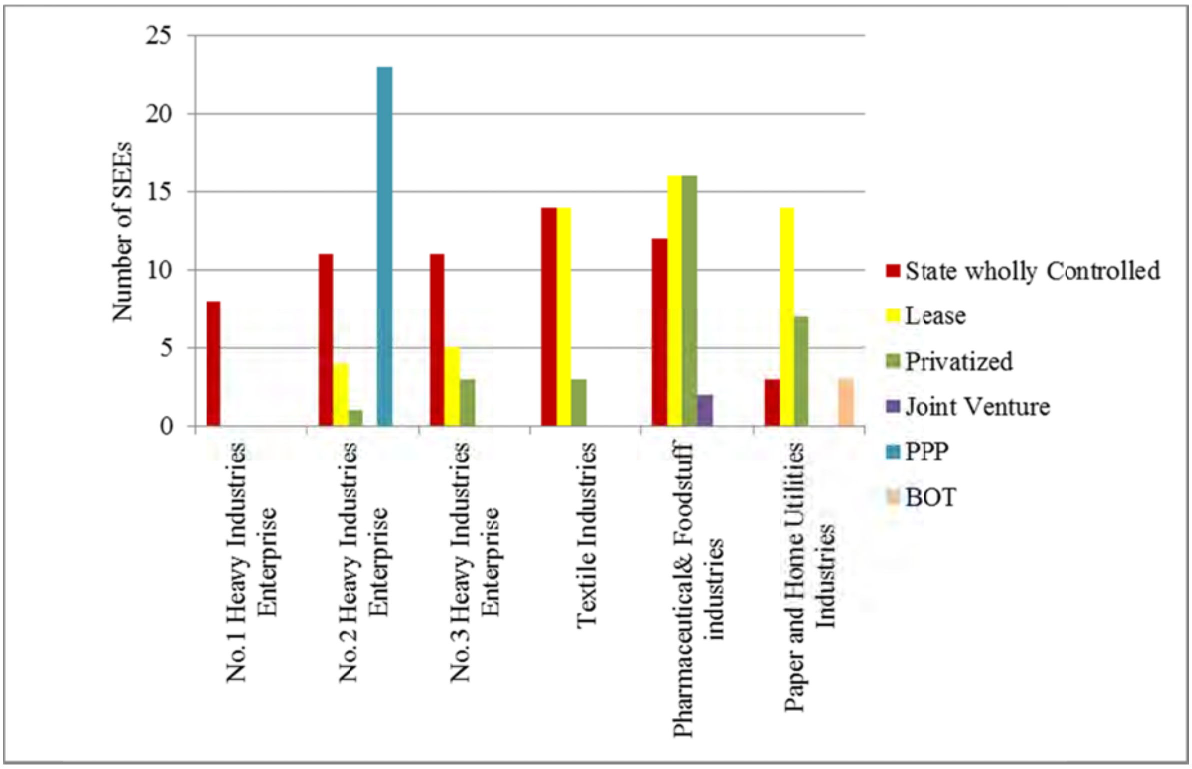
Under these six main enterprises, table (5.1) describes that there are 144 factories, 26 Rubber Plantation Fields and one department of industrial raw materials. At the time of Nov 2014, 30 factories are privatized. 56 factories and 3 Rubber Plantations are under state control while 58 factories and 23 rubber plantation are operating under different arrangement with private sectors such as private-public partnership, joint venture and long term lease. It can be seen that 76% of Main Factories, 24% of Branch Factories and 12% of Rubber Plantation are still state fully owned. 24% of Main Factories, 47% of branch factories and 89% of rubber plantation are operating as joint venture or long term leasing. 30% of Branch factories are fully privatized as of November 2014.

Table 5.1. Number of SEEs under Ministry of Industry as of Nov 2014

SEE	Main Factories		Branch Factories		Rubber Plantation	
	Number	%	Number	%	Number	%
State Wholly Controlled	32	76.2	24	23.5	3	11.5
PPP/Joint Venture/Long term lease	10	23.8	48	47.1	23	88.5
Privatization			30	29.4		
Total	42	100.0	102	100.0	26	100.0

Source: Ministry of Industry (Nov, 2014)

Figure 5.1. Different status of SEEs under Ministry of Industry as of Nov 2014



Source: Ministry of Industry

Table (5.2) shows that there are still a certain number of SEEs which are controlled by the State. It does not mean that the remaining SEEs will not be transferred to the private sector. Reviewing of expression of interest and tender for long term leased and joint venture arrangements are being processed for the rest SEEs. Some SEEs have been allowed to stop production. Although tenders are still invited, nothing or not much tender applications are received since private sector is also not interested to invest in unprofitable or poor-performing SEEs. The consideration from private sector includes location of SEEs and condition of machines and equipment.

Table 5.2. Number of SEEs under Ministry of Industry which is state wholly controlled

SEE	Main Factories	Branch Factories	Rubber Plantation
No.1 Heavy Industries Enterprise(Total)	**7**	**1**	
Steel Mill	2		
Automotives factories	5		
Automotive parts factory		1	
No.2 Heavy Industries Enterprise(Total)	**6**	**2**	**3**
Tyres Factories	2		
Machine, Electrical and Electric goods factory	4		
Rubber related products factory		2	
Rubber plantation			3
No.3 Heavy Industries Enterprise(Total)	**8**	**3**	**0**
Cement Factory	3		
Ceramic Insulator factory	1		
Glass factory	1		
Agricultural Machineries and Equipment factory	3		
Glass, High alumina brick factory		3	
Textile Industries(Total)	**6**	**8**	
Textile Factories	6		
Textile, bleached and dyed yarn factories		8	
Pharmaceutical& Foodstuff industries(Total)	**4**	**8**	
Pharmaceutical factories	2		
Horses and Sheep Breeding Farm	1		
Household products(soap, plastics)	1		
Pharmaceutical factories		2	
Household products(bottle,noodles,soap,corn products)		5	
Paper printing factory		1	
Paper and Home Utilities Industries(Total)	**1**	**2**	
High Grade Paper Mills	1		
Paper Packing Material Factory		1	
Hydrogen Peroxide Factory		1	
GRAND TOTAL	**32**	**24**	**3**

Source: Ministry of Industry (Nov, 2014)

Table 5.3. Different status of SEEs under Ministry of Industry as of Nov 2014

SEEs	Main Factories	Branch Factories	Rubber Plantation
No.1 Heavy Industries Enterprise(Total)	**7**	**1**	**0**
State wholly Controlled	7	1	
No.2 Heavy Industries Enterprise(Total)	**6**	**7**	**26**
State wholly Controlled	6	2	3
PPP			23
Lease		4	
Privatized		1	
No.3 Heavy Industries Enterprise(Total)	**9**	**10**	**0**
State wholly Controlled	8	3	
Lease	1	4	
Privatized		3	
Textile Industries(Total)	**10**	**21**	**0**
State wholly Controlled	6	8	
Lease	4	10	
Privatized		3	
Pharmaceutical& Foodstuff industries(Total)	**5**	**41**	**0**
State wholly Controlled	4	8	
Joint Venture		2	
Lease	1	15	
Privatized		16	
Paper and Home Utilities Industries(Total)	**5**	**22**	**0**
State wholly Controlled	1	2	
Lease	3	11	
Privatized		7	
BOT	1	2	
Grand Total	**42**	**102**	**26**

Source: Ministry of Industry

Figure (5.1) describes the different status of SEEs under Ministry of Industry. Public Private Partnership arrangement in terms of product sharing can be found in rubber plantation under No. 2 Heavy Industries Enterprise. Two branch factories under

Pharmaceutical and Foodstuff industries are operating as joint venture.

30 SEEs under No. (2) Heavy Industries Enterprise (1 out of 13 factories), No. (3) Heavy Industries Enterprise (3 out of 19 factories), Textiles Industries (3 out of 31 factories), Pharmaceutical and Foodstuff (16 out of 46 factories), Paper and Home Utilities Industries (7 out of 27 factories), were privatized. Privatized SEEs generally manufacture consumer products such as footwear, leather, home paints, soaps, leather products, wood, soft drinks and etc. Three SEEs namely Bicycle Factory (Kyauk-Se), Bicycle Factory Branch (Yangon) and Packaging Material Factory (Amarapura) under Paper and Home Utilities Industries are under BOT arrangement.

Most of the leasing arrangements are for 30 to 50 years. The joint venture partners continue the existing business transactions. However, if the partner wants to change the purpose of the business (to construct new building for apartments or other business activities), the approval from the ministry and the Myanmar Investment Commission is needed. The employees at the ministry have the options of working with the ministry , being transferred to the other ministry if the relevant posts are vacant and becoming an employee of the private sector taking into account of transition arrangement. Some elder employees can ask for the retirement. The ministry is currently taking care of the movement of the employee for the sake of their welfare.

In Myanmar Times dated May 29, 2015, state wholly owned Myanmar Pharmaceutical Factory (MPF) is planning for upgrading in terms of replacing much of its machinery at the five private investors. As per the news, EOI (Expression of interest) was submitted by 20 private companies and the tender process will be done on end of May. It is mentioned that for FY 2015-16 budget, 50 Billion Kyats (US$ 46 million) was allowed for MPF and 32 Billion Kyats will be used up for this project. MPF mainly supplies its products to government own hospitals under Ministry of Health, Ministry of Defence and Ministry of Social Welfare. Under the U Thein Sein government, MPF is not able to get the order from Ministry of Health’s central medical store. Government procurement tender process is relatively more competitive and millions of medicine and pharmaceutical products are being imported. MPF is facing increasingly competition with the imported products from India.

Moreover, there are some issues at enterprise level. The official mentioned that after SEEs have been operated as a joint venture, the private investors are not able to manage them due to unexpected situations for eg. high price of imported raw materials due to exchange rate depreciation and difficulty of getting raw materials. They cannot manage to pay the salaries of the staff and have to stop production. In that case, they have to ask the permission from the ministry to stop it before the joint venture term since they are not able to continue to manufacture the products. The ministry encountered the problems of paying salaries of the staff since they assume that during the joint venture period, the private sectors are expected to pay the salaries of the stuff and the ministry excludes the salaries from its budget.

5.2. Ministry of Energy

Under Ministry of Energy, there are three state economic enterprises namely 1) Myanmar Oil and Gas Enterprise (MOGE), 2) Myanmar Petrochemical Enterprise (MPE) and 3) Myanmar Petroleum Products Enterprises (MPPE). MOGE is responsible for upstream oil and gas exploration, drilling, production and onshore oil and gas transportation while MPE is responsible for refineries, fertilizer plants, CO_2 and LPG (liquefied petroleum gas), methanol plants, petroleum and petrochemical transportation. MPPE is responsible for storage, marketing and distribution of petroleum products. Almost all of the Oil and Gas exploration has been under joint venture arrangements.

Myanmar Alinn Daily (government newspaper) dated on 14^{th} July 2015 shows the announcement of invitation from Ministry of Energy that calls for a Joint venture for Importation, storage and distribution of Petroleum Products except liquefied petroleum gas (LPG) and liquefied natural gas(LNG). The Myanmar Petroleum Products Enterprises (MPPE) is a state owned enterprise which is carrying out the retail and wholesale distribution of petroleum products under the ministry of energy in Myanmar. Myanmar Times (private newspaper) dated on 10^{th} July 2015 mentions that most of the petrol stations (148 out of 260) were sold to the private sector. Its monopoly power of fuel imports has spread into around 70 private companies which are allowed to import and distribute petroleum products. These 70 private companies run the country’s 1163 petrol stations but few possess storage facilities or import license. Currently, the MPPE operates storage facilities, conducts sales and distributes petroleum products through four main fuel terminals, twenty four sub fuel terminals and 12 petrol stations in Myanmar. The invitations also describe that the interested foreign companies are invited to submit for bidding in order to improve the management of the business and to give better service for storage, distribution and sales of petroleum products.

5.3. Ministry of Information

Under Ministry of Information, there are three enterprises namely 1) Printing and Publishing Enterprise (PPE), News and Periodicals Enterprise (NPE) and Motion Picture Enterprise (MPE). Myanmar Alinn Daily (government newspaper) dated on 4th July 2015 describes that movie Theaters under Ministry of Information were sold out to the private businesses with the permission of Privatization Commission. The private sector has not yet implemented according to the terms and conditions of the privatization agreement. Therefore Ministry of Information urged 12 businessmen to comply the terms of the agreement. Those who purchased movie theaters under the Ministry of Information have to submit their action plans within one month and implement it within six months. The news shows that Ministry will take further actions as per the agreement if they fail to submit and implement.

Myanmar Alinn Daily (government newspaper) dated on 8th July 2015 depicts the news that , all over the country, there are total 162 movie theaters including proposed places for movie theaters under Ministry of Information. 27 places are under long term lease and 93 movie theaters were sold out to private sector.38 movie theaters and four places were given permission for doing other business activities. Most of them run for banking services in this Movie Theater places. The lists are as follows;

Table 5.4. List of movie theaters under Ministry of Information engaging other business activities

State/Regions	**Theater Name**	**Current Business Activities**	**Status**
Thahtone, Mon State	Kyal Tar Yar Movie Theater	Myanmar Oriental Bank	Privatized
Myaung Mya, Ayeyarwaddy Division	San Pya Movie Theater	Myanmar Oriental Bank	Privatized
Aung Ban, Shan State	Ngwe Bait Mhan Movie Theater	Asia Green Development Bank	Privatized
Thibaw, Shan State	Sein Myit Tar Movie Theater	Myanmar Oriental Bank	Privatized
Kyaing Tone, Shan State	KhayMarRah Movie Theater	Myanmar Oriental Bank	Privatized
Taungoo, Bago Region	San Thiri Movie Theater	Under repair process for banking service	Privatized
Kawlin, Sagaing Region	Myoma Movie Theater	Under repair process for banking service	Privatized

Soruce: Myanmar Alinn Daily (8th July, 2015)

6. Challenges embedded within on-going SEE reform in Myanmar

Reforming SEEs stresses the issue of ownership, competition and regulation. Challenges with the transformation of SEE are in place at individual enterprise level. Moreover, challenges remain for relevant ministries level. The overwhelming challenge is that human resource management. The existing government personnel can choose the options of becoming the employee of the private sector but still can get pension benefits or being transferred to another department or ministry. Some employees want to work back at the ministry or some want to go for pension after becoming the employee of the private sector since the working nature is different.

At the macro level, under U President Thein Sein government SEE's reform came under the Framework for Economic and Social Reform (FESR) in order to reduce the fiscal burden from the State Budget and to improve the performance of SEEs. Under Public Financial Management Reform mission, two workshops about SEEs' reform were done in 6-7 March 2014 and 5 March 2015 led by the World Bank and Ministry of Finance.

Another challenge is that, as mentioned above under the case study of Ministry of Industry, after SEEs have been operated as a joint venture, the private investors are not able to manage them due to unexpected situations for eg. high price of imported raw materials due to exchange rate depreciation. They cannot manage to pay the salaries of the staff and have to stop production. In that case, they have to ask the permission to stop it before the joint venture term since they are not able to continue to manufacture the products. The relevant ministries have encountered the problems of paying salaries of the staff since they assume that during the joint venture period, the private sectors are expected to pay the salaries and the ministries exclude the salaries from their budget. Such kind of unexpected costs and situation are encountered.

7. Conclusion and Recommendations

The reform policy of SEEs includes limiting budget, SEE being run autonomously and corporatization and privatization (in which public private partnerships method include). Loss making SEEs are likely to be privatized while profitable SOEs are more likely to be strengthened. It can be seen that loss-making SEEs have been privatized through lease arrangement and total divestiture. There are still loss-making SEEs and most of them are being processed for lease arrangement. However, some loss-making SEEs are crucial for the welfare of the people due to their non-commercial and non-profitable objectives.

Almost all of the SEEs have been restructured in different ways. Very few ones were sold out to the private sector making valuation on property. Some SEEs such as under Ministry of Commerce becomes new regulatory department and some integrated into their ministry regulatory bodies. In fact, at the individual SEE level or at the ministry level, the reform agenda is identified in different ways. It depends on the importance of

SEE to the public welfare as well as their revenue contribution to the state coffer.

Key findings from this paper are as follows;

- The revenue from SEEs to union government is a major contribution to total revenue. SEE revenue have constituted between 50-70 percent of the total. But the declining trend of its contribution can be observed over the four fiscal years which has dropped from 71 percent to 49 percent of total revenue.
- At 2013-14 FY, SEEs under ministry of Labor and Commerce did not run anymore. SEEs under ministry of industry (1) and (2) were integrated. At 2014-15 FY, SEEs budget under Ministry of Livestock, fisheries and rural development and hotel and industry are no longer existed. Central Bank of Myanmar was introduced as SEE in this fiscal year. At 2015-16 FY, SEEs budget under ministries of cooperatives and ministries of construction seems abolished or integrated within the ministry.
- The core SEEs which make most revenue contribution to union budget are under ministry of mines, energy and communications and information technology.

Key recommendations from this paper are as follows;

- Challenges underpinning with the SEE reform are still present at individual enterprise level and ministerial level. Government administrative capacity to regulate private sectors, access to finance and political commitment definitely support for the dynamic of SEE reform.
- SEE reform cannot be done alone and it is linked with other country development objectives and initiatives such as developing private sector, creating level playing fields and building other institutional environments (such as accessible to finance).
- Some SEEs do have non-commercial objectives which are not mostly explicit. It is fundamental to clarify SEEs' objectives with the purpose of performance monitoring and evaluation. For eg. Pharmaceutical Products are restricted to competition in the market due to imported cheap products. As a result, this SEEs suffer loss. However, their existence is crucial for providing welfare of the people.
- GOM take carefully consideration of the options for reforming SEEs under different ministries in the form of strategic central unit rather than individualized approach of reform. The function of this unit is to monitor the operational, social

and economic efficiency of SEEs but not limited to that of different reformed SEEs so that the transformation of SEEs can be transparent and accountable.

There is no specific framework that can guarantee the success of SEE's reform.

However, other countries' experiences and literature shows the fundamentals that could enhance the probability of success.

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Chapter 3

Myanmar's State-Owned Enterprise Reform: A Comparative Study of Asian Transition Economies

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Abstract

This paper analyses Myanmar's State-Owned Enterprise (SEEs) Reform from four perspectives. First, the scope of SEEs is considered. We have found that the SEE Law does not define the SEE's role clearly. SEEs can operate in any activity which the government wants; on the other hand, there have been JVs and private companies in legally state-monopolized sectors. Meanwhile, China and Vietnam have been gradually limiting the scope of their SOEs and withdrawing state capital from non-core sectors. The government should decide which areas are core or non- core sectors for SEEs.

Secondly, legal and regulatory framework is focused. Legal forms of SOEs develop from departmental enterprises to statutory corporations, to limited-liability companies or joint stock companies. Myanmar's SEEs are departmental enterprises. SEEs should, therefore, be separated from their line ministries and transformed into corporations. Furthermore, corporatization requires reforms of relevant company and labor laws. In China, management and employee buyout was dominantly used to privatize small and medium SOEs in the 1990s. On the other hand, some large SOEs were corporatized, and then transformed into state wholly-owned limited-liability companies. The companies separated their profitable assets and made them joint stock companies which were listed in the stock exchanges. These measures may be useful for Myanmar's SEEs.

Thirdly, state ownership arrangements are discussed. Ownership models can be classified into four categories; (1) the decentralized model, (2) the dual model, (3) the advisory model, and (4) the centralized model. Myanmar's ownership arrangement is a decentralized model commingled with a few elements of dual and advisory models. It is advisable that the government should enhance MOF's overseeing financial management of SEEs and the Privatization Commission's role and capacity.

Fourthly, fiscal relations between SEEs and the state are examined. From a quantitative perspective, we cannot obtain an accurate view of the relations partly because of the accuracy of statistical data and partly because of the existence of "Other Account" which is not fully reported in fiscal reports. From an institutional perspective, SEEs were completely a part of the government budget since FY1990/91 until FY 2011/12. The autonomy of financial management has been gradually growing since FY2012/13, while at the same time SEEs have been taking on more burdens of part of current expenditures. The government should develop reliable data and enhance SEE's autonomy of financial management.

Contents

1. Introduction

1.1. Purpose

The purpose of this paper is to discuss the main issues on the reform of state-owned enterprises in Myanmar and to consider the sequences of the reform. Here the author uses state-owned enterprises (hereinafter SOEs) in the general meaning[18] and state economic enterprise (hereinafter SEEs) only for Myanmar's SOEs.

In China and Vietnam, SOE reform does really matter. Their SOEs have accounted for a large share of the real sector despite inefficiency, in particular, of the heavy industries. In addition, cozy relations between the SOEs and state-owned banks have piled up bad debts, which have often impeded the development of financial intermediation.

In Myanmar, in contrast, SEEs play a minor role in the manufacturing sector at present. They, however, have strongholds in utilities, finance, and extracting industries. SEEs do not have financial obligations to state-owned banks; on the other hand, SEE's finance has been a part of the state budget. Furthermore, the scale of SEE's finance has been usually larger than that of the central government finance. SEE reform, therefore, play an especially vital role in improving public financial management in Myanmar.

1.2. Literature Review

In the mid-1990s, there were some studies on SEEs in Myanmar such as World Bank (1995) and Nishizawa (1997) in Japanese. The chapter three of the former dealt with state enterprise reform and profoundly analyzed the fiscal relations between SEEs and the government budget. Since then, only a few studies have been made so far at Myanmar's SEEs until recently.

Full-fledged research has started since shifting to civilian rule in 2011. Kubo (2012) analyzes the reform of the budget system for SEEs, and Kudo (2012) overviewed industrial development under the military regime. Japan Economic

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[18] The author uses EU directive No 80/723/EEC as the definition of SOEs, which says that, "public undertakings means: any undertaking over which the public authorities may exercise directly or indirectly a dominant influence by virtue of their ownership of it, their financial participation therein, or the rules which govern it."

Research Institute Inc. (JERI) and Daiwa Institute of Research Ltd. (DIR) conducted a detailed survey of some SEEs and their factories under the Ministry of Industry (MOI) as a JICA program in FY 2012/13, in which the author participated as a consultant (JERI & DIR (2013)). The material on SEEs in this paper is derived mainly from this survey. Although we have only limited information on SEEs under other ministries, Adam Smith International (2015), published in the fairly recent past, yields precious information on SEEs of the extracting industries.

By way of comparison, the development of SOE reform in China will be referenced. Although there are vast amounts of studies on SOEs in China, the late Imai's admirable studies offer much suggestive evidence for this paper (Imai (2003a), Imai (2003b), Imai (2003c), and Imai (2003d)). Moreover, Yang Qiu Ling's recent work on large SOEs of China's oil industry provides good examples for the purpose of this paper (Yang Qiu Ling (2013)).

1.3. Structure of the Paper

In section two, the scope of SOEs, including SEEs, is considered. Myanmar's SEE Law does not limit the scope of SEEs, while China and Vietnam are withdrawing state capital from non-core sectors. Section three examines the development of legal and regulatory framework. The author borrows analytical tools from the World Bank's toolkit (World Bank (2014)), and then systematizes them as stages of development based on the late Professor Ishikawa's theoretical framework (Ishikawa (1997a) and Ishikawa (1997b)). In the framework, China's experiences and Myanmar's recent developments are analyzed. In section four, state ownership arrangements are classified into four models and considered as stages of development as section three. In the models, Myanmar's developments are interpreted. In section five, combining information from various sources, the author tries to clarify the fiscal relations between SEEs and the state budget quantitatively and qualitatively. Section six offers the conclusion of this paper.

2. Scope of SOE's Economic Activities

2.1. Introduction

In this section, the scope of SOEs is considered. To begin with, Myanmar's State-owned Economic Enterprises Law is examined. Next, SEEs under the Ministry of

Industry and the Ministry of Mines are observed. We can see that Myanmar's SEEs have been established in any area the government wants, while Joint Ventures (JVs) have been operating in legally state-monopolized areas. Furthermore, China's and Vietnam's experiences are reflected. Both countries have been gradually limiting the scope of their SOEs. Finally, we conclude that Myanmar should have an integrative and specific strategy on SEEs.

2.2. Myanmar's SEEs from a Legal Standpoint

2.2.1. SEE Law

The state sector is considered to be highly inefficient relative to the non-state sector; nevertheless, many governments have established many SOEs with various purposes, such as providing utilities and finance, building infrastructure, controlling natural resources and key sectors, what is called "commanding heights," and so on.

In Myanmar, the State-owned Economic Enterprises Law (hereinafter the SEE Law) was established in 1989[19] and was amended in 1997[20]. SEEs have been founded based on these laws; thus, they are not corporate bodies under the Company Act[21] or the Special Company Act[22]. The SEE law, as is well known, defines economic activities to be carried out solely by the Government. Section 3 of the Law specifies the twelve economic activities as follows:

> The government has the sole right to carry out the following economic enterprises as State-owned economic enterprises:
>
> 1. Extraction of teak and sale of the same in the country and abroad;
> 2. Cultivation and conservation of forest plantation with the exception of village-owned fire-wood plantation cultivated by the villagers for their personal use;
> 3. Exploration, extraction and sale of petroleum and natural gas and production of products of the same;
> 4. Exploration and extraction of pearl, jade and precious stones and export of the same;
> 5. Breeding and production of fish and prawn in fisheries which have been

[19] The State Law and Order Restoration Council, The State-owned Economic Enterprise Law (The State Law and Order Restoration Council Law No. 9/89), 31st March 1989.

[20] The State Law and Order Restoration Council, The Law Amending the State-owned Economic Enterprise Law (The State Law and Order Restoration Council Law No. 6/97), 4th March, 1997.

[21] The Myanmar Companies Act, 1914.

[22] The Special Company Act, 1950.

reserved for research by the Government;

6. Postal and Telecommunications Service;
7. Air Transport Service and Railway Transport Service;
8. Banking Service and Insurance Service;
9. Broadcasting Service and Television Service;
10. Exploration and extraction of metals and export of the same;
11. Electricity Generating Services other than those permitted by law to private and cooperative electricity generating services;
12. Manufacture of products relating to security and defence which the Government has, from time to time, prescribed by notification.

Among the twelve fields, controlling natural resources is set forth in Sections 1-5 and 10, utilities and finance in Section 6-9 and 11, and defence in Section 12.

Furthermore, Section 6 of the Law stipulates that, “Any person shall have the right to carry out any economic enterprise other than those prescribed under Section 3 to be carried out solely by the Government.” Consequently, it follows that the scope of SEEs’ activities is limited to the above-mentioned ones.

Despite these sections, there is an inconsistent stipulation, Section 7, which states that, “Without prejudice of the provision of Section 6, the Government may, in addition to those economic enterprises which are prescribed under Section 3 to be carried out solely by the Government, also carry out any other economic enterprise if it is necessary in the interest of the Union of Myanmar.” Based on this section, SEEs can run business in any area which is not stated in Section 3. In short, SEEs can operate in any activity which the Government wants. On this point, however, President U Thein Sein made a speech saying,

> First we will make an assessment of the communication, electricity, energy, forestry, education, health and financial sectors where the ratio of government ownership is large. Then we will increase the ratio of private ownership in these sectors as per the international rules and practices followed by the government encouragement for efficiency promotion.[23]

As a matter of fact, SEEs offer a broad range of goods and services. Annex 1 shows a list of SEEs by ministry, though it is of unknown origin and looks somewhat old[24]. World Bank (1995) illustrates “List of State Economic Enterprises Under Various Ministries,” on which there were 59 enterprises under 17 ministries at that time. In

[23] President U Thein Sein’s address on 19 June 2012.

[24] According to Phoo Pwint Phyu (2013), the Government has 44 SEEs as of December 2013.

comparison between the list of 1995 and that of 2013, there were no major changes in the SEE system in that every SEE belongs to its line ministry respectively.

2.2.2. SEEs under Ministry of Industry and Ministry of Mines

We have obtained information on SEEs and their factories under MOI as of November 2012 (JERI & DIR (2013)). The Ministry had six SEEs and 54 factories under those SEEs at that time (Table 2-1). Every SEE under the Ministry does not fall under the state-controlled monopolies defined by Section 3 of the SEE Law; it has, therefore, been established based on Section 7 of the law.

Table 2-1. SEEs and Factories under Ministry of Industry

Enterprise	Number of Factories	Main Products
Heavy Industries (1)	8	Cars, trucks, SUVs, construction equipment, agricultural equipment, diesel engines, etc.
Heavy Industries (2)	6	Tires, machine tools, cables, LEDs, turbines, generators, etc.
Heavy Industries (3)	10	Cement, fire clay brick, ceramic tableware, glass, mirrors, etc.
Pharmaceutical and Foodstuff enterprise	4	Medicines, vaccines, health materials, syringes
Textile enterprise	18	Yarn, fabric, garment and knitting
Paper and Home Utilities enterprise	8	Cultural paper, newsprint paper, cardboard paper, hydrogen peroxide, bicycles, stainless steel furniture, sewing machines, footwear, etc.

Note: as of November 2012

Source: JERI & DIR (2013)

A recently published study on the extractive industries in Myanmar, Adam Smith International (2015), has provided us with information on SEEs in those sectors. According to it, the Ministry of Mines (MOM) has six SEEs as follows:

- No 1 Mining Enterprise (ME1) is to undertake mining, production and marketing of antimony, lead, zinc, silver, iron, nickel and copper ores.
- No 2 Mining Enterprise (ME2) is responsible for mining, production and

marketing of gold, platinum, tin, tungsten, molybdenum, niobium, columbium, heavy mineral and gold ores.

- No 3 Mining Enterprise (ME3) is responsible for productions and supply of industrial raw minerals such as barites, bauxite, bentonite, gypsum, limestone, dolomite, clay, manganese and coals.
- Myanmar Gem Enterprise (MGE) is responsible for mining and marketing of various precious gemstones and jade.
- Myanmar Pearl Enterprise (MPE) handles breeding and cultivating of mothers of Pearl, and production of Pearl.
- Myanmar Salt and Marine Chemical Enterprise (MSMCE) is responsible for production and marketing of common salt, marine chemical and soda ash.

Next, let us consider the following quotation. The report says that, "GOUM (Government of the Union of Myanmar – the author) officials stated that all mines are now either JVs or have been privatised, with none operated either by the State Economic Enterprises or ministry staff, who have a regulatory role," and "The policy direction of the MOM specifies that approximately 90% of the mines should be private sector owned, with the remaining 10% still owned and operated by the MOM." It also points out that "in contrast to the State Owned Economic Enterprises Law, the GOUM no longer exercises its right to monopolise resource extraction" (Adam Smith International (2015)).

In short, SEEs can operate in any activity which the government wants; on the other hand, there have been JVs and private companies in the fields defined by Section 3 of the SEE law.

2.3. Case Studies: China and Vietnam

In China, there were SOEs all over sectors before the beginning of policies of reform and opening-up. In the early 1990s, however, the central government took cognizance of the need to reduce the number and distribution of SOEs. Then local governments voluntarily made small and medium SOEs under them privatized in ways such as the conversion of SOEs to joint stock cooperatives and the sale of those enterprises to the private sector, which was allowed by the central government in 1993. Furthermore, the party officially announced the "Grasp the large, liberalize the small" policy in 1995, namely, a different treatment between large SOEs and small and medium ones. In the next phase, the policy of "strategic adjustment of the state economy" was announced in 1997, under which the state decided to concentrate state capital on a few core, strategic areas and authorized the promotion of the exit of state capital from and full privatization in non-core sectors. Since 1999, the scope of privatization has expanded to large SOEs in non-core industries (for details, see Imai (2003a) and Imai (2003b)).

In Vietnam, as is the case with China, privatization of small and medium SOEs preceded reforms of large SOEs. At present the government of Vietnam is planning to withdraw state capital from non-core sectors. Decision 37/2014/QD-TTg on the criteria for the classification of SOEs on 18 June 2014 sets out four categories setting out the state ownership requirements as follows:

(1) group 1: state ownership 100% for 16 sectors including electricity transmission, the management of railway systems, irrigation systems, banknote and coin production, public postal services, etc.,

(2) group 2: state ownership 75% or more for seven sectors including oil, gas and large-scale mineral exploitation, telecommunication infrastructure, inland roads and waterway systems, etc.,

(3) group 3: state ownership from 65% up to 75% for eight sectors including petroleum and natural gas processing, cigarette production, petroleum, gas, food and medical drug wholesaling, electricity distribution, etc., and

(4) group 4: state ownership from 50% up to 65% for nine sectors including water supply and drainage sewerage, international sea and railroad transportation, basic chemicals, chemical fertilizers and insecticides, etc.

As seen above, China and Vietnam have been gradually limiting the scope of their SOEs.

2.4. Section Summary

Myanmar's SEE Law does not define the SEE's role clearly. Although the government indicates the basic direction toward SEE reform, as seen later in the President's address and Framework for Economic and Social Reforms, it does not present integrative and specific policies on key issues of the reform. Ministries, therefore, discretely address the reform of SEEs of their own. It is advisable that the government, as with China and Vietnam, should decide which areas are core or non-core sectors for SEEs and apply an integrative approach to SEEs.

3. Legal and Regulatory Framework

3.1. Introduction

In this section, we would like to focus attention on the legal and regulatory framework of SOEs. Governments all over the world have made efforts to reform their SOEs by many different means. For example, OECF (1998) enumerated various measures as follows:

Table 3-1 (a). Classification by Means of Reforms

With Transfer of Assets	Without Transfer of Assets
(1) Public Offering	(1) Corporatization
(2) Direct Sale	(2) Holding Company, Trust Fund
(3) Liquidation and Asset sale	(3) Merger
(4) Concession	(4) Performance Contract
(5) Voucher Privatization	(5) Management Contract
	(6) Lease
	(7) Joint Venture

Table 3-1 (b). Classification by Purchaser and Scale of Assets

Purchaser and Scale of Assets
(1) Mass privatization
(2) Management-Employee Buyout
(3) Small Privatization
(4) Spontaneous Privatization
(5) Foreign Privatization

Source: OECF (1998)

First, in section 3.2, we show several legal forms and legislations of SOEs and systematize them as stages of development. Secondly, in section 3.3, employee status which is associated with legal form is considered. Thirdly, China's experiences are outlined in section 3.4. Management and employee buyout (MEBO) was dominantly used for the privatization of small and medium SOEs in the 1990s. Meanwhile, completely different ways were chosen for reforms of large SOEs. Departmental enterprises were separated from line ministries and corporatized to statutory corporations. After that, they were transformed into wholly state-owned limited companies, and then the companies separated their profitable assets and made them joint stock companies which were finally listed. Fourthly, in section 3.5, examining some aspects of SEEs under MOI, we demonstrate that SEEs are departmental enterprises. Fifth, in section 3.6, we take a look back on SEE reforms such as asset sales under the military rule, JV and lease in recent years, and recent attempts to corporatize SEEs. Finally, section 3.7 offers the conclusion of this section.

3.2. Legal Form and Legislation of SOEs

There are several legal forms and legislations of SOEs. Table 3-2 shows typical cases based on World Bank (2014).

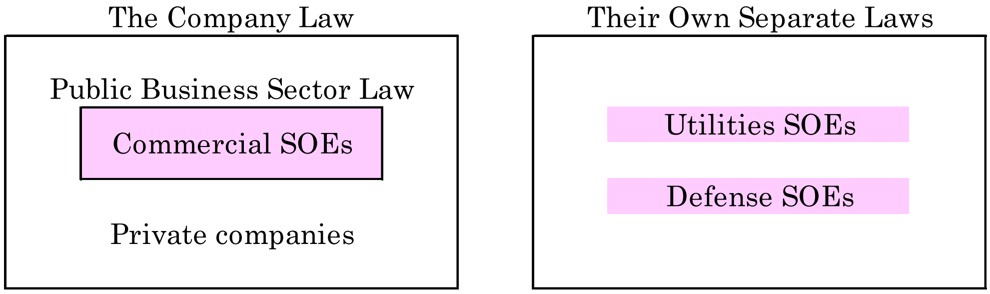
Table 3-2. Type of SOE Legal Form and Legislation

Legal Form	Legislation
Noncorporatized entities (government department or SOEs)	SOE law or public enterprise Law
Statutory corporations	Their own legislation act or other distinct legal foundation (special statute)
Corporatized SOEs (limited-liability companies or joint stock companies)	Their own legislation or general SOE law, and/or company law
Listed joint stock companies	In addition to the above laws, the listing requirements and other securities laws

Source: By author based on World Bank (2014)

Some countries have plural legal forms of SOEs. In Egypt, for example, commercial SOEs are subject to the SOE law and the company law, while exceptional SOEs such as utilities and defense to their own separate laws (see Figure 3-3).

Figure 3-3. General SOE Law and Separate SOE Law:
Case of Egypt



Source: By author based on World Bank (2014)

World Bank (2014) regards the above-mentioned legal forms as types, not necessarily as stages of development. The author, however, would like to systematize them and consider sequences of SOE reform based on the late Professor Ishikawa's framework. Ishikawa presented the analytical framework of SOE reforms in China. He classified the development of those SOEs into the following five stages:

(a) Patrimonial SOEs,
(b) Departmental SOEs,
(c) SOEs with enhanced autonomy of management,
(d) Corporatization of SOEs, and
(e) Privatization of SOEs.
Source: Ishikawa (1997a) and Ishikawa (1997b)

In concordance with these stages, it can be argued that the development of legal form is sequenced below:

- noncorporatized entities (departmental enterprises)[25],
- statutory corporations,
- corporatized SOEs (limited liability companies or joint stock companies), and
- listed joint stock companies.

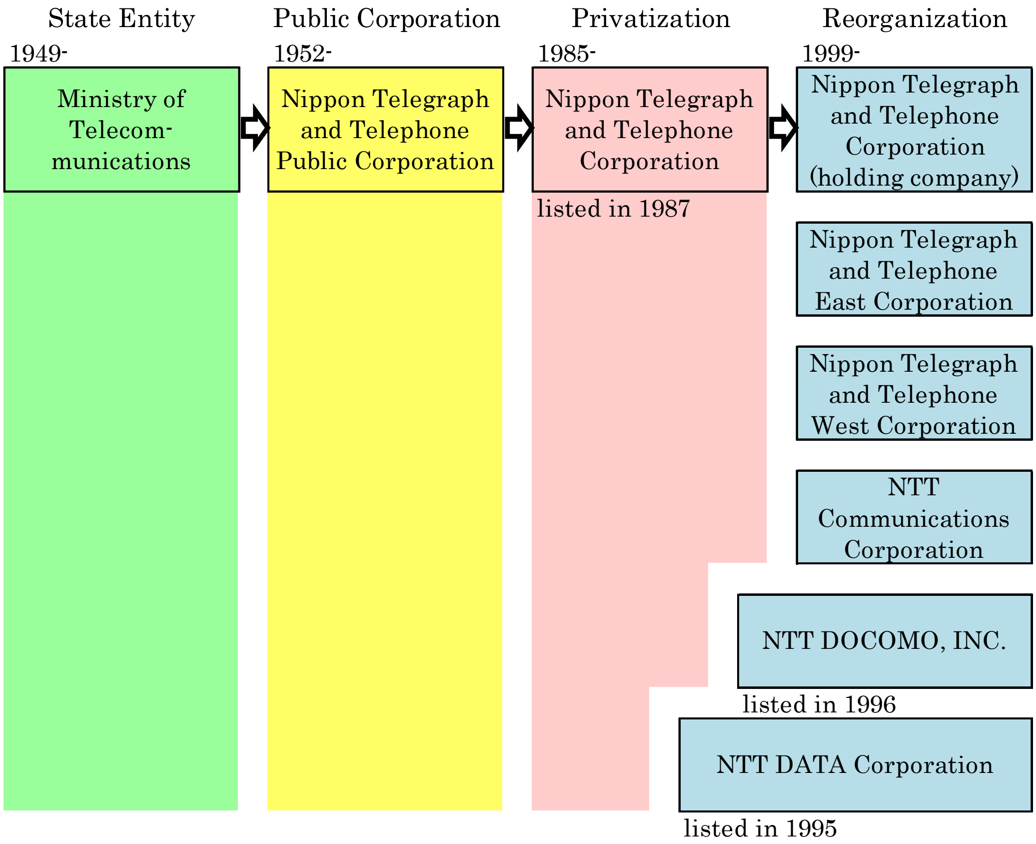
Furthermore, reforms without transfer of assets, such as JV and lease, are applied to departmental enterprises.

The experience of Japan's Nippon Telegraph and Telephone Corporation (NTT) provides a good example of development of legal form. From 1949 to 1952,

[25] According to the OECD Glossary, departmental enterprise is "An unincorporated industrial or commercial unit that: (i) is closely integrated with a government ministry/agency; (ii) is likely to hold a small working balance; (iii) is either mainly engaged in supplying goods and services to government units or the general public; but (iv) operates on a small scale.

telecommunications service was operated by the departmental enterprise under the Ministry of Telecommunications. In 1952, the state entity was transformed into a statutory corporation, Nippon Telegraph and Telephone Public Corporation. The corporation was turned into a joint stock company in 1985 and listed in 1987, then reorganized into a holding company in 1999 (see Figure 3-4).

Figure 3-4. Japan's Nippon Telegraph and Telephone Corporation
Modes of Corporate System



Source: By author based on "NTT's Privatization and Reorganization" (in Japanese), NTT, 2004.

While Japan's NTT offers an excellent example of successive stages of development in the natural course of things, there are some cases in which a SOE skips stage(s) of development. For instance, in India, until 1999 telecommunications services were provided by a departmental enterprise, the Department of Telecom Services (DTS). In 2000 it was corporatized and converted to a new wholly state-owned company registered under the Companies Act, Bharat Sanchar Nigam Limited (BSNL) (World Bank (2004)).

3.3. Employee Status Associated with Legal Form

World Bank (2014) says that, “SOEs fall under a wide variety of labor regulation, from the full application of the civil regime to the application of private sector labor law.” Table 3-5 shows typical institutional reorganization and changes in employee status associated with changes in relevant institutional legislation. As will be discussed in detail later, Myanmar’s SEEs are departmental enterprises; therefore, their officials and workers are civil servants. The Bank also says that, “SOEs face a number of labor restrictions that reduce their operational autonomy and disadvantage them vis-a-vis the private sector.” Actually Myanmar’s SEEs cannot cut the wages and salaries or dismiss employees because of the status of civil servants.

When the government is trying to change legal forms of SOEs, labor problems do matter. In response to changes in legal forms, employee status has to evolve as seen in Table 3-5, which often constitutes serious obstacles such as strikes.

New Zealand Rail provides a good example of employment status changes. In 1982 when the rail was converted from a departmental enterprise to a statutory corporation, New Zealand Rail Corporation, the status of its workers was changed from civil servants to public servants. Next, in 1990 when it was converted from the statutory corporation to a public limited liability company, New Zealand Rail Ltd., the staff remained as public servants. Finally, in 1993 when its shares were sold to the private sector, the employee status changed from public servants to private sector employees (World Bank (2004)).

Table 3-5. Institutional Reorganization and Changes in Employee Status

Type of PPI entry	Departmental enterprise	State-owned corporation	State-owned company (wholly owned)	Private company
Relevant institutional legislation	Civil service regulations or civil service law	Act of parliament establishing statutory corporation	Joint stock company with 100 percent of shares owned by the state; subject to normal company laws and corporate code (including bankruptcy)	Joint stock company; subject to normal company laws and corporate code (including bankruptcy)
Employee Status	Civil servant	Public sector employee	Public sector employee	Private employee

Source: World Bank (2004)

3.4. Case Study: China

3.4.1. Small and Medium SOEs

As seen in section two, reform of small and medium SOEs in China started in the early 1990s. A dominant mode of conversion in the first half of the 1990s was Joint Stock Cooperatives owned by employees, and that in the latter half of the 1990s was Private Liability Companies owned by employees. Local governments willingly encouraged small and medium SOEs to convert into employee-owned enterprises by such measures as setting the selling price at a lower level, compensation for the loss of job guarantees, assumption of debts, etc. It follows that management and employee buyout (MEBO) had a leading role in converting from small and medium SOEs to private companies (for details, see Imai (2003b)).

It seems reasonable to suppose that MEBO has some advantages over direct sales to the private sector in reducing asymmetric information and labor problems. Private sector investors are not interested in investing in unprofitable or loss-making SOEs partly because asymmetric information prevents them from fairly evaluating those SOEs. On the other hand, SOEs' insiders such as the management and employees can more easily evaluate the fair value of the businesses with lesser asymmetric information. On labor problems, as seen earlier, changes in employee status from civil servants often cause resistance of workers. MEBO can, however, relatively easily obtain workers' consent.

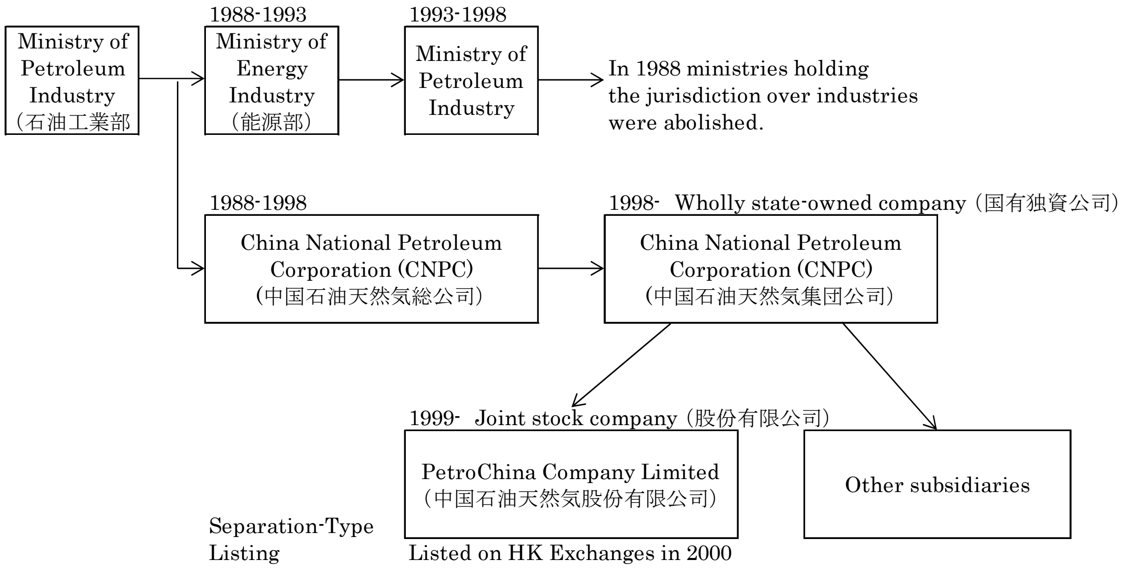
3.4.2. Large SOEs

As an example of large SOEs, let us consider China's oil industry (see Table 3-6). Before 1988, the industry was operated by the Ministry of Petroleum. In 1988, the ministry was divided into the Ministry of Energy Industry and China National Petroleum Corporation (CNPC), although CNPC had to be burdened with a part of administrative function. In 1998, old CNPC was transformed into new CNPC, a wholly state-owned limited company. In 1999, CNPC separated its profitable assets and made it a joint stock company, PetroChina Company Limited, which was listed in 2000 (for details, see Yang Qiu Li (2013)).

On this separation-type listing, Imai (2003c) says that, "In China, where most of large state-owned enterprises are burdened with excessive facilities or redundant labor, it is true that the separation-type listing is a realistic approach." However, parent SOEs as the largest shareholder have often exploited minority shareholders by their control over listed joint stock companies[26]. In order to protect the basic rights of minority shareholders, World Bank (2014) recommends; (a) encouraging shareholders to participate actively in the annual shareholders' meeting, (b) allowing minority shareholders to influence the nomination and selection of board members, (c) protecting against abusive related-party transactions, etc.

[26] On the diversion of company resources from its minority shareholders to the controlling shareholder, see, for example, Johnson et al. (2000).

Figure 3-6. Corporatization, Reorganization and Listing
Case of China's Oil Industry



Source: By author based on Yang Qiu Li (2013)

On separation-type listings, the same is true on Japan National Railway. Japan National Railway, a statutory corporation was dissolved in 1987. Profitable parts of it, that is, JR East, JR Central and JR West were separated and listed later, while other unprofitable parts were left as statutory corporations.

3.5. Departmental Enterprises: Case of SEEs under Ministry of Industry

Myanmar's SEEs are thought to be part of ministries, namely, departmental enterprises. Here we would like to affirm this fact from various aspects such as organizational structure, management, investment, personnel affairs, etc., using information we obtained from the survey of SEEs under MOI in FY2012 (JERI & DIR (2013)).

(1) Organizational Structure

As stated in section two, SEEs are established based on the SEE Law, neither on the Company Act nor on the Special Company Act. The SEE Law, however, has no sections which regulate organizational and management structure of SEEs. Naturally, those sections of the Company Act and the Special Company Act do not apply to SEEs.

For example, general meetings which are stipulated in the Company Act (Section 76) are not organized in SEEs.

The government individually designs the organizational and management structure of SEEs based on Section 8 of the SEE Law. In the case of MOI, the plan of the organizational and management structure of SEEs is drafted by the Executive Committee (explained in detail next) of MOI, have to be submitted to the Ministry of National Planning and Economic Development (MNPED), and have to be approved by the Cabinet (JERI & DIR (2013)).

(2) Management

SEEs under MOI are apparently part of the ministry; therefore, their management is not independent of the ministry. The status of SEEs is the same as that of directorates. MOI's website explains that,

> (The) Ministry of Industry organized with two Directorates, six Enterprises and one Central Research & Development Center as follows:
>
> Union Ministerial Office
> Directorate of Industry (DI)
> Directorate of Industrial Supervision and Inspection (DISI)
> No. (1) Heavy Industries Enterprise (HIE-1)
> No. (2) Heavy Industries Enterprise (HIE-2)
> No. (3) Heavy Industries Enterprise (HIE-3)
> Textile Industries (TI)
> Pharmaceutical and Foodstuff Industries (PFI)
> Paper and Home Utility Industries (PHUI)
> Central Research and Development Center (CR&DC)

Source: Ministry of Industry Website (accessed on 23 July 2015)

In MOI, the most significant decision-making body is the Executive Committee which consists of the Minister of Industry as chairman, two Deputy Ministers, Director of Ministerial Office, Directors General of Directorates, and Managing Directors of SEEs. The Executive Committee makes decisions not only of MOI as a whole but also of SEEs, including SEE's procurement, production, personnel affairs, etc. Headquarters of SEEs implement daily operations, and factories under SEEs are responsible only for production (JERI & DIR (2013)).

Table 3-7. Provision of MOI, SEEs, and State-Owned Factories

Organization	Decision-maker	Responsible for
Ministry of Industry	Minister, Executive Committee	Business management as a whole
State Economic Enterprises	Managing director	Daily operations of SEEs
State-owned factories	General manager	Production management (execution of production plans)

Source: JERI & DIR (2013).

(3) Investment

When a SEE has incentive to invest in capital spending, it has to obtain approval not only from MNPED and the Ministry of Finance and Revenue (MOF), but also from the Cabinet (JERI & DIR (2013)).

(4) Personnel Affairs

Since SEEs and their factories are part of MOI, personnel transfers are frequently made among them. The Executive Committee assigns Managing Directors who are required to be officials of MOI. The status of Managing Directors of SEEs is the same as that of Directors General of Directorates.

Staff of SEEs and their factories are officials of MOI; thus, personnel management of whom is determined by Union Civil Service Board. The staff’s wages and salaries are paid based on the government salary schedule determined by the Cabinet. It follows that staff of SEEs and their factories are civil servants (JERI & DIR (2013)).

(5) Finance

Although financial aspects of SEEs will be discussed later in section five in detail, SEEs have little autonomy of financial management.

All of these amount to saying that Myanmar’s SEEs are obviously departmental enterprises, not corporations with autonomy of management.

3.6. SEE Reforms: Past and Present

Here we would like to make a retrospective review of SEE reforms during the last two decades. We show observations as to which measures were used, who bought privatized SEEs, what kind of institutions were established, etc.

(1) Reforms under Military Rule from 1988 to 1997

Privatization of SEEs was introduced as part of a reform package from the planned economy to a market economy, and then the Privatization Commission was established in January 1995. Nevertheless, only small assets such as cinemas, rice mills, and sewing plants were sold to the private sector (see JERI & DIR (2013), Aung Kyaw (2008), and Nishizawa (2000)).

(2) Reforms under Military Rule from 1997 to 2011

More than 100 SEEs, almost all of the petrol stations under Myanma petroleum Products Enterprise (MPPE), some docks at Yangon Port, etc. were sold in 2010. On these sales, it has been rumored that the government sold off businesses in good-standing to cronies just before the handover of power to the civilian government (JERI & DIR (2013)).

(3) Reforms under Civilian Government from 2011 to Present

As seen above, the past privatization cases were sales of state assets, which makes the civilian government rethink privatization policy. The president's address on 19 June 2012 says,

> In addition, we must trim down uneconomical and redundant enterprises and cut expenses, while shrinking the State-own business sector and encouraging privatization. Here, privatization covered by the second phase of reform strategy <u>doesn't mean a big sell-off of government-run businesses</u> (underline – the author's).

As a result, the new Privatization Commission was established with a Vice President being Chairman and economic ministries being members in June 2012. The government has accorded JV and lease priority over asset sales. In case of MOI, some small factories have been leased and transformed into JVs, while all SEEs and most of main factories remain state-controlled (JERI & DIR (2013)).

There seem to be no official rules and criteria as to how to privatize which assets. Hence it seems that line ministries discretionally decide how to deal with their SEEs respectively. For instance, procedures of MOI are as follows (Table 3-8).

Table 3-8. JV, Lease, and Asset Sales: Case of SEEs under MOI

	Approval	Valuation / Lease Fee	Financial Supports by the Government
JV	Myanmar Investment Commission	Ministry of Industry	Possible
Lease	Ministry of Industry	Ministry of Industry	Not Possible
Asset Sales	Privatization Commission	Privatization Commission (Valuation Committee)	Not Possible

Source: JERI & DIR (2013)

(4) Recent Attempts to Corporatize SEEs

As Framework for Economic and Social Reforms states, "GOM will continue implementing the process of State Owned Enterprise reforms, from <u>corporatization</u> to privatization, in a transparent and efficient manner to produce greater benefits to the population without causing adverse environment and social consequences (underline – the author's),"[27] the government recognizes the importance of corporatization as the first step to reform.

(4)-1. Ministry of Transport

The Ministry of Transport has transformed its four SEEs into "corporation units," which are (i) Myanmar Airways, (ii) Inland Water Transport, (iii) Myanma Shipyard, and (iv) Myanma Port Authority. Although some government officials call this conversion "corporatization," these units still remain departmental enterprises and are not corporation based on the Company Act or the Special Company Act.

The corporation units obtain flexibility in operational and financial autonomies to some extent. On operational autonomy, managers in the private sector can embark on corporation units. The units can increase the wages and salaries of employees and pay bonuses to them. On the other hand, they cannot cut the wages and salaries or dismiss employees because they still remain civil servants. On financial autonomy, the units can borrow from banks as stipulated in the budget law for FY2012/13 (JERI & DIR (2013)).

(4)-2. Ministry of Communications and Information Technology

According to Phoo Pwint Phyu (2013), the Ministry of Communications and

[27] Framework for Economic and Social Reforms: Policy Priorities for 2012-15 towards the Long-Term Goals of the National Comprehensive Development Plan, 14 December 2012.

Information Technology (MCIT) has started its reform strategy since August 2012, in which the ministry is planning the separation and corporatization of telecommunications and postal service.

(4)-3. Yangon City Electricity Supply Board (YESB)

Yangon City Electricity Supply Board (YESB), a distribution part of the electric power sector (see Table 3-9), is on track to become a corporation with the assistance from International Finance Corporation (IFC). It is expected to be the first case that a departmental enterprise will be corporatized.

Table 3-9. Structure of Ministry of Electric Power

Ministry of Electric Power (MOEP)	
Department of Hydropower Planning	Planning for generation, Transmission, Distribution
Department of Electric Power	
Department of Hydropower Implementation	Construction for Hydro & Coal Power Station
Hydropower Generation Enterprise	Generation
Myanma Electric Power Enterprise	Transmission
Electricity Supply Enterprise	Distribution
Yangon City Electricity Supply Board	

Source: Aye San Dar Myo, Infrastructure of Yangon City Electricity Supply Board (YESB), 3rd July 2013.

IFC says that,

> We support the transformation of the state-operated Yangon Electricity Supply Board into a commercially viable corporate entity, revitalizing Yangon's electricity system and extending reliable and affordable power to millions of people in the country's most populated city. (underline – the author's)
>
> Source: IFC website, IFC in Myanmar, East Asia & the Pacific (accessed on 20 July 2015).

The newspapers say that,

> "We will form a corporate entity soon, but we're still finalizing how to structure it," Mg Mg Latt, the YESB vice-chairman, told The Irrawaddy this week. (underline – the author's)
>
> Source: Kyaw Hsu Mon, "Rangoon Power Board to Seek Private Sector

Involvement from 2015," The Irrawaddy, 26 November 2014.

The International Finance Corporation (IFC) would transform Yangon Electric City Supply Board (YESB) into a corporation next, year, said Vikram Kumar, resident representative for the IFC. (underline – the author's)

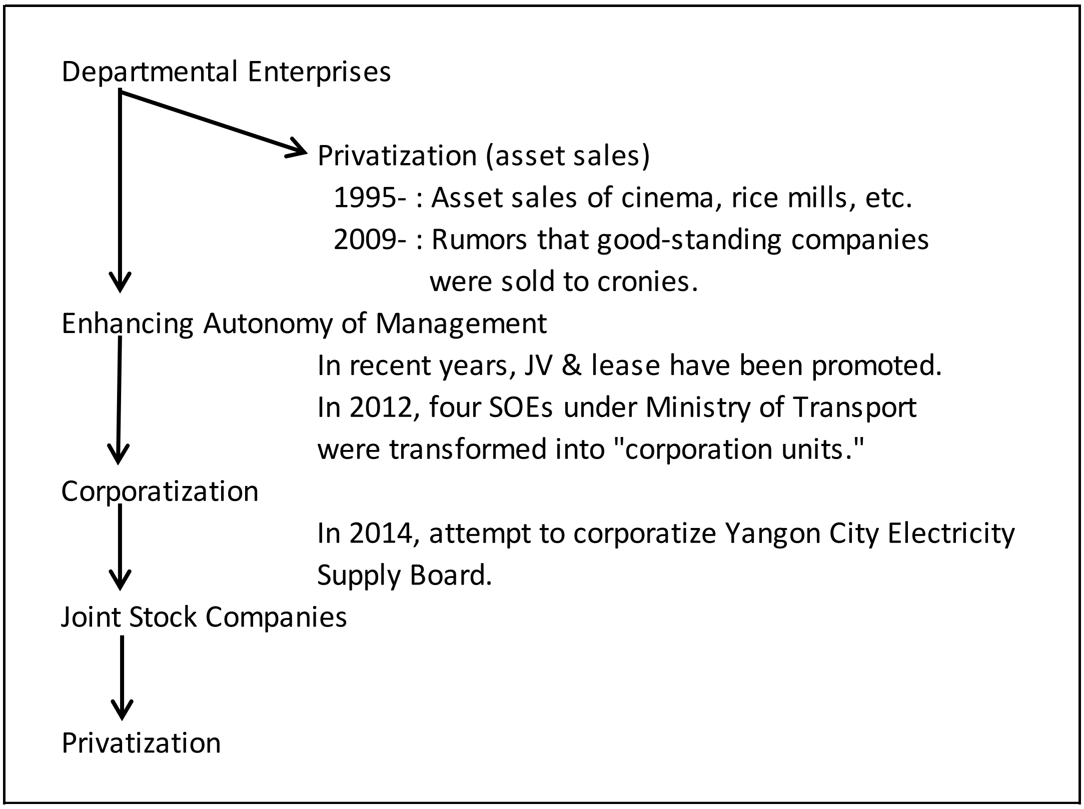
"The IFC will invest in YESB as a share holder when the YESB is transformed into an independent corporation. The government will hold more than 80 percent of the shares," Kumar said in April. (underline – the author's)

Source: "YESB O BECOME CORPORATION NEXT YEAR," Eleven Myanmar, 13 December 2014.

Judging from these quotations, YESB is to be corporatized from the present departmental enterprise directly to a joint stock company, of whose shares more than 80% are to be held by the government and less than 20% by IFC. Because the existing SEE Law and the Company Act cannot be attuned to SEE's corporatization, it is not too far from the truth to consider that a special statute will be established for YESB's corporatization.

The above-mentioned movements of SEE reform are summarized as the figure below indicates;

Figure 3-10. Myanmar's SEEs in Stages of Development



Source: By the author.

3.7. Section Summary

(1) Myanmar's SEEs are departmental enterprises.

(2) Corporatization: SEEs should be separated from their line ministries and transformed into corporations, while the policy section of them should be transferred to their line ministries.

(3) Legal forms of SOEs develop from departmental enterprises to statutory corporations, to limited-liability companies or joint stock companies in the natural course of things.

(4) There are some issues associated with corporatization. First, corporatization needs developing legislation on companies. The SEE Law and the Company Act are old-fashioned; therefore, they do not deal with corporatization. The government seems to have no choice but to use special statutes for a while. Second, with corporatization, employee status has to evolve from civil servants to public servants. The government should develop relevant labor laws.

(5) In China, MEBO was dominantly used to privatize small and medium SOEs in the

1990s. On the other hand, some large SOEs were corporatized, and then divided into state wholly-owned limited-liability companies (parent companies). The companies separated their profitable assets and made them joint stock companies which were listed in the stock exchanges. These measures may be useful for Myanmar's SEEs.

4. State Ownership Arrangements

In this section, we discuss state ownership arrangements[28]. The main theme of the section is to examine how to separate the state's ownership functions[29] from its policy-making and regulatory functions. When the functions are combined, the conflicts of interest may arise. It is of considerable significance to clarify the state's role as owner and reduce fragmentation of ownership functions across multiple institutions.

4.1. Models of Ownership Arrangements

We will begin by overviewing types of state ownership arrangements. According to World Bank (2014), ownership models can be classified into four categories as follows:

(1) *The decentralized model*, where ownership responsibilities are dispersed among different line ministries;

(2) *The dual model*, a variation of the decentralized model, where in addition to line ministries a second ministry, such as the ministry of finance, may also have certain responsibilities;

(3) *The advisory model*, where ownership remains dispersed but an advisory or coordinating body is created to advise ministries on ownership matters; and

(4) *The centralized model*, where ownership responsibilities are centralized in an entity or entities that may be independent or may fall within government.

Source: World Bank (2014)

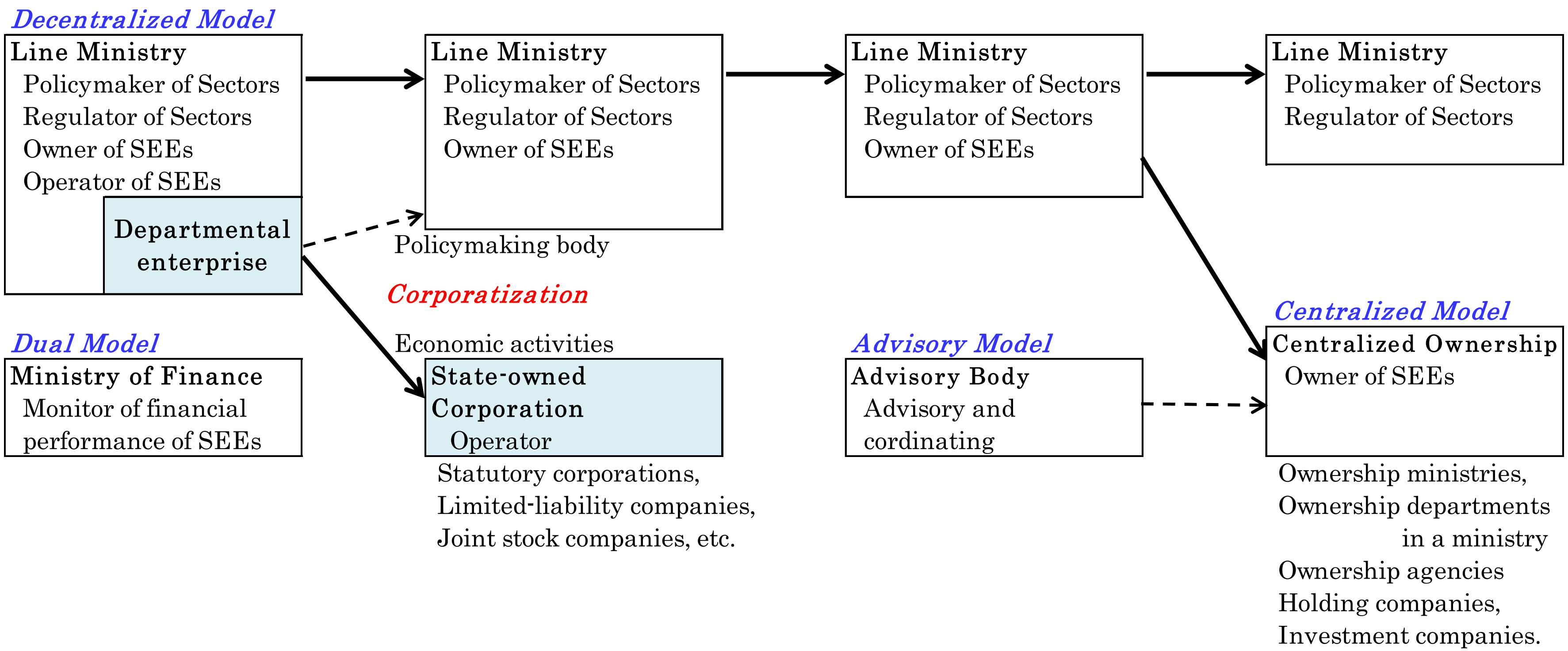
Furthermore, the Bank notes that the above models are not rigid archetypes and specific country arrangements often combine elements of more than one model. We will find the same fact in Myanmar's state ownership arrangements.

[28] According to World Bank's definition, the term *ownership arrangement* refers to the way in which the state organizes itself to exercise its ownership rights over SOEs (World Bank (2014)).

[29] According to World Bank's definition, the term ownership function refers to the fundamental rights and normal functions exercised by shareholders when they own shares in a company or when they own a company outright (World Bank (2014)).

Interestingly, World Bank (2014) regards these four models not only as types but also as stages of development because it states that "These reforms involve moving away from traditional ownership models in which line ministries have ownership responsibilities to centralized ownership arrangements" and that "Ownership arrangements have evolved over time." Meanwhile, World Bank (2006), a previous report on SOEs, divided ownership forms into three categories; centralized, decentralized, and dual. It regarded the three categories only as types, not as stages of development.

Figure 4-1. Development of State Ownership Arrangements



Source: By author based on World Bank (2014)

(1) The Decentralized Model

In the decentralized model, economic activities were often organized as departmental enterprises within line ministries, and the ministries were responsible not only as policymakers and regulators of jurisdictional sectors but also as owners and operators of departmental SOEs (see Figure 4-1, top left).

Corporatization, namely, separating a departmental enterprise from a line ministry and transforming it into a corporation, brings about the effect that the function of operating the SOE is transferred from the line ministry to the corporatized SOE. The ministry, however, still has the ownership function of the SOE (see Table 4-1, second from the left).

The World Bank enumerates shortcomings of the decentralized model such as the scope for political interference, conflicts between ownership and policy-making functions, fragmentation of ownership responsibilities and diffused accountability, insufficient ownership capacity, and lack of adequate oversight of the SOE sector as a whole (World Bank (2014)).

The same goes for Myanmar's case. As seen in 3-5, all SEEs under MOI are departmental enterprises which are part of the ministry. The Executive Committee of MOI governs decision-making not only of the ministry as a whole but also of SEEs. Naturally, those SEEs have almost no operational and financial autonomy, though there are some attempts to corporatize a few SEEs under other ministries.

SEEs in the extracting industries, however, are in a different situation from other SEEs such as those under MOI. According to Adam Smith International (2015), in the mining sector,

> the MOM (Ministry of Mines – the author) is gradually shifting its mandate from owner/operator to regulator/administrator according to the government's adoption of market oriented policies and privatisation objectives. The enterprises are responsible for negotiating contracts, marketing the share of the mineral product defined in the Production Sharing Contracts and monitoring the operations.

In the energy sector,

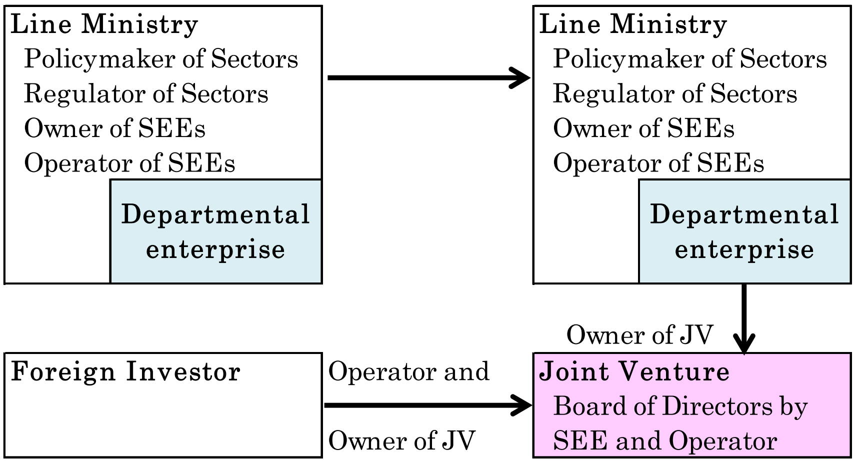
> The MOE (Ministry of Energy – the author)'s Planning Department is in charge of coordinated energy management across all ministries with a regulatory responsibility related to energy.
>
> The MOE has an influential role in setting policy and direction for the overall energy sector, including MOGE, the state enterprise in charge of negotiating and managing contracts with oil and gas companies.

Source: Adam Smith International (2015)

JVs are run by a Board of Directors whose membership is equally shared by the SEE and the operator (Adam Smith International (2015)).

It may be concluded that in the extracting sectors profitable and opened up to the world, the ministries are moving to policymakers and regulators, while in unprofitable sectors such as manufacturing, the ministries remain owners and operators.

Figure 4-2. JV in the Extracting Industries



Source: By author

(2) The Dual Model

Some countries have a dual model in which a ministry, typically the ministry of finance, has responsibilities in addition to those of the line ministries. According to World Bank (2014), “The potential advantage of the dual ministry model over the decentralized model is that it provides for overall financial oversight of individual SOEs and the SOE sector as a whole.” The model, however, has a weakness that MOF “may lack the authority and power which line ministries have over SOEs,” which is common in Myanmar.

In Myanmar, as examined later in 5.2, the budgetary assessment of capital expenditure is conducted by MNPED and that of current expenditure by MOF. World Bank (2012), however, says that SEE’s in-year budget reports are available to the line ministry and are also available to the Office of the Auditor General (OAG), and that SEE’s annual financial statements are available to the line ministry, the senior cadre of both MOF and MNPED as well as OAG (World Bank (2012)). It follows that neither

MOF nor MNPED constantly receive financial reports, though line ministries grasp the situation of SEEs on a routine basis.

(3) The Advisory Model

In this model, governments create "advisory or coordinating bodies to help professionalize the state's ownership role, promote good governance practices in individual enterprises, and bring consistency to SOEs as a whole." Advisory or coordinating bodies are "usually located in a central ministry such as finance or economy" (World Bank (2014)). As seen later, Myanmar's Privatization Commission consists of officials from many ministries; however, its secretariat is located in Project Appraisal and Progress Reporting Department under MNPED.

Myanmar's Privatization Commission

The new Privatization Commission for State Owned Economic Enterprise was established with a Vice President being Chairman in June 2012. The Commission has two committees, namely, Valuation Committee and Land Analysing Committee. Both committees consist of ten officials from government agencies, such as the Ministry of Agriculture, the Ministry of Industry, Union Attorney General's Office, the Ministry of Finance and Revenue, the Ministry of Home Affairs, Yangon City Development Committee, Mandalay City Development Committee, etc. Its office work is carried out by Project Appraisal and Progress Reporting Department under MNPED (JERI & DIR (2013) and MNPED website).

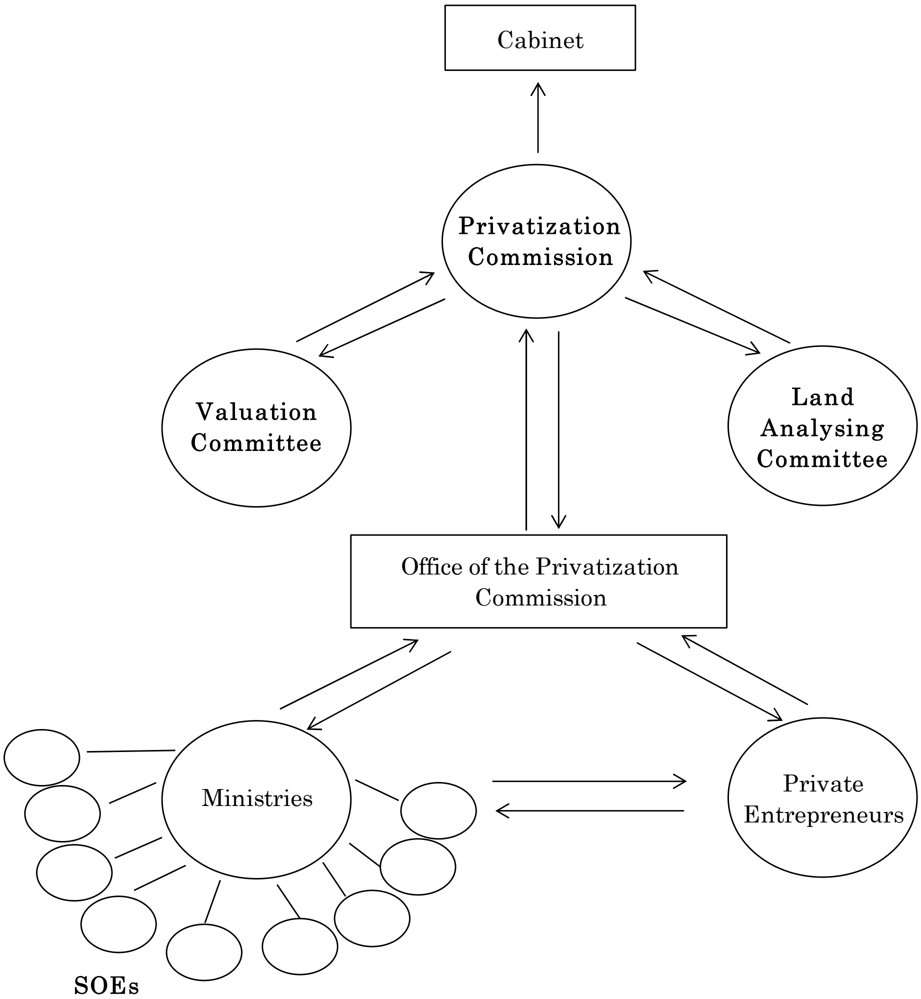
As seen in 3.6 (3), the Privatization Commission has the approval authority on state asset sales, not on JV and lease. For example, when MOI wants to divest state asset sales, the ministry notifies its intent to the commission. The commission seeks bids, and Valuation Committee under the commission determines selling price (JERI & DIR (2013)).

Framework for Economic and Social Reforms states the strengthening of functions of the Privatization Commission;

> GOM will ensure that the state privatization authority will have sufficient capacity in the areas of project appraisal, valuation and securitization procedures, public auctioning and open tender systems in managing the process of privatizing state assets – particularly for large SEEs.

At present, however, the Privatization Commission remains a very weak advisory body which has a partial advisory role only for state asset sales. It is advisable that the government should enhance its role and capacity to increase its effectiveness.

Figure 4-3. Relations between Privatization Commission and Other Organizations



Source: National Planning and Economic Development website (accessed on 7 April 2015).

(4) The Centralized Model

In a centralized model, the government concentrate SOE ownership authority in a single entity, which does not exist in Myanmar. The state's ownership functions are separated from its policy-making and regulatory functions, and the single entity has the former functions and line ministries have the latter ones (see Figure 4-1, right).

Table 4-4. Types of Centralized Ownership Arrangements

Type		Example
Government ownership agencies	Stand-alone ministry	Indonesia: Ministry of State Enterprise
	Ownership department or unit	South Africa: Department of Public Enterprises, Ministry of Finance
	Stand-alone ownership agency	China: State-Owned Assets Supervision and Administration Commission
Company-type structures	Holding Companies	Hungary: State Holding Company directed by the National State Holding Board
	Investment Companies	Singapore: Temasek Holdings wholly owned by Ministry of Finance

Source: World Bank (2014).

Centralized ownership arrangements are broadly classified into two categories: (a) government ownership agencies such as ministry, department, or agency, and (b) company-type structures such as holding companies or investment companies.

(a) Government Ownership Agencies

(i) Stand-alone ministry

The government creates a stand-alone ministry responsible for SOE ownership function, which World Bank says is a relatively rare one. An example is Indonesia's Ministry of State Enterprise (World Bank (2014)).

(ii) Ownership department or unit

The government creates an ownership department or unit within a central ministry, commonly the ministry of finance, which is more widely used. Examples which World Bank illustrates this with are cases of Finland, France, Norway, Poland, South Africa and the United Kingdom (World Bank (2014)).

(iii) Stand-alone ownership agency

The government establishes a stand-alone ownership agency under the direct control of the executive branch. A typical example is China's State-owned Assets Supervision and Administration Commission (SASAC) under the State Council (China's cabinet), which will be described in detail later.

(b) Company-Type Structures

According to World Bank (2014), "A number of countries have created company-type structures to oversee and manage their SOEs. These entities have a separate legal identity and their own governance bodies, including a board of directors and a chief executive officer responsible for investment, divestment, and business decisions." Company-type structures are broadly divided into two categories; holding companies and investment companies.

(iv) Holding companies

The task of holding companies is to manage the assets in the portfolio. World Bank (2014) enumerates examples of Hungary, Bhutan, Mozambique, and Peru.

(v) Investment companies

As contrasted with holding companies, investment companies actively act as the state's strategic investor. World Bank (2014) points out that, "Investment-company-type structures are found in a few developed and emerging market countries that have better-performing SOEs and greater institutional capacity." Singapore's Temasek and Malaysia's Khazanah Nasional are famous instances.

An interesting point which World Bank (2014) makes is that, "A number of Gulf Cooperation Council (GCC) countries in the Middle East have also delegated the state's ownership rights to sovereign wealth funds." On the other hand, Demachi & Kinkyo (2014) points out that, "These NRF (natural resource fund – the author) are considered sovereign wealth funds (SWF), as long as they are managed by central or regional governments and invested internationally and strategically." It may be argued that sovereign wealth funds double as investment companies having state's ownership rights over SOEs and triple as natural resource funds.

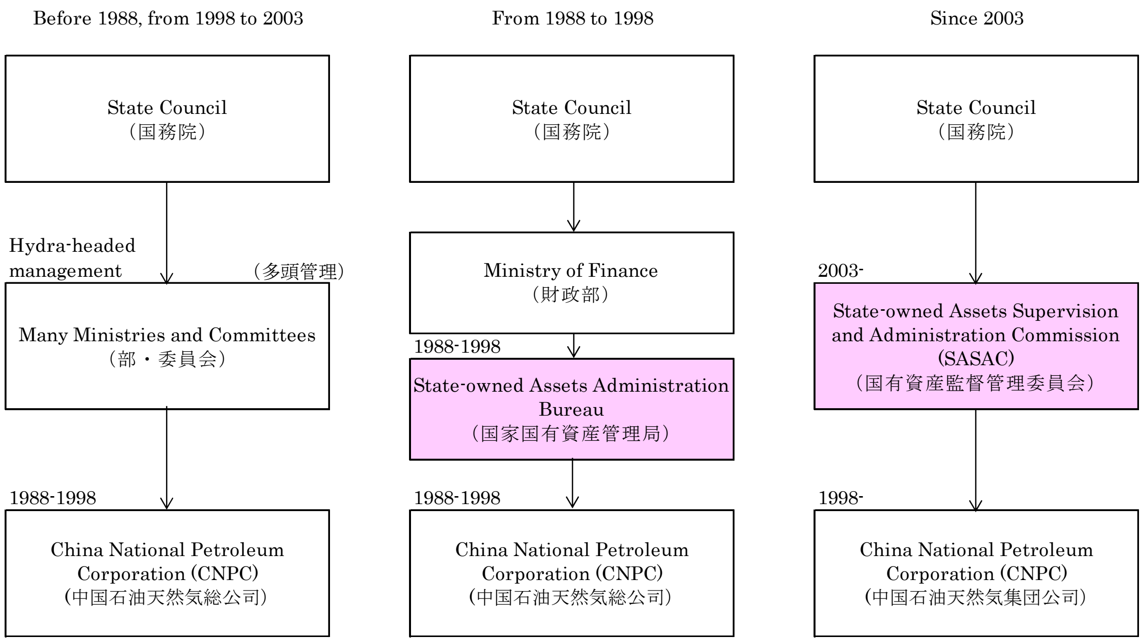
4.2. Case Study: China

China provides an interesting example. Many ministries and committees, such as line ministries, the Ministry of Finance, State Planning Committee and so on, intervened and commanded SOE's business previously. To correct this hydra-headed management, the State-owned Assets Administration Bureau was established under the Ministry of Finance in 1988. The Bureau, however, encountered difficulties because of its little authority, and then it was abolished in 1998. In 2003, the State-Owned Assets Supervision and Administration Commission (SASAC) was established directly under State Council and holds shareholder's rights, leading to the separation between administrative function and assets management function in the State[30].

In summary, first, China's state ownership arrangement was a decentralized model before 1988. Next, it took an ownership department approach of a centralized model in 1988 and abolished it in 1998. Finally, it moved to a stand-alone ownership agency approach of a centralized model in 2003.

[30] SASAC has, however, experienced some difficulties. See, for example, Naughton (2008).

Figure 4-5. Separation between Administrative Function and State-owned Assets Management Function in China’s Oil Industry



Source: By author based on Yang Qiu Li (2013)

4.3. Section Summary

To which model do Myanmar’s state ownership arrangements correspond? Since the four models are ideal types, specific country ownership arrangements often combine elements of more than one model, and so do Myanmar’s. As examined above, we may say that Myanmar’s ownership arrangement is a decentralized model commingled with a few elements of dual and advisory models. It is advisable that the government should enhance MOF’s overseeing financial management of SEEs and the Privatization Commission’s role and capacity.

It is not clear as to which model or approach is appropriate for Myanmar at present. World Bank (2014) states that, “experience also shows that no one ownership model or approach is universally applicable and that different starting points may require different reform approaches and sequencing.” Much remains to be studied.

5. Fiscal Relations between SEEs and the State

In this section, fiscal relations between SEEs and the state are dealt with. SEEs pay taxes, profit remittances ("contributions" in Myanmar), etc. to the central government, while the enterprises receive budget allocations for current and capital expenditures, etc. from the government.

In section 5.1, we show what has become clear and what has yet to be revealed from a quantitative perspective. In section 5.2, tracing the history of institutional arrangements on the fiscal relations, we examine SEE's autonomy of financial management.

5.1. Statistical Data on SEE Finance

5.1.1. Statistics of Public Finance by IMF and World Bank

Table 5-1 is taken from IMF Country Reports, the data of which show that the scale of SEE's finance has been usually larger than that of the central government finance and that net transfers from SEEs to the central government have been positive. We cannot help but doubt the veracity of the data. As a matter of fact, not all of the receipts and payments of SEEs have been recorded in the SEE accounts. For example;

・wages and salaries: they have been paid by the central government because workers of SEEs are civil servants.

・capital investment: it has also been paid by the central government.

・foreign exchange subsidies: foreign exchange had been sold for SEEs at the official rate much lower than the market rate until FY2011/12. This was regarded as implicit subsidy.

・energy subsidies: factories under MOI had been provided with natural gas approximately at half the market price until May 2013.

After all, we cannot obtain an accurate view of the fiscal relations between SEEs and the government budget.

As far as I know, World Bank (1995) was the only study which estimated transfers between SEEs and the government budget, including implicit fuel and interest subsidies based on various assumptions (see Table 5-2). The estimation demonstrated that net payments of SEEs to the government, including implicit subsidies, had been greatly negative at that time.

Table 5-1. Summary Operations of the Nonfinancial Public Sector
(in percent of GDP)

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15		2015/16
						Prel. Act.	Est.	Budget	Proj.	Proj.
Conslidated accounts										
Revenue and grants	14.1	13.0	10.7	11.4	12.0	23.3	24.8	22.5	24.2	24.0
Tax revenue	3.7	3.6	3.1	3.3	3.9	7.1	7.2	7.7	7.3	7.4
Transfers from SEEs to Union Government	2.9	2.8	2.3	2.0	2.3	1.6	1.5	0.8	0.8	1.3
SEE receipts net of transfers to Union Government	6.8	5.8	4.9	5.1	5.5	13.7	13.2	12.9	13.4	13.3
Other nontax revenue	0.6	0.8	0.5	1.1	0.4	0.9	2.7	0.8	2.3	1.6
Grants	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.4
Expenditure	17.9	15.5	15.6	16.9	16.6	25.0	26.5	28.7	28.7	28.6
Expense	11.0	9.6	8.7	8.8	9.8	16.8	18.2	19.9	20.0	19.6
Union government	3.5	3.3	3.3	3.9	4.5	7.4	8.7	10.4	10.4	10.4
SEEs net of transfers to Union Government	7.5	6.4	5.4	4.9	5.3	9.5	9.5	9.6	9.6	9.2
Net acquisition of nonfinancial assets	6.9	5.8	6.9	8.0	6.8	8.1	8.3	8.8	8.8	9.0
Union government	5.8	4.6	5.8	7.1	5.9	6.1	5.6	5.9	5.9	6.0
SEEs	1.2	1.2	1.2	0.9	0.9	2.0	2.7	2.9	2.9	3.0
Net lending (+) / borrowing (-)	-3.8	-2.4	-4.9	-5.4	-4.6	-1.7	-1.6	-6.1	-4.5	-4.6
Union government	-2.0	-0.7	-3.3	-4.6	-3.9	-3.9	-2.7	-6.6	-5.5	-5.7
SEEs net of transfers to Union Government	-1.9	-1.8	-1.7	-0.8	-0.7	2.2	1.1	0.5	1.0	1.0
Discrepancy (+ indicates overfinancing)	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0
Financing	3.8	2.4	4.9	5.4	4.6	3.4	1.6		4.5	4.6
External (net)	0.0	0.0	0.0	0.0	0.0	1.2	1.0		1.1	1.7
Domestic (net)	3.8	2.4	4.9	5.4	4.6	2.2	0.6		3.3	3.0
Of which: CBM	2.7	3.0	3.4	3.5	1.8	1.3	0.8		1.3	0.7
Commercial banks	0.3	0.4	1.3	1.1	1.5	0.9	-0.3		2.0	2.2
Other	0.8	-1.0	0.2	0.8	1.3	0.0	0.2		0.0	0.0
Union government										
Revenue	7.3	7.2	5.8	6.3	6.5	9.6	11.6	9.7	10.8	10.7
Tax revenue	3.7	3.6	3.1	3.3	3.9	7.1	7.2	7.7	7.3	7.4
Transfers from SEEs to Union Government	2.9	2.8	2.3	2.0	2.3	1.6	1.5	0.8	0.8	1.3
Other nontax revenue	0.6	0.8	0.5	1.1	0.4	0.9	2.7	0.8	2.3	1.6
Grants	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.4
Expenditure	9.3	7.9	9.1	11.0	10.4	13.5	14.3	16.3	16.3	16.4
Current expenditures	3.5	3.3	3.3	3.9	4.5	7.4	8.7	10.4	10.4	10.4
Capital expenditures	5.8	4.6	5.8	7.1	5.9	6.1	5.6	5.9	5.9	6.0
Current balance	3.8	4.0	2.5	2.5	2.0	2.2	2.9	-0.7	0.4	0.4
Overall balance	-2.0	-0.7	-3.3	-4.6	-3.9	-3.9	-2.7	-6.6	-5.5	-5.7
State economic enterprises (SEEs)										
Receipts	9.7	8.6	7.1	7.0	7.8	15.3	14.7	13.7	14.3	14.6
Expenditures	11.6	10.4	8.8	7.8	8.5	13.1	13.6	13.3	13.3	13.6
Current expenditures	10.4	9.2	7.6	6.9	7.6	11.1	11.0	10.4	10.4	10.6
Transfers from SEEs to Union Government	2.9	2.8	2.3	2.0	2.3	1.6	1.5	0.8	0.8	1.3
SEEs net of transfers to Union Government	7.5	6.4	5.4	4.9	5.3	9.5	9.5	9.6	9.6	9.2
Capital expenditures	1.2	1.2	1.2	0.9	0.9	2.0	2.7	2.9	2.9	3.0
Current balance	-0.7	-0.5	-0.5	0.1	0.1	4.2	3.8	3.3	3.9	4.0
Overall balance	-1.9	-1.8	-1.7	-0.8	-0.7	2.2	1.1	0.5	1.0	1.0

Source: IMF (2013a), IMF (2013b), IMF (2014a) and IMF (2014b)

Table 5-2. Links between SEEs and the Government Budget

	FY91	FY92	FY93	FY94	FY95 (RE)
SEs' payments to the government	3307	3342	4997	6636	7820
(as a share of total government receipts %)	22	18	24	24	24
SEs' contributions	3307	3342	4997	6636	7820
SEs' receipts from the government	4414	3283	4596	7608	9265
(as a share of total government expenditures %)	17	11	14	17	16
SEs' capital expenditures	3889	3276	3462	3373	6123
SEs' current deficit	525	7	1134	4235	3142
SEs' net contribution to the government	**-1107**	**59**	**401**	**-972**	**-1445**
SEs' tax payments to govt.	3769	3442	4236	5411	6858
Commercial tax & income tax	3186	2853	3606	4694	6150
Customs duties	583	589	631	717	708
Implicit fuel and interest subsidies to SEs	**4853**	**7891**	**10338**	**12810**	**13485**
Subsidies on electricity	3226	4783	6031	8046	7990
Subsidies on gasoline and diesel	954	2071	2887	2969	3050
Interest subsidies on investment grants	673	1037	1420	1795	2445
Net payments to govt. including interest subsidies	**-2191**	**-4390**	**-5701**	**-8371**	**-8072**
As a share of budget deficit (%)	**19**	**34**	**44**	**52**	**30**

1/ Includes all State Enterprises.

Source: World Bank (1995)

5.1.2. Other Accounts

In addition to the accuracy of data, the existence of "Other Accounts" does matter. According to the Public Financial Management Performance Report, "Other Accounts" are essentially accounts held by ministries and SEEs in Myanmar Economic Bank for management of their own-source revenues, which are not fully reported in fiscal reports (World Bank (2012)). Ministries and SEEs have an enormous number of Other Accounts. World Bank (2012) states that,

> The total number of Other Accounts (as of June 2012) held by ministries at the Union level was 8,417 and at the state/regional level was 176. The total number of Other Accounts (as of June 2012) held by SEEs at the Union level was 4,319 and at the state/regional level was 517. … All other Accounts held by MEB (Myanma Economic Bank – the author) are in kyat. Special accounts for ministry own-source revenue denominated in foreign exchange can be held in the Foreign Exchange Trade Bank.

In terms of size of Other Accounts,

> FY2011-12 data from MEB and the Budget Department show total Other Account receipts of 2.54 trillion kyat, which is 44 percent of total budgeted revenues, and expenditures of 2.26 trillion, which represents 28 percent of total budgeted

> expenditure. What is not clear is the distribution of these funds, that is, how much is held in SEE accounts versus line ministry accounts.

After all, it remains an unsettled question how much SEEs receive and pay in Other Accounts.

5.2. Institutional Arrangements on Fiscal Relations

Here we would like to trace the history of institutional arrangements on the fiscal relations between SEEs and the central government budget.

(1) SEE Finance until FY 1989/90: MEB's Loans to SEEs

Until FY 1989/90, SEEs were financially independent, and they were able to obtain loans from MEB, the largest state-owned bank. They, however, accumulated huge bad debts[31], which led to the prohibition of bank loans to SEEs. (Nishizawa (1997), Nishizawa (2000) and Kubo (2012))

(2) Introduction of SFA System in FY 1990/91

In FY 1990/91 the government introduced the State Fund Account (hereinafter SFA) to the budget system.

Let us consider the following quotation.

> Under this system, which was intended to better control SE (state enterprise – the author) spending, the finances of all SEs are combined with those of administrative departments into a combined pool called the SFA. Since all revenues flow into this pool and all expenditures must be made from it, this system has meant that control over SE finances effectively has been transferred from the enterprises to the Union Government. Since they are owned by the Government, they are obliged to surrender any surplus they generate, initially as a "contribution" that is budgeted at the start of each fiscal year and as the residual surplus if any remains at the end of the year. Finally, like administrative departments, their capital expenditures are made directly from the government budget. Apart from the link through the SFA, SEs contribute indirectly to government revenues through payments of commercial and income taxes and custom duties (World Bank (1995)).

The budgetary assessment of capital expenditure is conducted by MNPED and that of current expenditure by MOF. Payments in national currency (kyat) are transferred

[31] According to Kubo (2012), "The outstanding loans from MEB to the SEEs swelled from nine percent of GDP in 1978 to 61 percent in 1988."

through MEB, while those in foreign currency are done through the Myanma Foreign Trade Bank (MFTB).

MOF's Budget Department website says that

> Before 2012-2013 Financial Year, all SEEs budget were put under the State Fund Account.・・・30 % of net profit of SEEs are paid as income tax and 70 % of net profit are put into the State Fund as contribution.
>
> MOF’s Budget Department Website (accessed on 15 April 2015)

The purpose of these quotations is to show that Myanmar’s SEEs were completely integrated to the State and they had no autonomy in financial management[32]. Naturally this SFA system created “soft budget constraints” in SEEs. The system, which is illustrated on the top of Figure 5-3, had continued until FY 2011/12.

In many economies in a transition from a planned to a market economy, typically in China and Vietnam, SOEs have usually depended heavily on bank loans extended by state-owned banks, significant portions of which are estimated to be non-performing loans (NPLs). On the other hand, Myanmar remains in a totally different situation from China and Vietnam because SEEs have not been allowed to borrow from banks.

(3) New Account System in FY2012/13: Restoration of Partial Autonomy

The SFA system was significantly changed in FY 2012/13. When SEEs make profits, 25 % of net profits are paid as income tax, 20 % of them are put into the SFA, and the remaining 55 % of them can be retained in the SEEs-Owned Fund Account or “Other Account”[33] (see the bottom of Figure 5-3). As seen earlier, “Other Accounts” are essentially accounts held by ministries and SEEs in MEB for management of their own-source revenues. It seems reasonable to suppose that “Other Account” in JERI & DIR (2013) and World Bank (2012) is a synonym for “SEEs-Owned Fund Account” on MOF’s Budget Department website.

In addition to the distribution of net profits, finance of current expenditure was changed. All current expenditures of SEEs were paid out of SFA until FY 2011/12. In FY2012/13, however, 22% of material and fuel costs were paid out of SFA, and 78% of them out of SEEs-Owned Fund Account or “Other Account” (see Table 5-4).

(4) Changes in FY2013/14

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[32] On practical operations, see JERI & DRI (2013).

[33] JERI & DIR (2013) states that SFA was divided into “Union Fund Account” and “Other Account.” We observed that some officials in MEB continued to use the term “SFA” instead of “Union Fund Account” in August 2014; thus, the differences between “SFA” and “Union Fund Account” are not clear.

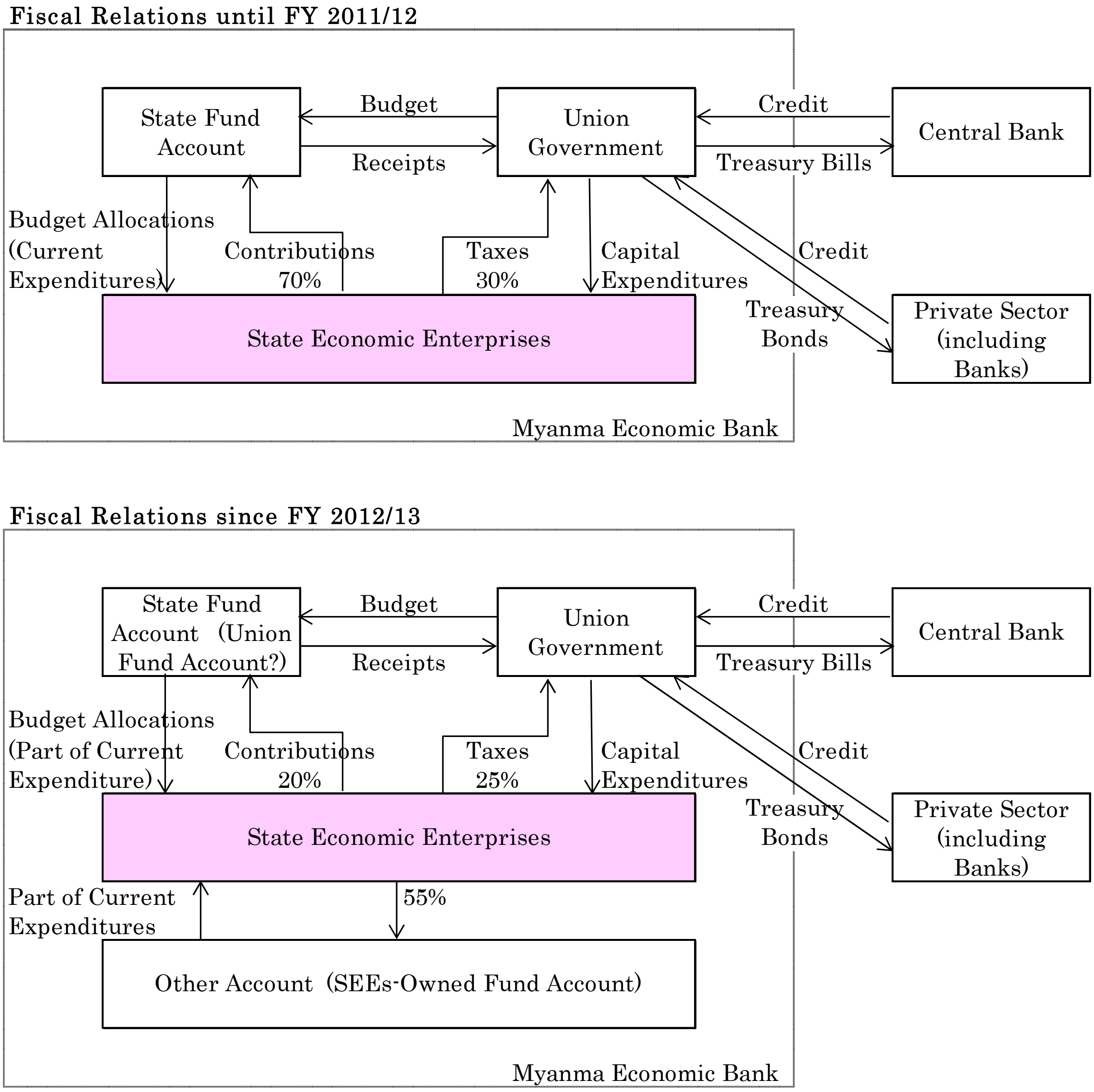
In FY2013/14, SEEs took on more burdens of material and fuel costs. All the current expenditures are paid out of “Other Account” in the case of profitable SEEs. On the other hand, 20% of them are paid out of SAF and 80% of them out of “Other Account” in the case of loss-making SEEs (see Table 5-4).

5.3. Section Summary

In summary, from a quantitative perspective, we cannot obtain an accurate view of the fiscal relations between SEEs and the government budget partly because of the accuracy of statistical data and partly because of the existence of “Other Account” which is not fully reported in fiscal reports.

From an institutional perspective, although SEEs were financially independent until FY1989/90, SEEs’ finance was completely a part of the government budget since FY1990/91 until FY2011/12. Since FY2012/13, the autonomy of financial management has been gradually growing, while at the same time SEEs have been taking on more burdens of part of current expenditures.

Figure 5-3. Fiscal Relations between SEEs and State



Source: By author based on JERI & DRI (2013), World Bank (1995), Kubo (2012), MOF's Budget Department website (accessed on 15 April 2015), and Interview with MEB in August 2014. There are, however, some discrepancies among the sources.

Table 5-4. Burdens of Current and Capital Expenditures

		until FY 2011/12	FY 2012/13	since FY 2013/14
Current expenditures	Current (material & fuel costs)*[1]	SFA	22% SFA 78% SEEs-Owned Fund Account	(for Profitable SEEs) 100% Other Account (SEEs-Owned Fund Account)
				(for Loss-Making SEEs) 20% SFA 80% Other Account (SEEs-Owned Fund Account)
	Current (Other costs)	SFA	SFA	SFA
Capital expenditures		Union Government	Union Government	Union Government

Note: *1/ The expression in JERI & DIR (2013) is "material & fuel", and that in MOF's Budget Department website is "raw materials."

Source: By author based on JERI & DIR (2013), IMF (2013a), IMF (2013b), World Bank (2012), MOF's Budget Department website (accessed on 15 April 2015), Kubo (2012), and Interview with MEB in August 2014.

There are, however, some discrepancies among the sources.

6. Conclusion

Scope of SEEs

First, we have examined the SEE Law and have found that the Law does not define the SEE's role clearly. SEEs can operate in any activity which the government wants; on the other hand, there have been JVs and private companies in legally state-monopolized sectors. Meanwhile, China and Vietnam have been gradually limiting the scope of their SOEs and withdrawing state capital from non-core sectors.

It is advisable that the government should determine which areas are core or non-core sectors for SEEs and apply an integrative approach to SEEs.

Legal and Regulatory Framework

We have affirmed that SEEs are part of line ministries, namely, departmental enterprises. Legal forms of SOEs develop from departmental enterprises to statutory corporations, to limited-liability companies or joint stock companies in the natural course of things.

SEEs should be separated from their line ministries and transformed into corporations, while the policy section of them should be transferred to their line ministries, that is, corporatization. Furthermore, corporatization requires reforms of relevant company and labor laws.

In China, management and employee buyout (MEBO) was dominantly used to privatize small and medium SOEs in the 1990s. On the other hand, some large SOEs were corporatized, and then transformed into state wholly-owned limited-liability companies (parent companies). The companies separated their profitable assets and made them joint stock companies which were listed in the stock exchanges. These measures may be useful for Myanmar's SEEs.

State Ownership Arrangements

It is of considerable significance to separate the state's ownership functions from its policy-making and regulatory functions. Ownership models can be classified into four categories; (1) the decentralized model, (2) the dual model, (3) the advisory model, and (4) the centralized model.

We have demonstrated that Myanmar's ownership arrangement is a decentralized model commingled with a few elements of dual and advisory models. It is advisable that the government should enhance MOF's overseeing financial management of SEEs and the Privatization Commission's role and capacity.

Next, there are five types of centralized ownership arrangements; namely, (1) stand-alone ministry, (2) ownership department or unit, (3) stand-alone ownership agency, (4) holding companies, and (5) investment companies. It is not clear as to which approach is appropriate for Myanmar in the future. Much remains to be studied.

Fiscal Relation between SEEs and the State

From a quantitative perspective, we cannot obtain an accurate view of the fiscal relation between SEEs and the government budget partly because of the accuracy of statistical data and partly because of the existence of “Other Account” which is not fully reported in fiscal reports.

From an institutional perspective, SEEs were completely a part of the government budget since FY1990/91 until FY 2011/12. The autonomy of financial management has been gradually growing since FY2012/13, while at the same time SEEs have been taking on more burdens of part of current expenditures.

The government should develop reliable data and enhance SEE’s autonomy of financial management.

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Annex 1
State-Owned Enterprises by Ministry

No.	Name of Enterprise	Name of Ministry
1	Printing and Publishing Enterprise	Ministry of Information
2	News and Periodicals Enterprise	
3	Myanmar Motion Picture Enterprise	
4	Myanma Agricultural Service	Ministry of Agriculture and Irrigation
5	Myanma Cotton and Sericulture Enterprise	
6	Myanma Jute Enterprise	
7	Myanma Sugarcane Enterprise	
8	Myanma Perennial Crops Enterprise	
9	Myanma Mechanical Crop Development Enterprise	
10	Myanma Economic Bank	Ministry of Finance
11	Myanma Foreign Trade Bank	
12	Myanma Investment and Commercial Bank	
13	Myanma Small Loans Enterprise (old name)[*1]	
14	Myanma Insurance	
15	Department of Public Works	Ministry of Construction
16	Myanma Agricultural Products Trading	Ministry of Commerce
17	Myanma Post and Telecommunication	Ministry of Communications, Information and Technology
18	Myanmar Timber Enterprise	Ministry of Environmental Conservation and Forestry
19	Livestock, Foodstuff and Milk	Ministry of Livestock and Fisheries
20	Myanma Livestock and Fisheries Development Bank (old name)[*2]	
21	No. 1 Mining Enterprise	Ministry of Mines
22	No. 2 Mining Enterprise	
23	No. 3 Mining Enterprise	
24	Myanma Gems Enterprise	
25	Myanmar Pearl Enterprise	
26	Myanma Salt and Marine Chemical Enterprise	
27	Co-operative Export Import Enterprise	Ministry of Co-operative
28	Myanma Shipyards	Ministry of Transport
29	Inland Water Transport	
30	Myanma Airways	

31	Myanma Five Star Lines	
32	Myanma Hotels and Tourism Services	Ministry of Hotels and Tourism
33	Myanma Textile Industries	Ministry of Industry
34	Myanma Foodstuff Industries	
35	Myanma Pharmaceutical Industries	
36	Myanma Ceramic Industries	
37	Myanmar Paper and Chemical Industries	
38	Myanma General and Maintenance Industries	
39	No. 1 General Heavy Industries	
40	No. 2 General Heavy Industries	
41	Myanma Industrial Development Bank	
42	Myanma Railways	Ministry of Rail Transportation
43	Myanma Oil and Gas Enterprise	Ministry of Energy
44	Myanma Petrochemical Enterprise	
45	Myanma Petroleum Products Enterprises	
46	Electric Power Supply	Ministry of Electrical Power
47	Myanma Electric Power Enterprise	

Note 1: The present name is Myanma Microfinance Supervisory Enterprise.

2: The present name is Global Treasure Bank (a private bank).

Source: unknown origin.

Part II. Economic Structure and Financial System

Chapter 4

Key Challenges in the Development of Better Corporate and Financial System : Historical Context since 1990s. [34]

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Abstract

The paper aims to describe the stage of the economic development on which Myanmar is now standing in the historical context from the early 1990s. The economic opening policy by the junta in the early 1990s substantially changed the system from the socialist regime until 1980s, and at least for the first decade it brought a sprout of industrialization. Yet, the macroeconomic instability reflected by Asian Economic Crisis incurred the burst of the financial sector and serious recession in the early 2000s. In the recovery process since 2004, the economy became highly depended on natural resource exports, typically of natural gas.

The reforms since 2011 have stand basically on such economic circumstances. Furthermore, recently favourite economic conditions such as in trade account surplus or exchange reserve are being lost, while the industrialization is still in the preparative stage.

During the economic change in the junta rule, private capitals apparently showed a remarkable development, while it was less orderly, oriented to domestic service sector, and lack of equity. The process of the emergence of financial sector was linked with such private capitals' growth pace and, was less orderly as well.

Considering these economic backgrounds, government's strong initiative for drawing ground designs for reforming corporate and financial system, is crucially ethnical. It should improve the governance system in corporations and in the financial sector in ways of supporting the industrialization process.

The financial reform should include the argument on how to construct ways for providing long-term fund, since it is one of the most important factors in a certain stage of industrialization. This argument relates to the trade-off choice between securities market and policy-based development bank.

[34] This paper is largely based on author's previous articles: Mieno (2013) and Mieno and Kubo (2015).

Contents

1. Introduction

In mid-2015, it is now possible to identify the outcomes of some of the economic reforms enacted in Myanmar in 2011. Foreign direct investment (FDI) has apparently increased, and many official development aid (ODA) projects in infrastructure construction are about to begin. There has also been a dramatic resurgence in urban consumption, and exports of agricultural products continue to increase. Despite this, however, the basic structure of the economic system has barely changed from the one that existed during the two decades of junta rule, and this remains a challenge. To achieve long-term economic growth through industrialization, it is necessary to rearrange the fundamental in the following aspects of the economic system: state ownership, fiscal policy, the labor market, corporate governance and education. One of the most important policy issues with regard to these aspects is the system for channeling financial resources into industrialization.

Most parts of the economic system associated with this financial channel have their origins in the system used during the period of junta rule in the 1990s–2000s; some were newly established while others were inherited from the pre-1980s socialist regimes or even the country's colonial period[35]. This chapter looks back at the process by which the economic systems and entities were formed so as to identify the key aspects of existing problems and determine the focus for reforms. The paper as a whole focuses on three factors: (1) the financial system, (2) the corporate system, and (3) the supply channel for long-term capital. Factor (3) is an applied argument of the factors (1) and (2). The paper also references the macroeconomic situation and its change in the junta period to clarify issues with respect to the financial and corporate system.

The issue of establishing a financial system is associated with the enhancement of financial intermediation between savings and investment by financial institutions. A successful financial institution minimizes the social costs of such intermediation through information processing, and loosens credit rationing which is regarded as a market failure associated with the problem of information asymmetry. When the economy is in the early stages of development, however, so too are the financial institutions, so the capacity for financial intermediation is generally limited. Given this, discussions need to start by establishing an agenda for overcoming the incompleteness of the current financial system and widespread credit rationing.

The issue of establishing a corporate system is associated with the enhancement of corporate governance. Just like the financial system, the corporate system is less organized during the early stages of an economy's development. Generally, the

[35] The Burma Company Act, for example, has not revised since it was enacted in 1914, when the country was still a British colony.

growth of firms tends to be extremely unbalanced under unbalanced conditions. A limited number of firms accumulate a large amount of assets under certain favorable conditions, which are often related to their connections to government. Some entrepreneurs expand and diversify their businesses to form business groups under pyramid or cross-holding ownership structures. Also, in transition economies, state-owned enterprises (SOEs) usually continue to be major players. A capital market does not exist—or if it does it remains very primitive—in the initial stages of economic development. In addition, ownership of firms tends to be highly concentrated, and transparency is limited.

Since corporate governance is usually weak at this stage, corruption and the illegal transfers of corporate assets are widespread. This, in turn, leads to very high agency costs due to the existence of information asymmetry between the corporation and its creditors (or investors), which prevents financial institutions from fully functioning as financial intermediators in the market. Banks tend to behave as credit suppliers within the inner circle of their own business groups, while many potential borrowers remain unable to access credit (credit rationing). In fact, banks are usually established within growing business groups, and behave as one of the group's core firms. Given this, it is natural, in a sense, for banks to provide loans to firms that have a connection (so to called as 'connected lending' to during the early stages of economic development.

The issue of establishing a channel for long-term capital is an important objective as it is necessary for the formulation of polices for the growth strategy. During industrialization, demand for long-term capital increases at an accelerating rate, investment in infrastructure is required and larger, longer-term investments are crucial in upgrading the export manufacturing process from a labor-intensive one to a capital-intensive one. Given this, the formulation of a system for suppling long-term capital becomes a key policy concern at a relatively early stage.

Long-term capital can be provided in the form of ODA (particularly for activities in the quasi-public sector such as infrastructure building in the earliest stage of development) and, to a degree, FDI into private businesses. This does not mean, however, that a system for long-term capital is unnecessary. Without an appropriate channel for long-term capital, the private sector will remain dependent on short-term borrowing or self-financing, which could become a serious bottleneck for growth.

There are multiple policy options for addressing this issue. Developing a capital market (for both bonds and equity) is the most common practice. However, a lesson that emerges in many countries is that a securities market is not equipped to function very smoothly during the economic development process. In some countries, long-term capital is supplied through policy-based finance that is usually provided by what is known as a 'development bank', which either takes the form of a state bank or a specially licensed private bank.

The rest of this paper is organized as follow: Section 2 provides an overview of the characteristics of Myanmar's economic structure during the twenty years of junta rule; Section 3 provides case studies on SOEs, private capital and the financial sector in modern-day Myanmar; Section 4 discusses a policy problem with regard to the supply system for long-term capital; and Section 5 is the conclusion of this paper.

2. Economic Structure since the 1990s

2.1. Reforms since the early 1990s and Economic Trends

The reforms enacted by the junta in the early 1990s can be seen as an important benchmark when examining the process of transformation that the Myanmar economy has undergone. Seizing power in September 1988, the military government declared its intention to abolish what is known as the Burmese Way of Socialism, and attempted to introduce economic reforms to strengthen the market economy.

The government started its reforms by separating the fiscal and financial sectors. The mono-bank system employed by Myanmar's socialist government was broken up into a central bank and a number of other state banks established to provide specific services, such as commercial banking, foreign exchange or agriculture. The banking sector was opened up to private capital under license, with many private banks being established in quick succession until the mid-1990s. Unlike the financial sector, however, the reform of the fiscal sector did not progress very smoothly. SOEs remained in an immature state; although some small factories and retail shops were privatized, most SOEs remained in government hands. In fact, the integrated accounting system introduced in 1990 actually weakened their managerial autonomy.

In another aspect of the reforms, Myanmar's economic relationships with other countries were largely liberalized. Foreign trade, which had generally been strictly limited under the Burmese Way of Socialism, was completely liberalized through the introduction of an import license system both at its ports and its borders. 'Authorizing' overseas trade in this way resulted in a fundamental change to the economy. The institutional entities associated with foreign investment were gradually established, the Foreign Investment Law (1988) and the Myanmar Citizen Investment Law (1994) were enacted, and the Myanmar Industrial Development Committee was established in 1995.

In contrast, the government's attitude toward reforms aimed at macroeconomic stabilization was largely passive. The establishment of a financial sector, the deregulation of trade, and the increase in capital flow through FDI inevitably stimulated the flow of money and foreign exchange. The monetary control system, meanwhile, remained unchanged, as demonstrated by the fact that the exchange rate continued to be pegged to the Special Drawing Right (SDR) of the IMF, essentially fixed at 5–6% against the US dollar; the private sector was not allowed to hold foreign exchange; all exporters were obligated to deposit their export revenue in foreign exchange at a state bank (the Myanma Investment and Commercial Bank [MICB] or the Myanma Foreign Trade Bank [MFTB]).

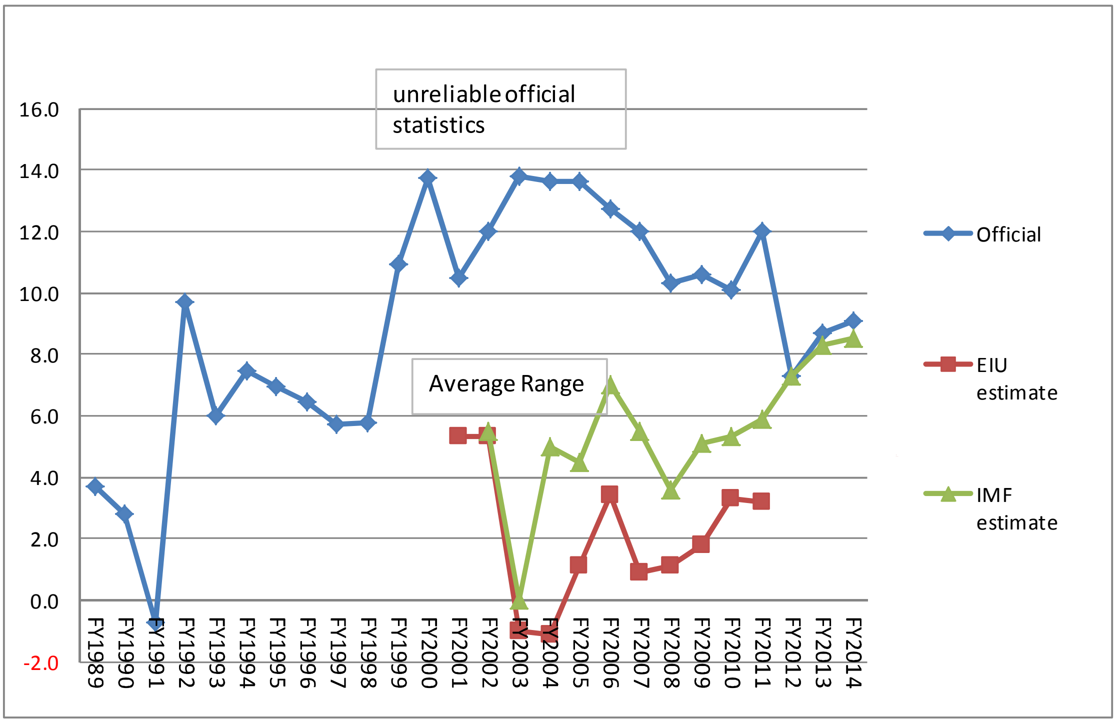
Although they were inconsistent in some respects, the reforms resulted in substantial economic growth in the 1990s. The upsurge in trade generated a vast trade surplus, particularly from primary sector goods such as agricultural products, marine products, and precious metals. This in turn accelerated capital accumulation in the private sector. Expanding exports triggered a diversification in the crops cultivated in the agricultural sector (Fujita and Okamoto 2009). FDI was directed mainly into the construction, tourism and mining sectors. Due to the growing number of local businesses, more and more private banks were established and these emerged as one of the key players in the financial system.

At the same time, however, inconsistency in the reforms led to serious macroeconomic instability. The most significant confusion concerned the foreign exchange system. The official exchange rate was preserved at an unrealistic level, resulting in a huge expansion of the black market. Between 1997 and 2001, the government did attempt to unify the various exchange rate systems to form a managed float system that converged on the market rate by manipulating a Foreign Exchange Certificate (FEC; introduced in 1993). After this attempt failed, however, the gap between the official rate and the market rate widened increasingly to the point where it became uncontrollable, the markets were essentially divided into public and private sectors, and inefficient SOEs continued to be subsidized through applying the official foreign exchange rate (i.e. by means of a vastly appreciated kyat). This subsidization of SOEs become a major cause of the worsening fiscal deficit, which in turn accelerated inflation and produced a further depreciation of the kyat on the black market, thereby worsening the problem by enlarging the gap between the official and market exchange rates.

The government basically stuck with this system until 2011, but minor changes were made at particular times. The Asian Financial Crisis (AFC) of 1997–98 resulted in a sudden drop in exports and FDI inflow, making foreign exchange control much more difficult. Facing a serious shortage of foreign reserves, the government implemented direct restrictions on imports and strict controls on foreign exchange in the private sector. This was done with a view to maintaining foreign exchange controls and separating the foreign exchange markets between the public and private sectors. In the midst of the macroeconomic instability brought about by the AFC, a bank run on a private bank occurred in 2003, triggering a serious economic recession.

Since 2006, a different change in circumstances occurred, following a rapid expansion in the export of natural gas reserves that had been under development since the early 1990s. This helped to refloat the economy and reduce the shortage of foreign reserves and fiscal revenue. When the Thein Sein Government introduced its current reforms in early 2011, the problematic economic structure remained unchanged, but the climate had recovered sufficiently to produce relatively favorable conditions for the reforms.

Figure 1: Various Estimates for Real Growth Rat, 1989-2012



Note: FY2013 figures are Estimates, FY2014 figures are projections:
Sources:
Official: 1993-94:Key Indicators 2003, Asian Development Bank; 1995-2008:Statistical Yearbook 2008, Central Statistical Organization; 2008-2011: Regional Outlook, ISEAS, 2012-2013, p.171
EIU: Economic Intelligent Unit, 1999-2001: ver. Nov. 2002-05, ver. Sep. 2005, 2006-07: ver. April 2009, 2008-2011: Regional Outlook, ISEAS, 2012-2013, p.171
IMF: IMF Country Report, and other publications

2.2. Growth Performance

Although the performance during the last twenty years can't be described as a success, the economy was not always in a poor state; it actually performed quite well at times. Figure 1 shows the real economic growth rate for Myanmar over this period. As the official GDP estimates for 1999–2012 are generally considered to be unreliable, we have included alternative estimates produced by the International Monetary Fund

(IMF), the Economist Intelligence Unit (EIU), and Regional Outlook (RO). While the alternative estimates vary substantially, we can quickly identify a few common trends and it is clear that Myanmar's economic transformation over the last two decades can be divided into three distinct periods.

During the first period from 1988 to 1996, the government implemented reforms to transform the economy from a socialist system to a market-based one, as described earlier in this paper. As a result of these reforms and driven by commodity exports and FDI, the Myanmar economy has attained a reasonable level of economic growth of about 6–8% annually since 2012.

During the second period from 1997 to 2003, the economy experienced a significant external shock from the AFC. After 1998, export growth slowed and FDI declined sharply. The country's expanding current account deficit and the disappearance of foreign capital inflow led to a serious shortage of foreign reserves, resulting in harmful macroeconomic instability. Despite this, however, growth was sustained for a short while due to the domestic service sector enjoying a real estate and construction boom and the emergence of an export market for the garment industry. The booming domestic economy ended when the private banking sector, which was still in its infancy, suffered a bank run in 2003, which led to a widespread economic depression.

According to the official statistics, the growth rate declined slightly in 1997 and 1998 before rising significantly from 1999 onwards, but this doesn't appear to be consistent with actual events. The EIU and IMF started using their own alternative estimates in about 2001 or 2002. Yet even these alternative GDP estimates show moderate growth (around 5%) until 2003. It is presumed that the economy continued to exhibit moderate growth led by the domestic service sector until the end of 2002, but it then came to a standstill as a result of the bank run in 2003. As some of the alternative GDP estimates (EIU and IMF) indicate, the economic growth rate in 2003 may even have been negative.

During the third period from 2005 onwards, the economy was transformed in an unexpected way. The natural gas industry—which had been developed by the junta with the assistance of FDI during the first period—entered into stable production in 2003–04, becoming a significant source of export revenue. Owing to these natural gas exports, the current account recorded a surplus after 2002, and the foreign reserve shortage was eliminated. As a result, the economy recovered to register a growth rate of 2–6% (the exact rates vary across the various estimates, though) and the macroeconomy returned to a position of stability. The newly elected Thein Sein government was able to kick off its reforms in 2011 in these favorable economic and fiscal conditions.

Table 1: Sectoral Composition of GDP (%)

	Agriculture	Mining	Electricity, gas, and water	Manufacturing	Construction	Trade	Others
1988	57.4	0.7	0.4	7.5	1.1	20.8	12.2
1992	60.5	0.5	0.2	6.9	1.8	22.6	7.4
1996	60.1	0.6	0.3	7.1	2.4	22.6	6.8
2000	57.2	0.6	0.1	7.2	1.8	24.0	9.0
2004	48.2	0.6	0.2	11.6	3.9	22.3	13.2
2008	40.3	0.9	0.7	16.8	4.2	21.1	15.9
2009	38.1	1.0	1.0	18.1	4.5	20.3	17.0
2010	36.4	0.9	1.0	19.5	4.5	19.8	17.8

Source: Statistical Database System, Asian Development Bank, in December of 2012

2.3. Sectoral Structure

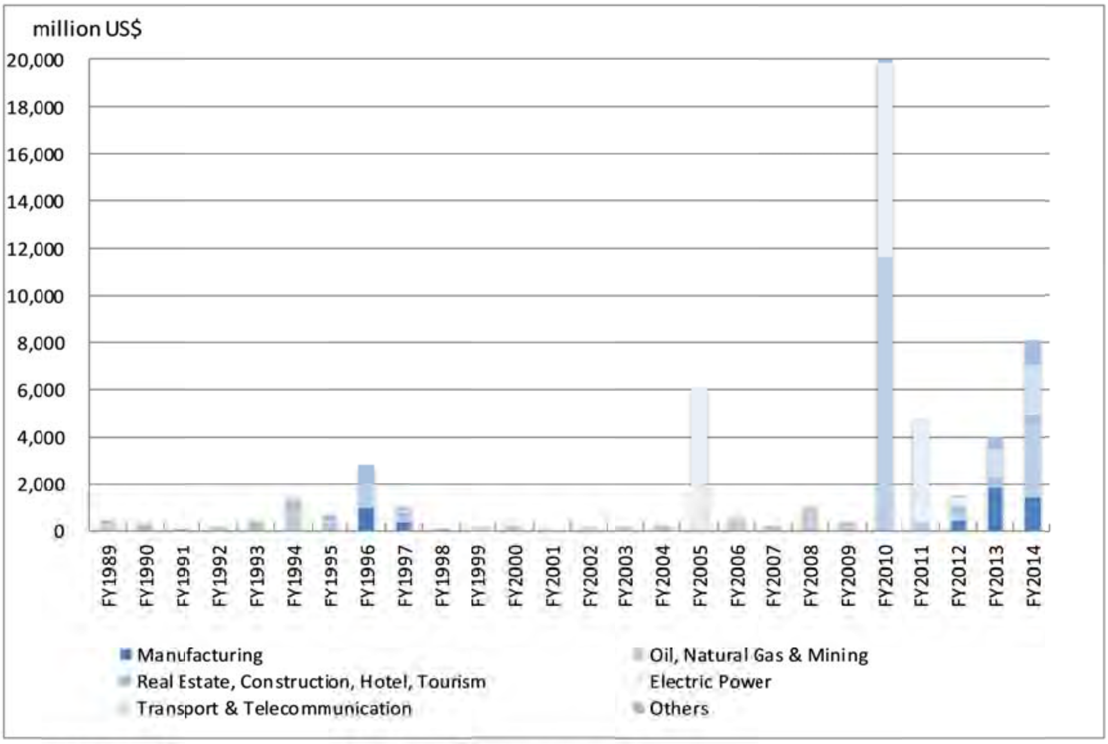
Generally speaking, macroeconomic growth is a result of sectoral development, and in the case of Myanmar in the 1990s to 2000s, it was based on changes in the country's external economic relationships; that is, trade and FDI. Table 1 and Figure 2 show the composition of GDP and FDI inflow by sector since the 1980s. Figure 3 details trends in trade broken down by export products and the trade balance (in Myanmar kyat). These three illustrations provide us with an overview of the nature of economic growth in Myanmar during the 1990s.

When the Myanmar economy grew rapidly during the early 1990s (the first period), the largest industry in terms of value added was agriculture (representing about 50–60% of total GDP) followed by trade, which was gradually increasing its value added (some 20% of total GDP). In contrast, the manufacturing sector had only a 6.8% share of economic activity in 1993, and this increased only slightly during the 1990s.

Figure 2 indicates that while Myanmar's FDI inflow was accelerated by the relevant legal arrangements, it was mostly directed toward service sector businesses—such as hotels, real estate and mining—with very little finding its way into the manufacturing sector. Economic growth in Myanmar in the first period was mostly driven by trade and domestic service sectors.

The prevailing trade structure confirms this feature. As shown in Figure 3, Myanmar's main exports were primary sector goods such as agricultural and marine products and "others," which presumably includes precious gems and noble metals. Such facts suggest that growth during the first period was mainly driven by an expansion in commodity exports as a result of trade having been opened up and foreign investment being directed toward the service sector. The degree of industrialization at this time remains small.

Figure 2; FDI Inflow (Approval Base)

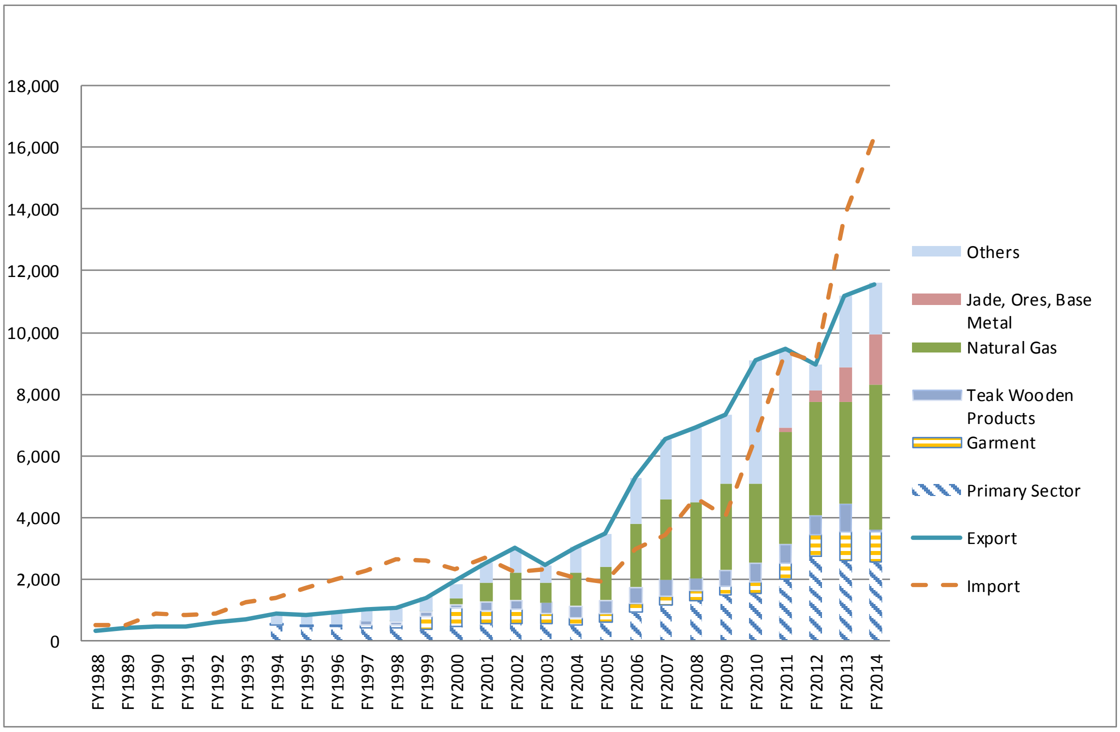


Source: Selected Monthly Economic Indicators, CSO, various years
Note: the figure of 2014 is forecasted value based on the performance April-January

An economy that is dependent on commodity exports and foreign investment, and is not in the process of industrializing is frequently vulnerable. Myanmar's vulnerability was revealed by the external shock it suffered from the onset of the AFC during the second period. Since the early days of the country's reforms, the trade balance had worsened and the trade deficit expanded, and when the AFC struck; it brought FDI inflow to a sudden halt in 1998 and led to a foreign reserves shortage. Coping with a further decline in the market exchange rate, the government strengthened its foreign exchange controls so as to preserve the system for transferring foreign exchanges from the private sector to the public sector under an extremely appreciated value. The government even imposed direct restrictions on imports from 1999 onwards to restrict foreign exchange outflow. As can be seen in Figure 3, any increase in imports was limited from 1999 to 2005.

It is worth noting that even in an environment such as this, the export sector evolved remarkably. In fact, the garment sector emerged as a major exporter, leading to increased exports until 2002. Table 1 shows that manufacturing's share of GDP increased slightly in the 2000–02 period from the 6% level to around 7%. This means that, during the second period, the Myanmar economy showed signs of shifting toward industrialization based on labor-intensive sectors. Thanks in part to the increase in exports—and to strict restrictions on imports—the trade account deficit decreased after 1999 and a surplus was finally achieved in 2001.

Figure 3: Trend in Export Commodities and Trade Account



Source: Statistical Yearbook, CSO

Note: Million US$. For the volumes of each commodity in FY2011-13 are estimated from the information in US dollar. The volumes of 2014 is forecasted based on the performance in April-January. "Jade, Ores, Base Metal" is available only after FY2012, it presumed to be included "Others" before FY2011.

As mentioned above, although the FDI inflow slowed dramatically during the second period, domestic service sectors (e.g. real estate, construction, and hotels) appeared to remain active during and after the AFC. Real estate development continued to flourish in the Yangon area. Most private banks were established as part of business groups in domestic service sectors, and the credit they offered was mostly directed toward their own business groups. The real estate boom continued through to the end of 2002, when it came to a sudden end in early 2003 due to runs on several private banks leading to a serious recession.

During the third period (2004 onwards), however, the economy exhibited yet another upswing in activity. The development of natural gas fields in Myanmar was completed and production began. Natural gas exports from Myanmar, which began in 2000, have exhibited a stable upward trend since 2004, resulting in a dramatic surge in total exports. The total value of exports tripled over the period from 2004 to 2010, with natural gas exports accounting for between 30 and 39% (Figure 3) of this value. This development can be understood, in a sense, to be a fruitful outcome of strong foreign investment in the sector during first period. Figure 2 shows that the share of total GDP accounted for by other services increased after 2004 as well. Responding to the economy's recovery, the FDI inflow into Myanmar increased after 2005, mainly in the electricity generation and natural gas sectors, and this further accelerated the development of these sectors. By the end of the 2000s, the Myanmar economy had retrogressed from a spouse of industrialization in the second period (the early 2000s) to a commodity-exporting economy.

In summary, since the reforms enacted by the junta in the early 1990s, Myanmar's economic growth has been driven by exports of primary products and investment in the non-manufacturing sector. The AFC worsened the country's trade deficit and created a foreign reserves shortage, but it could be said that the AFC had a minimal effect on the export sector due to two main factors: (1) the substantial emergence of a garment sector and (2) the rewards of natural resource development. In the post-2004 economic recovery in particular, the latter factor played an overwhelmingly significant role.

3. Corporate and Financial Systems

3.1. SOEs in Myanmar

Many SOEs have survived and continued to operate in Myanmar because the country's reforms were ended prematurely in the early 1990s. The SOE sector has continued to be based on the light and heavy industry sectors with some government privileges.

Table 2: Share of Value Added to GDP by Sector

	Sectoral Share to GDP in 2007	FY1986			FY1996			FY2007		
		State	Coopeative	Private	State	Coopeative	Private	State	Coopeative	Private
Agriculture	35.6	0.1	6.4	93.4	0.2	1.9	97.9	0.4	2.4	97.2
Energy	0.2				99.9	0.1	0.0	76.3	9.3	14.4
Mining	0.5	89.8	2.2	8.0	10.8	1.0	88.2	2.9	0.2	96.9
Manufacturing	15.0	41.6	4.2	8.0	28.2	0.9	70.8	9.2	0.2	90.6
Service	14.8	60.7	2.5	36.9	54.5	2.6	43.0	14.8	0.1	85.0
Commerce	36.5	44.6	9.1	46.3	37.2	2.5	60.3			
Total GDP	100.0	24.6	6.8	68.6	21.8	1.9	76.3	7.8	1.5	90.7

Source: Reprinted from Kudo(2012), p.173. (original source: *Review*, MNPED)

Although information on SOEs in Myanmar is generally scarce, the share of value added to GDP that is attributable to SOEs is fairly well reported. As shown in Table 2, it was 7.8% for total GDP in 2007, down from 21.8% in 1996 and 24.6% in 1986. For the manufacturing sector, the share of value added that is attributable to SOEs was 7.8% in 2007. In contrast, the share of value added by SOEs for particular sectors remains very high; in fact, it was 76.3% for the energy sector in 2007. Although the shares of value added by SOEs probably increased for particular sectors in the 2000s, the number of SOEs in the Myanmar economy is not especially large, despite the strong protection that they receive from the government.

The subsidy provision system that makes use of a foreign exchange quota with an appreciated exchange rate is said to have been abolished in April 2012[36]. It seems certain that the privatization of SOEs is being undertaken as part of the current economic reform process.

3.2. Private Capital: The Emergence of Conglomerates

Private business capital has increased during the economic growth experienced over the last twenty years. In the early 1990s, private businesses grew by adapting to the changing economic structure. Several large business conglomerates were formed to serve as bases for operations in service sector industries such as trade, construction and real estate. Some of these groups have built up close relationships with the junta government.

Mieno (2009 and 2013) have produced profiles on several business groups that had been established by the late 1990s based on interview-based research. One example of the groups that were profiled is the FMI–SPA Group, which was founded by a Myanmar businessman of Chinese descent after he had succeeded in business in Hong Kong and Thailand. Starting out as an importer of cosmetics, this group subsequently grew to include over 40 subsidiaries and affiliates by 2003, owned by

[36] In an interview with the author in March 2012, the cabinet member in charge stated: "[With] 140 SOEs, mainly in the heavy industry sector, now being privatized, the number of SOEs will fall to 63. [The] Public Private Partnership (PPP) method is being actively utilized."

FMI, the directors of FMI–SPA, and through cross holdings. In 2004, the core businesses of its 51 affiliated firms included finance, real estate, services (hotels, golf courses, and hospitals), and commerce. It is worth noting that their presence in the manufacturing sector appeared to be minimal.

Another recent example is the Kanbawza Bank Group, which was established by a ruby trader in Shan State in 1994 and is known for its conservative management. Kanbawza was a relatively small bank before the bank run in 2003, but it subsequently grew rapidly by absorbing the outflow of deposits from troubled banks and has now become Myanmar's largest private-sector bank. After the post-2005 economic recovery, the group diversified its business into modern service sector industries, such as domestic airlines.

Aung Min and Kudo (2014) have summarized the profiles of representative business groups in Myanmar based on information from newspapers and other publications. They covered 11 groups, including ones under the control of the army (Myanmar Economic Corporation and Union of Myanmar Economic Holdings Ltd.). This clarified the process by which an already huge amount of private capital grew further even during the 2000s. For example, the Asia World Group was established by a well-known rebel leader from the Kokang area of Shan State. Previously known to have been a drug lord, he expanded his legal business into the construction and real estate sectors after his surrender. This group, a typical crony of the junta, grew rapidly under the leadership of the founder's son during the country's post-2005 economic recovery, and it is now heavily involved in the construction of infrastructure for the new capital city, Nay Pyi Taw. The group is also currently involved in the construction of roads in Yangon in partnership with the Yangon City Development Committee, as well as jetties at Yangon Port and Thilawa Port.

The Htoo Group is another example of a business group that grew rapidly after the 2003 recession, rather than during the early period of the junta's reforms in the 1990s. Starting out as a rice mill leasing business in the late 1980s, the group grew to include agriculture and timber businesses. Since the mid-2000s, the group has expanded into various service sector industries, including aviation, hotels, and construction. In 2010, the group entered banking. The Max Myanmar Group was founded in the early 1990s as an import agent for buses from Japan, and expanded its business to include timber, gems, construction, hotel and transportation. The group moved quickly in response to changes in the political and economic climate in the late 2000s. It acquired gas stations under the privatization scheme launched by the junta, and acquired a banking license in 2010. The Htoo Group and the Max Myanmar Group tried to establish a capital channel in Singapore by attempting to take over a business group and establishing fundraising companies there. Asia World, Htoo and Max Myanmar have all been subject to sanctions by the U.S. Department of Treasury.

As these examples show, the growth of big business conglomerates went hand-in-hand with growth in the trade and service sectors over the last two decades. These businesses typically started to build up their capital by exporting primary goods—such as gems, drugs or agricultural products—before reinvesting it in the service sectors. Recently, they have begun moving into modern service sector industries, such as aviation.

In terms of the problems it faces with regard to its corporate system and corporate governance, post-reform Myanmar seems to find itself in the infant confusing stage. The rapid process of capital accumulation experienced by Myanmar can be seen as similar to that experienced by its ASEAN neighbors in the early stages of their development. While private capital provides its economy with vitality, Myanmar's corporate system is far from ideal, suffering as it does from continued cronyism, lack of transparency and an extreme concentration of businesses. Some conglomerates are already intent on modernizing their management, but a fundamental requirement is a mechanism for corporate governance and a regulatory framework for the financial system that are ethnical. The country continues to face huge policy challenges in terms of introducing a legal framework through the enactment of basic and functioning company laws, as well as in terms of establishing a well-functioning financial system.

3.3. Banking Sector and Private Banks

The banking sector in Myanmar is characterized by its slow transition away from the dominance of the state banks and the rapid but less orderly development of its private banks. Although its private banks have been expanding rapidly since the introduction of the recent reforms, the financial system in Myanmar is still in its infancy in terms of performing the function of financial intermediation.

Most state banks were created by dividing monolithic People's Bank of Myanmar in the socialist regime in 1976, and they have had little experience of functioning as financial intermediaries. The Myanmar Economic Bank (MEB) is by far the largest entity in the banking sector, accounting for 47% of the sector's total assets in 2007. It is also worth noting that 8% of the other state banks account for 55% of the total assets of all financial institutions. This share has gradually declined since the reforms, but it still accounted for 35.5% in March 2012.

Many private banks were established by major business groups, but some were originally established by particular branches of the government. As of April 2015, the banking system consisted of 4 state-owned banks and 22 private banks. Of the latter, 15 were established between 1993 and 1996 following the 1990 enactment of the

Financial Institutions Law allowing the private sector to enter the banking sector, 4 were new entrants that had been licensed by the junta in 2010 and the remaining 3 were newly established in 2013 to fulfill specific purposes under the current government. Many banks are subsidiaries of large business conglomerates that operate in the service sector. In particular, the 4 banks that were newly established in 2010 all belong to the major business groups that have grown rapidly since the 2000s: Htoo, Max Myanmar, IGE, and Eden. Several banks have been established by branches of the government, such as the Ministry of Industry or the Myanmar Army, so these are regarded as 'semi-government' banks.

The private banking sector has experienced both strong expansions and contractions since the mid-1990s. The explosive growth of the banking sector in the 1990s was largely due to the absorption of public deposits. Together with the flourishing real estate sector, Myanmar's banks continued to expand even after the AFC. In light of this situation, informal financial institutions—then known as General (Financial) Service Companies—began issuing deposit-like certificates and flourished from around 2000 to 2002. These institutions are said to have promised their depositors high interest rates (2–6% monthly), and they were involved in various types of speculation. In late 2002, they suddenly stopped paying any interest and went into liquidation one after the other. This incident triggered a run on three private sector banks in February 2003: the Asian Wealth Bank, the May Flower Bank and the Yoma Bank (see Kubo et al. 2009 and Turnell 2009). Following this run, the first two banks ended up going out of business and were liquidated. The Asian Wealth Bank and the May Flower Bank were then rumored to have been involved in the drug business and money laundering, so they subsequently faced serious deposit outflows. The government froze the operations of these two banks under the Control of Money Laundering Law, and later they were ordered by the authority to dismiss. As a result, other banks with healthier finances and management reputations, such as the Kanbawza Bank and the Myawaddy Bank, have grown to become major players in the banking sector. Facing the bank run, the government urgently introduced new regulations to restrict bank deposits to ten times the equity value of the bank. This regulation has become a major impediment to the collection of deposits by Myanmar's banks.

The Thein Sein government has worked to reform the financial system since 2011. The unification of foreign exchange rate in April 2012 brought about a need to reconsider the role of state banks, particular in the case of the MICB and the MFTB. The government enacted the Central Bank of Myanmar Law in August 2013, which strengthened the central bank's independence with regard to the setting of monetary policy and its power to regulate private banks. The regulation over the deposit-equity ratio was abolished. At present, in August 2015, a new financial institution law upgrading the country's financial regulations to better reflect standard practice is being deliberated in parliament.

In light of these developments, private banks have undertaken remarkable changes recently. Some major banks, such as the Kanbawza Bank and the CB Bank, have rapidly expanded their assets by extending their branch networks. The speed at which their deposits are growing is much higher than that of the MEB, suggesting the possibility that private banks may in the near future catch up to the state banks dominating the banking sector in terms of size. Some 'semi-government' banks have "normalized" their management and ownership to become purely private commercial banks, while others have strengthened their positions as policy-based banks[37].

Table 3 illustrates trends in terms of the financial assets and operations of private sector banks in Myanmar. The assets and deposits of private sector banks rapidly expanded following the establishment of such banks after 1992 until the bank run of 2003. However, the ratio of M2 to GDP has remained very low at around 30%, and has even declined recently. This figure suggests that the lending operations of these banks have not yet caught up to the expanding level of their deposits. This increase in deposits was accompanied by a continual decline in the loan-to-deposit ratio between 1992 and 2000.

Despite this dramatic expansion of private-sector banks in Myanmar, they still tend to act as private asset managers to particular conglomerates, and do not appear to be fully functioning as effective financial intermediaries in the national economy yet, although their activities have changed in recent years[38]. From the view of role of financial institution, the private bank sector emerged under the junta's reforms in the early 1990s and extensively transformed during the reforms being enacted in the 2010s, has only partially enhanced the bank's capacity of financial intermediation in the economy. The state banks still have a strong presence in the system, but their financial functions seem to be inactive. In particular, the future of the MEB, which has an enormous presence within the financial system, needs to be discussed as early as possible.

Table 3: Financial Position of Private Banks

[37] See Chapter 7 by Fumiharu Mieno

[38] See Chapter 7 by Fumiharu Mieno

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Total Asset	Deposit	Total Asset / GDP	Deposit / GDP	M2 / GDP	Loan / Deposit	TB/ Deposit	(6)+(7)
1992	522	230	0.2	0.1	31.2	78.1	0.0	78.1
1993	2,400	1,578	0.7	0.4	27.4	82.0	2.5	84.5
1994	6,676	4,840	1.4	1.0	27.9	72.6	0.8	73.5
1995	20,231	15,705	3.3	2.6	30.7	61.9	3.2	65.0
1996	48,966	37,014	6.2	4.7	32.5	70.8	3.1	73.9
1997	85,062	58,156	7.6	5.2	29.7	86.8	7.7	94.5
1998	139,849	110,784	8.7	6.9	28.2	54.9	8.3	63.3
1999	230,588	186,169	10.5	8.5	26.8	52.1	31.8	83.9
2000	384,101	324,580	15.0	12.7	32.7	49.2	31.1	80.4
2001	597,174	487,101	16.9	13.8	34.3	63.6	22.0	85.5
2002	846,215	644,692	15.0	11.5	28.9	72.3	15.8	88.1
2003	439,204	215,579	5.7	2.8	21.1	85.9	37.0	122.9
2004	531,387	346,245	5.9	3.8	24.1	60.2	31.0	91.2
2005	514,981	364,559	4.2	3.0	22.1	68.5	19.5	88.0
2006	711,435	519,366	4.3	3.1	20.2	62.6	20.7	83.3
2007	948,189	689,449	4.1	3.0	18.8	68.6	23.7	92.3
2008	1,331,262	928,091	4.6	3.2	17.2	63.2	28.8	91.9

Source Statistical Yearbook 2002 & 2007, ADB Key Indicators
Note: unit for (1) and (2),: million Kyat, unit for (3)-(8): percentage

4. Supply System for Long-term Capital

4.1. Capital Market Development in Myanmar

In May 2012, the Myanmar government exchanged a memorandum of understanding with the Tokyo Stock Exchange and Daiwa Securities Co., Ltd. of Japan to establish a securities exchange as a means of moving toward the development of a functioning capital market in Myanmar. Scheduled for completion by 2015, this joint venture utilizes the experience of the Myanmar Securities Exchange Center (MSEC; run by Daiwa Securities Co., Ltd.) together with technical assistance from the government of Japan. This cooperation work started with the reforming of the legal system and the construction of a transactions system. Based on these preparations, the Yangon Stock Exchange is scheduled to open in the autumn of 2015.

The capital market is expected to play a key role in providing the economy with relatively large amounts of capital over the long term. It is generally expected to play a complementary role to the commercial banking sector, whose main role if to provide short-term credit.

However, the greatest difficulty in establishing a capital market in a developing country is that it usually takes a substantial amount of time before it is able to fully function following its physical establishment. The historical experience of Myanmar's neighboring ASEAN countries teaches us that it may take a decade or more for the market to begin functioning as a tool for resource allocation. For a securities market to become fully operational, a government must first take steps to establish the necessary legal systems, protect investors' rights and provide incentives that will encourage firms to participate in it.

Once it has been established, however, the market should provide a vital platform for further governmental and corporate reform in terms of government bond absorption, SOE privatization, and transparency in the management of private corporations, including banks. Particularly with regard to the enhancement of the financial system, private banks need to be more transparent and public, and to operate independently of any particular business group. The securities market can play a vital role in imposing discipline on banks with a view to improving the quality of the financial system in the future[39].

4.2. Development Bank System in Myanmar

While capital market development is a standard means of providing long-term capital, some countries in East Asia have adopted an alternative means, known as the development bank system, during their high-growth stages. These development banks were usually created within the banking system in the form of a policy-based financial institution specializing in long-term credit. The fundraising side of their operations is designed to ease the long-term finances through fiscal sources, privileged bonds, or compulsive deposits from private banks for development banks to sustain resources of long–term lending. They could be found in Japan during its high-growth era—both in the form of state-run banks (Japan Development Bank) and special private banks (Long-term Credit Banks)—and in Korea even today in the form of a state-run bank (Korea Development Bank). Recently, some ASEAN countries have attempted to establish state-run banks specializing in the provision of credit for infrastructure.

It should be noted that there is essentially a fundamental trade-off between the capital market and the development bank system. The establishment of a development bank amounts to a sort of government intervention in the financial market designed to mitigate a certain market failure. In the early stages of development, the market sometimes fails to create enough long-term credit due to severe information asymmetry or as a result of risk arising from inadequate information processing capabilities. In some situations, loan coordination by the government or the provision of interest subsidies can prove effective. Such policy interventions, however, generally impede capital market development in the long run. For example, during Japan’s high-growth era (1960s–1970s), the system for providing long-term credit employed by the Japan Development Bank and Long-term Credit Banks was only made possible through the repression of equity and bond issues by corporations and the imposition of partial restrictions on the operation of commercial banks (Hoshi and

[39] When Thailand established its stock exchange in the late 1970s, for example, all commercial banks in the country were compelled to become public companies and to be listed on the exchange.

Kasyap 2000).

The debate concerning the introduction of a development bank system in Myanmar will be intimately related to the reform policy for state banks, particularly the MEB. While the MEB seems to provide a great source for fundraising, its capacity for financial intermediation as a bank appears to be insufficient. The possibility of introducing a development bank system should be carefully examined with consideration given not only to the capacity of existing state and private banks, but also to its effect on capital market development.

5. Conclusion

This paper looked back at the process by which Myanmar's economy changed and developed over the last two decades, with its focus on the emergence of the private sector during the period of junta rule in the 1990s. Myanmar economy exhibited the substantial private sector-led growth, and the development of the trade, construction, and banking industries that was supported by the growth of primary sector exports during the early stages of the reforms enacted by the junta in the 1990s. Furthermore, a sprout of industrialization by the labor-intensive garment sector was shown in the late 1990s. However, due to the economic turmoil caused by the AFC, signs of a downturn in the industrialization being driven by the private sector began to appear in 2003, and since its recovery, the economy has become characterized by commodity (natural gas) exports in the government sector as well as domestic service industries, such as construction, in the private sector. This transformation has certainly contributed to the recovery and rescued the government from a fiscal and foreign reserve crisis, but it may also have made the economy more vulnerable to external conditions, such as variations in international commodity prices. The current reforms, which were begun in 2011, are still built upon this fundamental principle.

The dissolution of major SOEs was limited, and this policy was later suspended under the junta's reforms. The private sector, on the other hand, has grown to emerge as another major entity. Most large private corporations, however, expanded their businesses into the service sector and formed business groups, some of which developed intimate ties to the government. These crony relationships have essentially remained unchanged, even since the new government took power. Myanmar's corporate system is still in the primitive stages of its development.

Established during the junta regime, Myanmar's private banks have grown rapidly during the current reforms, even taking the place of the state banks within the financial system. However, most of these banks were created by private business groups and they still behave as the financial departments of these groups, rather than as public corporations. As a result of this, their performance of financial intermediation is not yet very sophisticated. In terms of the provision of long-term capital, the establishment of a capital market is still its preparatory stage.

It is important that the reforms be designed to deliver corporate and financial systems that are suited to the industrialization process. Construction of a financial channel for supporting growth in the manufacturing sector should be the country's first priority, and this can be broken down into three criteria. Firstly, the existence of well-functioning private commercial banks that are managerially independent is a prerequisite. To this end, a legal framework and regulatory practices for the banking sector is crucial. Secondly, discussions need to be started with regard to the design of a system for creating a financial channel for long-term capital, which is of crucial importance for the achievement of widespread industrialization. Discussions concerning a system for channeling credit to small and medium enterprises and agricultural production are also important. Lastly, a policy regarding the creation of a fair corporate system—including the issue of SOE privatization as well as corporate ownership and governance—will become a vital part of plans for achieving long-term sustainable growth.

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Chapter 5

Developing a Robust Financial System for Myanmar's Sustainable Growth

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Abstract

This paper aims to discuss how a robust financial system that facilitates Myanmar's sustainable growth may be developed in an efficient and effective manner. By extracting the theoretical implications and lessons learnt in other developing countries, Southeast Asia in particular, and by comparing the implications and lessons with Myanmar's current efforts and policy framework, the author addresses remaining challenges and proposes future directions for Myanmar's financial sector development through answering three crucial questions.

The first question is regarding the pathways for Myanmar: Is the current reform heading in the right direction and sequence? Despite good progress in a number of key areas, there are challenges remaining. A significant part of the flow of funds in Myanmar is channelled through informal, unregulated financial system. Unless regulated banks regain trust and see accumulation of currencies in deposits, the transition from a cash-based economy to inter-bank electronic payment and settlement system regime will not be realized. Businesses must disclose their financial and operational circumstances in a standardized manner verified by trustworthy third parties to obtain financing at a reasonable cost. Establishment of the Yangon Stock Exchange may be beneficial in this context, as it would allow stakeholders to learn and actually operate according to international accounting and auditing rules and practices. Macro-economically, Myanmar needs a strategy to break the old habit of falling into widening trade deficit and foreign currency shortage every time the economy grows.

[40] Disclaimer: The views expressed in this paper are those of the author and do not necessarily reflect the views of the author's organization.

The second question is on regulating financial institutions: How should authorities regulate banks and other financial institutions to guide them to operate prudently, but function more for the unmet real demands at the same time? The rapid credit growth and low non-performing loans rate indicate that at least in the short-term and based on Myanmar's current definition of non-performing loans, banks are operating prudently while meeting more demands. However, banks need to cast off the traditional lending behavior of requesting real estate collaterals with a value of twice as much as the loan, to learn the know-how of project evaluation, and to convert short-term demand deposits into multiple year loans that suit investment demands for facilities and equipment. Strategic allocation of funds to macro-economically crucial sectors that contribute to sustainable external transactions must also be considered as one of the reform agenda for the financial system. The authorities have shown interest in applying policies and instruments that reflect views encouraging and discouraging the use of policy-based loans at the same time, promoting liberalization of commercial bank operations while pursuing directed and/or subsidized finance through policy banks. However, they have not been able to clearly articulate on how they intend to promote finance to prioritized sectors. The first step could be consolidating the existing state-owned banks and other banks under government influence and defining the objective, function and scale of the consolidated bank. Absence of regulatory framework and proper insurance products for the rural population is not merely a defect in the financial system, but socially unsustainable as many people in poverty suffer from economically catastrophic events for households, such as illness, crop failure and drought.

The third question is effective use of external and public financing: How can the government of Myanmar improve the way it utilizes and manages external resources and public expenditure, for financing infrastructure development in particular? The government maintained the low risk of external debt after arrears clearance operation in 2013 and has done a superb job of inducing external private financing, successfully increasing foreign direct investment (FDI). Nonetheless, poor infrastructure, such as power and transportation, is impeding more FDI to flow into manufacturing sector. International development partners and the government will not be able to fully fund huge demands for infrastructure development. Incentivizing the population to deposit their enormous hoarded cash into banks, channelling the underutilized domestic savings to long-term infrastructure development by using public finance as the catalyst, and boosting industries with positive impact on trade surplus with external financing such as FDI, could be the keys to unlock the potential of Myanmar.

Contents

1. Background and Objective

Since President U Thein Sein took office in 2011, Myanmar has embarked on a comprehensive set of reforms—political, socio-economic, administrative, and the private sector. To accelerate growth and reduce poverty on the road to long-term, sustainable development, the government has introduced numerous initiatives, including modernization of the financial sector. While Myanmar already achieved remarkable progress in rapidly expanding the financial sector by removing fundamental obstacles that have kept the sector small and ineffective, there are arduous tasks remaining for both the authorities and the private sector to overcome multiple bottlenecks to further develop the sector.

In light of the above, this paper aims to discuss how a robust financial system that facilitates Myanmar's sustainable growth may be developed in an efficient and effective manner. As a late comer, Myanmar can take advantage from past practical experiences and findings from academic researches. By extracting the theoretical implications and lessons learnt in other developing countries, Southeast Asia in particular, one can assess whether the on-going and planned financial sector reform is on the right track or not. The author will first provide an overview of financial sector reform since President U Thein Sein took office in 2011. The paper then picks up key elements for establishing robust financial system in developing countries from Okuda, Mieno and Ojima (2010), which clearly and concisely elaborates evolving theoretical background and actual practices adopted in developing countries. The author will compare Myanmar's current efforts and policy framework against these theoretical background and practices. Based on this comparison, the author will wrap up the paper by addressing remaining challenges and propose future directions for Myanmar's financial sector development through answering three crucial questions. The first question is regarding the pathways for Myanmar: Is the current reform heading in the right direction and sequence? The second question is on regulating financial institutions: How should authorities regulate banks and other financial institutions to guide them to operate prudently, but function more for the unmet real demands at the same time? The third question is effective use of external and public financing: How can the government of Myanmar improve the way it utilizes and manages external resources and public expenditure, for financing infrastructure development in particular?

2. Myanmar's Financial Sector Reform to Date

2.1. Arrears Clearance and Reform Monitoring

Financial sector has been one of the core reform agenda for U Thein Sein's administration. Reform of the sector was believed to be an essential factor for the country's development, but the sector was regarded as small, segmented, and repressed due to unfavorable administrative controls at the outset. Myanmar started tackling the issue by clearing the accumulated sovereign debt and by introducing measures to abolish rules and regulations that prohibited the financial sector to function properly. The country agreed with Japan, its largest creditor, on a sovereign debt restructuring plan. This plan was followed by arrears clearance operation of the two multilateral development banks, the World Bank and the Asian Development Bank, with support from Japan's bridge financing in January 2013. Paris Club reached agreement to write off at least 50 percent of all arrears and reschedule the remaining at a minimum condition of 15 years repayment including 7 years grace period, and many countries offered better treatment than the Club as a whole has agreed. Paris Club arrears clearance was phased, the latter phase subject to the implementation of various reforms under the Staff Monitoring Program (SMP) of the IMF which was confirmed as successful completion in the Second Review report published in March 2014. In parallel with IMF's SMP, Japan International Cooperation Agency (JICA) helped the Government of Myanmar implement and monitor a broader set of reform progress, which consisted of 3 clusters: (1) macroeconomic management & development policy, (2) social sectors, and (3) governance issues (MOFA (2014)).

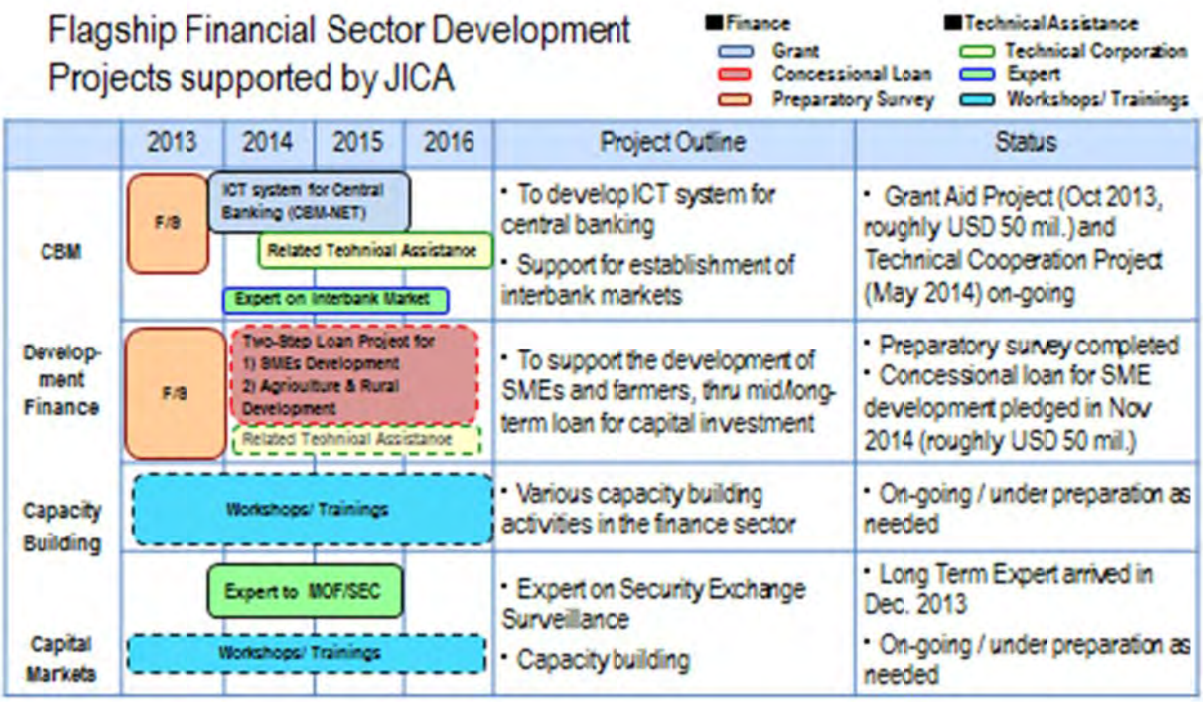
Cluster 1 of Japan's reform program covered key aspects of financial sector reform. Through various support and occasional discussion meetings, it was confirmed that Myanmar quickly expanded, restructured and opened up the sector en route to a modernized financial system. In terms of monetary policy, the most notable achievement is the enactment of a law to grant greater autonomy to the Central Bank of Myanmar (CBM), which became independent from the then Ministry of Finance and Revenue in July 2013. The more autonomous CBM implemented measures such as formulation of a monetary policy committee, adoption of a reserve money target, and improvement of its liquidity forecasting capacity. The foreign exchange rate system also went through several key policy changes, including transition to a managed floating rate (April 2012), implementation of Foreign Exchange Certificates (FEC) phase out (from March 2013), and introduction of interbank foreign exchange market (August 2014). In the financial sector, the authorities have acted swiftly to remove some of the administrative controls that have supposedly repressed financial intermediation. These include, among others, abolishment of the capital-to-deposit requirement, easing of the capital requirements for the opening of new branches, and liberalizing deposit rates within a fixed corridor. Relaxation and rationalization of the rules are seen as major drivers of rapid credit growth. In addition to introducing measures to remove these obstacles, the authorities have enacted key laws to offer a more diversified regulated financial services to the public, including the Microfinance Law (November 2011) and the Securities and Exchange Law (August 2013).

2.2 Recent Developments

After the successful completion of IMF's SMP and since the last monitoring meeting between the authorities of Myanmar and Japan on the reform program after the arrears clearance operation, the financial sector in Myanmar continued to show progress. One of the most symbolic developments is awarding of the preliminary approval of licenses to 9 foreign banks from Australia, China, Japan, Malaysia, Singapore and Thailand (October 2014). In April 2015, CBM announced that The Bank of Tokyo Mitsubishi UFJ, Ltd., Oversea-Chinese Banking Corporation Ltd, and Sumitomo Mitsui Banking Corporation have been granted final licenses to commence operation, having met all requirements. In August 2014, the Securities and Exchange Commission (SEC) was established, which is a body for inspection and surveillance of stock exchange and securities market. The members are now undergoing training programs in preparation for the anticipated opening of the market in 2015.

Such remarkable progress was made possible with extensive support from multilateral and bilateral organizations offering various financial and technical assistances to the CBM and other authorities concerned. A coordination mechanism to better align these supports to Myanmar's financial sector development and reform agenda was established following an informal meeting of the Development Partners (DPs) in October 2013. The Committee for the Coordination of the Financial Sector Technical Assistance to Myanmar (COFTAM) has met three times since its establishment (April and November 2014, July 2015). As a member of the COFTAM and one of the leading DPs in Myanmar, JICA is offering a number of financial and technical assistance to support the CBM and other relevant ministries for sound financial sector development in Myanmar (Figure 1). There are three main target sub-sectors to JICA's assistance. The first is the operation of the central bank, CBM. In October 2013, Japan has offered a grant aid of approximately 50 million USD to develop the ICT system for the CBM, which has largely depended on manual operation until now. The financial support, together with resident experts dispatched under a related technical cooperation project, aims to introduce electronic means of payment and settlement to allow the banking sector cope with the rapidly expanding financial transactions amid fast economic growth (CBM-NET). The second is development finance. In November 2014, Japan has pledged provision of a highly concessional ODA Loan of approximately 50 million USD for financing small and medium enterprises through local banks, and has signed the loan agreement in June 2015. Last but not least is capital market development. In close alignment with the private sector led initiative to help the Government of Myanmar establish its stock exchange targeting 2015, JICA dispatched an expert from the Financial Services Agency of Japan to offer advice to Myanmar authorities for inspection and surveillance, including the establishment and initiation of the SEC.

Figure 1: Overview of Support from JICA



Source; JICA (2015)

3. Key Elements towards a Robust Financial System and Myanmar's Current Efforts

This section will first pick up key elements for establishing robust financial system in developing countries from Okuda, Mieno and Ojima (2010), which clearly and concisely elaborates evolving theoretical background and actual practices adopted in developing countries. Then, Myanmar's current efforts and policy framework will be analyzed against these theoretical background and practices.

According to Okuda, Mieno and Ojima (2010), there are four key elements for designing robust financial system in developing countries. The first element is the role of financial sector in economic development. The authors have attempted to capture the essence of interactions between the development of the real economy and that of the financial sector in other Southeast Asian countries by using Comparative Institutional Analysis. The second element is the basic design of a financial system in development countries. Characteristics and advantages of a bank system and a market system will be compared from the perspective of what is suitable for developing countries at a certain stage of economic development. The impact of a rapidly globalizing banking sector and the role of foreign banks are studied as emerging agenda for the design in developing countries. The third element is how to deliver financial services to businesses and the dominant agriculture sector in developing countries. Theory and practices in Southeast Asia on corporate finance and corporate governance are reviewed to extract lessons. Similarly, rural finance and micro finance will be reviewed by applying recent economic theories to explain the realities on the ground. The fourth and final element is external and public financing for developing countries. The history and management framework of debt sustainability applied to analyze the circumstances in developing countries will be introduced. The important roles of foreign direct investment (FDI) and public financial inflows will be highlighted as well.

3.1. Economic Growth and Financial Sector

3.1.1. The Role of Finance in Developing Countries

(a) Theoretical Background and Practices

The two functions of the financial sector that contribute to economic development are (a) to provide the means of exchange to lower transaction costs and promote division of labor, and (b) to transfer money from one economic entity to another which enable efficient use of resources. Financial intermediaries and financial markets are mechanisms to realize smooth transfer of money through lower transaction costs. These mechanisms do so by providing 1) risk diversification, 2) project evaluation, and 3) liquidity risk management functions. Risk diversification allows providers of funds to diversify their investment and reduce the risk of default. Intermediaries and markets produce information on borrowing companies to evaluate the expected profits and risks associated with investment. Liquidity risk management is about standing in the middle of a fund provider who wants to obtain return in the shortest possible timeframe and a fund borrower who wants longer repayment period.

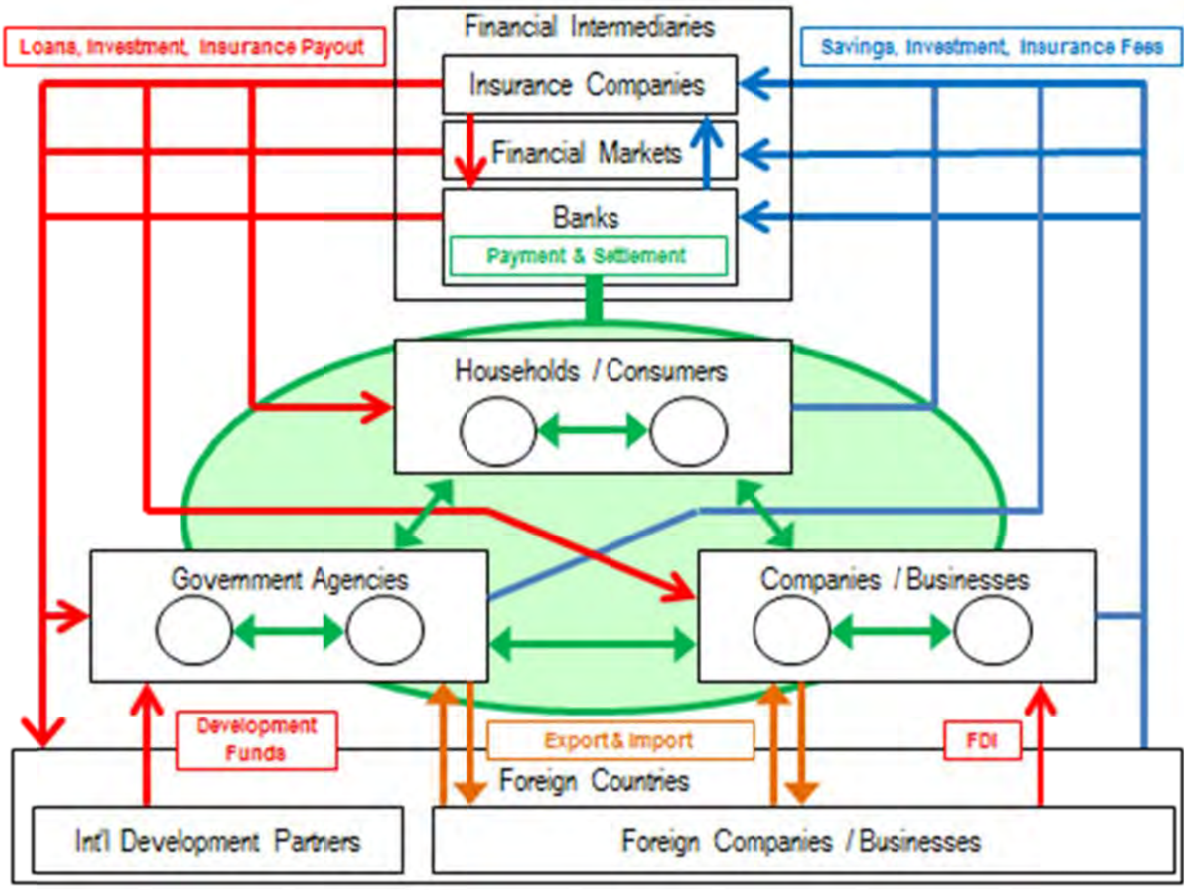
Banks manage the risk by pooling deposits, and markets manage the risk by offering a platform to enable reselling of bonds and stocks. Empirical analyses indicate positive causality from financial sector development to economic growth, although economic growth can be regarded as a crucial driver for financial sector reform as well. There is a broad international recognition that either way, government sector should facilitate financial sector reform to achieve accelerated economic growth through developing institutional and human capacity such as legal framework, accounting rules, human resources, and enforcement of regulations.

In terms of financial liberalization, two opposing views exist. The first is "financial repression," or the position that highlights the negative impact of policies setting artificially low interest rates with the intension of expanding flow of funds to priority sectors at generous terms and conditions. This theory warns that lower interest rates lead to decrease of overall flow of investment and thus lower economic growth, and that funds will flow to less inefficient sectors and also cause improper use of the rents obtained by governments and financial intermediaries engaged in low-interest loan operation. The other view is "financial restraint," or the position that highlights the incompleteness of markets in developing countries and considers the government controlled financial allocation merits execution. Under asymmetric information, meaning that fund providers have access to limited information of the borrower, higher interest rates may function as a signal of higher risks, resulting in lower amount of funds made available under high interest rates. If low-interest policy results in accelerating investment in priority sectors and in advancing institutional and human capacity to contribute to the resolution of limited fund availability due to asymmetric information, it could mean that "financial restraint" theory is capturing the realities in developing countries better. Generally speaking, however, the rapid globalization of the global economy implies that institutional and human infrastructure development for financial liberalization is a priority over artificial low-interest policy for developing country governments. In addition, foreign financial entities can play key roles to stimulate and transform domestic intermediaries to provide better functions under a more open and linked global economy.

One key aspect of the financial sector in developing countries not covered fully in Okuda, Mieno and Ojima (2010) was the payment and settlement system. As described earlier, providing the means of exchange and transferring money are the two fundamental functions of the financial sector. Building a reliable system for settlement, or economic transaction that involves money or securities, is an integral part of the sector's development. Banknotes and deposits in the central bank's account are offered by the authorities as assets for transfer. Safe and efficient payment and settlement system is crucial to prevent default, which could trigger significant market disruptions. Payment and settlement among numerous economic businesses and households tend to be based on deposits in commercially operated banks as transaction becomes larger in numbers and size in pace with economic development. These transactions are generally aggregated and electronically settled in interbank system using each bank's deposit in the central bank's account to minimize risks.

Another sub-sector not described in detail by Okuda, Mieno and Ojima (2010) is insurance. Insurance offers the opportunity to pool funds to compensate against the risks of possible losses and damages to individual households and businesses. People living with low levels of income, whose conditions are generally more serious in developing countries, are vulnerable to risks as they tend to force catastrophic payments for their households and businesses. These risks include deaths of labor force in households, devastating weather events damaging agriculture production, traffic accidents during transportation of goods, etc. Providing affordable yet meaningful coverage to these risks is crucial for inclusive and equitable economic and social development.

Figure 2: Flow of Funds in a Functioning Financial System



Source: Author

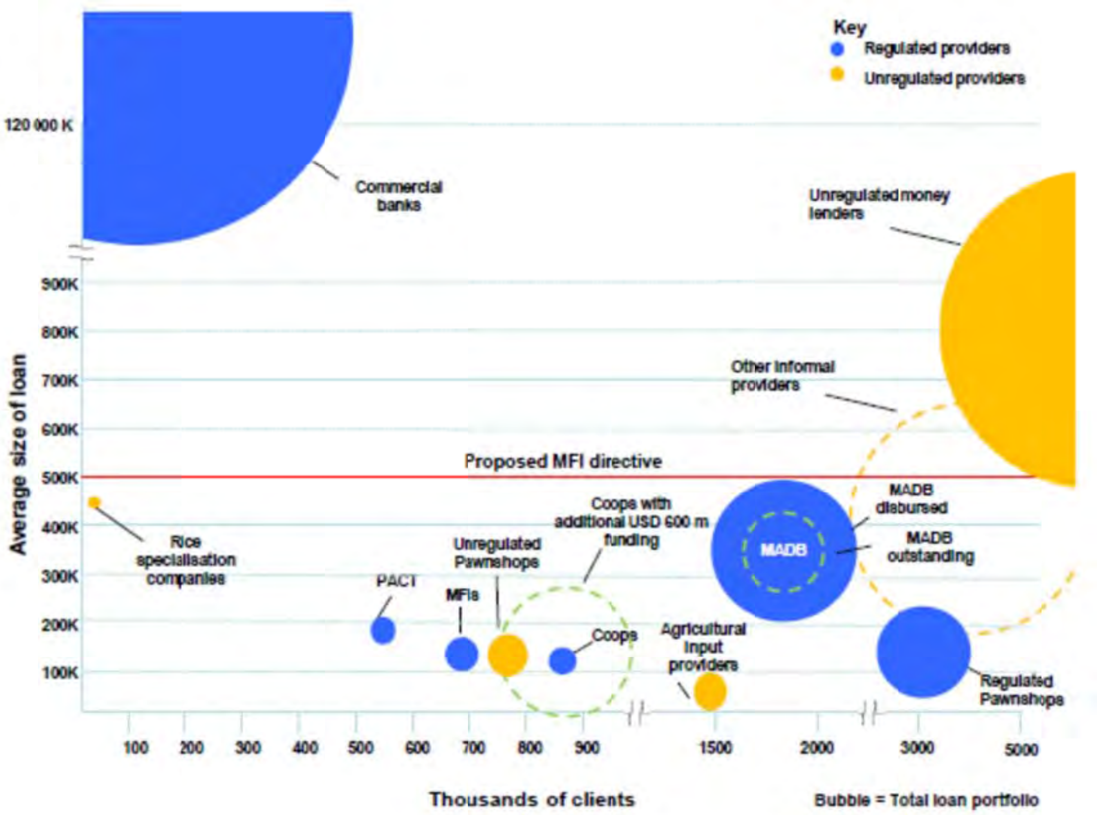
An illustration of flow of funds in a functioning financial system is shown in Figure 2.

(b) Status Quo and Current Policy Framework in Myanmar

At present, Myanmar's formal financial system is limited both in size and function. Despite a rapid increase from around 3% in FY 2009 to over 15% in FY 2013, the percentage of domestic credit to the private sector against GDP is the lowest among ASEAN countries. Banks are the principal agents providing financial services for businesses and individuals. The aggregate assets held by the banks in percentage of GDP quickly increased from 11% in March 2010 to 55% in March 2014, despite being only about half of that in Thailand at 117%. Banks hold nearly 90% of the total assets owned by formal financial institutions.

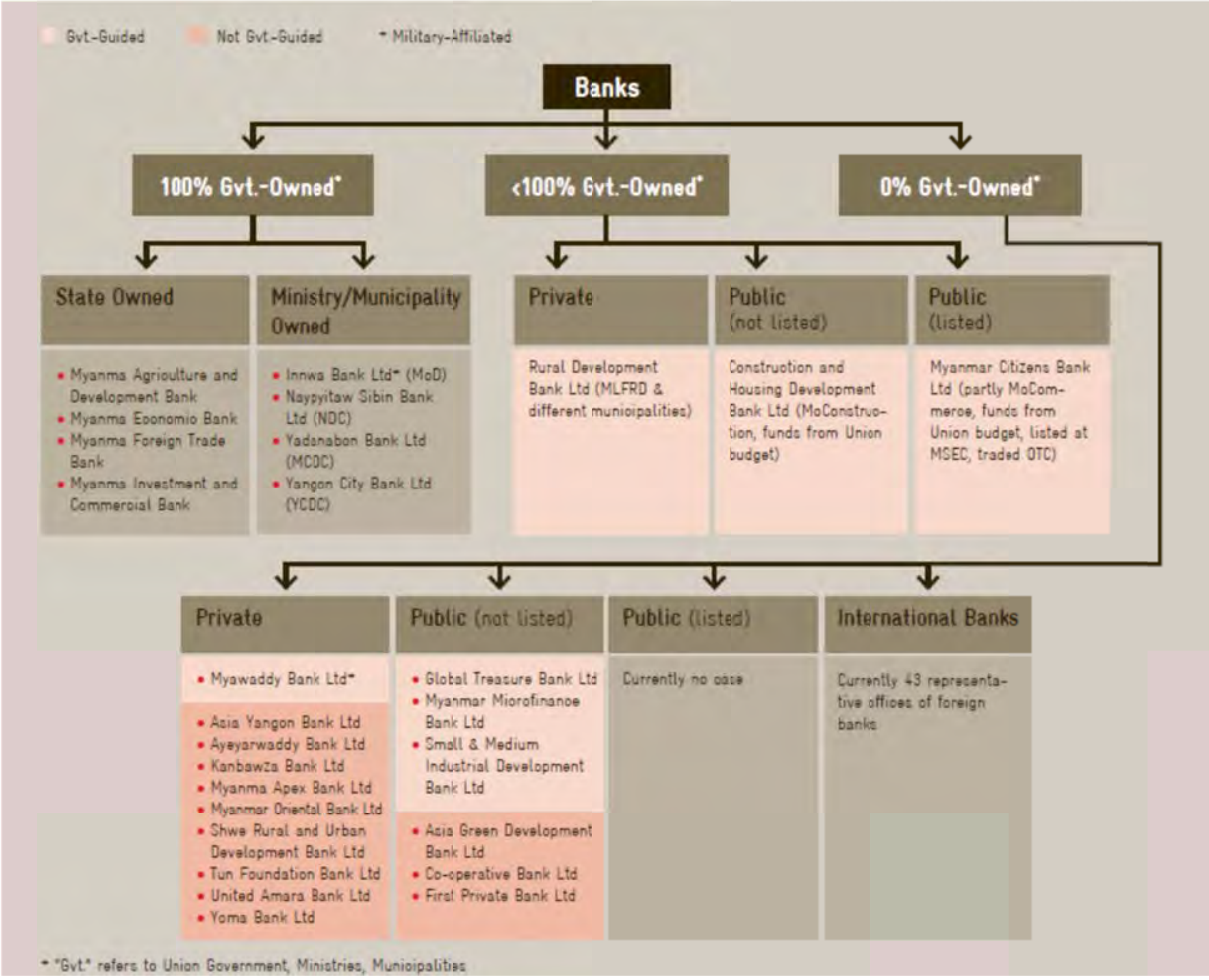
The financial services offered by the banks are limited, and therefore they are not effectively functioning as desirable financial intermediaries. Roughly 80% of the entire source of financing come from personal savings and personal loans, with only fractions coming from state-owned banks and commercially operated banks (Foerch et al. (2015)). The framework legal documents, such as the enacted CBM law, the Bank and Financial Institutions Law and Myanmar Accountancy Council Law being drafted and under discussion, are gradually strengthening regulatory and supervisory capacity of the authorities, but it may not be keeping pace with the rapid expansion and modernization of the system, including informal, unregulated transactions.

Figure 3: Credit Provision Landscape (Loan Outstanding)



Source: Chamberlin et al. (2014)

Figure 4: Types of Banks in Myanmar



Source: Foerch et al. (2015)

The four state-owned banks, holding around 60% of the assets owned by banks and collecting nearly 40% of the total deposit to banks, conduct not-for-profit policy-based lending such as loans to farmers by the Myanmar Agricultural Development Bank (MADB). The two major state-owned banks, the Myanma Economic Bank (MEB) and MADB, own over 500 branches nationwide, which represent over 40% of the total 1,300 bank branches deployed and are particularly dominant in the rural areas where roughly 70% of the population lives.

Despite the large share in assets, deposits and outreach, the state-owned banks only contribute to less than 10% of the total lending by banks, meaning that they are underperforming in terms of transferring money between economic entities which enable efficient use of resources. Their excess liquidity has been used to purchase treasury bonds to finance government deficits. Due to the policy-oriented direction of the lending yet with collateral mandates and being a major purchaser of treasury bonds, state-owned banks are hardly equipped with risk diversification and project evaluation functions, lagging behind commercially operated banks in modernizing its operation such as investment for information technology. The policy impact of the lower-than-market interest rate loans provided through these state-owned banks are unclear. Given that over 90% of the deposits are demand deposits and can be drawn down at the users' disposal, its portfolio focused on multiple-year treasury bonds may mean that state-owned banks are somewhat managing the liquidity risks, but at a cost symbolically represented by the MEB's 20 year plus successive deficit covered by government spending.

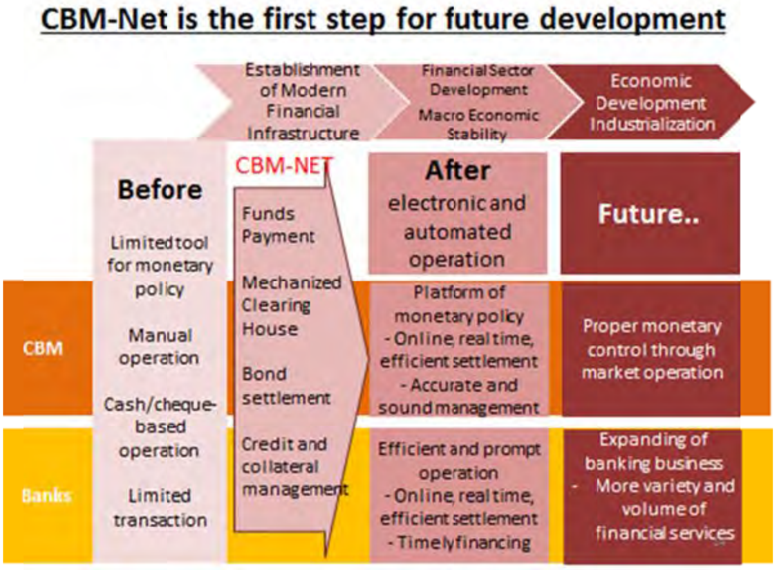
The commercially operated banks, 19 of them including both full or partial ownership of the public or the private sector, have been the major driving force for rapidly expanding deposit and credit to the private sector since the reform started, increasing their aggregate total asset for nearly six times from 2010 to 2014. The authorities have made significant progress to remove many obstacles for the development of the banking business. They have abolished restrictions on capital-to-deposit ratio. Capital requirement for new branch opening was eased. The scope of mandated collateral has been extended to include exportable agricultural crops. Administrative interest rates now allow some flexibility within a fixed range for deposit rates. The progress of these reform activities all added up to the drastic increase of commercially operated bank loans.

The commercially operated banks, however, remain limited in their three functions of risk diversification, project evaluation and liquidity management. To begin with, although the scope of collaterals was widened, the newly added exportable agricultural crops are not used in practice due to the complex nature of assessing the values. Only around 30 – 60% of the forced sale value for land and buildings collateral can be lent. Collaterals and guarantees requirements are still seen as the most serious impediment for utilizing bank loans. There are official notification regarding the accounting and auditing standards of businesses, but they are not strictly followed in practice and certainly not being utilized as reliable source of lending commitment by banks. As for interest rates, although a positive comment is given from IMF that both the deposit and lending rates appear to be in line with economic outlook, small and medium enterprises (SMEs), which make up more than 99% of the businesses, see the lending rates as too expensive in comparison to the expected return on assets. Financial products are also limited by existing rules and regulations. The duration of the loan is also mostly under one year. Adding all these up, the main business of these banks is to provide one-year financial loan available mainly to know-clients, presumably borrowers with relationships, such as those associated with conglomerates. Their project evaluation functions are as good as the collaterals they require, their portfolio concentrated to known-clients with little diversity, and their liquidity management functions are bound by the usually one-year lending limit.

In terms of annual interest rate, commercially operated banks now offer 13%, which is the maximum cap enforced by the authorities. The deposit rate is 8.25%, a level influenced by the minimum ceiling of 8%. Only the MADB and Small and Medium Industry Development Bank (SMIDB) currently offer low-interest, subsidized loans to end-users. MADB offers 5% for farmers, and SMIDB offers 8.5% for SMEs, in addition to its regular loans. The government has further established policy banks for construction and housing, emphasizing the importance of extending financial services to the under-served. IMF warned about the relatively poor lending decision and lack of commercial management of loans by policy banks, potentially leading to budget expenditure to fulfill deficits. The authorities seem to be in favor of utilizing both policy-based finance, including low-interest rate funding, and further liberalization to correct the incomplete commercial banking system.

The modern payment and settlement system is now being developed by the CBM towards the end of 2015 with financial and technical support from Japan. The new system, called the CBM-NET, is designed to offer functions such as funds payment, mechanized clearing house, and bond settlement. It is hoped that CBM-NET will turn the current manual operation dominated transaction into more efficient and prompt electronic operation, providing a platform of monetary policy that allows monetary control through market operation. The challenge is how to increase the use of inter-bank payment system in retail transactions, when most of the businesses and population do not have bank accounts and when the entire economy is suffering from unstable and lacking electricity and internet infrastructure.

Figure 5: CBM-NET

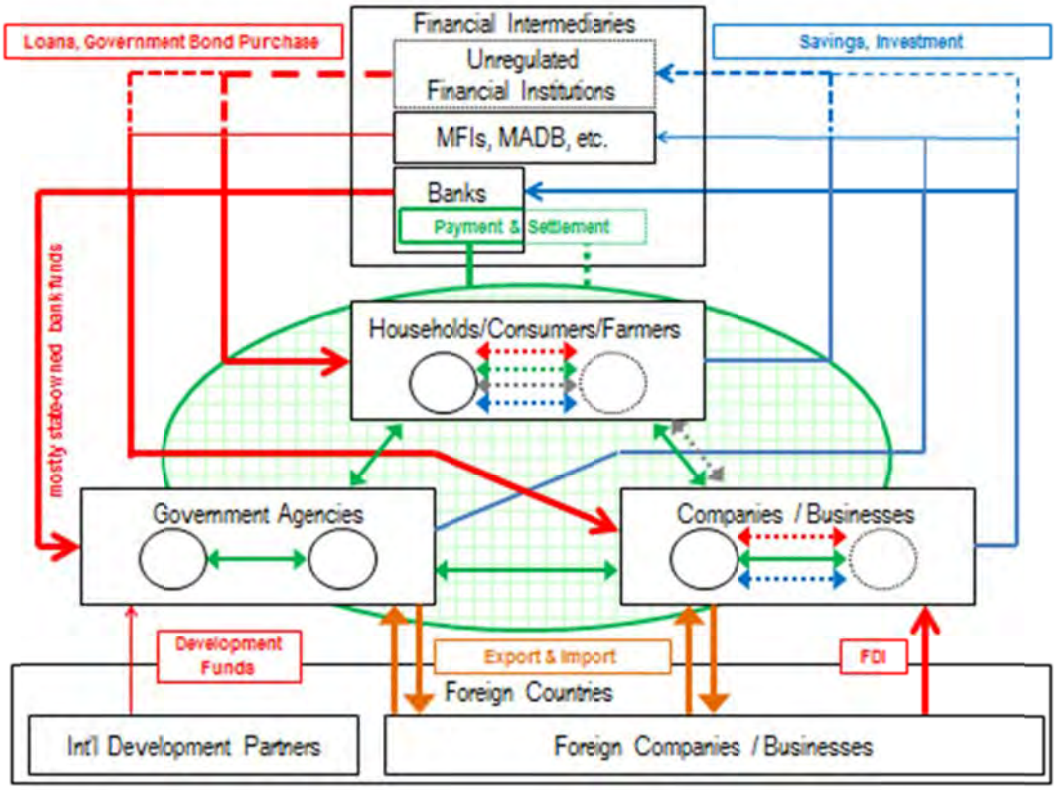


Source: JICA (2014)

Demand for insurance is high and crucial in the still low-income Myanmar, particularly in the rural areas. According to Chamberlin et al. (2014), more than 20% of the population experienced events that require insurance due to illness (medical expenses), crop harvest failure (income loss) and shortage of water for farming (income loss). Unless employed by the government or formal enterprises, the take-up of regulated insurance products are nominal. Unregulated insurance products are also not very common. Most of the population tends to rely on what is called the reactionary risk mitigation measures, such as borrowing money, selling assets and withdrawing from savings. The regulated insurance market is currently restricted to domestic insurance companies, with the exception of sales in the Special Economic Zones, and it is still largely dominated by Myanma Insurance, the state-owned insurance company.

Figure 6: Image of Flow of Funds in Myanmar

(dotted lines indicate informal, unregulated entities and flows)



Source: Author

3.1.2 Financial System in Developing Countries: Pathways for System Development

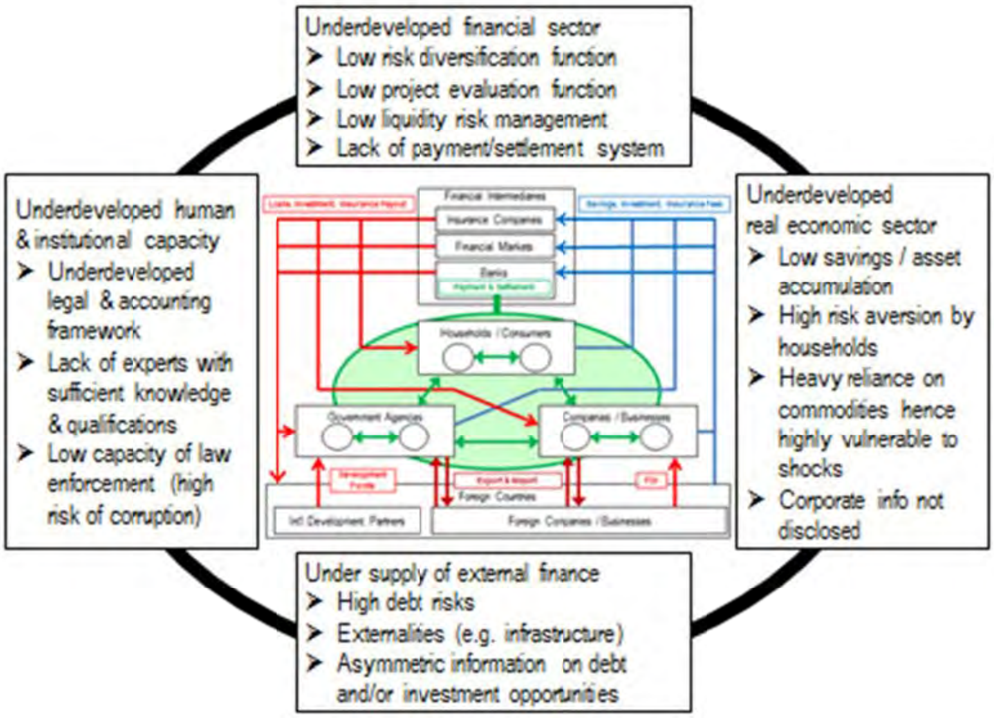
(a) Theoretical Background and Practices

Okuda, Mieno and Ojima (2010) attempted to capture the essence of interactions between the development of the real economy and that of the financial sector in Southeast Asian countries by applying Comparative Institutional Analysis. The initial conditions of a low-level equilibrium in the financial and real sectors of developing countries are illustrated in Figure 7. Comparative Institutional Analysis implies that when institutional infrastructure is underdeveloped, developing countries are pinned down to this low-level equilibrium. There are four possible ways to help the system take off from the initial low-level equilibrium into a development path. First is for each economic entity to learn and imitate to realize creative innovation. Second is for the government to coordinate such innovation to take place. Third is to interact with different system from which the entities can learn and imitate. Fourth is reform after the current system collapses.

Okuda, Mieno and Ojima (2010) compared the industrial process and measures to remove impediments to the three functions of financial intermediaries and financial markets in South Korea and Thailand. In short, South Korea utilized the coordination mechanism of the government, and Thailand, particularly following the Asian economic crisis, relied on global and foreign system to renovate its own. In Korea, the government shared a portion of investment risks to help financial institutions diversify the risks, assessed credibility of the borrowers based on performance of exports, and provided long-term funds through artificially created policy-based lending. In Thailand, it relied on overseas markets and foreign financial institutions to overcome the shortcomings of domestic financial sector and aggressively promoted financial liberalization as well as introduction of financial markets to weaken its excessive dependency on the banking industry.

Based on the above theoretical and empirical implications, Okuda, Mieno and Ojima (2010) note four points that must be considered in determining the direction of financial system development in developing countries. The first point is the diversity of system in capitalist economy. There is an international trend to shift from bank based system to market based system. Each system obviously has pros and cons, and country context must be considered. For example, in Thailand where financial liberalization was aggressively sought, local financial institutions remained immature despite rapid industrialization and economic development. The second point is that while best international practices on legal, regulatory and accounting standards play key roles in creating an environment for financial system development, sufficient incentives must be given to firms and financial institutions for those practices to be adopted in a developing country environment. The third point is the speed and sequence of system transition. Comparative Institutional Analysis warns that due to the non-negligible switching cost that societies must bear for such transition, gradual approach is preferred over “big-bang” approach. The final point is the important role of the prevailing informal rules. One of the reasons why institutional economics highlight the inertia of institutions and insist that system is path dependent, is the very existence of sticky informal rules supported by economic entities. Introducing best international practices may not be so effective unless formal rules are compatible with and/or more beneficial to entities utilizing the financial system.

Figure 7: Vicious Circle of Underdeveloped Financial Sector



Source: Author based on Okuda, Mieno and Ojima (2010)

(b) Status Quo and Current Policy Framework in Myanmar

As introduced in the former section, regulated financial institution assets are almost entirely owned by banks. State-owned banks own 30% of total assets and half of branches deployed nationwide, but have low capability as financial intermediaries. Commercially operated banks play major role in lending money, but their function is still limited and yet to serve many unmet needs of the country.

Myanmar Securities Exchange Centre (MSEC), established as Joint Venture of MEB and Daiwa Securities Group, Japan, is to be transformed into Yangon Stock Exchange by 2015. Securities Exchange Commission (SEC) established in 2014 for inspection and supervision. The role the new market in terms of its asset size will be marginal, at least in the short-term. It is important to note, however, that Myanmar will now be equipped with both banks and markets with a surveillance institution, and has the luxury of comparing the pros and cons of both systems in the long-run.

Given that the informal, unregulated financial services are as dominant as the regulated services at present, the establishment of the securities exchange market could be more meaningful in terms of introducing internationally accepted practices on legal, regulatory and accounting standards for both domestic financial institutions and Myanmar authorities, rather than in terms of a short-sighted argument on “bank or market.” The same implications may also be true for foreign bank entry.

In order to maximize the opportunities to introduce international practices, the authorities and also international financial bodies including the IMF, need to focus more on the informal, unregulated financial services providers, such as the over 400,000 money lenders, Hundis (informal payment service providers) and community-based assistance groups that provide de-facto insurance. Without knowing why these providers attract their clients and what rules are applied, it might be difficult to find the incentives for users to choose regulated financial services despite switching costs, which ultimately should be the foundation for pathway to a robust financial system.

3.2. Basic Design of a Financial System

3.2.1. Banks or Markets?

(a) Theoretical Background and Practices

Historically, banks have been dominant in the financial sector of developing countries, particularly during the early stages of their development. Okuda, Mieno and Ojima (2010) tried to identify the underlying reasons for such phenomenon and to find out if there are any problems stemming from such bank-dominant regime and whether developing countries should make a transition to market-led regime as soon as possible. The authors approached these issues by focusing on the different ways the banks and markets produce information relevant to the three functions to enable smooth transfer of money through lower transaction costs. Banks accumulate information on borrowers through long-term, direct negotiated transaction, making it difficult for outsiders to access internalized information. In markets, open and explicit information available for both investors and investees are the sources of transparent money transfers.

In early stages of economic development, there are three major reasons why bank based system has advantage over market based system. The first is access to borrower information that is often not publicly available due to underdeveloped legal, accounting and supervisory soft infrastructure. Banks have internalized, accumulated information on potential borrowers to determine the appropriate recipients of their financial products. By becoming a major source of funds, banks can then monitor their borrowers closely and influence the way they are managed. From the perspective of investors, the cost of producing and having access to borrower information is much higher in a developing country environment, compared to simply making a deposit to banks that have more efficient means to utilize such information. The second is the possibility of renegotiation between banks and borrowers when business is not going well. When the number of entities engaged in the loan is small, it is relatively easy to renegotiate over the terms and conditions of the loan with consideration to accompanying business restructuring. This will not be the case when the money is raised in markets where numerous and evolving investors need to be consulted. It could be said that this may force businesses to operate on a higher discipline, but in a developing country environment where law and contract enforcement is not necessarily in ideal circumstances, the difficulty of renegotiation may not be a sufficient incentive for businesses to have such higher discipline. The third is the comparative advantage of banks to manage liquidity risks. While banks can level the ups and downs from business cycle, investors will face larger volatility if they channel their money through markets. Generally speaking, individual businesses and households in lower income economy will have less ability to cope with shocks, thus more risk averse.

As economy grows, however, theory suggests increase of demand for markets. First, after institutions that disclose and assess corporate information are established, the advantages of banks over markets in terms of information production diminish. Well performing businesses have higher chances of directly having access to finance by issuing bonds and stocks in markets. Second, households generally tend to allow more risks for higher expected return as their income and assets increase. The leveling function of banks over time and across portfolio may not be so attractive for investors willing to take more risks and opt for a different set of destinations of their investment. Third, due to the liquidity risk management function of banks to convert short-term deposits to long-term loans, banks pose a greater threat to the entire financial system if banks dominate the system. Panic run on the banks based on rumors and trigger events such as bankrupt of major borrowers could lead to bankrupt of banks themselves, together with the internalized, accumulated information of their client businesses.

Based on the above findings, the authors noted the following about the selection and transition of financial system. First, in both developed and developing countries, changes in financial system are often induced by exogenous shocks. Due to path dependency of institutional development, demands for financial markets may not easily change traditionally bank based structure. Reform may only start after sizable shocks, such as the Asian economic crisis in 1997. Second, transition to new financial system requires comprehensive reform. For example, in order to smoothly establish and operate stock exchange, legal and accounting institutions, professionals with high expertise, institutional investors, and securities companies are required. Active government coordination will be essential for such comprehensive reform to succeed. Third, the reform process of a developing country should not be overly influenced by shifting international trends and must diagnose the needs of the country in question before determining the design and pathways for introducing a suitable financial system.

(b) Status Quo and Current Policy Framework in Myanmar

The current situation in Myanmar favors the bank system over the market system for financing the economy. First, despite efforts by the government to apply accounting and auditing standards of businesses, these are not strictly followed in practice and certainly not being utilized as reliable source of lending commitment by banks. Many companies are therefore not ready for financing from the market, and banks with information on individual firms have advantage over selecting potential borrowers. However, such practice is also one of the major reasons why banks request immovable asset collaterals that are valued too low and conservative, and why regulated finance is not widely utilized. Second, the maximum lending term of one year creates the necessity and environment for borrowing firms to negotiate for re-financing. As for the last theoretical advantage of liquidity risk management capacity, it may not apply to banks in Myanmar. Banks are currently able to attract savings which may be drawn down by depositors in the short-term, and are mainly providing loans limited to one year or less.

The creation of the Yangon Stock Exchange expected in 2015 is seen as an early move given the advantages of the bank system in present-day Myanmar. The experiences indicate, however, that there is a path dependency of institutional development, meaning that demands for financial markets in the future may not easily change traditionally bank based structure. Reform may only start after sizable shocks. To be equipped with the legal, regulatory and institutional infrastructure for market transactions and to offer the opportunity for regulators and the private sector to learn from actually utilizing the market could facilitate smooth system transition the future when the time is ripe. Additionally, introduction of the market system is expected to play a role in disseminating international standard accounting and auditing practices among businesses, which should help regulated banks to make lending decisions without asking for excessive collaterals and guarantees.

3.2.2. Globalization and the Banking Sector

(a) Theoretical Background and Practices

Okuda, Mieno and Ojima (2010) acknowledged that globalization has increased both external and internal pressure for more competition in the financial sector of developing countries. This is because the driving force behind globalization of the financial sector is the belief that free competition enhances economic efficiency. The authors observed how and why the structure of the banking industry is changing under increased competition, in order to consider policy for guiding banks to contribute to economic development in developing countries.

In Asia's developing countries, several characteristics were observed as a result of financial globalization. First is concentration of assets to a fewer number of large scale banks. Several factors are seen as the reasons behind this change, including economics of scale, economies of scope (product and portfolio variety), and better investment for technological innovation. Another characteristic observed is the increase in market share, both wholesale and retail, of foreign banks.

Concentration into a few large banks may lower service cost for borrowers, but may also lead to standardization of products, making it difficult to meet unique financing opportunities. This is a result of banks' efforts to rationalize their operation after the financial sector was liberalized and regulations for prudent operation were strengthened. For-profit behaviors by banks, however, may not be in alignment with the responsibility of banks as social infrastructure. For example, after the Asian economic crisis, local banks are increasing the weight of consumer financing, which is seen as easier to manage risks compared to corporate financing. Strengthening of prudential regulations appear to be driving local banks into more conservative positions, favoring consumers finance over corporate finance including those for the small and medium enterprises.

(b) Status Quo and Current Policy Framework in Myanmar

In Myanmar, the current reform has aimed for a functioning domestic financial system rather than globalization, but the driving force behind such reform seems to be similar – the belief that free competition enhances economic efficiency. The authorities have removed several fundamental obstacles for improving commercial banking operation, such as abolishing capital-to-deposit requirement, and easing capital requirements for the opening of new branches. While the current regulation still applies maximum and minimum interest rates for lending and saving, it is reported that the prospect for further relaxation is high. The products offered by the banks are therefore very similar. Nehru (2015, p.3) warns, however, that "liberalizing interest rates too early in the absence of a strong financial infrastructure and a supervision and risk management system can lead to risky bank behavior and exacerbate systemic risks."

Further reform on interest rates, length of loans, and collaterals, all highly associated with improving accounting and auditing practices for businesses, are deemed necessary for liberalization and more competition. Nonetheless, as a result of the past liberalization measures and reform in other sectors, bank credit growth is exceeding 50% annually in the past few years, amid increasing concerns for real state and consumer price hikes. Within the industry, state-owned banks are losing market share. Private banks, including semi-governmental and commercial banks, are rapidly expanding business. The 3 top banks account for nearly 60% of commercially operated banks' assets (Kanbawza, Cooperatives and Myawaddy).

In Myanmar, however, the current dominant practice of lending for less than a year, on top of the real estate asset collateral requirements, has prevented loans being utilized for serving as funds for corporate investment. A modernized Banking and Financial Institutions Law, which is told to be in the final stages of drafting and accompanied by prudential regulations, may drive local banks into more conservative positions, favoring consumers finance over corporate finance including those for the small and medium enterprises, according to implications from other Southeast Asian countries. SMIDB is currently described as the only bank with specific client target, although other policy banks may follow.

3.2.3. Foreign Bank Entry and Its Role

(a) Theoretical Background and Practices

Since the 1990s, activities of the foreign banks in emerging market economies are rapidly expanding. In Asia, there are notable movements by foreign banks to enter into Southeast Asian markets following the economic crisis. Foreign bank entry is seen as an impetus for enhancing the banking industry and is increasingly becoming an important element in designing financial system in developing countries.

Okuda, Mieno and Ojima (2010) listed typical pros and cons of allowing foreign banks to enter into developing country markets. The first positive impact is strengthening the linkage to international financial markets and promoting expansion of fund inflows. The second positive impact is introduction of new management and technical skills through enhanced domestic market competition, resulting in higher quality of the services and products offered by banks. The third positive impact is upgrading legal, accounting, supervisory and other institutional framework by allowing foreign banks to perform financial transactions requiring international standard infrastructure. Possible negative impacts of foreign bank entry include, among others, inviting capital flights, promoting financial transactions among only the rich and large corporations, allowing foreign banks to control the domestic market, increasing the risks by tolerating players who may easily pull out of the country, and raising concerns about the authorities not being ready to appropriately supervise advanced transactions conducted by foreign banks.

Evidences in Asian countries indicate that foreign and local banks have different clients and services, and are supplementing each other. However, foreign banks are recently also moving into retail market, which is seen as the strong hold of local banks that have more information and knowledge of local businesses. In addition, linkage to international markets through foreign bank entry will certainly increase the risk of international financial crisis channeled into the financial system of developing countries.

(b) Status Quo and Current Policy Framework in Myanmar

Current international market is characterized by excess liquidity in low-growth industrialized countries heading to developing countries. Since 1994, 43 foreign banks and institutions were granted license to set up representative offices (no operation allowed) in Myanmar. In order to accelerate transfer of know-how and integration into international financial system, on Oct 1, 2014, CBM gave preliminary approval to 9 foreign banks to start operation within one year, on condition that retail banking is not allowed and that these banks can do wholesale banking, lending loans and taking deposits with foreign companies and domestic banks.

IMF recommended the authorities to allow a fewer number of foreign banks entry in the initial stage, mainly due to concerns that the authorities lack supervisory capacity and level playing field for both local and foreign banks (IMF (2014)). The authorities' views were such that competition is required among the admitted foreign banks, despite agreeing to the arduous tasks of strengthening supervision. What is more important, however, is that based on cooperation agreements and hiring of foreign advisors, commercially operation banks are rapidly catching up with international practices of commercial banks, including introduction of electronic information system to manage transactions. While the theoretically possible positive impact on linkage with international financial system and strengthening of regulatory framework has a long way to go, the authorities' policy to let 9 foreign banks to enter into Myanmar market has led to increased partnership between these banks and local banks, thereby stimulating transfer of management and technical skills.

For the time-being, expensive entry cost of USD 75 million minimum as paid-in capital and limited scope of license offered to foreign banks appear to have blocked the possible negative impact, such as control of market and early pull-out by foreign banks. It will be a challenge for the authorities to keep attracting the foreign banks by showing that the industry will continue to grow. Real-sector growth, such as continued increase of FDI flow into Myanmar, and further financial sector reform resulting in more use of regulated lending, savings, payment and insurance services will be the keys in convincing the foreign banks to stay in Myanmar over long period and contribute to managerial and technical upgrading of their partnering local banks.

3.3 Delivering Financial Services

3.3.1. Rural Financing and Microfinance

(a) Theoretical Background and Practices

Financing in rural areas of developing countries is a core agenda for international development. The functions of rural financing, however, have not been analyzed in detail by financial sector experts until recently, when researchers started to focus on microfinance as an important tool for poverty alleviation.

In rural areas of developing countries, conventional financing, including informal credits, pawn shops, and other forms of unregulated money lending, was generally offered at high interest rates and was negatively perceived as a practice that exploit the farmers. Both the failure of interventions to provide subsidized loans and the persistence of these conventional financing led to a hypothesis that these informal forms of credit exist for a good, rational reason. Originally, researchers tried to explain the high interest rates by risks (high project risks forcing the interest rates to rise) and by absence of competition (money lenders are scarce in specific geographical areas). These explanations, however, could not justify why it persisted after artificially created low-interest products were offered.

Okuda, Mieno and Ojima (2010) highlighted the fruits of recent research from the perspective of information economics and contract theory. This perspective focuses on the serious lack of contract enforcement and prevailing asymmetric information in rural financial markets, resulting in high transaction costs. This explanation is consistent with the general practice followed in rural areas of developing countries, where financial transactions are parts of "inter-linkage" among the entities. For example, merchants acting as intermediaries of agricultural product sales offer loans to farmers who sell products and buy fertilizers from these merchants. "Inter-linkage" methods overcome economic externalities through two types of mechanism. The indirect mechanism is the approach to give incentives to borrowers to repay the money, such as long-term continuous transaction and offset non-repayment in other transactions. The direct mechanism is to monitor and assess the credibility of the borrower through various market transactions and information available in the society.

The authors noted that although further research is deemed necessary, micro-finance has generally succeeded in rural areas through direct (periodic visit to borrower’s house, incentive to repay punctually, saving as guarantee) and indirect (group-lending) methods to prevent non-performing loans.

(b) Status Quo and Current Policy Framework in Myanmar

The status quo of rural finance in Myanmar is described in Chamberlin et al. (2014), which segments adult population of roughly 40 million into 5 groups to identify the situation of provided financial services. The authors identified that rural area population use both regulated (banks, micro finance institutions, insurers, cooperatives, pawn shops) and unregulated (agriculture input providers, money lenders, etc.) loans more than the urban population. They also show that as the income level goes higher, the less the population will rely on loans.

Farmers and those involved in farming are the top group using regulated loans (38%), but there are unmet needs and high demand to insure events like illness, drought and crop failure. The percentage of farmers with access to regulated loans, including the subsidized loans from MADB, are higher in those with 10 acres or larger plots (54%), compared to those with 2 acres or less (24%). However, the percentage of unregulated loans to the same group is 40%, indicating that regulated loans are not fulfilling the demand. Non-bank lenders, both regulated and unregulated, offer loans at higher interest rates of 2 - 3% per month (around 30% per year) (Chamberlin et al. (2014)). Most of the non-MADB loans in the rural areas appear to be sourced from agricultural input providers and value chain companies, such as Awba. Both are in line with the practices in other developing countries.)

Microfinance institutions are regulated by Microfinance Business Law of 2011, being imposed to apply interest rate caps for micro-loans (maximum interest rate of 2.5% declining per month, around 30% per year) and micro-savings (minimum interest rate of 1.25% per month, around 15% per year). MFIs are mainly financing urban needs.

3.3.2. Corporate Governance and Corporate Financing

(a) Theoretical Background and Practices

Traditional theory of corporate governance focused on division of and principal-agent relationship between ownership (principal) and management (agent), who is delegated by the ownership to manage corporates, and analyzed how to avoid inefficiency inherent in such division. In Southeast Asia, ownership and management is not clearly divided as the theory assumes. Conglomerates, the corporate groups without clear distinction between ownership and management, played important roles in economic development in Southeast Asia.

Asian economic crisis led to the discussion that the principal-agent theory should be applied to lender-ownership relationship matters and to the relationship between ruling owners and minority owners. There were perceptions that weak governance was the cause of serious crisis. Conglomerates obtained loans from banks with close relationships not necessarily under suitable prudence regulations on financial institutions. Ruling owners not separated from management appeared to have moved funds and assets to overseas for their own benefits, damaging the value of the corporates they own and run. Analyses in this direction suggest the need for appropriate protection of investors through legal and other institutional framework.

However, non-listed conglomerates are also seen as one of the key contributors of sustainable growth in Asia. Reform to introduce capital markets after the Asian crisis has not shown results in drastically changing the way corporates are governed. Okuda, Mieno and Ojima (2010) pointed out that understanding why many major conglomerates remain non-listed merits further research from the perspective of corporate governance. Another area that needs further research is the role of foreign companies. In Southeast Asia, both regional and non-regional foreign companies produce significant portion of value added every year. Their relationships with parent companies back home as well as those with partner companies in developing countries require consideration from corporate governance point of view.

Regarding corporate finance, “agency cost” is seen as key in the selection of financing options (debt or equity). Debt is usually offered at a higher cost than equity due to asymmetric information, but debt can decrease free cash flow for disposal by management – something that could be preferred by shareholders who do not want to leave extra cash for the management who may try to hide information from shareholders to gain from the extra cash. Empirical analyses in Southeast Asia reveal that corporates owned by a few shareholders rely less on debt, which is explained by the lower agency cost thus less need for compressing the level of free cash flow. Conglomerates rely more on debt, debt with higher liquidity in particular. Corporates owned by a single family tend to prefer debt to maintain their corporate ruling power. Foreign owned firms show low debt ratio. This could be interpreted as reflective of the relatively low agency cost in shareholder-management relationship. Future research is needed to understand how foreign owned firms are financed in relation to its parent company, local financial institutions and multinational business group as a whole.

Evaluation of the different impacts and mechanisms of various types of debts, including bank loans, funds from internal capital market such as employees and affiliate companies, loans from parent companies to overseas subsidiary, and trade credits, are being studied in the context of developing countries.

(b) Status Quo and Current Policy Framework in Myanmar

There are roughly 30,000 firms in Myanmar. Although statistical evidence is limited, only a few numbers of firms belonging to 30 local conglomerates is seen as the key drivers of the economy. As most are not public companies, the size of the corporations as well as other information are not well-known. FMI Group is the only public company group, with a few others letting some companies go public (Min and Kudo (2014)).

Over 90% of all firms are SMEs. Lack of ownership transparency and proper financial statements characterize Myanmar companies. Both formally established and informal firms do not rely on loans (no take-up: formal-74%, informal-58%), and rely mostly on unregulated services or families and friends when they do so. The percentage of using other types of financial services, such as savings and payments, are higher among firms.

Informal firms rely heavily on family and friends for the necessary financial services. Myanmar still has one of the lowest rates of formal bank lending penetration in the world (1.3 loans per 1,000 people in March 2013). As shown in Tables 1 and 2, majority of commercially operated banks are either under government and/or conglomerate influence. Extending financial services beyond government and conglomerate influence remains as a challenge in Myanmar despite recent growth.

Table 1: Assessment of Cronies in Myanmar and Banking Business

Assessment of Cronies in Myanmar and Banking Business

Name of Conglomerates	Established	Leader / Affiliation	Major Business Activities				Degree of Cronies / Souces of Growth			
			Banks*	Infrastructure, etc	Services	Natual Resources	Sanction Impact	Connection to Military Government	Contact with China	Other Foreign Contact
Htoo Group	1990	Tay Za	Asian Green Development Bank (4.30%, #7)	Air Transportation (Air Bagan), Construction, Telecommunication	Tourism (Aureum Hotel), Real Estate	Timber, Agriculture (rice processing)	■	■		◎
Max Myanmar	1993	Zaw Zaw	Ayeyawaddy Bank (9.03%, #4)	Machineries (power generation), Transportation (bus)	Beverages, Tourism (Royal Kumudra Hotel), Real Estate	Palm Oil, Rubber, Gems, Cement, Timber	■	■		◎
Asia World Co., Ltd.	1992	Steven Law		Infrastructure (construction and operation), Land Transportation, Telecommunication	Tourism (Sedona Hotel), Trade, Real Estate	Pulp, Textile	■	◎	◎	△
UMEHL (Union of Myanmar Economic Holdings Ltd.)	1990	(Army)	Myawaddy Bank (9.24%, #3)	Transportation	Beer, Tourism, Real Estate	Gems, Tobacco	■	■	◎	◎
MEC(Myanmar Economic Corporation)	1997	(Army)	InnwaBank (N.A.)	Transportation	Trade	Mining, Tyres	■	■	△	△
Kanbawza Group	1994	Aung Ko Win	Kanbawza Bank (38.46%, #1)	Air Transportation		Gems, Tobacco, Palm Oil	△	■		◎
IGE Group (International Group of Entrepreneurs Co. Ltd.)	1994	Pyi Aung / Ne Aung	United Amara Bank (3.58%, #9)	Machineries (power generation and energy)	Tourism, Trade (timber and chemicals)		△	◎		◎
SPA/FMI Group (Serge Pun Associates and First Myanmar Investment	1991	Serge Pun	Yoma Bank (3.70%, #8)	Construction, Hospitals	Automobile Sales (Nissan, Suzuki), Tourism, Real Estate	Agriculture		△	△	■
Shwe Taung	1990	Aik Htun	Asia Wealth Bank (N.A.)	Infrastructure (construction and operation), Machineries (construction)	Retail (Junction Centre), Trade, Tourism, Real Estate	Cement	◎	△	◎	◎
IBTC (International Brewery Trading Co.)	1997	Aung Moe Kyaw			Beverages (whiskey, etc), Automobile Sales (Mercedes-Benz), Trade					◎
Loi Hein	1992	Sai Sum Htum			Beverages					◎

* Percentage of Banks represent market share of assets among all commercially operated banks. # shows ranking among commercially operated banks

■ large scale impact, ◎ middle scale impact, △ small scale impact, no mark: none or negligible impact

Source: Author based on Min and Kudo (2014), Foerch et al. (2015)

Table 2: Top 10 Commercially Operated Banks and Their Affiliates

Top 10 Commercially Operated Banks in Myanmar and Their Affiliations

Ranking by Market Share	Name of Banks	Market Share of Assets Among All Commercially Operated Banks (%) <Cumulative>	Controlled by	
			Government / Army	Conglomerate
1	Kanbawza	38.46 <38.46>	-	Kanbawza Group
2	CB	10.96 <49.42>	Ministry of Cooperatives	-
3	Myawaddy	9.24 <58.66>	(Army)	UMEHL
4	Ayeyawaddy	9.03 <67.69>	-	Max Myanmar
5	Myanmar Apex	6.60 <74.29>	-	Eden Group
6	Global Treasure	5.17 <79.46>	Ministry of Livestock, Fisheries and Rural Development	-
7	Asian Green Development	4.30 <83.60>	-	Htoo Group
8	Yoma	3.70 <86.30>	-	SPA/FMI Group
9	United Amara	3.58 <89.88>	-	IGE Group
10	Myanmar Oriental	1.79 <91.67>	-	-

Source: Author based on Min and Kudo (2014), Foerch et al. (2015)

3.4. External and Public Financing

3.4.1. Debt Sustainability

(a) Theoretical Background and Practices

External inflows into developing countries, as well as financing of public sector activities, play crucial roles in funding activities that contribute to economic development. For external inflows, developing countries historically relied on funds originating from public sector overseas, although recent globalization of corporate, financial and labor activities have raised the weight of private sector originated funds even in low income developing countries. At the same time, regardless of the nature of the capital, public or private, sovereign debt is seen as an essential part of macroeconomic management to avoid catastrophic ex-post adjustments and to make the best use of available resources at affordable pace to develop public goods.

According to IMF (2002), sustainability of sovereign debt is judged by whether a country's debt can be serviced without an unrealistically large future correction in the balance of income and expenditure. Factors that lead to debt default are (i) lack of liquidity, which is a temporary issue meaning momentary lack of cash, (ii) lack of solvency, meaning that the country is predicted to have insufficient capacity to continue repaying the external debts, and (iii) lack of willingness, meaning that the country is willing to refuse repayment regardless of the available case levels and long-term prediction of revenues. Based on past incidents in many developing countries where sovereign debts were accumulated beyond their capabilities, IMF and the World Bank now apply ex-ante sovereign debt management framework to prevent sovereign default to the extent possible, by focusing on three indicators, a) debt to GDP, b) debt to export and c) debt service to export ratios. When determining the threshold for each indicator, the level of policy and institutional strength measured in the Country Policy and Institutional Assessment (CPIA) is applied. Forward looking future estimates with stress tests are used to obtain future predictions for the three indicators.

Similarly, debt of the public sector in developing countries are monitored and assessed by IMF using similar framework, using the three indicators of a) debt to GDP, b) debt to public sector revenue and c) debt service to public sector revenue ratios.

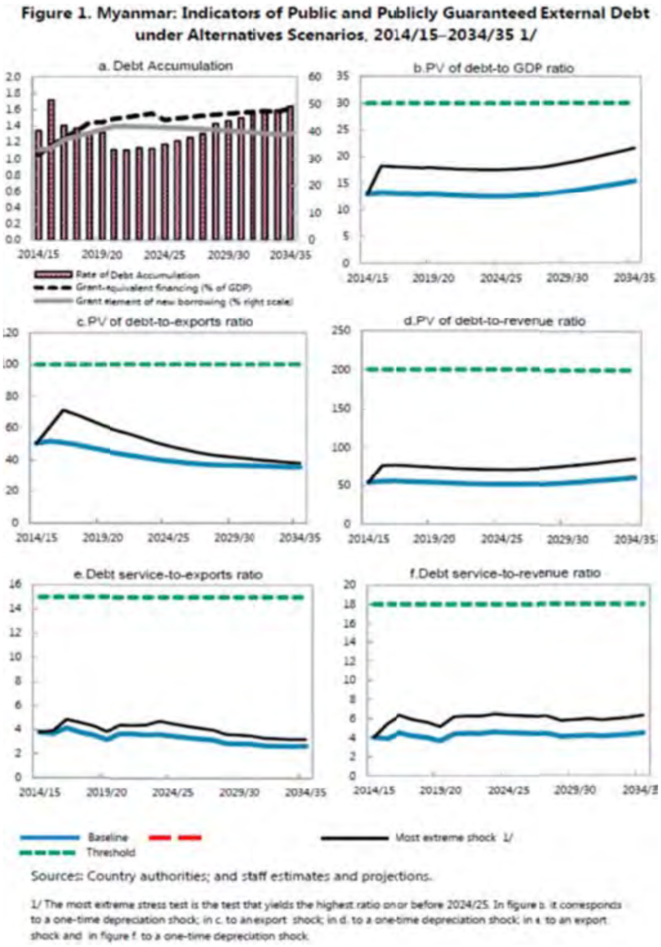
(b) Status Quo and Current Policy Framework in Myanmar

Myanmar's external debt risk has been reduced to low risk levels drastically due to: a) increased gas revenues at market-determined exchange rate, b) resolution of arrears, c) improvement of economic outlook and d) external concessional financing replacing non-concessional financing. External debt is relatively vulnerable to export shocks, as the country's export heavily relies on natural gas. Downward movement of its production and international prices has strong impact on the external debt evaluation. Trade deficit is widening since the start of the reform, indicating that opening up of the country to international economy and fast economic growth is structurally leading to higher growth of imports over exports. From the point of view of sustainable external debt and foreign trade, diversification and high growth of export base, fueled by both FDI and concessional financing to fund investment projects, are the keys to reduce the risk in the long-run.

Public debt projection has also improved by the same set of reasons. Public debt figures are vulnerable to fiscal slippages and low GDP growth, requiring prudent fiscal management, increasing tax base. The government has kept the budget deficit below the goal of 5% of GDP, although it has risen in 2014/15. The percentage of revenues from State Economic Enterprises is high, and tax base is still weak.

Myanmar's Country Policy and Institutional Assessment (CPIA) score is still low at 3.0 on a 1 (low) to 6 (high) scale, tied for 59th overall among 81 LDC countries (2013).

Figure 8: Latest Debt Sustainability Analysis by IMF



Source: IMF (2014)

3.4.2. Foreign Direct Investment (FDI)

Historically, developing countries initially relied on public external finance to escape from poverty traps. Economic theories stressed that after asymmetric information is resolved and investment opportunities are known, foreign direct investment (FDI) and private finance are attracted, although recent globalization of corporate, financial and labor activities have raised the weight of private sector originated funds even in low income developing countries.

MacDougall & Kemp model explains international capital movements by higher marginal profitability of capital in developing countries. Dunning’s theory raises three advantages for foreign companies to make a decision to go ahead with FDI. The first advantage is ownership, implying that a foreign company owns tangible and intangible assets such as capital, technology and knowhow that cannot be matched by domestic companies in developing countries. The second advantage is internalization, meaning that it would be more beneficial for the foreign company to conduct FDI rather than selling the rights to domestic companies. The third advantage is location, meaning that the potential market of the products is easier to access after FDI. As discussed earlier, globalization on multiple fronts appears to have lowered the threshold for many businesses, accelerating more FDI to flow into developing countries compared to decades ago.

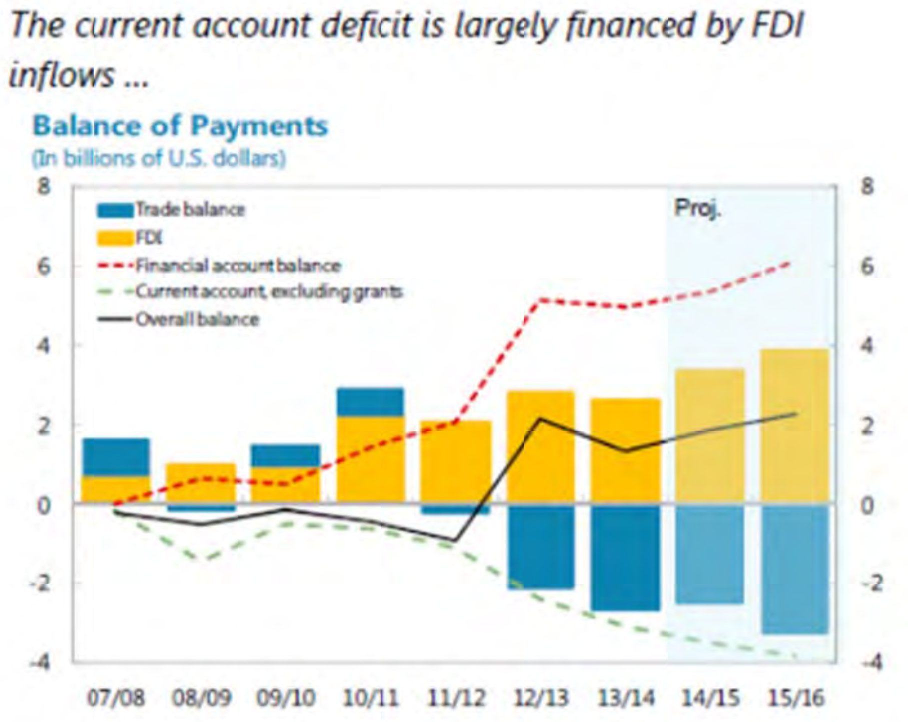
Theoretically, FDI brings positive impact on economic development in developing countries. FDI generally strengthens production capacity through accumulation of capital stock, enhances export capacity through expansion of export channels, brings spillovers through sharing of advanced knowledge, technique and technology, increases employment opportunities and tax revenues, is more stable compared to other forms of external finance, and may induce other domestic investment activities related to the production facilities built by the FDI.

(b) Status Quo and Current Policy Framework in Myanmar

Over the past decade, Myanmar has attracted FDI mainly in power, oil and gas sectors, from China and Thailand. The government now places priority in labor intensive sectors that provide job opportunities, followed by sectors producing value-added goods. Recent increase in FDI to manufacturing, light industry in particular, and telecom sector is also promising. However, real estate, hotel and tourism sector investment has shown increase through Singapore and Hong Kong. Macro-economically, current account deficit is largely financed by FDI inflow (2.8 billion USD, 5% of GDP).

Poor infrastructure, such as power and transportation, is impeding more FDI to flow into the manufacturing sector. World Bank Doing Business 2015 ranks Myanmar 177th out of 189 countries. Indicators which were ranked especially low include: Starting a Business, Enforcing Contracts and Protecting Minority Investors (World Bank (2014)).

Figure 9: Latest Balance of Payments in Myanmar



Source: IMF (2014)

3.4.3. Public (Grant & Concessional) Financial Inflows

The economic rationale for inviting public inflows from outside the country is to augment market failures commonly seen in developing countries, at the early stages of economic development in particular. Such market failures include (a) externalities of infrastructure development which may not convert into high financial profit for investors but will certainly benefit many economic activities requiring such infrastructure and (b) asymmetric information on debt sustainability and potential investment opportunities available in developing countries but not well known and/or understood by external investors.

There are other economic theories that emphasize the importance of external public inflows for economic development in developing countries. Financial gap theory justifies the amount of external public (aid) inflows necessary for developing countries. It identifies investment-saving gap, foreign currency (to purchase foreign goods) gap, fiscal gap, and skills gap to explain how much additional financing is needed to achieve the required level of investment to realize target economic growth. Big push theory calls for a game changer, or simultaneous large scale investment in multiple fronts to change the behavioral patterns that lock developing countries into low-income equilibriums known as poverty traps, to push these countries shift to high-income equilibriums. These theories also imply that higher level of domestic investment, particularly those supporting the development of infrastructure with positive externalities, will help close the gap and provide a bigger push.

Okuda, Mieno and Ojima (2010) highlighted that absorption capacity of recipient developing countries and needs based provision of aid are crucial for effective external financing, in addition to the products used to deliver such funds, such as grant, loans, and performance-based aid. The authors also hinted that counter-cyclical provision of funds against the business cycle may also help developing countries in need.

(b) Status Quo and Current Policy Framework in Myanmar

The authorities have welcomed re-entry of many international aid agencies into Myanmar after the reform. These agencies resumed or expanded their operation after reform, although actual inflows to date have been very limited in terms of its magnitude relative to the scale of the economy (GDP at roughly 50 billion USD), only reaching around 0.1 billion USD in 2013/14, 0.4 billion USD in 2014/15. Activities to date are focusing mostly on capacity building and preparation for financing. IMF projects that the numbers will increase up to 1.0 billion USD in 2017/18, to 2.7 billion USD in 2024/25, and to 6.1 billion USD in 2034/35 (two-thirds by concessional loan).

Although the IMF recommends gradual scaling-up due to investment inefficiency, absorptive capacity and shortening lifespan of existing facilities, infrastructure investment needs are estimated to be enormous. It is predicted that over the next 20 years is predicted at 320 billion USD, or 16 billion USD on annual average, for 8% annual growth. Clearly, international development partners will not be able to fully fund these huge demands. Bank deposit in ratio to GDP is estimated at 30.6% in 2013/14, a significant increase from 12.9% in 2011/12. Such increasing in domestic saving may not be sufficient to provide necessary funds. For example, the recent restrictions on the use of foreign currency in May 2015 amid depreciation of the local currency Kyat, such as setting lower maximum amount for withdrawal of US dollars and restricting the use of US Dollars for domestic transactions, shows that the gaps for foreign currency may persist. Similarly, the fiscal deficit ranging at around 5% of GDP annually is a sign that gaps for fiscal space may also be an issue in the medium to long-term.

4. Discussion and Way Forward

In the previous sections, Myanmar's current efforts and policy framework toward a robust financial system was compared against theoretical background and practices. Based on this comparison, the author will wrap up the paper by addressing remaining challenges and propose future directions for Myanmar's financial sector development through answering three crucial questions. The first question is regarding the pathways for Myanmar: Is the current reform heading in the right direction and sequence? The second question is on regulating financial institutions: Is the sector under sufficient control of the authorities? The third question is effective use of external and public financing: Is Myanmar seizing opportunities?

4.1. In the Right Direction? – Pathways for Myanmar

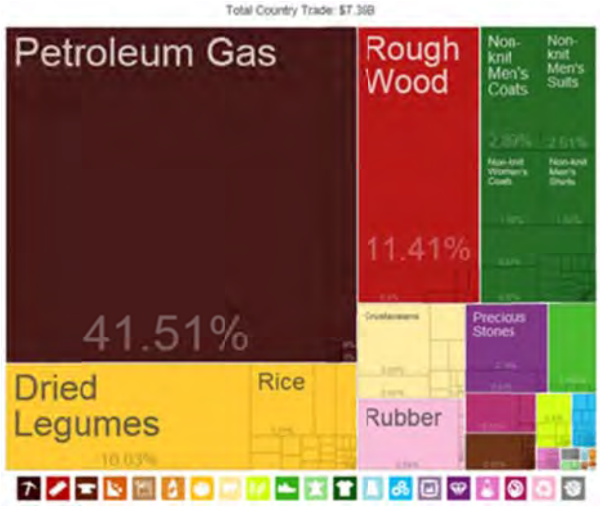
Is Myanmar's current reform efforts and policy framework for development of the financial system heading in the right direction and sequence for sustainable growth? So far, we have seen good progress in a number of key areas. First and foremost, the authorities have implemented numerous concrete measures to liberalize the banking sector under an autonomous central bank, such as enacting the CBM Law and abolishing onerous restrictions on banking operation such as the deposit-to-capital ratio. CBM made swift decisions to enable the transition from manual to electronic transaction, agreeing with Japan to build CBM-NET, the first modern financial infrastructure in Myanmar that would allow electronic inter-bank funds payment and bond settlement. It is also worthy to note that the authorities have maintained the risk of external debt at a low level in terms of World Bank - IMF Debt Sustainability Framework, despite recent unfavorable international market trend of its main export product, the natural gas. Myanmar's efforts to increase and diversify sectors of incoming FDI have been successful so far, supplementing the widening trade deficit as a result of rapidly increasing import.

Looking ahead, however, there are a number of challenges remaining for transforming Myanmar's financial system into a robust one. First, as described in earlier sections, a significant part of the flow of funds in Myanmar is channeled through informal, unregulated financial system. Discussion with international authorities on financial sector reform tends to focus on the regulated services. However, in theory and from examples in other developing countries, the users need to feel that the benefits of utilizing regulated finance are far greater than the cost of traditional way of transaction, if they were to choose the new, reformed regulated financial system. Unless many have trust in banks and are accustomed to holding deposits in regulated banks, through measures such as introduction of a more reliable deposit insurance scheme, the benefits of inter-bank electronic payment and settlement system offered by the new CBM-NET will not be realized. This is also true for introduction of internationally accepted accounting and auditing practices.

Second, businesses must disclose its financial and operational circumstances in a standardized manner verified by trustworthy third parties, in order to obtain financing at a reasonable cost. Cost does not refer only to the direct cost of borrowing, such as interest payment, but also indirect cost, including excessive collaterals and guarantees, and necessity of having close relationships with banks and bank management in the absence of legitimate financial statements. Without a proper, objective signal on past, present and future performances and plans of a business, banks will remain to be very conservative and policy reforms may not result in sufficient finance to boost the private sector. While the theory and past experiences in other developing countries favor the bank system over the market system in the initial stages of financial sector development, establishment of the Yangon Stock Exchange in 2015 may be beneficial for Myanmar in this context. It would allow regulatory bodies, participating listed corporations and other stakeholders to learn and actually operate according to international accounting and auditing rules and practices.

Third, from a more macro-economic viewpoint, Myanmar needs a strategy to break the old habit of falling into widening trade deficit and foreign currency shortage every time the economy grows. The country needs to introduce a measure to either find a way to increase exports or slow down imports in order to avoid constantly trapped in a foreign currency lacking situation. Financial system reform should be aligned with such macro-level policy, including directing bank loans to finance industries that help create jobs and added value, while contributing to a net positive impact on trade balance.

Figure 10: Structure of Export (2012)

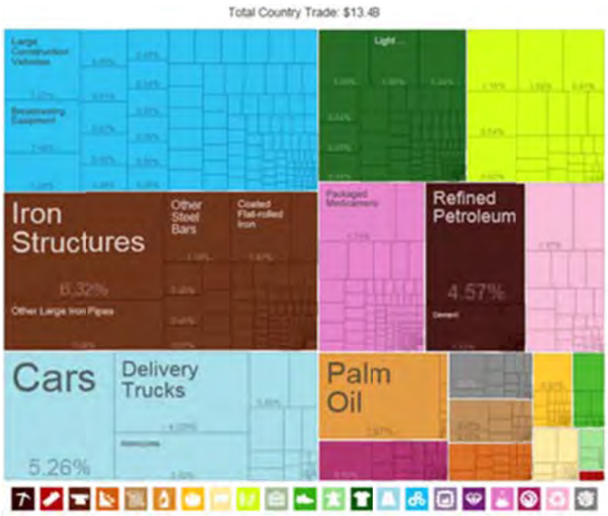


Source: Simoes and Hidalgo (2011), Hausmann et al. (2011)

https://atlas.media.mit.edu/en/explore/tree_map/hs/export/mmr/all/show/2012/

(accessed June 28, 2015)

Figure 11: Structure of Import (2012)



Source: Simoes and Hidalgo (2011), Hausmann et al. (2011)

https://atlas.media.mit.edu/en/explore/tree_map/hs/import/mmr/all/show/2012/

(accessed June 28, 2015)

4.2. Under Control? – Regulating Financial Institutions

How should authorities regulate banks and other financial institutions to guide them to operate prudently, but function more for the unmet real demands at the same time? The rapid growth of the credit, together with the nominal percentage of non-performing loans at 1 – 2% across all types of financial institutions, indicate that at least in the short-term and based on the definition of non-performing loans applied in Myanmar, banks and other financial institutions are operating prudently while meeting more demands at the same time after the reform. The draft Banks and Financial Institutions Law, despite delay in the progress, sets forth key requirements for prudent operation, such as the single exposure limit and reserve fund requirements. Although not regulated, many unmet real demands are currently served by the informal sector, providing a range of de-facto products for loans, savings, insurances and payments.

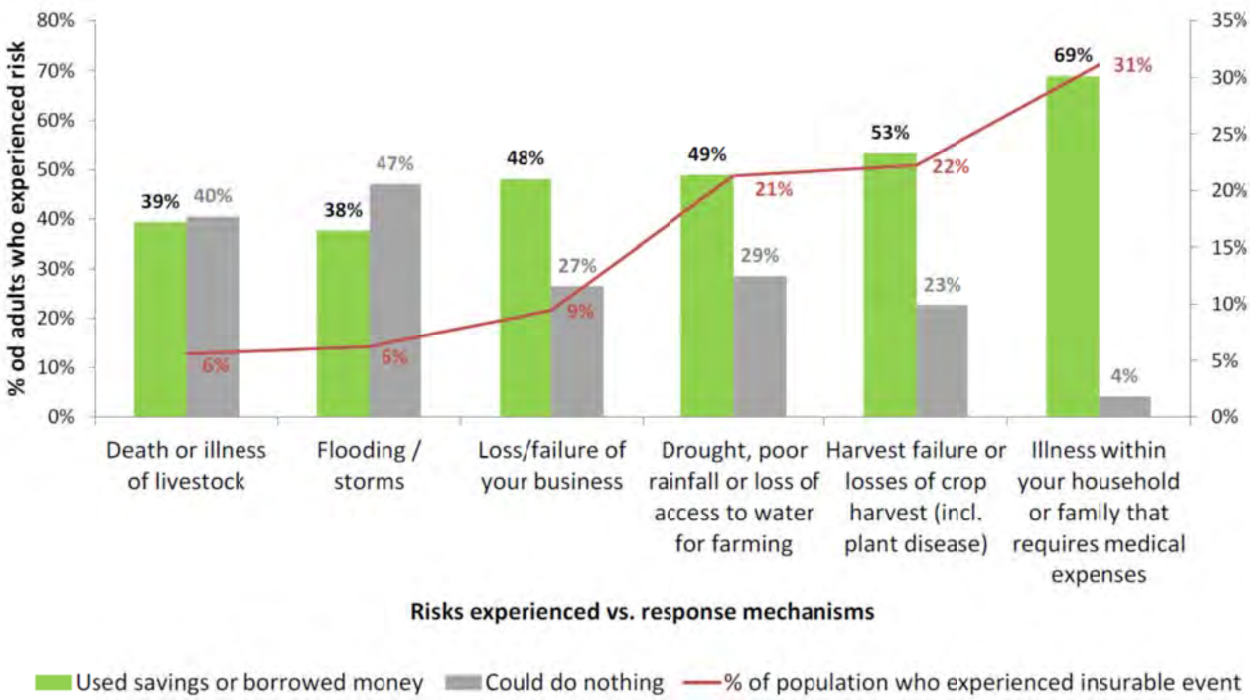
Despite the seemingly encouraging start, the ratio of credit to GDP is still lingering around 15% far behind its peers in Southeast Asia. While standardized financial statements with reliable audits are prerequisite to be utilized banks, banks also need to cast off the traditional lending behavior of requesting real estate collaterals with a value of twice as much as the loan they are about to offer. In order to realize such transformation, not only do Myanmar banks need to learn the know-how of project evaluation, but also to manage the liquidity risk by converting short-term demand deposits into multiple year loans that suit financial demands for investment for facilities and equipment. In addition to giving licenses to foreign banks for limited operation, the authorities might want to consider providing incentives for foreign banks to accelerate such transformation of local banks.

Another future possible action that needs to be considered is strategic allocation of funds to macro-economically crucial sectors. As discussed, the Myanmar economy is currently facing the issue of widening trade deficit and potential risk of shortage of foreign currency. The financial system should ideally be reformed and modernized to provide funds for investment and growth in sectors that are likely to contribute positively to decrease the trade deficit and induce more FDI to flow into Myanmar. Recently published National Export Strategy (2015 - 2019) identified 7 priority sectors with capacity to contribute to export growth. They are (1) rice, (2) beans, pulses and oilseeds, (3) fisheries, (4) textiles and garments, (5) forestry products, (6) rubber, and (7) tourism. These sectors were selected based on the current circumstances and do not necessarily reflect medium to long-term potentials, meaning the choices may not be optimal in the long-run.

The authorities have shown interest in policies and instruments that reflect views that encourage and discourage the use of policy-based loans (“financial repression” versus “financial restraint”) at the same time, promoting liberalization of commercial bank operations yet pursuing directed and/or subsidized finance through policy banks such as SMIDB. However, they have not been able to clearly articulate on how they intend to promote export and investment in the prioritized sectors utilizing these policies and instruments. The four not-for-profit state owned banks have not been able to utilize the large assets to full extent, lagging behind the commercially operated banks in terms of volume of loans. The first step could be consolidating the existing state-owned banks and other banks under government influence and defining the objective, function and scale of the consolidated bank.

In the area of rural financing, there are still limited number of researches and established theoretical framework. However, in Myanmar, it is evident that there are high demands to insure events like illness, drought and crop failure that result in catastrophic expenditure by rural households. Absence of regulatory framework and proper insurance products for the rural population is not merely a defect in the financial system, but socially unsustainable as many people in poverty suffer from such events. In the meantime, as formal credit through MADB is limited, many farmers either have to take up high interest, unregulated loans or shrink their activities as they cannot purchase inputs such as fertilizers (Turnell (2014)).

Figure 12: Largest Insurable Risks Experienced versus Risk Mitigation Response



Source: Chamberlin et al. (2014)

4.3. Seizing Opportunities? – Effective Use of External and Public Financing

Since the reform, it is safe to say that the government has done a superb job of inducing external private financing, successfully increasing FDI to manufacturing, light industry in particular, despite some increase in real estate, hotel and tourism. Macro-economically, current account deficit driven by trade deficit is largely financed by FDI inflow. The authorities have lowered external debt sustainability risk after concluding negotiations with international lenders to clear arrears, and succeeded in maintaining low risk levels with prudent budget debt ceiling, using opportunities to access more concessional lending from abroad. Nonetheless, poor infrastructure, such as power and transportation, is impeding more FDI to flow into manufacturing sector. World Bank Doing Business 2015 ranks Myanmar 177th out of 189 countries.

How can the government of Myanmar improve the way it utilizes and manages external resources and public expenditure, for financing infrastructure development in particular? It is predicted that over the next 20 years is predicted at 320 billion USD, or 16 billion USD on annual average, for 8% annual growth. Clearly, international development partners and the government will not be able to fully fund these huge demands. The government would need to list the investment needs and consider long-term macro-level financing option strategy to fulfill the needs by various source of available funds including grant, concessional lending and private investment. Efforts to increase available government funds, such as strengthening tax base and increasing transparency of revenues from the abundant natural resources are necessary. In addition, FDI could also be directed to develop infrastructure that enables FDI and domestic investment to flow into manufacturing and other production sectors.

An important source to fill the infrastructure investment gap would be the underutilized domestic financial resources. According to March 2012 data, the four not-for-profit state owned banks held roughly 40% of total banking system deposits, but offered just under 10% of total banking system loans, which resulted in a loan-to-deposit ratio of little above 10%. In addition, a large volume of cash is lying outside the banks in Myanmar. In 2012, the ratio of Myanmar's currency outside the banks to GDP was the highest in ASEAN region. The doubling of the ratio of currency inside the banks to currency outside the bank from 2011 (about 1) to 2014 (about 2) indicate a growing public trust in the bank system, but the number is still far below that of its peers (such as nearly 5 in Laos and around 12 in Thailand) (Foerch et al. (2015)). Incentivizing the population to deposit their enormous hoarded cash into banks, channeling the underutilized domestic savings to long-term infrastructure development by using public finance as the catalyst, and boosting industries with positive impact on trade surplus with external financing such as FDI, could be the keys to unlock the potential of Myanmar.

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Part III. Banking Sector and Financial Inclusion

Chapter 6

Banking Sector, Policy-based Finance and Financial Inclusion of Myanmar

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Contents

1. Introduction

1.1 Background

Banking penetration is still low in Myanmar, which leaves much room for the growth of financial services. The banking sector remains small compared to regional peers, and banking infrastructure is still limited with respect to the size of the population.

The liberalization of the telecommunications market is underway in Myanmar, the continued opening of the financial services sector to foreign players and the rise of micro-finance investment has set the stage for a stellar rise of electronic money in Myanmar. Taking a look at one example of electronic money, mobile banking, shows the almost unlimited potential for branchless banking to take off in Myanmar.

1.2 Objectives

The paper aimsto make policy recommendation in eliminating gap between rural and urban area for the purpose of financial institutions penetration in Myanmar and, to analyze an imperative need to arrange physical capital, along with finance capitaleither simultaneously or sequentially contextually depending on region's geo profile within a country.

1.3 Overview of the access to finance in Myanmar

In Myanmar, less than 20 percent of the population has access to formal financial services. Most people use informal ways. Two state owned banks, Myanmar Agricultural Development Bank and Myanmar Economic Bank are engaged in financial inclusion, but most of the commercial banks focus on the upper segment of the market. Mobile banking could play a major role for Myanmar to leapfrog financial inclusion. Mobile phone penetration is around 11 percent. Therefore, increasing access to finance is a major goal of the government and government has set the target of 75-80 percent of mobile coverage by 2016. Two international mobile operators; - Telenor has committed to cover 83 percent of the country for voice and 78 percent for data after five years, and Ooredoo has committed to reaching 84 percent for both voice and data.

Challenging productive credit and related financial services to farmers is critical importance. Increased agricultural productivity could enhance food security.Increased food production will safeguard the country's limited foreign exchange reserves and improved development opportunitiesfor micro small and medium enterprises (MSMEs). Currently, most MSMEs have to utilize expensive unregulated credit, their business are not covered by insurance, utilize unregulated payment services.

Therefore, the improvement of level of financial intermediation through regulated institutions such as banks, MFIs, insurers, cooperatives, licensed pawnshops is quite important. Priorities opportunities for the Government of Myanmar to increase access to financial services are:

(i) Increase the supply and availability of electronic payments – throughmobile payments platforms and electronic payment networks to be developed by commercial banks;

(ii) Extend the availability of account- based savings options and to develop bank- based deposits – MEBcan strengthen its role as saving mobilizes in both urban and rural;

(iii) Improve the quantity, terms and risk profile of agriculturalinput Credit – in this point, MADB will play a leading role, but there is also opportunity for Agricultural input providers and Microfinance Institutions;

(iv) Increase the availability of unsecured credit such as lending providers,MicrofinanceInstitutions and Cooperatives are permitted to extend loans without collateral;

(V) To relax the collateral requirement for personal loans once a credit bureau is in place;

(vi) To grow the insurance product portfolio to meet the risk mitigation needs;

(vii) To develop insurance products to provide security for credit expansion and protectionof customers, particularly for agriculture;

2. Financial System in Myanmar

The Central Bank of Myanmar (CBM) is the primary regulator and supervisor of financial institutions mainly banks and it becomes autonomous one since new Central Bank of Myanmar Law was enacted in July, 2013.

Myanmar Financial system comprises of Banks and non-banks financial institutions.Banking system is at the core of financial system.Since the non-bank financial sector is relatively smalland financial markets, and traded assets are still thin, even less than in most low income countries, the development of banking sector hasbecome significantly important for the effective mobilization and allocation of financial resources in order to promote economic growth, safeguard stability and raise the living standard of the people. Currently, state-owned insurance company is most active one together with 12 private licenses which licensed in 2013. Financial Regulatory Department was formed to regulate for both the microfinance and insurance industries under the Ministry of Finance (MOF) in 2014.As of August, 2015 the structure of Myanmar financial sector was shown in below Table;

Table 1: The structure of Myanmar financial sector as at August, 2015

Types	Numbers	Branches
1. Banks		
State-owned banks	**4**	**548**
Domestic private banks	**23**	**1097**
2. Non-Bank Financial Institutions		
State-owned Insurance	**1**	**38**
Private Insurance	**12**	
Finance Company	**10**	**15**
Securities Exchange Co. Ltd.,	**1**	
Micro-finance Institutions	**287**	

Together, state-owned banks in Myanmar hold 30% of assets in the banking system and 25% of all commercial banks' branches in the country. Each of the state-owned banks has evolved from its initial specific function, such as to fund foreign trade, agriculture, investment, trade, etc. The state-owned banks currently operate as departments of the Ministry of Finance except for the Myanmar Agriculture and Development Bank ("MADB"), which is under the Ministry of Agriculture. These institutions face some challenges and prevent them from fulfilling their developmental objectives satisfactorily. Table 2 below shows the structure of SOBs and their networks and strength.

Table 2: The structure of SOBs and their networks and strength

	Myanma Agricultural Development Bank (MADB)	Myanma Economic Bank (MEB)	Myanma Foreign Trade Bank (MFTB)	Myanmar Investment and Commercial Bank (MICB)
Branches	207	341	0	2
Supervisor	-	Central Bank of Myanmar	Central Bank of Myanmar	Central Bank of Myanmar
Owner	Ministry of Agriculture and Irrigation	Ministry of Finance	Ministry of Finance	Ministry of Finance
Legal Framework	Owned Law	Financial Institutions of Myanmar Law	Financial Institutions of Myanmar Law	Financial Institutions of Myanmar Law
Total Assets	642.9 Kyat inbillion(31-3-2015)	5,094.16 Kyat in billion (31-3-2015)	8,907.80 Kyat in billion(31-3-2015)	3,308.14 Kyat in billion(31-3-2015)
Total Capital	4.5 Kyat in billion (31-3-2015)	20 Kyat in billion (31-3-2015)	20 Kyat in billion (31-3-2015)	18 Kyat in billion (31-3-2015)
Total Loans	568,044.25 Kyat in million (31.3.2015)	1,453,290.12 Kyat in million (31.3.2015)	255,196.94 Kyat in million (31.3.2015)	21,716.17Kyat in million (31.3.2015)

2.1 Financial Sector Performance

Although research and experience has proven that an efficient and larger-scale financial system promotes economic growth and poverty reduction, access to finance is limited in Myanmar and there have not been concerted efforts to address the constraints until new democratic government took over the office. The financial system in Myanmar is at the early stages of development particularly in comparison with neighboring countries. Credit to economy as a percent of GDP is only 21.5%, while the deposit to GDP is 38 %in March 2015. A factor in Myanmar's low deposits is the lack of bank branchesreflecting Myanmar's previous regulatory limits on bank branching and ATMs and now lifted a number of restricted measures because of that it has noted there has been a rapid growth of the banking sector sinceFY 2011-2012.

Table 3:Myanmar: Money, Deposits and Bank Credit to GDP

Indicators	2011-2012	2012-2013	2013-2014	2014-2015
Currency/ M2	0.44	0.6	0.33	0.30
M2/ GDP (%)	30.2	38.5	43	44
Money Multiplier	1.67	1.82	2.06	2.36
Credit to private sector /GDP (%)	7.5	10.2	13.6	18.3
Credit to private sector(YoY change)	60.1	50.5	52.5	31.0
Credit to Economy / GDP (%)	7.5	10.8	14.6	21.5
NPL/Total Loan	1.64	1.57	1.20	1.20
Domestic saving/GDP	16.2	24.5	30.1	38.6
Exchange Rate(end of March, 2015)	5.56	880	965	1029

The four state owned banks dominate the financial sector in many areas and the largest bank, Myanmar Economic Bank (MEB), comprises most of this activity. This dynamics has been changing over the last three years and the share of state bank lending to the private sector has declined due to the rapid growth of private bank activities. As of March 2015, the MEB has the most branches (341) and the Myanmar Agricultural Development Bank (MADB) has 207, where the 23 private banks in total have1079branches as of August 2015, largely clustered in urban areas and Yangon. MEB also provides many central banking and fiscal functions aside from its commercial banking role. Each of the state owned banks evolved over time with a specific function, such as to fund foreign trade, agriculture, investment, etc.

The private banks operating in Myanmar are relatively small in scale compared with population. Total outstanding loan by 22 private banks has been 9057.69 billion kyat while total outstanding loan by 4 state owned banks has been 2592 billion kyats as of 31 March 2015.The financial sector is expanding along with the government reform agenda and financial sector liberalization plan initiated by the Central Bank of Myanmar. The private banks generally focus on small and medium-sized enterprises (SMEs) and 90% of a bank's total loans are to SMEs representing close to 30% of the value of the loan portfolio. It is understood that competition for the stronger SMEs is strong, but a small segment of the SME sector is being served by banks. The range of banking products and services provided in Myanmar is limited to a handful of simple, basic banking services. The amount of credit to private sector in March 2015 was

10116 Kyat billion and which has increased 31% compared with march 2015. It can be observed that sectorial loan disbursed by both state and private banks were 31 % in Trade, 19% in Agriculture, 12% in construction, 13% for Manufacturing , 10% in services and the rest 13% in General. The credit to Trade sector was 31% which is largest share in sartorial loan and the credit was mainly used for import of capital and intermediate goods. (Loans and deposit positions of state banks and private banks are presented in Table 4)

Table 4:Myanmar: Loans and Deposits of 22 Domestic Private banks

					(Kyat in Million)
Sr.	**Bank Name**	**Deposit (March 2014)**	**Deposit (March 2015)**	**Loan (March 2014)**	**Loan (March 2015)**
1	Myanma Economic Bank*	2,952,412.54	3,267,322.96	1,619,411.56	1,747,751.33
2	Myanma Foreign Trade Bank*	4,106,868.40	2,939,383.54	269,882.69	255,196.94
3	Myanma Investment & Commercial Bank*	659,128.61	799,879.04	22,569.52	21,716.17
4	Myanma Agricultural Development Bank*	11,717.43	11,728.82	65,2437.1	568,044.25
5	Asia Green Development Bank Ltd	405,693.34	402,968.66	264,251.05	260,162.95
6	Innwa Bank Ltd	186,789.34	254,626.01	88,011.41	88,319.03
7	Ayeyarwady Bank Ltd	896,293.89	1,647,156.03	529,488.65	1,032,393.55
8	Asia Yangon Bank Ltd	2,457.07	4528.8	1,537.37	2,191.51
9	Construction and Housing Development Bank	4,608.31	28,002.92	0	56,937.25
10	Co-Operative Bank Ltd	959,611.97	1,439,321.65	606,587.89	868,539.27
11	First Private Bank Ltd	107,197.37	136,975.50	100,339.65	121,149.81
12	Kanbawza Bank Ltd	3,710,888.59	5,232,123.30	2,513,412.72	3,49,,852.74
13	Myanmar Citizens Bank Ltd	76,948.42	103,178.94	60,848.43	87,116.78
14	Global Treasure Bank Ltd	399,997.04	425,632.16	334,713.32	353,317.88
15	Myanma Apex Bank Ltd	641,096.73	878,037.19	404,441.84	591,996.09
16	Myanma Microfinance Bank Ltd	354.64	5,296.85	0	1,595.52
17	Myawaddy Bank Ltd	819,975.07	945,508.61	620,781.08	710,806.65
18	Small&Medium Industrial Development Bank Ltd	111,292.76	130,815.61	85,511.76	116,145.16
19	Myanmar Oriental Bank Ltd	161,225.41	206,765.19	118,820.89	140,462.08

20	Nay Pyi Taw Sibin Bank Ltd	96,840.89	96,799.67	290,469.66	304,986.54
21	Rural Development Bank Ltd	70,028.36	75,371.94	35,404.55	40,944.89
21	Tun Foundation Bank Ltd	99,405.95	98,859.19	59,162.55	73,376.75
23	United Amara Bank Ltd	333,060.68	508,438.86	193,008.48	252,903.01
24	Yadanabon Bank Ltd	6,476.99	6,451.23	6,321.58	6,354.61
25	Yangon City Bank Ltd	29,770.07	32,672.03	29,109.65	35,812.48
26	Yoma Bank	370,550.81	689,575.97	85,565.22	415,326.01
27	Shwe Rural and Urban Development Ltd**	0	0	0	0

* state banks data were as of February 2014

** bank's operation has not yet started

According to the financial sector liberalization roadmap in line with the overall Framework for Social and Economic Reforms, the Government of the Republic of the Union of Myanmar ('Union Government'), the Central Bank of Myanmar has granted preliminary approval to nine foreign banks to establish branch in Myanmar on 1 October 2014. Up to August 2015, eight foreign banks branches have been granted the final license to do banking business.

Interest rates ceilingis set by the Central Bank of Myanmar. Both lending and deposit ratesare capped and linked to the Central Bank discount rate, which is currently 10 percent per year.The deposit rates have been liberalized within a fixed corridor ranging from 8 % p.a to 10 % p.a meanwhile lending rate is 13 percent per annum. Furthermore, loans cannot be extended for past one year and or rolled over more than three times, effectively preventing loans for capital investments. Interest on deposit and loan pattern are described in Table 5.

Table 5: Myanmar: Interest on deposit and loan pattern by banks

(Percent per annum)

		2013-2014	2014-2015			
			QI	QII	QIII	QIV
Central Bank Rate		10	10	10	10	10
Deposit Rate						
Saving Account rate		8-10	8-10	8-10	8-10	8-10
Fixed Deposits Rate	Three	8-10	8-10	8-10	8-10	8-10
	Six Months	8-10	8-10	8-10	8-10	8-10
	Nine Months	8-10	8-10	8-10	8-10	8-10
Saving Certificates -12		9	9	9	9	9
Treasury Bill		4	4	4	4	4
Treasury Bond	Two Year	8.75	8.75	8.75	8.75	8.75
	Three Year	9	9	9	9	9
	Five Year	9.5	9.5	9.5	9.5	9.5
Lending Rate		13	13	13	13	13
Working Capital		13	13	13	13	13
Agricultural Loan to		8.5	5.0*	5	5	5
Small Personal Loans (apply to MFI Lending rate		36	36	36	36	36

*** witheffectfrom 1 June 2014**

Source: Central Statistical Organization

In terms of the non-bank financial sector, there is no real securities market (although securities are in fact issued by companies and banks, but they are not listed on an exchange and in most cases they are not traded). The government of Myanmar has issued limited government debt, which is largely bought and held by banks. On behalf of Government, the Central bank of Myanmar has issued two years, three years and five years treasury bond and mostly, the private banks buy the treasury bond. The interest rate for treasury bonds are 8.75, 9.0, 9.5 percent for two years, three years and five years respectively. The government has also issued 92 days Treasury bill and starting from January 2015,Treasury bill has been sold by Auction mechanism. Although a number of private insurance companies have been licensed recently, these are small in scale and outreach with agricultural sector activities such as flood, crop or livestock insurance.

2.2 Recommendation for Financial Stability

Although the Central Bank of Myanmar puts much effort to develop the financial sector gradually and maintains its stability, the following measures could be recommended to undertake further;

- (i) Improve financial sector performance – although development process of financial market and financial system is on-going and it is needed to further development of financial system;
- (ii) Develop Microfinance Institutions systematically – since largest number of people benefit from the use of regulated financial services;
- (iii) Strong effective regulatory and supervisory measures – required not only banks but also MFIs and cooperatives;
- (iv) Enhance good governance among banks;
- (v) Develop securities and foreign exchange market;
- (vi) Effective payment and settlement system.

3. Financial Inclusion of Myanmar

3.1 Government Initiatives

Government is taking initiatives to develop the high-level reform plan outlined in the Framework for Social and Economic Reform (FESR). Since poverty has decreased from 32 percent in 2005 but remained high at around 25 percent in 2010; there are also large regional disparities, the FESR therefore outlines a medium-term growth strategy that is focused on reducing poverty and diversifying sources of economic growth to provide income and employment, particularly in rural areas. The FESR was endorsed by donors in the Nay Pyi Taw Accord in January 2013, and envisages comprehensive reforms in priority sectors including agriculture, health care, education, industrial development, and infrastructure.

Additionally, Government is advancing reforms in priority areas and is opening the economy. Laws to promote foreign investment, access to land (including through titling), and microfinance have been passed and are being implemented, and others to promote the development of special economic zones and small enterprises are under consideration.

3.2 Legal Platform for Microfinance Activities

The Microfinance Business Law was enacted on November 30, 2011 which paves the way to shape the development of microfinance in Myanmar. Main objective of this law is to reduce the poverty and to promote the socio-economic life of the grass-root people. The Law provides a legal basis for the establishment of deposit taking and non-deposit taking MFIs. The Myanmar Microfinance Supervisory Enterprise, under the Ministry of Finance, is the supervisory and regulatory authority for the MFIs. MFIs had received the a license to operate as a microfinance institution from Microfinance Supervisory Enterprise by May 2013 and so far 287 MFIs were established under the Law. Most of them are small organizations with less than a thousand clients, and only a handful of MFIs have a chance to reach significant scale in the future. The largest operator, PACT Global MFIs, is serving over 500000 clients and has worked since 1997. Moreover, ACLEDA Bank has also received licenses to operate as MFIs in Myanmar. This will help Myanmar from the industry move from a microcredit focus towards a full financial ecosystem that provides diverse financial services for poor.In the area of microfinance alone, some estimates indicate that the demand for microfinance could be as large as US$ 600 million with a population needing access to formal credit of about 4 million.

3.3 New Regulatory Framework for MFIs

In 2014 Financial Regulatory Department (FRD) within MOF was established with the oversight function for microfinance. FRD builds on and replaces Myanmar Microfinance Supervisory Enterprise (MMSE) as a supervisor for microfinance, with the addition of the new functions including oversight for private insurance as well. FRD is expected to have staff of about 600, primarily former MMSE staff. FRD faces a steep learning curve as a microfinance supervisor and requires technical assistance and international best practice in a number of areas.

3.4 Measures taken by Central Bank of Myanmar to Increase Access to Finance

With the aim to increase credit to private sector, the Central Bank of Myanmar lifted the deposit to capital ratio and additional requirements for branch expansion. Banks are allowed to expand more branch networks as we plan to have up to 1000 branches for the fiscal year 2013-14 and we reached the target since as of October 2015, the total number of bank branches by 22 private banks are 1127 in numbers. Also restriction on eligible collateral was ease and broaden the collateral to include key agricultural export goods and firm machinery and equipment, the loan ceiling to farmers was doubled and consumer credit such as hire purchase are being allowed to conduct by banks. In order to promote Access to Finance, the CBM has issued 1 regulation and 1 instruction. These are; - Regulation on Microfinance Institutions Development Bank mainly aimed to finance MFIs and Instruction on Mobile Banking as the potent instrument for increasing outreach of financial services to the rural population. In addition to this, savings accounts with no minimum balance requirements and reasonable transaction fees aimed at cash earners in the agricultural sector can help boost domestic savings. Table 6 shows the branches and products which can contribute to improve the access to finance by banks.

3.5Progress on Financial Inclusion

Many international donors and investors are supporting financial inclusion in Myanmar. UNDP started funding microfinance projects in the mid-90, and was followed by several other agencies through the LIFT trust fund. Bilateral agencies such as DFID and USAID have been particularly active in recent years. The World Bank Group (IFC and the World Bank) are supporting the regulatory framework and good practices in the industry.

We have some supply side factors needed to address in a medium term plan such as technology, mobile coverage, regulatory framework and government support. In a broader sense, since the enactment of the Microfinance Business Law, the Microfinance sector has grown rapidly with limited oversight. Based on the data by August 2015, there were 251 licensed MFIs of which 96 were deposit taking. These MFIs extended 987 billion kyat outstanding loans in March 2015 and 75.31 billion kyat in savings. The outstanding loans extended by MFIs has increased five times as there was 187 billion kyat outstanding loans in March 2014. The entrance of new formal finance providers helps to expand access to finance in a country with extremely low levels of financial inclusion. As of March 2015, outstanding loans to GDP stood at only 21.5 % of GDP, although the overall level deposits is slightly higher at 38.6% of GDP and it is estimated that less than 20 % of the population has access to formal financing. We are much aware that bank and other formal financial institutions penetration in Myanmar are relatively low and concentrated in urban areas; we need to make best efforts to eliminate this gap.

Table 6: Myanmar: branches and products to improve the access to finance by banks

Sr No	Name of Banks	Branches	ATMs	Mobile Banking	Internet Banking	Authori-zed Dealer Bank	Money Changer		Linked with Western Union	Linked with Money Gram
							Bank	No of MC		
1	Myanmar Citizens Bank Ltd	17	4	√		√	√	4	-	√
2	First Private Bank Ltd	27	-	√		√	√	20	√	
3	Co-operative Bank Ltd	147	325	√	√	√	√	81	√	
4	Yadanabon Bank Ltd	2	-				√	1	-	
5	Myawaddy Bank Ltd	43	36	√		√	√	8	-	
6	Yangon City Bank Ltd	4	-				√	1	-	
7	Yoma Bank Ltd	58	-			√	√	10	√	
8	Myanmar Oriental Bank Ltd	31	25			√	√	14	√	
9	Asia Yangon Bank Ltd	13	-				√	3	-	
10	Tun Foundation Bank Ltd	21	4			√	√	4	-	√
11	Kanbawza Bank Ltd	285	399		√	√	√	147	√	
12	Small & Medium Industrial Development Bank Ltd(Change Bank Name dated 13.9.2012)	14	2			√	√	7	-	
13	Global Treasure Bank Ltd(Change Bank Name dated 12.11.2013)	107	-			√	√	10	√	
14	Rual Development Bank Ltd(Change Bank Name dated 13.9.2013)	2	-			√	√	3		
15	Innwa Bank Ltd	38	7	√		√	√	3		
16	Asia Green Development Bank Ltd	51	116		√	√	√	50		√
17	Ayeyarwaddy Bank Ltd	121	223		√	√	√	34	√	
18	United Amara Bank Ltd	40	72		√	√	√	29	√	
19	Myanma Apex Bank Ltd	58	118	√	√	√	√	29	√	
20	NaypyitawSibin Bank Limited	4	-				√	3		

Sr No	Name of Banks	Branches	ATMs	Mobile Banking	Internet Banking	Authori-zed Dealer Bank	Money Changer		Linked with Western Union	Linked with Money Gram
							Bank	No of MC		
21	Construction and Housing Development Bank Limited	5	4			√	√	4		
22	Myanma Microfinance Bank Ltd.,	9	-							
23	Shwe Rural and Urban Development Bank Ltd	-	-							
	Total	1079	1335	6	6	17		465	9	3

In addition to this, there is a need to consider demand side realities for making responsible financial inclusion with more purpose oriented beyond inclusion towards development at macro level and support of low income people at micro level as well. Probably these demand side factors also may explain the cause for prevailing backwardness, unmet demand, exclusion, unavailability for financial institution for expansion etc.,. These demand side challenges therefore need to be looked at on three vital areas viz., human, social, and physical capital. Without making these capital investments adequately, financial inclusion will not work. In such a backdrop mere delivering micro credit either branch or branchless mode using mobile network in the supply front, it would not yield expected outcome and also is risky. What is therefore emphasized here is that there is an imperative need to arrange physical capital as explained above, along with finance capital.

In the area of non-cash payment system, the Central Bank of Myanmar is encouraging the issuance of debit cards and ATMs among the financial institutionsin order to lessen the handling of currency notes. Point of sale (POS) terminals have been introduced which means that ATM card holder will be able to pay for services and goods in big chain stores that will have agreements with the banks, and an interbank payment system has been developed which means that card holders will be able to withdraw money at any bank participating in the Myanmar Payment Union (MPU) system. As of 21 June 2015, 1191 ATMs are running throughout the country.

3.6 Myanmar Financial Inclusion Road Map

The Myanmar Financial Inclusion Roadmap lays out a vision for the enhancement of financial inclusion in Myanmar. The roadmap is based on a diagnostic which includes an analysis based on in-country research and quantitative data provided by the

Myanmar Fin Scope Survey 2013. It was funded with support of the UNCDF. Under the Roadmap, twenty interventions have been identified as critical to scale up financial inclusion. The Roadmap has been adopted by the Inter-ministerial Committee on Financial Inclusion chaired by the Ministry of Finance.

The Roadmap focuses on achieving outcomes in two critical areas: (i) strengthened financial sector support to financial institutions; and (ii) better financial inclusion in priority segments. Priority outputs have also been identified and supported by a set of 20 interventions to be implemented by various public and private stakeholders. These interventions primarily relate to capacity and knowledge building initiatives, corporate reform and modernization programs, consumer protection and financial literacy initiatives, infrastructure enablement projects and proposed research projects. A time horizon of up to five years has been envisaged for the full impact to be realized.

4. Legal and Regulatory Development

The Financial Sector plays an important role in the economic development of any country. With this in mind, since 2012, in line with the overall Framework for Social and Economic Reforms, the Government of the Republic of the Union of Myanmar has accelerated the development of the banking sector and has set out a roadmap for liberalization in the banking sector. The main goal of the roadmap is to develop a modernized and thriving banking sector in Myanmar by strengthening financial stability and improving sector efficiency.

In line with this roadmap, over the last couple of years Myanmar's banking sector has taking several steps towards liberalization and reform, including the enactment of several important laws. The 2012 foreign Exchange Management Law eased foreign currency controls and allowed for a new unified managed exchange rate, and allowed our local currency, the Myanmar Kyat, to stabilize.

Another Key milestone is the enactment of the New Central Bank of Myanmar Law on July 11, 2013 which gave the Central Bank new responsibilities and governance in line with international best practice in terms of its independence and mandate.

Since Myanmar takes sure and brisk strides in the path of reform and towards economic growth and development, the financial sector and the related laws must follow suit. Against this background, the 1990 Financial Institutions Myanmar Law (FIM) has been revised with the technical assistance of the World Bank. It has been approved by the Pyi Thu Hluttaw and currently reviewed by the Ah MyoTha Hluttaw (Upper House) so that the new FIM Law will come out soon. The new Law will cover broader sense of permitted activities by financial Institutions and other international best practices and procedures.

During last two years, banks have improved their product offering and have been increasingly promoting new modern payment solutions. Going forward, foreign banks can reinforce the modernization and development process of the banking sector even further. In line with this, the Central Bank has granted preliminary approval to conduct banking business in Myanmar to 9 foreign banks and among which eight banks have been already granted final licence and started banking business.

Since financial inclusion which is tremendous power to drive economic growth and if it works functionally ,it could bring towards the well –being and prosperity of people , Central Bank of Myanmar is working continuously to develop a modern information technology based efficient and secured banking system with a view to increase stability in the financial sector. To this point, the CBM has issued the "Mobile Banking Regulation" in December, 2013 which is potent instrument for increasing outreach of financial services to the unbanked and rural population and focus on banks and financial institutions initially and mobile network companies / operators later on, to participate in the mobile money market. Among two approaches of Mobile Payment and Mobile Banking , CBM approach is inviting both financial institutions (at a first stage)for the development of a comprehensive portfolio of life enriching services including mobile money services , a range of mobile health services to farmers and agriculture in line with the goals of poverty reduction and sustainable economic growth.

The Central Bank Myanmar has the idea of licensing a new group of special purpose banks, including for housing, microfinance, small and medium-size enterprises, regional/ state level development .In this regard, the CBM issued two regulations for the establishment of the Microfinance Institution Development Bank, Housing and Construction Development Bank and Regional Farmers Development Bank on 2 January 2014, 18 February2014 and 30 July 2014 respectively.

4.1 Way Forward to improve Financial Inclusion

The Central Bank of Myanmar uses its best efforts to boost Financial Inclusion and with this in mind, the Central Bank of Myanmar lifted the deposit to capital ratio and additional requirements for branch expansion. Banks are allowed to expand more branch networks and increasingly expanded their network to 1079 branches by 22 private banks as of August, 2015. As to expand the credit to private sector, The Central

Bank of Myanmar lifted restriction on eligible collateral and broaden the collateral to include key agricultural export goods and firm machinery and equipment, the loan ceiling to farmers was doubled and consumer credit such as hire purchase are being allowed to conduct by banks. The Central Bank of Myanmar is increasingly granting the license to finance company which provides consumer credit to households and SMEs financing up to four numbers during the 2013-2014 FY. As a result the credit to private sector to GDP is growing from 13.6 percentin 2013-14FY to 18.3 percent in 2014-2015FY.

Additionally, the Central Bank of Myanmar is working continuously to develop a modern information technology based efficient and secured banking system with a view to increase stability in the financial sector. To this point, the CBM has issued the "Mobile Banking Regulation" which aims to increase outreach of financial services to the unbanked and rural population and it focuses on banks and financial institutions initially and mobile network companies/operators later on, to participate in the mobile money market.

Section 75 of the Central Bank of Myanmar Law enacted in July 2013 also provides the establishment of the Credit Bureau and the draft Regulation for the Credit Reporting System is being drafted with the assistance of IFC, the World Bank Group as a further step to improve credit reporting system and another round way at improve access to finance by increasing credit to the SMEs.

4.2 Rational to draft Mobile Financial Services Regulation

The current mobile banking directive provides for bank-led model in which an agent can partner with a bank to sign up customers for the service and carry out cash in and cash out transactions. Moreover, technical service providers, financial service providers and mobile network operators can be appointed as agents of such bank to provide mobile banking services. The regulation however is- unclear on the scope, powers and tentative role for the mobile network operators.

There can be seen the potential for expansion of mobile banking network through – (1) Mobile Network Operators; (2) Microfinance Institutions; (3) Other financial services providers. Additionally, to reap the benefit of the mobile financial services including-

- Access to the banking facilities without visiting the bank;
- Save time and transportation costs;
- Promote financial inclusion;

- Help to transform the current cash-based economy to a lesser cash-based one;
- Minimize cost of banks to expand banking network.

To create an enabling regulatory environment for efficient and safe mobile financial services in Myanmar, the Central Bank of Myanmar takes initiative to draft the Mobile Financial Services Regulation with the assistance of the World Bank and CGAP starting from early year 2015.

5. Conclusion

There should be noted that increasing access to financial services is important for broad-based growth. In this regard, under the Government concrete commitment, the measures collaborating taken by the Central Bank of Myanmar, Ministry of Finance and all stakeholders are steps in the right direction. However, particular care will need to be taken to effectively supervise the increasing number of operators in the microfinance and insurance sector.

Myanmar is making progress in the area of financial sector reform and the industry is evolving rapidly as the economy is opened. Many important changes have taken place in the last two years, the impacts of which have yet to be fully realized. The economic growth potential of Myanmar is substantial, but is constrained by its lifeblood – finance. The efficiency, depth, and outreach of the financial system will have to improve quickly if Myanmar is to achieve broad-based growth that generates increasing employment and income opportunities, especially through micro-enterprises and SMEs. Many more reforms will be in order for the country to reach this goal and the opportunities are abundant. However, financial reforms must be sequenced appropriately in order ensure the stability of the financial system. Therefore, the Central Bank of Myanmar needs to develop a sound and prudent regulation and supervision, a strong core of local banks and also foreign bank branches, and a selective admission policy. The quality of prudential oversight, risk management, and corporate governance must keep pace once the financial sector is further growing.

Chapter 7

Some Perspectives on the Banking Sector in Myanmar Based on the Banking Sector Survey

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Abstract

Based on originally collected information, the paper investigates the present banking sector in Myanmar. The paper confirms still persisting large presence of the state banks, particularly of Myanmar Economic Bank (MEB) which occupies about 40 % of the assets of the entire sector. We found that while shouldering a large burden for subsidy provisions to Myanmar Agricultural Development Bank, the MEB is gradually increasing profit-seeking operation, and becoming financially sustainable.

Our examination reveals regarding the private bank sector that very diverse private banks can be classified into (1) the typical private banks owned by groups of traders or rapidly growing business tycoons, established in 1990s or recently, and (2) the banks originally established by government sections. Some of the latter are now aggressively transforming themselves into regular commercial banks, successfully and unsuccessfully, while the others are strengthening the position of policy-based bank.

Simple analyses from the data in available financial statements of 8 banks show that the profit levels of large private banks in the process of expanding the capacity of banking practices are not very high, while those of the smaller-sized banks practicing policy-based lending for SME or provincial business are rather higher. This difference is caused simply by the difference of the operational costs. It may suggest that under a yet less competitive condition, the banks under aggressive expansions are in the process of expending sunk cost, while the small banks doing policy lending are presently facing plenty of credit demand in the financial inclusion field.

The government should support the moves forward the two-hold transformations in private bank sector by appropriate rules, regulations and legislation. Also, the reform of the state banks should be prompted in a way consistent to MEB's superior capability for deposit mobilization.

Contents

1. Introduction

This paper reports on information collected from the Banking Sector Survey, which was conducted under a collaborative research program, together with quantitative information from recent publications produced by the Myanmar government, international organizations and research institutes. Its aim is to evaluate the current position of the banking sector within the reform process.

Since the start of Myanmar's reforms in 2011, information on the financial sector has gradually become available: the Central Bank of Myanmar (CBM) began publishing annual reports on its website for the 2011–12 fiscal year; the Asian Development Bank (Nehru, 2015) and the World Bank (2014) have published survey reports on the financial system; and the United Nations Capital Development Fund (UNCDF) regularly updates its summaries on the financial sector[41]. The numerical data provided in these publications has helped to gradually produce a clearer overall picture of the financial system. Based primarily on the results of our interview-based banking survey but also using the basic data mentioned above, this paper aims to examine the operational features of Myanmar's banking sector.

In our Banking Sector Survey, we focused on collecting both quantitative and qualitative information on each of Myanmar's private banks. For the quantitative aspect of the survey, we asked each bank to provide us with its financial statements (balance sheet and income statement) for the last five years (typically 2008–12), and acquired other fundamental information—such as its number of employees, the number and location of its branches, its interest rates, and a breakdown of its loans by sector—by means of an interview-based questionnaire. The qualitative aspect of the survey was also conducted by means of an interview-based questionnaire used to collect information such as the following: their corporate histories, ownership structures, relationships with other businesses, development strategies and the influence of the banking regulations. The interviewees were typically manager-level employees.

The survey was also conducted for Myanmar's state banks in a similar format, but in this case we basically emphasized the interview aspect of the survey, using an extensive questionnaire focused on their role as policy-based finance. We did, however, ask them to provide financial statements, just as we did for the private banks.

We conducted the survey in three phases: October 2013 and January to February 2014 for private banks and August 2004 mainly for state banks. We succeeded in

41 Making Access Possible (MAP) initiative entitled "Myanmar-Demand, Supply, Policy and Regulation"

conducting the interview-based survey for all of the state banks and for 14 of the 19 private banks that existed at the time we began our survey[42].

This paper addresses three main issues with regard to Myanmar's current situation and the challenges involved in its reform of the financial system. Firstly, we wanted to obtain an overall picture of the sector and the distribution of banking institutions through a comparison between state and private banks. Since Myanmar is currently in a transitional phase of economic reform, its state banks still have a dominant position in the sector, but private banks are rapidly closing the gap. An accurate understanding of the current situation and how it is likely to develop going forward is essential in formulating reforms.

Secondly, we were interested in ascertaining the roles that the state banks had played so far, and the function of policy-based financial practices for both state and private banks. The Myanmar Economic Bank (MEB), a state bank, has by far the largest presence in the financial sector. On the one hand, it has behaved as a commercial bank with a rich branch network, but while it has amassed huge deposits, it doesn't seem to have been very active in terms of lending. On the other hand, it plays a central role in providing credit resources to certain state banks, such as the Myanmar Agricultural Development Bank (MADB), and operating other directed-credit programs for some private banks. An understanding of the structure of the credit flow through state banks and the directed credit programs is also essential and fundamental information for policy formulation.

Lastly, and most importantly, we paid particular attention to the diversity within the private bank sector in terms of their operations, ownership and management. Most private banks were established in the mid-1990s under the Financial Institutions of Myanmar Law (enacted in 1990). Early on in the process, however, they were established not only through the investment of private capital, but also by governmental bodies, such as ministries, the army and cooperative societies. Some of these 'semi-government' banks have behaved in the same way as conventional commercial banks, while others have operated directed-credit programs for small and medium-sized enterprises (SMEs) or provincial sectors. In addition, under the current reform process, 'semi-government' banks have tended to further diversified, with rapidly changing operations, ownership and management.

Myanmar's financial sector currently faces a variety of challenges, and the economic circumstances in which it operates are constantly changing. Conventional private banks established in the 1990s are transforming themselves into dynamic

[42] The following three private banks were established in 2014 while we were conducting our survey: Construction and Housing Bank, Myanmar Microfinance Bank and Naypyitaw Development Bank.

commercial banks, and a few new private banks that appear to be policy driven have been established under the current government. A new financial institutions law has been drafted, and as of August 2015 it is deliberated in parliament. Outside the banking sector, the practice of microfinance is growing rapidly and emerging as a significant sector for rural or small businesses. This paper does not, however, cover such recent developments. Instead, it focuses more narrowly on the banking institutions with the fundamental information.

The rest of this paper is organized into four sections. Section 2 provides an overview of the various banking institutions in Myanmar and makes a comparison between the country's state and private banks. Section 3 looks at the problems of the state banks, with a particular focus on the operational and financial structure of the MEB and its relationship with policy-based finance programs, such as that of the MADB. Section 4 examines the ownership and managerial characteristics of Myanmar's private banks as well as trends in the diversification in their operations. In this section, we classify the private banks into four categories. Section 5 looks into the cost and profit structures of Myanmar's private banks, and highlights differences within the sector. Section 6 concludes our observations by touching on some policy implications for our findings.

2. Banking Sector in Myanmar

2.1 Institutional Development

As of April 2015, the banking sector in Myanmar consisted of 4 state banks and 22 private banks. Most of the state banks were created by the breakup of the country's monolithic People's Bank of the socialist regime in 1976. During this breakup, the section of the People's Bank that had been responsible for the central banking function were transferred to the newly established CBM, which is a department within the Ministry of Finance and Revenue, and the section that had been responsible for the commercial banking function was broken off to create the MEB. Other specialized banks that were created in the breakup to handle foreign exchange (Myanma Foreign Trade Bank; MFTB) and long-term loans (Myanma Investment and Commercial Bank; MICB). In addition, the MADB was established in 1976 from part of the People's Bank for the purpose of providing agricultural loans under the auspices of the Ministry of Agriculture and Irrigation.

With the exception of the MADB, which is under the supervision of the Ministry of Agriculture and Irrigation, all of Myanmar's state banks are under the supervision of the Ministry of Finance (or are in effect departments belonging to the ministry). Of these banks, the MBE is by far the largest entity in the banking sector, accounting for 34% of the total assets of the entire banking sector—including those of private banks—as of March 2012.

Myanmar had a relatively active private bank sector prior to the emergence of the socialist regime in the 1960s. The existing private bank sector, however, was re-started in the mid-1990s, and it has experienced not only a strong expansion in activity over the last two decades, but also a strong contraction. After the explosive growth of the 1990s, the private banks experienced a serious bank run in 2003[43]—triggered by the bankruptcy of an informal financial institution (known at the time as 'General (Financial) Service Companies: GSC)—and their operations almost came to a standstill due to the repressive control exerted by the banking authority, the international restrictions imposed to prevent money laundering, and the economic recession between 2003 and 2005.

Of the 22 private banks that existed as of April 2015, 15 were established between 1993 and 1997 following the 1990 enactment of the Financial Institutions of Myanmar Law, which allowed the private sector to enter banking, 4 were new entrants licensed in 2010 by the junta, and the other 3 were newly established in 2013 for specific purposes by the current government.

Many private banks were established by major business groups, while some others were originally operated by particular parts of the government—such as the Ministry of Industry, the Ministry of Commerce and the Myanmar Army—so they are usually regarded as being 'Semi-government' banks. The 4 new banks that were established in 2010 all have links to major business groups that have grown rapidly since the 2000s, such as the Htoo Group and the Max Myanmar Group.

2.2 Overview of the Banking Sector

Table 1 lists Myanmar's private banks, while Table 2 lists its state banks. Both table provide information on the size of the various banks' total assets as of March 2015 and the dates on which the banks were issued with a banking license. We conducted an interview-based survey for all of the state banks and 15 of the private banks (Nos. 1–10 and Nos. 12–14). Information on total assets was not available for 1 state bank (MFTB) and 4 private banks (No. 11 and Nos. 16–19).

Figure 1 provides a breakdown in the share of total assets of the private and state banks (excluding the MFTB). As of March 2012, the share of the banking sector held by state banks and private banks was 40% and 60%, respectively. The MEB is by far the largest, accounting for more than 90% of the state bank sector and about one-third of the entire banking sector.

There is also considerable disparity within the private bank sector, with the

[43] The Asian Wealth Bank, the May Flower Bank and the Yoma Bank (see Kubo et al. (2009) and Turnell (2009)).

largest private bank, the Kanbawza Bank, holding assets equal to one-third of the total assets for the entire private bank sector and the top five banks accounting for 73% of the total assets of the private bank sector. A comparison between the state and private bank sectors reveals that the assets of the Kanbawza Bank are equal to about 60% of those of the MEB, while the second largest private bank (Myawaddy Bank) and the third largest (Co-operative Bank) are equal to 25% and 19%, respectively. The sum total of the assets of these 4 banks accounted for as much as 72% of the total assets for the banking sector as a whole, indicating that the market is highly oligopolistic.

In fact, this situation reflects the rapid growth that has been experienced by some private banks since 2011, as the share of total assets for the entire banking sector that was accounted for by state banks in 2008 was actually 91.9%, with most of the state banks' assets presumed to have been those of the MEB[44]. Before the reforms were launched, the banking sector market was characterized by the "Gulliver" oligopoly of the MEB. This suggests that the market structure is still advancing rapidly down a path toward a situation where only a few active private banks will be able to compete with the MEB in terms of operational size and network.

3. State Banks and Policy-based Finance

3.1. Interest Structure and Profit Conditions for Banks

Before evaluating the MEB's financial structure, we should look at the interest structure of the financial system. As of 2012, the central bank reference rate, which is the interest rate charged by the central bank for credit extended to banks, is 10% per annum. The loan interest rate is regulated so as to ensure it does not exceed 13% and, according to our survey, most private banks determine the maximum level regardless of the loan type or risk. Similarly, the deposit rate is regulated so that it will not exceed 8%, and the interest rate for most deposit instruments is, in fact, fixed at around 8%. The coupon rates on Treasury bonds are usually between 8.5 and 9.5%.

Given this, banks can gain a net interest income at between 0.5 and 1.5% by holding Treasury bonds with the fund mobilized as a deposit, which may meet the operational cost. A 5% spread between the deposit and the loan would seem to be large enough, even if we take the default risk and operational costs into account. Although the current interest structure lacks flexibility, it can be considered fairly reasonable (i.e. it offers positive interest in real terms and there is no backspread for banks, at least).

[44] The Statistical Year Book for 2011 contains a consolidated balance sheet for state and private banks (pp. 417), while that for 2009 contains a balance sheet only for private banks (pp. 331). Figures for total assets in 2008 are available from both sources. This percentage is calculated from these figures.

3.2. Operations of the Myanmar Economic Bank

Based on the results of the survey, it would seem that the MEB behaves as a proxy for the CBM in that it delivers bank notes to provincial areas through its branch network and provides a platform, known as the State Fund Account (SFA), for cash flow transactions for the government and state economic enterprises (SEEs). It also maintains a large number of deposit accounts for government employees and pension recipients. Basically, however, it operates as a commercial bank. Its loans are directed to domestic enterprises involved in construction (38.1% of total loans in 2012), trade (34.2%) and production (14.1%). In principle, though, SEEs are not allowed to borrow from the MEB, and the actual amount of loan to SEEs seems to be very limited[45].

On the other hand, apart from its usual commercial banking operations, the MEB, in its capacity as a government bank, functions as a resource provider for policy-based finance. Since 2013, credit provided to the MADB has increased rapidly to the point where it has become a major managerial issue. Before then, the MEB have provided loans to the directed credit programs conducted by private banks. Its loans to the Small and Medium Industry Development Bank (SMIDB) and the Rural Development Bank (RDB) are for SME sectors, while its loans to the Naypyidaw Development Bank and the Construction Development Bank are for infrastructure. The interest rate charged for this credit is commonly set at 8.25%, which is slightly higher than the ceiling deposit rate and roughly the same as the coupon rate on Treasury bonds. This suggests that the credit extended to these banks by the MEB functions to support credit availability for them at a rational cost and that it rarely includes subsidy factors. According to the results of our interview, the amount of credit extended for these programs remains very small for the MEB.

The credit extended to the MADB differs remarkably from that extended for the abovementioned programs, with the interest rate for credit extended to the MADB set at 4%. The MADB usually extends loans to end users at an interest rate of 8%, which is highly subsidized. Since the deposit rate is 8%, the MEB usually loses 4% under this framework. This framework was launched in 2012, and the credit extended under this framework currently accounts for the largest share of the MEB's total loans.

3.3. Financial Structure of the Myanmar Economic Bank

Through our survey, detailed financial statements for the MEB for FY2011 (March 2012) and FY2013 (March 2014) were made available, and rough information was made available for between 2011 and 2014. Figures 2-A, B, and C summarize the balance sheet structure of the MEB for two fiscal years. First, Figure 2-A shows a

[45] This view is based on the results of our interview.

remarkable growth in total assets over these two years, increasing by 68% from 2,930 to 4,932 billion kyat. In terms of fundraising, its deposits continue to be the largest source of funds, accounting for 86% in FY2011 and 69% in FY2013, while its reserves emerged as the second largest source in 2013, accounting for 22.1% in March 2014. The growth in total assets has been largely realized due to an increase in equity only in FY2012[46], but it has basically been driven by the growth in deposits. This suggests that, since the reforms were introduced, the MEB has continued to increase its deposits.

The portfolio side of the MEB's operations shows that the vast funds mobilized through its deposits were not utilized very effectively. Figure 2-B shows that, in March 2012 (FY2011), 56% of the MEB's assets were held in reserve at the CBM, and 31% were invested in securities[47]. Only 8.9% was utilized for commercial lending. In March 2014 (FY2013), the percentage of the "Reserve to CBM" category shrank remarkably, while the "Loans and Advances" category increased substantially and the "Deposit to other FIs" category, most of which is assumed to be credit to the MADB, suddenly increased. This suggests that, on the one hand, the MEB has strengthened its commercial banking operations, but on the other hand, it has come to play a significant role in the provision of credit for the MADB's directed credit program.

Before evaluating the burden placed on the MEB by the provision of credit to the MADB, which is generally believed to result in a serious profit loss for the MEB, it is necessary to understand the overall figures for the cost and profit structure of the MEB. Figures 3-A and B show the income and expenditure for FY2011 and FY2013. The income side shows only the gross interest income, since non-interest income was reported to be zero for both years. The expenditure side shows interest expenses and operating expenses. The interest income in FY2011 was 4.2%, which is much lower than the deposit rate (8%). This is apparently due to a large deposit made to the CBM (more than half of the portfolio assets). The interest expenditure was 6.1%[48] and operating expenses was 0.4%, which resulted in the MEB bearing a 2.3% profit loss.

In FY2013, however, the profit structure became a little more reasonable. The interest income improved to 6.5% as a result of an expansion in commercial lending, and the interest expenditure fell to 3.8%, presumably reflecting an increase in the share of equity on the fundraising side, while the operating expenses remained almost unchanged. As a result, the MEB began to see a substantial positive profit. It is worth noting that this positive profit was realized even though there was an expansion in the

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46 The large "Other Reserve" category in reserves emerged suddenly in FY2012, but we were unable to establish any details for this.

47 The majority of this investment is assumed to be held in Treasury bonds.

48 This is lower than the deposit rate (8%) since the source for part of funds was equity.

amount of subsided credit extended to the MADB. The profit generated through commercial lending by the MEB seems to absorb the costs it incurs in subsidizing the MADB.

3.4. The MADB and Subsidized Credit from the MEB

The MADB specializes in the provision of agricultural credit, and it is almost the only state bank that regularly operates a directed credit program. The other directed credit programs are run by 'semi-government' banks. Before FY2012, the MADB extended loans in very limited amounts. As can be seen in Table 3, the total assets of the MADB as of March 2012 (FY2011) were only 116 billion kyat, which is comparable to the assets held by medium-sized private banks such as the SMIDB or the First Private Bank. According to statements given in our interview, the deposit rate and the loan rate were basically 8% and 13%, respectively, which is the same as the ceiling interest rates. During this period, the main source of funds was deposits (75% of total assets), and the most of the remaining funds (12%) was accounted for by borrowing from the CBM.

Under a new policy scheme that was introduced in FY2012, the MEB provided subsidized credit to the MADB at 4%, and the MADB provided loans to end users at 8.5%, which is much lower than the market rate. As shown in Figure 2-A, the MEB loan was in fact very large for the amount of MADB fundraising[49]; in FY2012, the borrowing from the CBM and the MEB increased by 12.8 times compared to the previous fiscal year, and the figures for FY2013 show that the figure had still more than doubled. At the same time, deposits have declined so sharply since FY2012 that this had become a very minor source of funds by March 2014[50]. As a result, total assets in March 2014 (FY2013) had increased by about 4.5 times compared to March 2012 (FY2011), and borrowing (mostly from the MEB but partly from the CBM) accounted for 90% of this.

Table 4 shows our calculations for the MADB's cost and profit structure based on information received through our survey. The reasons for this are unclear, but our calculations show unnaturally high interest income and expense rates, and seemingly unrealistically high interest margins. If we focus only the overall trend, however, we

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49 In Table 3, the total liabilities of MADB in FY2011 are 198,664 million kyat. It is only 10.3% of MEB's Loan and Advances including 'deposit to other financial institution' category (1,928,573 million kyat).

50 Many stories and rumours have been put forward to explain the sudden decline in MADB deposits in FY2012. Some explained that the authority issued an order for them to pay back deposits to farmers and that they prohibited such deposit under their agricultural policy, while others suggest that once it started receiving cheap credit from the MEB, the MADB lost the motivation to maintain expensive deposits. The author has not yet been able to establish the actual reason.

can see that both rates apparently declined in FY2012 and FY2013, while the interest margin remained substantially and was sufficient to cover the relatively high operational costs (1.1–2.6%). This suggests that the new subsidy credit scheme has proven an effective means of fundraising so far, in terms of expanding the operations, delivering cheaper loans to farmers, and maintaining the profits of the MADB.

This subsidy mechanism is generally regarded as being a serious, unsustainable burden for the MEB. As Table 2 shows, though, the MADB is, in fact, a very small-scale commitment for the MEB, so the cost does not seem to be that much of a serious burden at present. In FY2011, a large portion of the MEB's assets was not efficiently utilized, but in FY2013 part of this idle capital started to bear profit. Even after the subsidy to directed credit programs has been absorbed, the profit for FY2013 is 92,236 million kyat. If we suppose that the MADB's borrowing for FY2013, which amounted to 424,284 million kyat, was all acquired from the MEB[51], the potential cost of the subsidy can be roughly calculated as being around 16,971 million kyat (424,284 × (deposit ratio (8%) – Subsidized credit ratio (4%)[52]). This is only 9.1% of the interest expenditure of the MEB, and the MEB still gains a profit of 92,236 million kyat after absorbing the subsidy for that year.

In summary, the provision of subsidies to the MADB by the MEB might not be desirable in the long run, but it cannot, at this stage, be said that the system is too much of a burden to be sustainable or that it has a critical impact on the MEB's operations. After all, the MADB is a trivially small size for the MEB, and the MEB is now expanding its commercial banking operations with its idle capital and beginning to produce a large profit. Needless to say, however, a more autonomous fundraising system is needed for the MADB, and the appropriate level of subsidies for sustainable policy-based agricultural credit will need to be examined in the long run.

4. Categorizing of Private Banks

4.1 Aim of the Survey

According to the definition for private banks used in the Financial Institutions of Myanmar Law enacted in 1990, Myanmar's banking sector currently consists of 22 private banks. As Table 1 shows, 3 of these banks were established during the period of our survey, so they were excluded from our analysis. We succeeded in conducting interviews for 14 of the remaining 19 banks, including all of the 10 largest banks.[53] For most banks, we were able to collect quantitative or narrative information on their shareholders and managerial characteristics, but we did manage to get financial

51 Actually, a small part of this is assumed to have come from the CBM.
52 In fact, the fundraising costs are, as shown in Table 4, actually much lower since part of the fundraising is realized through increased equity.
53 As defined by the annual report for 2011–12 issued by the CBM (pp. 26).

statements from 10 of the 19 banks. As we have already discussed, the private bank sector in Myanmar includes not only purely private commercial banks, but also many institutions affiliated to Myanmar’s ministries, army, and local governments. The latter of these are usually referred to as "quasi-state banks." Given this, there is considerable diversity in the types of ownership, managerial features and business purposes for banks in Myanmar. This section aims to categorize them, based on the information gained from our survey, into four types with a view to ascertaining the direction that should be taken for future changes in this sector.

4.2 Basic Characteristics

Some of Myanmar’s banks were established by particular business tycoons in the course of their growth in the 1990s or 2000s. Despite this, according to the results of our survey, there is generally only a very limited direct relationship between these businesses and the banks they established in terms of ownership and operations. In most cases, banks don’t own subsidiaries that are non-financial businesses, and it is similarly very rare for a bank to be the subsidiary of a major firm in a business group or holding company. Instead, most purely private banks are owned directly by the tycoons themselves and their families. Also, according to the answers to one of the questions we asked at the interview, banks are not allowed, under the regulations of the banking authority, to extend loans to firms in their affiliated business groups. Although it is generally well known that some private banks function as the fundraising department for their respective business groups, such operations are not immediately apparent on the surface.

4.3. Bank Categories

(1) Type 1: Conventional purely private banks established in the 1990s

Table 5, which presents the same information as Table 1 but in a different format, classifies the categories of ownership and managerial characteristics based on the results of our survey. Although the information is not exhaustive, but scattered and lack in some cases, it contains some insights. The first category is made up of a group of conventional private commercial banks that were established in the 1990s in response to the junta’s economic reforms that opened up the banking business to private capital. The Kanbawza Bank, Yoma Bank, Myanmar Oriental Bank, and First Private Bank[54] are typical examples of the banks found in this category.

These banks are basically owned by and under the firm control of their individual founders, their families or groups of founding traders. The Kanbawza Bank was established in 1994 by a business tycoon involved in gemstone mining and trade in

[54] We were unable to visit FPB for the interview.

Shan State. The bank's stock is owned only by the tycoon, his wife and their two daughters.

Yoma Bank was established in 1993 as an affiliate of the First Myanmar Investment (FMI) Group, a well-known business group. The founder of the FMI Group started his business in the early 1990s, and then diversified by becoming an import agent and entering fields such as construction and real estate. Yoma Bank was born out of this diversification, and its shares are owned by the founder, FMI affiliates, and individuals associated with the management of the FMI Group[55]. In the 1990s, Yoma Bank was one of Myanmar's largest banks, but it was hurt by the bank run of 2003 and, until recently, it was prohibited from engaging in lending operations by the banking authority. As a result, it shank in size and became a small bank. Since 2012, however, its operations have been actively restored.

Myanmar Oriental Bank was established by a group of 25 traders in 1993 in an attempt to establish modern commercial banking practices. Since its early days, the bank has engaged in diverse range of financial businesses, including credit card and leasing services. Now, though, it is an independent bank that provides investment trust services. Its ownership is primarily concentrated in the hands of its founders, with its top five shareholders, all of whom are private individuals, accounting for 71.45% of the bank's shares.

Type 1 banks are commonly private banks that went into business relatively soon after the reforms were enacted, and essentially they seem to be relatively politically neutral. While the pace of growth they have experienced since their establishment has varied, they have commonly adopted an aggressive stance toward developing their standard commercial banking operations since the enactment of economic reforms in 2011.

(2) Type 2: New entrant purely private banks established by emerging tycoons

The second category of private banks is made up of 4 banks that were newly established in 2010. In July 2011, banking licenses were granted to new banks by the junta government for the first time since the last one (Innwa Bank) that was established during the first batch of economic reforms in 1997. These 4 banks—Myanmar Apex Bank, Asia Green Development Bank, Ayeyarwady Bank and United Amara Bank—began operations this year. Damaged indirectly by the Asian Financial Crisis of 1997–8, Myanmar was hit by bank runs and the subsequent serious recession of 2003. After around 2005, however, it achieved a significant recovery based on its natural gas exports. During this period of recovery, the junta strengthened

[55] Yoma Bank is a rare case of ownership in the form of a cross-holding of shares within a group.

the inward orientation of its politics and diplomacy and promoted the construction of Naypyitaw—the country's new capital—and other infrastructure investment projects by increasing public expenditure. The business tycoons that established the 4 new banks were all major contributors to the construction of Naypyitaw, and they grew rapidly after the mid-2000s. Their growth was based on their involvement in the infrastructure sector and, prior to the early 2000s, they had been no less prominent than the founders of Type 1 banks. In this sense, these tycoons seem to belong to a new generation, and they can appear to have had closer ties to the former military government.

Myanmar Apex Bank was established by Eden Group, which is involved in automobile imports, retail, hotels and restaurants, and coal mining and is a local company that did work in the construction of Naypyitaw. Asia Green Development Bank is affiliated to the Htoo Group, which started out in the timber and wooden products business but later diversified by entering new lines of business such as the trading of machinery and aircrafts, hotels and real estate, and (more recently) aviation. Ayeyarwady Bank was founded by one of the owners of the Max Myanmar Group, which has expanded its business into construction, rubber plantations and diesel retailing. Lastly, United Amara Bank was established by the IGE (International General Electric) Group, which supplies electric equipment and is actively committed to the construction of Naypyitaw.

The ownership structures of these banks are basically quite simple. With the exception of Asia Green Development Bank[56], shares in these banks are mostly owned by the founder, his wife and/or their children.

Because they are newly established, these banks have adopted a business style that, in terms of banking operations and the equipment they use, seems very modern; their front counters, for example, are systematized, which is seemingly very different to what you would find in most Type 1 banks. Some of these 4 banks have invited consultants from Singapore, Malaysia or Indonesia to visit. In spite of the fact that these banks only started their operations in July 2010, they succeeded in collecting deposits rapidly, and emerged as large-scale banks as early as March 2012 (FY2011). In fact, as Table 1 shows, 3 of the 4 banks are ranked among Myanmar's 10 largest banks.

(3) Type 3: 'Semi-government' banks transitioning into commercial banking

Although many of Myanmar's private banks were established by government departments, some of them are now reorienting themselves toward conventional

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[56] Details concerning the stock holdings for Asian Green Development Bank were unavailable at the time of our survey.

commercial banking and striving to reform their ownership and managerial structure as well as their operations. At present, it seems possible to classify them into active cases and less active cases. The CB bank, which was originally established by a cooperative society and the Ministry of Cooperatives in 1992, is the earliest and most remarkable example of the active cases. During the early stages of its existence, it was expected to contribute to the activities of cooperatives. However, when it was consolidated with two similar banks in 2004, it changed its legal status from being a private company to being a public one, and several directors joined as large shareholders. Nowadays, the bank is essentially run by about 15 board of director members, who are also the major shareholders. Most of them are entrepreneurs who run their own businesses. Given this, the bank is, in fact, a purely private bank that is jointly owned and run by business persons. It has expanded rapidly in recent years to become the third largest private bank in Myanmar after the Kanbawza Bank and the Myawaddy Bank.

Global Treasure Bank is another typical example of a ‘Semi-government’ bank that is transitioning to become a purely private bank. Originally established by the Ministry of Commerce in 1996, it has been under the control of the Ministry of Livestock and Fisheries since 1999 and was long known as the Myanma Livestock and Fishery Development Bank. After the current reforms were enacted in 2011, however, the bank became a public company when shares in the bank were released to the general public, though mainly to members of the board of directors, and was then renamed "Global Treasury Bank." Following what was essentially a management buyout (MBO), the bank is now independent of the government and transitioning to conventional commercial banking. Global Treasury Bank is the fourth largest private bank in Myanmar as of March 2012.

Two banks affiliated to Myanmar’s army—Myawaddy Bank and Innwa Bank—are currently attempting to become conventional commercial banks, but based on the impression we get from the results of our survey, they have not yet found a clear way to do this. Established and owned by Union Myanmar Economic Holding Limited (UMEHL), which is known as an army-related stock holding institution, Myawaddy Bank grew rapidly after the bank run of 2003 with the general public relying of the fact that its deposits are virtually guaranteed as it is a state (army) bank. Although Myawaddy Bank is under the ownership of a business organization affiliated to the army, its basic operations are in conventional commercial banking, not policy-based finance. In light of its position as one of Myanmar’s leading private banks, its managers appear to be committed to modernizing its operations as a commercial bank, but with the current ownership structure unchanged.

Innwa Bank is owned by Myanmar Economic Corporation, a well-known stock holding company under the army and has diversified into various businesses through its many subsidiaries. Similar to Myawaddy Bank, its operations are basically grounded in commercial banking and it is difficult to find any evidence of it engaging in policy-based finance. The bank seems to be committed to maintaining its current stance of continuing to conduct conventional commercial banking operations while leaving its ownership structure unchanged.

Another example of the banks found in this category is the Myanmar Citizens Bank, which is in a rather mixed situation. Originally established by the Ministry of Commerce, it became a public company when shares in the bank were released to the general public a few years later[57]. As of December 2012, 70% of its shares were held by the public, with the rest being owned by the government. However, the second largest shareholder after the government is the Union Solidarity and Development Association (USDA), which was the party of the current government. Given this, the bank is still firmly under the control of the current government.

(4) Type 4: 'Semi-government' bank transitioning toward becoming policy-based financial institutions

The last category is made up of banks that were originally established as quasi-state banks, but have recently been strengthening their positions as government agencies. In our survey, 2 of the 4 banks in this category stood out: the Small and Medium Industrial Development Bank (SMIDB), and the Rural Development Bank (RDB).

Established in 1996, the SMIDB was originally named the Myanmar Industrial Development Bank (MIDB) under an initiative undertaken by the Ministry of Industry to promote industrial development. Its name was changed in 2012 to emphasis its focus on small and medium enterprises. The legal status of the bank is that of a public company, and the bank's shares are held not by Ministry of Industry, but by 800 small-scale shareholders. Even the largest shareholder (a private individual) holds only 6%. However, the bank is under the firm control of the ministry as its chairman and directors are dispatched from the ministry. Its policy-based loan program for SMEs was launched in July 2012, with a credit line of 10 billion kyat made available to it from the MEB (13.8% of total loans in FY2012). In answer to one of the questions asked at our interview, the interviewee explained that the credit provided by the MEB is not very heavily subsidized as it is provided at an interest rate of 8.45% and that as the bank lends this money at a rate of 8.5%, this line of business is not very profitable. The rest of the bank's lending operations involve the provision of

[57] Until recently, this was one of only two companies listed on the Myanmar Securities Exchange Center (MSEC).

commercial loans centered on the industrial sector.

The RDB was established in 1996 by the Ministry of Border Affairs (now the Ministry of Border Areas and National Races and Development Affairs). Until 2012, the English name for the bank was Sibin Thaya Yay Bank. The bank's operations seem most closely related to microfinance. Its policy objective is to provide credit to small shopkeepers and entrepreneurs in townships across the country through its Township Development Committees (of which there are 284) and its large-scale development committees for places such as Yangon and Mandalay. About 40 to 50% of the total credit it extends is directed toward this propose. Half of the bank's shares are held by the government's Rural Development Department, and the other half are held by the Township Development Committees. Although the bank's fundraising is rarely subsidized by any policy schemes, its profit structure seems to be sound and in good shape. The bank ranked 17th among the largest contributors of corporate tax in FY2013.

Some 'Semi-government' banks, however, seem to be rather static, although they do fulfill public purposes. For example, Yangon City Bank, which was established by the Yangon City Development Committee (YCDC), seems to focus its operations mostly on public services for Yangon residents and public employees. Established as a spin-off from the receipts and disbursements department of Yangon City, the bank is 100% owned by the YCDC. While its lending areas are determined under the guidance of the YCDC, its loans are basically extended on a commercial banking basis. It actually seems more like a kind of regional bank or credit union than a policy based bank. Similar types of banks can be found in Mandalay (e.g. Yadanabon Bank, established by the Mandalay City Development Committee), but we were unable to visit them for our survey.

5. Cost and Profit Structure in the Private Bank Sector

5.1 Data Availability

This section explores the cost and profit structure of Myanmar's private banks, with a focus on comparing the various types of banks. Through our survey, we were able to collect financial data, including income statements for March 2012 (FY2011), for the 10 banks listed by types in Table 6. However, we excluded 2 of these banks from our analysis. The reason for this was that one was solely engaged in domestic remittances at that time so its structures could not be compared with those of the other banks, while another had a ratio of operational costs to profit that seemed to be an outlier. The data from the other 8 banks still allows us to examine a comparison of the banks by size and type to make certain suggestions.

5.2 Size and Profit

The observations made here are based on the following fundamental formula.

Profit = Int. Income – Int. Expenses + Non-Int. Income – Operating Expenses

Here, we ignore default costs (provisions for bad loans).

Figure 4 plots bank size (scaled according to total assets) against profit ratio (return on assets; ROA) for 8 banks with the 4 category of banks discussed in the previous section. Curiously, profit ratio is not positively correlated to size. Instead, relatively large banks seem to have a lower profit rate, while small and medium-sized 'semi-government' banks, including Type 4 banks, generally seem to enjoy higher profits. In the current stage of reforms, the market seems to be exhibiting diseconomies of scale.

To identify the reason for this situation, we need to look at a comparison of the banks' fundraising costs. Figures 5-A and 5-B show the relationship between the fundraising composition (the ratio of deposits to total assets in 5-A and the ratio of equity, including reserves, to total assets for 5-B) and the profit ratio. It is generally thought that the larger banks collect more deposits through their more extensive branch networks, which is one of the cheapest methods for fund mobilization (compared to borrowing interbank or from the market). Moreover, equity is the cheapest method of fundraising as it has zero nominal costs; in fact, some banks in Myanmar are largely dependent on equity. Figures 5-A and B, however, suggest that fundraising costs are not significantly correlated to the bank's profit level. They also show that large banks are mainly dependent on their own equity, not on deposits. 'Semi-government' banks (Type 4) are also relatively dependent on their own equity.

5.3 Portfolio and Profit

Next we looked at whether revenue makes any difference. Figures 6-A and B plot profit ratio against portfolio composition (the ratio of loans to total assets in 6-A and the ratio of Treasury bond holdings to total assets in 6-B). Strangely, the relationship between revenue-related factors to profit is unclear. The ratio of loans to total assets seems to be unrelated to the profit level; in fact, it may even show a negative relationship. Treasury bond holdings appear to be somewhat positively related to profit. This seems to disprove the idea that large-scale purely private banks that actively extend loans do not perform well, while small-scale inactive semi-government banks make larger profits.

5.4 Operational Costs and Profit: Conclusion

Lastly, Figures 7-A and B show the banks' operational costs in relation to the proportion of their total assets that are accounted for by deposits and loans. Figure 7-A clearly suggests that deposit collection is generally unrelated to differences in operational costs. At the same time, however, it also clearly shows that operational costs are higher for large-scale or newly expanding banks, while they are relatively low for 'Semi-government' banks. Figure 7-B shows a clear correlation between operational costs and loans, which clearly implies that the extending of loans is extremely costly and this accounts for the differences in operational costs among the various banks. As shown in Figure 8, profit ratio is strongly related to operational costs.

In conclusion, the differences in profit among the various banks is determined by the differences in their operational costs, which are in turn dependent on the relative size of their lending activities. Since portfolio composition has no bearing on profit, we seem to be confronted by a strange situation in which large-scale or recently expanding private banks of Types 1, 2 and 3 achieve only low profits, while 'Semi-government' banks that remain in a relatively static position make higher profits.

This situation can be interpreted as being a transitional situation in which expanding large-scale banks are in the process of investing sunk costs to build up their capacity for future lending on a wide scale. On the other hand, 'Semi-government' banks are able to make substantially higher profits by engaging in conventional operations alone. This means that there remains a large demand for credit, particularly for small-scale economic activities, in all corners of the country.

5.5 The Myanmar Economic Bank as a commercial bank

If we extrapolate the observations we made for private banks, we can examine how the operational characteristics of commercial banking at the MEB compares with those of the 8 private banks. For Figures 4 to 8, we also plotted the indices for the MEB. The indices for the private banks were for March 2012 (FY2011), but those we plotted for the MEB were for March 2012 and 2014 (-MEB12- and -MEB14-). In cases where the level dropped due to the existence of a statistical outlier, we exclude them from the figures.

As we have already discussed, the MEB was relatively inactive due to its holding of a large amount of idle capital, and it posted a negative profit in 2012. By 2014, however, it had already become considerably more active by limiting its cash and deposits to the CBM and extending more loans, thereby generating a positive profit. In addition, in 2014 the capital account side became ticker, with increasing reserve.

Figures 5-A and B show that the MEB was in an incomparable position in 2012, but by 2014 its profit level and fundraising composition had become similar to that of large-scale private banks, particularly the Kanbawza Bank. As a result, it made only a moderate profit and was largely dependent on its equity.

According to Figures 6-A and B, the huge amounts of idle capital were left "asleep" in its portfolio in the form of cash or deposits at CBM. While the MEB's ratio of Treasury bond holdings to total assets is the same as the average level for private banks (around 30%), its ratio of loans to total assets was only 24% in 2014. Even if deposits to other financial institutions, most of which are in the form of credit to the MADB, are included in the MEB's loans, the loan ratio still remains at 42.4%. This level is similar to that for Type 4 'Semi-government' banks. This suggests that the MEB still has considerable room to increase the amount of loans it makes at commercial interest rate.

The MEB's operational costs are very low compared to those of private banks, and they are much lower than those of Type 4 'Semi-government' banks, which are in the lowest group. Figure 7-B suggest that the MEB's low operational costs reflect the inactiveness of its loan operations, just like—but even more remarkably than—Type 4 quasi-state banks. In summary, the cost and profit structure of the MEB in 2014 was comparable to and resembled that of Type 4 'Semi-government' banks. Despite this, the MEB's operational costs are much lower, and far more of its funds remain inactive. The MEB appears to have considerable potential to make a surplus in their commercial banking operations, even while burdened with the cost of subsidizing the directed credit provided by the MADB.

6. Short Conclusion

In this paper, we examined Myanmar's banking sector based on the results of our survey, in which we collected qualitative information and conducted interviews. Looking at a short profile and history of the sector, we investigated a few vital issues for the sector in terms of both state and private banks.

We focused on the operational and financial structure of the state-owned MEB, the country's largest bank, and examined its provision of subsidies to the MADB. Given that the financial statements and other evidence we obtained are reliable, we believe that the MEB has great potential to develop its commercial banking operations through its existing branch networks and its capacity for mobilizing deposits. In fact, it is already gradually transitioning toward engaging in such operations. Although the burden of subsidizing the MADB accounts for a relatively large portion of the credit that the MEB provides, the MEB is able to maintain operational sustainability, for the time being at least, since their portfolio is incomparably larger than that of the MADB and it generates sufficient profits to absorb this cost easily. It is true, however, that the current mechanism for the provision of subsidies to the MADB by the MEB may perhaps become a serious cause of distortion in the market and weaken the MEB's operations in the future. Given this, it is desirable that the subsidy mechanism for financial inclusion field be more carefully designed in the long run, but it cannot be said that the mechanism is an immediate priority in terms of the MEB's management.

We looked at the diverse nature of the private bank sector in Myanmar, and confirmed that some old and new purely private banks are now expanding their operations to play an active role in commercial banking. On the other hand, the manner in which private banks that were originally established as ‘semi-government’ banks have responded to recent economic conditions are diverse. Some ‘semi-government’ banks are aggressively transforming themselves into a conventional form of private banks, while others have retained their conventional positions. Moreover, some ‘semi-government’ banks are strengthening their position as policy-based financial institutions, and playing a role in the directed credit program for SMEs or provincial enterprises. So far, they appear to have been very successful with gaining high profits.

Lastly, we examined the cost and profit structure by looking at the FY2011 financial statements for 8 private banks. We found that the main purely private banks tend to have expanded their operations in commercial banking, but they don't seem to have performed very well due to the high operational costs associated with lending, which suggests that they are in the process of providing start-up investment. We also found that a few policy-based banks engaged in work related to SME loans or local public services for small-scale operations are very profitable despite the fact that they are not very actively involved in the extending of loans. This is mainly due to their lower operational costs. The banking sector market is still on its way to becoming one that will allow market players to compete against each other. In such conditions, the MEB's operational characteristics can be seen as being close to those of policy-based institutions (e.g. SMIDB, YCB, and probably RDB) and to have considerable potential with regard to commercial banking.

Some policy implications can be derived from our observation. Firstly, private banks are, generally speaking, currently undergoing a dramatic transformation to become conventional commercial banks. The government should encourage this development by supporting it with clear rules and incentives for modernizing their operations, ownership and managerial organization, particularly for banks that were originally ‘semi-government’ ones.

Secondly, apart from supporting the abovementioned development, the government should also support the transitioning of ‘semi-government’ private banks to policy-based finance associated with financial inclusion field, to the direction to promote such an activity. The current operations carried by these banks are not only socially desirable, but also a promising lines of business. A possible issue for discussion is whether the government should give these banks a separate legal status to that of private banks, and develop schemes for the establishment of a different status and a careful subsidy mechanism.

Lastly, with regard to future reform of the MEB, it should be considered that the MEB has the potential to mobilize deposits from all over the country. It already functions fully as a saving bank, and the largest challenge they face is their lending capacity. The need to address the burden being imposed of the MEB by providing subsidies to the MADB is not of critical importance. In recent years, however, some large-scale private banks have been rapidly catching up to the MEB in terms of the size of their operations, so the potential capacity of the MEB may not last forever.

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Table 1. List of Private Banks (by Total Asset in March 2012)

	Name	Abbreviation	Total Assets*1 (Kyat Million)	Share (of No.1-19)	License Issue	Hearing	F.S. Availability
1	Kanbawza Bank	KBZ	1,774,444.86	34.6%	1994.6	yes	yes
2	Myawaddy Bank		732,786.29	14.3%	1993.1	yes	yes
3	Co-operative Bank	CB	563,134.99	11.0%	1992.8	yes	yes
4	Global Treasure Bank*2	GT	397,370.22	7.8%	1996.2	yes	yes
5	Myanama Apex Bank	APEX	275,867.19	5.4%	2010.7	yes	yes
6	Innwa Bank		245,094.28	4.8%	1997.5	yes	yes
7	Asia Green Development Bank	AGB	209,720.27	4.1%	2010.7	yes	yes
8	Ayeyarwaddy Bank	AYA	197,655.56	3.9%	2010.7	yes	yes
9	Rural Development Bank*3	RDB	119,322.76	2.3%	1996.6	yes	yes
10	Small & Medium Industrial Development Bank*4	SMIDB	118,341.40	2.3%	1996.1	yes	yes
11	First Private Bank	FPB	98,979.41	1.9%	1992.5		yes
12	Myanmar Citizens Bank	MCB	40,886.84	0.8%	1992.5	yes	yes
13	Yangon City Bank	YCB	37,414.94	0.7%	1993.3	yes	yes
14	Yoma Bank	YOMA	32,274.49	0.6%	1993.7	yes	yes
15	Myanmar Oriental Bank	MOB	n.a.		1993.7	yes	
16	United Amara Bank	UAB	n.a.		2010.7	yes	
17	Yadanabon Bank		n.a.	6.5%	1992.8		
18	Asia Yangon Bank		n.a.		1994.3		
19	Tun Foundation Bank		n.a.		1994.6		
	Total 1-18		5,126,837.51				
20	Naypyitaw Development Bank		n.a.		2014.7		
21	Myanmar Microfinance Bank		n.a.		2014.7		
22	Construction and Housing Bank		n.a.		2014.7		

Note.

*1 Table (3.3) in CBM Annual Report 2011-2012, p26 for No.1-10 and total 1-18, Banking Sector Survey for 11-14

*2 Previously, 'Myanma Livestock and Fisheries Development Bank'

*3 Previously, 'Sibin Tharyar Yay Bank''

*4 Previously, 'Myanmar Industrial Development Bank'

Table 2. List of State Banks (by Total Asset in March 2012)

No.	Name of Bank	Ticker	Total Assets*1 (Kyat Million)	Share (of No.1-19)	Hearing	F.S. Availability
1	Myanmar Economic Bank	MEB	2,930,209	93.9%	yes	yes
2	Myanma Agriculture and Development Bank	MADB	116,275	3.7%	yes	yes
3	Myanam Investment and Commercial Bank	MICB	74,215	2.4%	yes	yes
4	Myanma Foreign Trade Bank	MFTB	n.a.		yes	
	Total 1-3		3,120,699.30			

Table 3 Balance Sheet of Myanmar Agricultural Development Bank

	FY2011		FY2012		FY2013	
Total Asset	116,275	100.0%	209,293	100.0%	470,094	100.0%
Cash	24,061	20.7%	7,994	3.8%	9,338	2.0%
Loan and Advances	84,222	72.4%	193,243	92.3%	440,278	93.7%
Other Assets	7,992	6.9%	8,055	3.8%	20,478	4.4%
Liabilities	107,617	92.6%	198,664	94.9%	449,586	95.6%
Deposit	87,616	75.4%	14,556	7.0%	12,041	2.6%
Borrowings	13,716	11.8%	176,146	84.2%	424,284	90.3%
Other Liabilities	6,285	5.4%	7,961	3.8%	13,261	2.8%
Capital Accounts	8,658	7.4%	10,629	5.1%	20,508	4.4%

Note. Million Kyat

Table 4 Cost and Profit Structure of Myanmar Agricultural Development Bank

	FY2011	FY2012	FY2013
Interest Income	30.8%	14.3%	13.4%
Interest Expense	19.5%	6.6%	5.9%
Net Interest Income	10.6%	7.4%	7.2%
Non Interest Income	0.0%	0.0%	0.0%
Operational Expense	2.6%	2.0%	1.1%
Net Profit	8.7%	5.7%	6.4%
Total Income	30.8%	14.4%	13.4%
Total Expense	22.1%	8.7%	7.0%

Note. Percentage to Total Portfolio

Table 5. Private Banks by Type of Operation and Ownership

	Name	Ticker	Total Assets*1 (Kyat Million)	Hearing	F.S. Availability	Notes on Shareholdings	Public Company
Type 1. Conventional 'Pure' Private Banks							
1	Kanbawza Bank	KBZ	1,774,444.86	yes	yes	Founder (32%) & his wife (32%), and two daughters (18% each)	
11	First Private Bank	FPB	98,979.41		yes		yes
14	Yoma Bank	YOMA	32,274.49	yes	yes	FMI 35%, Serge Pun Holdings 4%	
15	Myanmar Oriental Bank	MOB	n.a.	yes		25 shareholders, the largest to the fifth: 32.05%, 17.46%,8.91%,7.59%, 5.44%	
18	Asia Yangon Bank		n.a.				
19	Tun Foundation Bank		n.a.				
Type 2. New Entrant 'Pure' Private Banks							
5	Myanmar Apex Bank	APEX	275,867.19	yes	yes	Founder of Eden Group, his wife, son & daughter by 100%	
7	Asia Green Development Bank	AGB	209,720.27	yes	yes	Htoo Group by 100%	
8	Ayeyarwaddy Bank	AYA	197,655.56	yes	yes	Founder of Max Myanmar Group & his families: 30%, 30%, 30%, 10%	
16	United Amara Bank	UAB	n.a.	yes		Founder of IGE Group 90%, his wife 10%	
Type 3. 'Semi-Government' Banks in Transforming forward Commercial Banking							
2	Myawaddy Bank		732,786.29	yes	yes	Union of Myanmar Economic Holdings	
3	Co-operative Bank	CB	563,134.99	yes	yes	Cooperative Societies => buy out by 15 BOD members	yes
4	Global Treasure Bank*2	GT	397,370.22	yes	yes	Min. of Commerce => Min. of Livestock & Fishery => becoming public company in 2013, owned by small shareholders (less than 5% share)	yes
6	Innwa Bank		245,094.28	yes	yes	Myanmar Economic Corporation by 100%	
12	Myanmar Citizens Bank	MCB	40,886.84	yes	yes	Est. by Min. of Commerce, 2012: MOC 55%, Public 45% 2013: MOC 30%, Public 70%, the largest public shareholder is USDA (govt. party)	yes
Type 4. 'Semi-Government' Banks Orienting Policy-based Finance							
9	Rural Development Bank*3	RDB	119,322.76	yes	yes	Est. by Min of Border Affairs, Owned by Township Development Committees 50%, Rural Development Department 50%	
10	Small & Medium Industrial Development Bank*4	SMIDB	118,341.40	yes	yes	Est. under the initiative of Min.of Industry, but owned by about 800 small shareholders (less than 7%)	yes
13	Yangon City Bank	YCB	37,414.94	yes	yes	Yangon City Development Committee by 100%	
17	Yadanabon Bank		n.a.				

Note.
*1 Table (3.3) in CBM Annual Report 2011-2012, p26 for No.1-10 and total 1-18, Banking Sector Survey for 11-14
*2 Previously, 'Myanma Livestock and Fisheries Development Bank'
*3 Previously, 'Sibin Tharyar Yay Bank"
*4 Previously, 'Myanmar Industrial Development Bank'

Table 6 Cost and Profit Structure by Bank Type (In March, 2012)

	Total Income	Operational Expense	Profit	Total Assets (Kyat Million)	No. of Banks
Type 1	5.2%	1.7%	3.5%	1,914,321	3
Type 2	3.2%	2.7%	0.5%	197,656	1
Type 3	4.3%	2.0%	2.3%	969,045	2
Type 4	4.4%	1.0%	3.4%	218,989	2
Total	4.3%	1.8%	2.4%	3,300,011	8

Note. Percentage to Total Asset (close proxy for total portfolio), 10 banks are KBZ, CB, GT, AYA, SMIDB, FPB, MCB, YCG, YOMA, INWA. The rates show average of banks, while Total Assets shows total sum.

Figure 1 Share of Banking Sector (Total Asset, March, 2012)

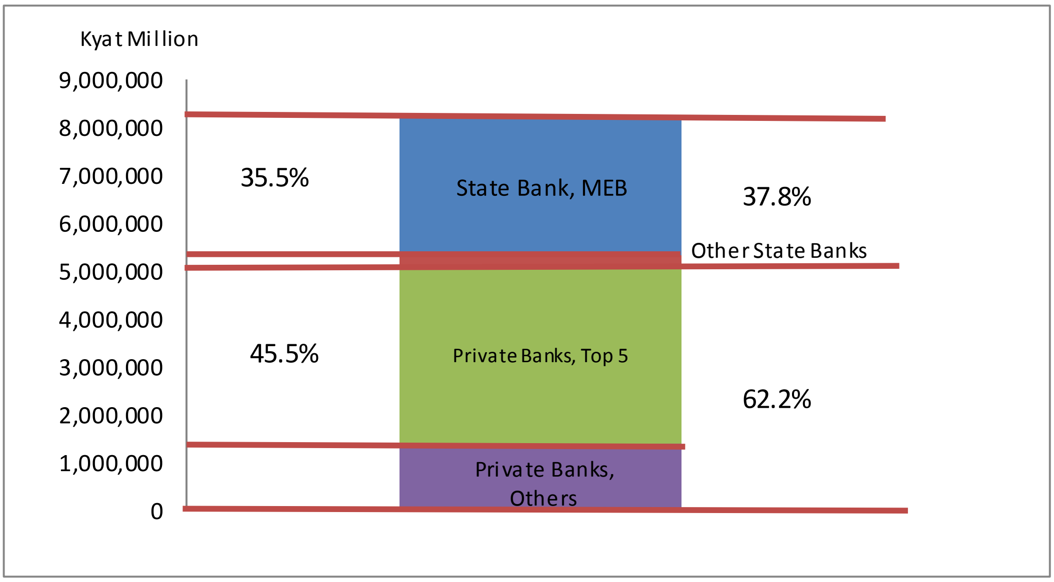
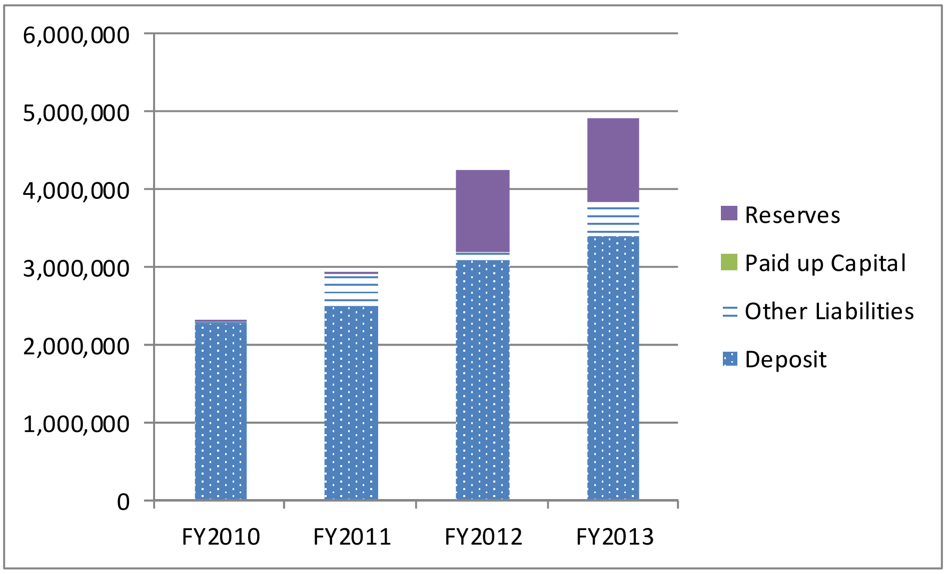


Figure 2- A. Total Asset of Myanmar Economic Bank by Liability and Equity Component



Note. Million Kyat. Figure in February 2013, for FY2012

Figure 2-B. Asset Composition of Myanmar Economic Bank

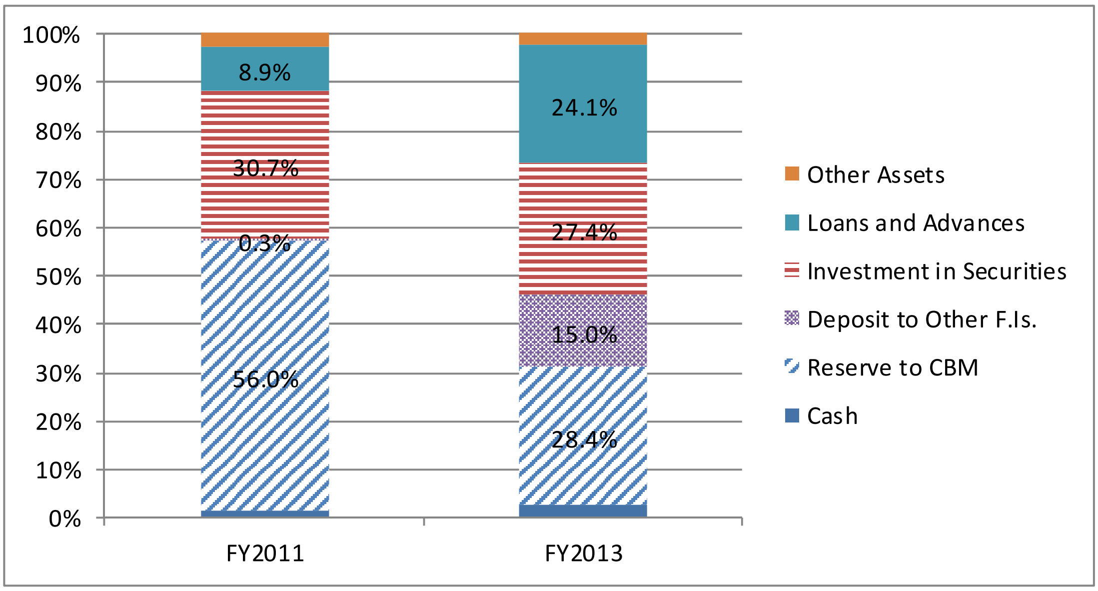


Figure 2-C. Liability and Equity Composition of Myanmar Economic Bank

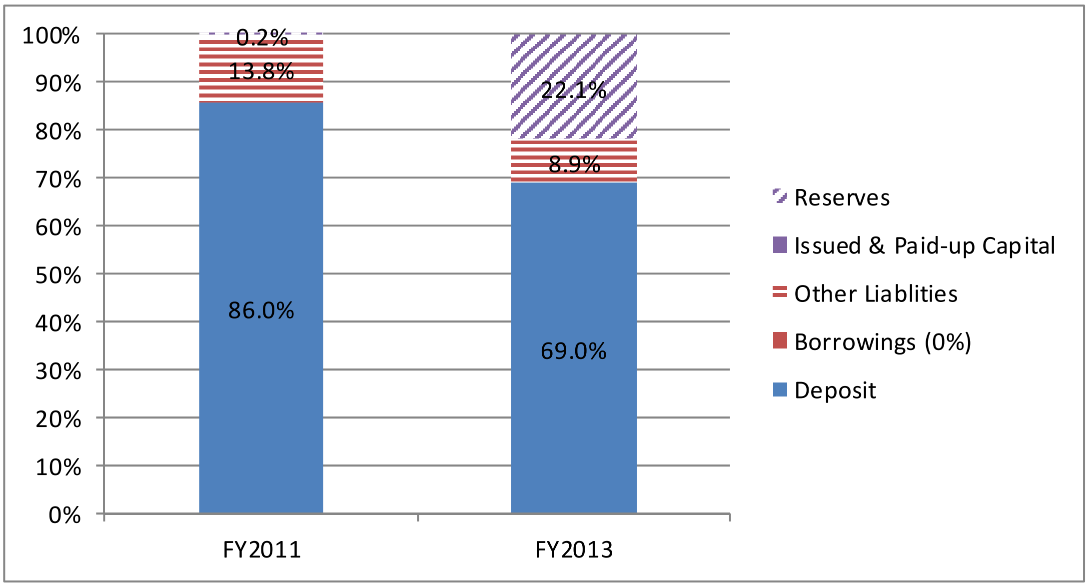


Figure 3-A Cost and Profit Structure of MEB (FY2011)

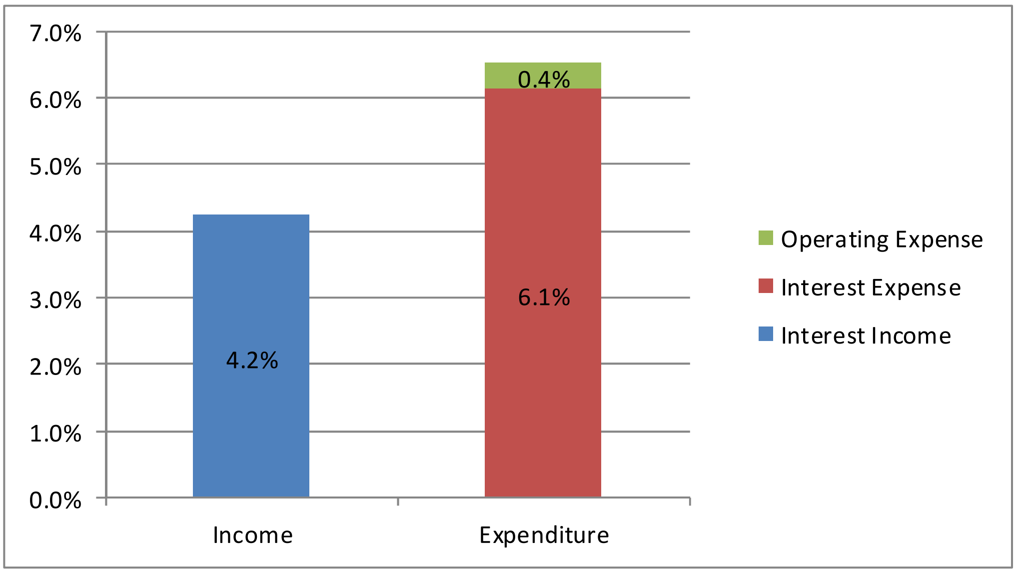
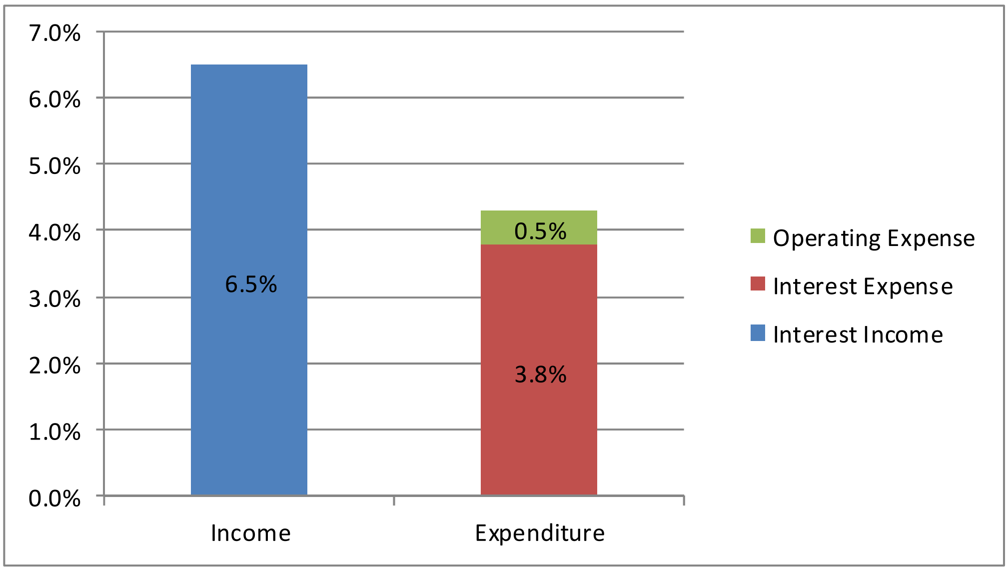


Figure 3-B Cost and Profit Structure of MEB (FY2013)



Note. Percentage to Total Asset (close proxy for total portfolio)

Figure 4 Profit vs. Size (Total Asset)

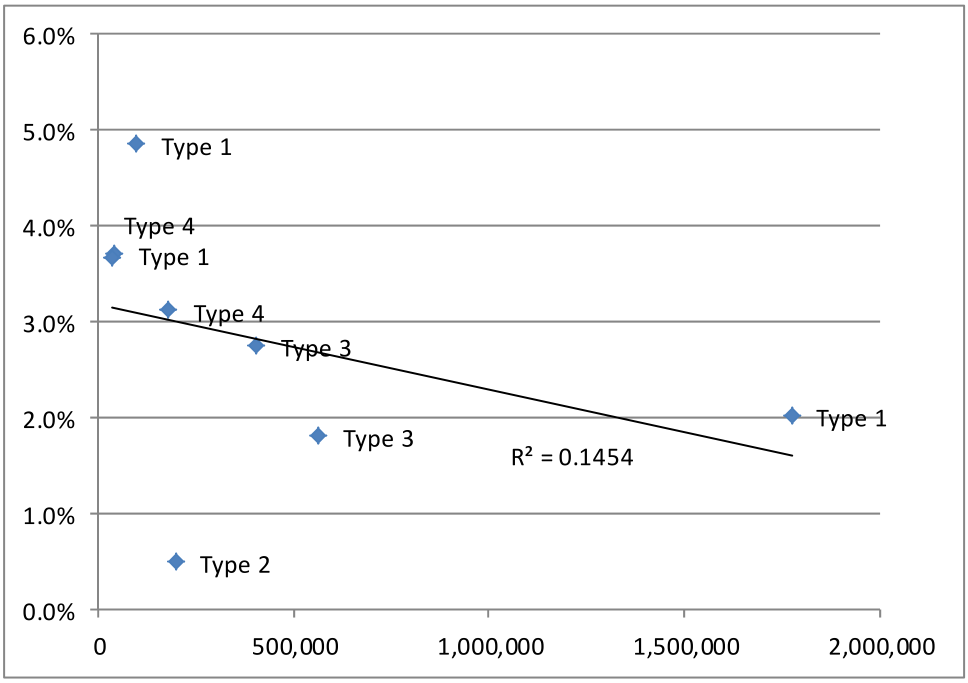


Figure 5 -A. Profit vs. Deposit Ratio (to Total Asset)

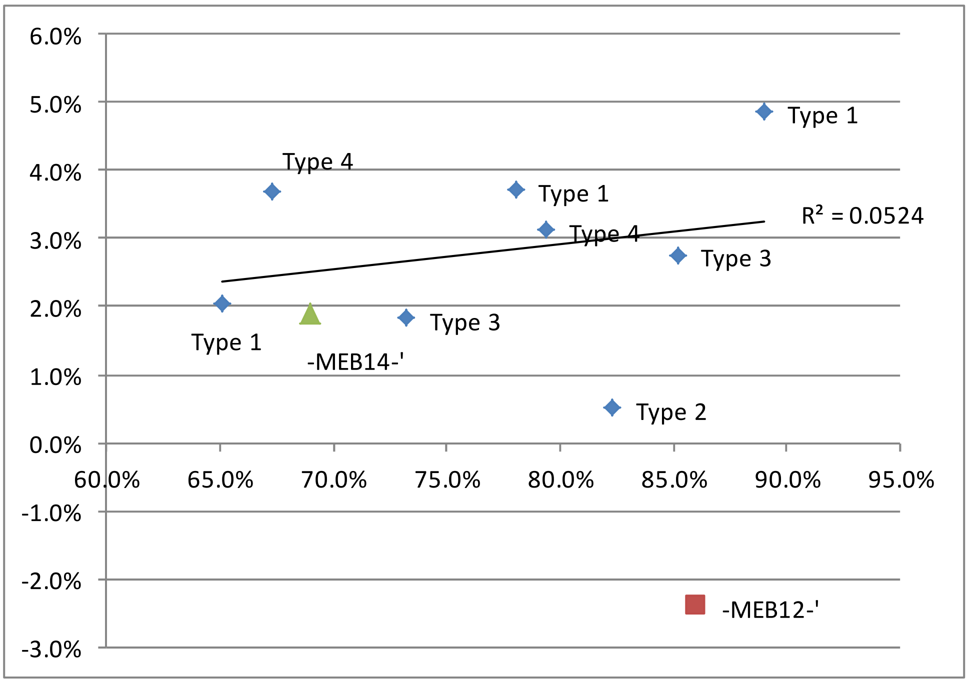


Figure 5-B. Profit vs. Equity Ratio (to Total Asset)

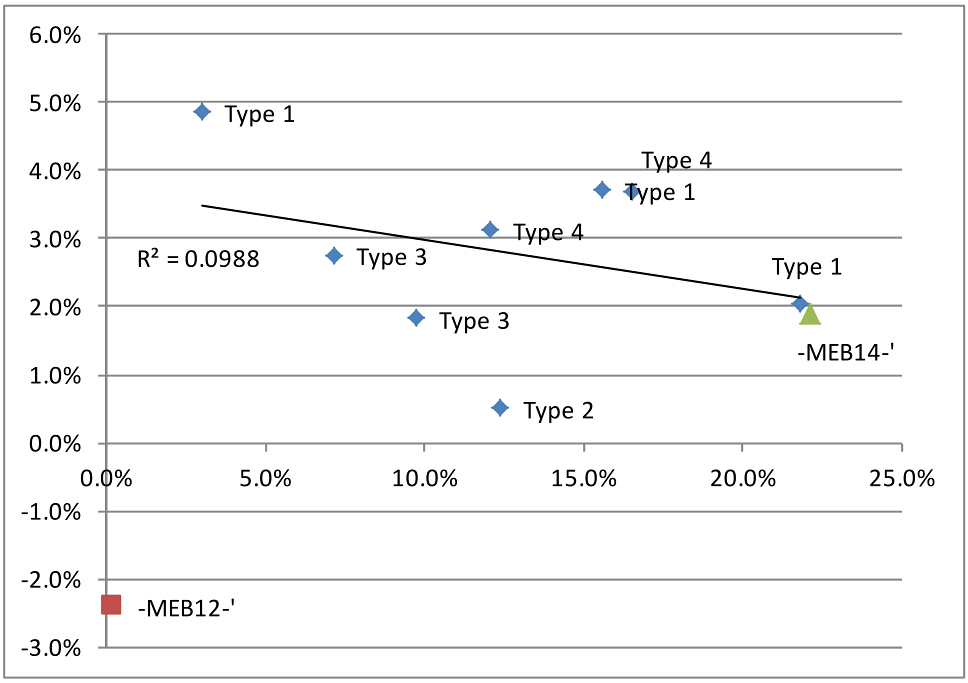


Figure 6 -A Profit vs. Loan Ratio

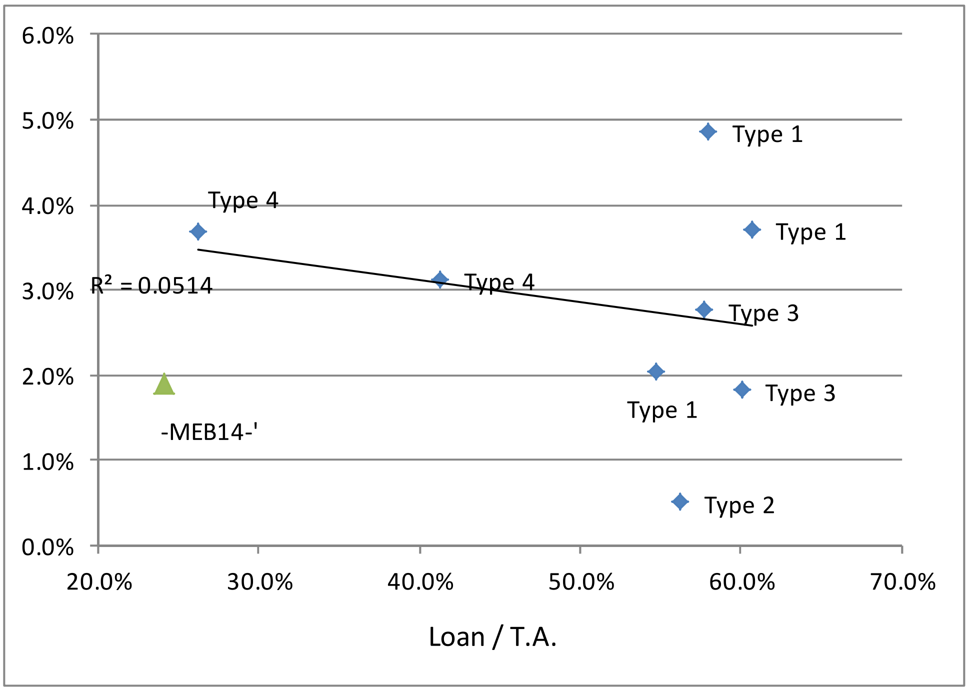


Figure 6 -B Profit vs. TB holding

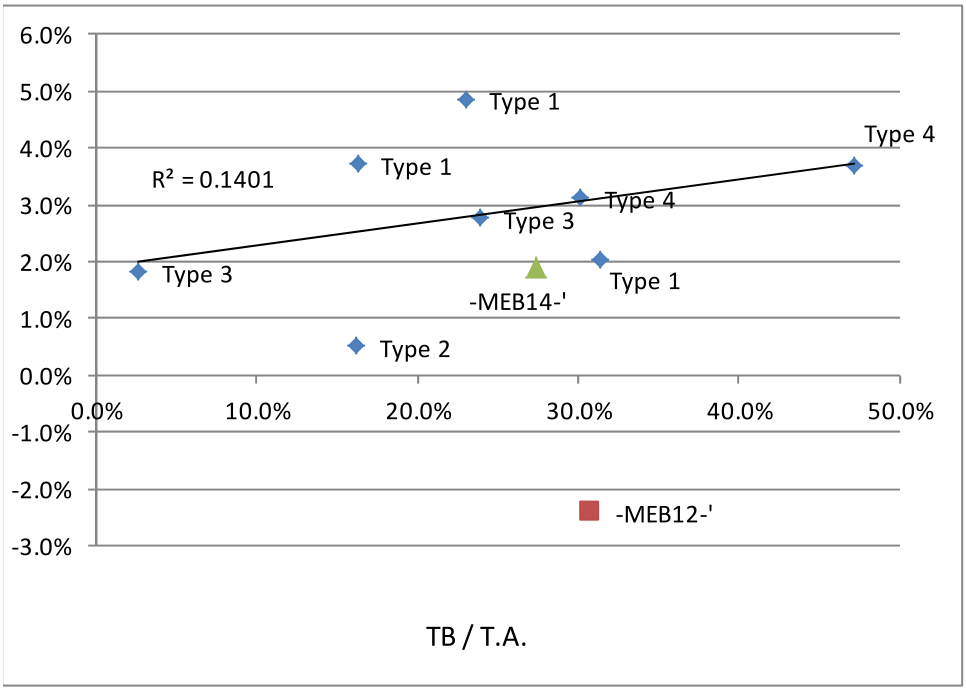


Figure 7-A. Operational Expense vs. Deposit

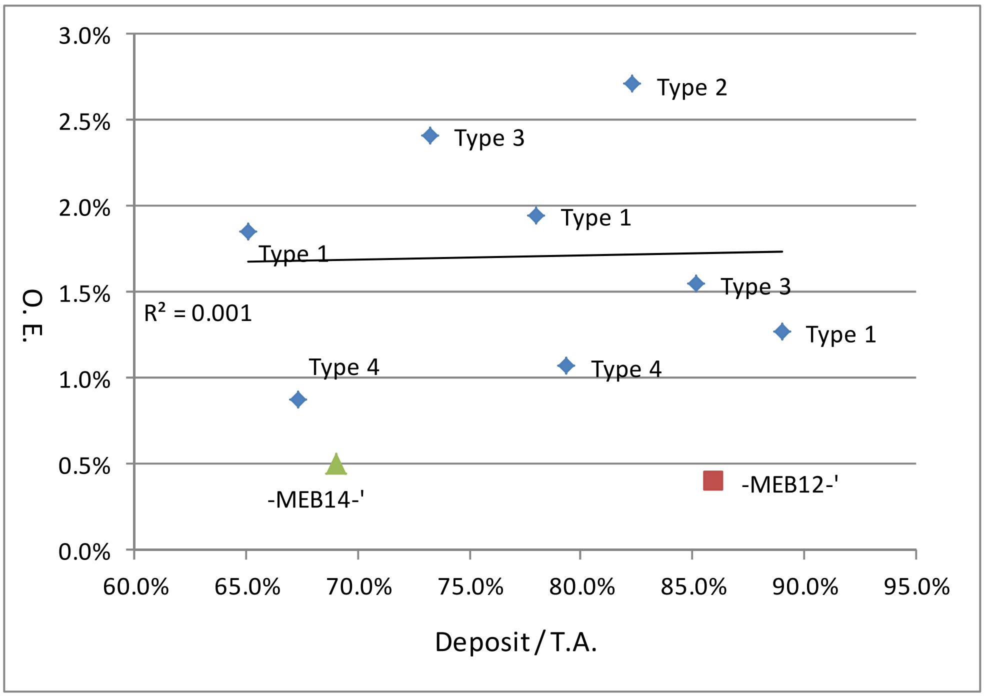


Figure 7-B. Operational Expense vs. Loan

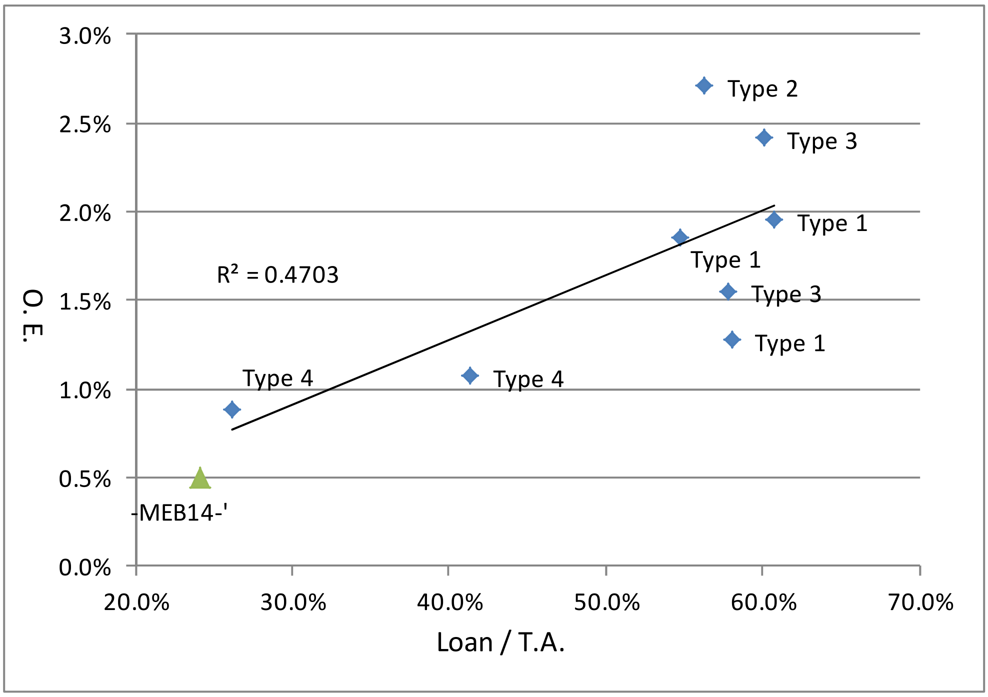
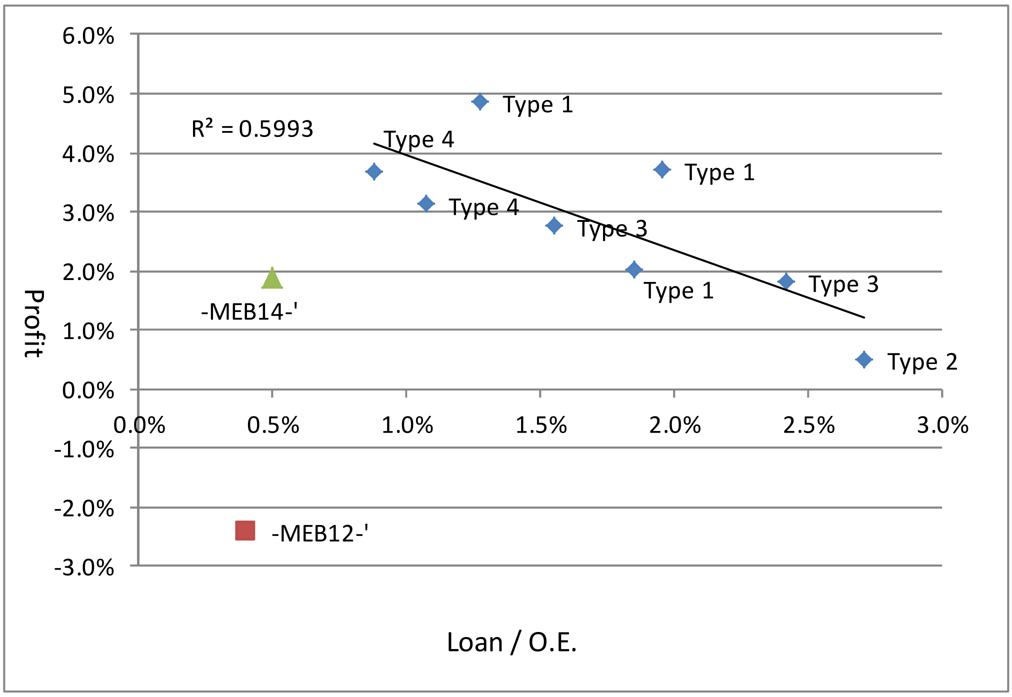


Figure 8. Profit and Operational Expense



Chapter 8

Microfinance as a tool for financial inclusion and poverty reduction in Myanmar

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1. Background

Myanmar is one of the countries facing the challenges of poverty. According to the Poverty Analysis and UNDP Integrated Household Living Condition Survey in Myanmar (2010), people living below the national poverty line are 26% of the total population compared to 32 % in 2005.The President reaffirmed the government's plan to reduce extreme domestic poverty from the current 26% to 16% of the population by 2015, endorsing, among other initiatives, the development of the microfinance sector. The development of micro-saving and credit associations are one of main important tasks laid down to address poverty.

As Myanmar is now using microfinance as a tool for poverty alleviation and financial inclusion for the poor and unbanked communities, it is crucial to undertake a study on how to best design and deliver large-scale financial inclusion for the poor. Tomoko FUDA (2013) points out how the Grameen approach could exclude the poor from credit access in Myanmar as they find it difficult to meet the requirements of a microfinance program such as their limited time for meetings due to daily labour work to meet their families' ends, pre-requisite repayment schedule etc. The findings of a study (Pitt and Khandker, 1999) on the impact of microfinance on the poor in Bangladesh led to controversial debate because it shows that microcredit reduces poverty while Roodman and Morduch (2013) argues that the original result of poverty reduction disappeared after dropping outliers. Considering the significant role of microfinance, we need to understand the emerging current microfinance sector, it strengths and weakness, issues, appropriate policies for institutional reforms and how microfinance can help unbanked poor in Myanmar.

Despite the efforts by NGOs and government bodies, microfinance outreach is still limited compared to the estimated poor population below the poverty line. With the existence of microfinance law, many financial institutions such as NGOs, banks and cooperatives also entered the microfinance sector but there remains a huge gap to reach the poorest of the poor and these most vulnerable populations are still unbanked. The issues to be considered include whether the microfinance providers are delivering efficient products to target the poor, how they manage and utilize their funds, how their monitoring mechanism is, whether their products really meet the needs of clients especially the rural poor. Additionally, in some regions, some clients, who are paying back credit to microfinance institutions on a regular basis, are only managing to do so by taking loans from informal money lenders thus trapping them in the cycle of debt and deepening their poverty. In these circumstances, a thorough study of the situation is needed because common economic indicator might paint an incomplete picture. For example, while repayment rates might be high, unsuccessful borrowers might be stuck in a debt trap because they take loans from others.

Thus, it gives a call to make a study on how microfinance can be used as a tool to reach out the financial services to unbanked people in Myanmar.

2. Research Objectives and Methodology

2.1. Objectives of the Research

1. To study the overview of microfinance institutions in Myanmar (outreach, feasible lending methodologies, barriers and challenges)
2. To survey existing government's initiatives relating to the microfinance sector such as Myanmar Agricultural Development Bank (MADB), Ministry of Cooperatives, and the efforts of selected microfinance institutions such as leading NGOs.
3. To laid the foundation for a strategy to use microfinance as a tool for poverty alleviation and financial inclusion for the unbanked, especially the rural communities, and to formulate appropriate policy recommendations for microfinance sector development in Myanmar

2.2. Why the research is needed?

Microfinance has become an increasingly important tool for financial inclusion and poverty reduction. For this sector to effectively extend financial services at an affordable cost to the poor, Myanmar needs to identify possible ways to make microfinance services truly accessible to the poor and implement effective microfinance programs targeted to the marginalized households. For this reason, it is crucial to make a study on the current status of microfinance services, different lending practices, lessons learnt, strengths and weakness and possible ways to link MFIs and banks so that microfinance can be used as a tool for financial inclusion and poverty reduction. Currently, a study of this sort covering Myanmar is limited and the policy-making process would greatly benefit from a deeper knowledge of this sector.

2.3. Research Questions

1. What is the general situation of microfinance in Myanmar?
2. What are the steps necessary to foster financial inclusion of the rural poor and higher degrees of lending?
3. What policy options and institutional reforms can ensure that higher financial

intermediation and access by the poor are achieved without compromising the sustainability of the microfinance sector?

2.4. Research Method

a) Consult with recent literature and research on Myanmar microfinance, reports and publications by both Myanmar Government and some institutions (INGOs, private sector, banks involving in microfinance industry) on microfinance industry in Myanmar
b) In-depth interview with some microfinance and financial institutions such as Myanmar Agriculture Development Bank, the Central Cooperative Society under the Ministry of Cooperatives, personnel working in the microfinance institutions (leading microfinance operators INGOs/NGOs, bankers and microfinance clients)
c) Once the current state of micro-finance in Myanmar has been established in steps a and b, examine this in light of lessons learned from the extensive international literature on micro-finance, so as to be able to recommend the most appropriate micro-finance strategy for Myanmar

3. Why microfinance for financial inclusion?

3.1. What is financial inclusion?

According to World Bank report (2014), half of the world's population – more than 2.5 billion people do not have an account at a formal financial inclusion.

> "Financial inclusion can be defined as the delivery of credit and other financial service at an affordable cost to the vast sections of the disadvantaged and low income groups. The objective of financial inclusion is to extend the scope of activities of the organized financial system to include, within its ambit, people with low incomes. Through graduated credit, attempts must be made to lift the poor so that they come out of poverty."[58] (Dr. Christabell. P. J. and Vimal Raj. A, 2012)

> "By financial inclusion we mean the provision of affordable financial services, viz., access to payments and remittance facilities, savings, loans and insurance services by the formal financial system to those who tend to

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[58] Financial inclusion in rural India, 2012, pp.25 ***IOSR Journal of Humanities and Social Science (JHSS)ISSN: 2279-0837, ISBN: 2279-0845. Volume 2, Issue 5 (Sep-Oct. 2012), PP 21-25 www.iosrjournals.org***

be excluded." (Dr. Jeet Singh and Dr. Preeti Yadav , 2012)

Financial inclusion intends to serve those who are living on low incomes and cannot access financial products such as bank accounts, credit, remittances, payment services, insurance services, etc. It attempts to bring the vulnerable and marginalized into the organized financial system. They also argued that Microfinance institutions (MFIs) plays a significant role in facilitating inclusion, as they are uniquely positioned in reaching out to the rural poor, especially the women into the formal financial sector.

3.2. Why microfinance is important for financial inclusion and poverty reduction in Myanmar

According to Making Access Possible (MAP, 2014), it is learnt that 30% of the adults in Myanmar use at least one financial service from formal regulated financial service provider while 21% used only informal or unregulated service only. MAP study found that 5.9 million adults borrowed from informal money lenders. About 5% adults have bank accounts and only 3% have insurance from the formal financial institution. MAP study reveals that there are about 700,000clients served by microfinance institutions.[59] However, there are many people who are lack of financial services apart from credit and saving. One example is in the remittance market many migrants workers working outside of the country remit their money using the informal channel of money transfer service so called hundi system. World Bank (2013) estimated that there are about 3 millions Myanmar migrants working outside of Myanmar. They don't use the formal channel of remittance services due to lacking the official documents required to remit money to their home countries. Thus, it is quite obvious that access to credit, the usage of formal savings, insurance and remittance still remain limited so it clearly shows that the financial system is not well developed. Due to the limited financial access, many households rely on the informal/ unregulated financial institutions.

Many scholars state that one of the major causes of being trapped in the poverty is lack of access to financial services to engage in income generating activities and poor are excluded from the financial services and microfinance becomes poverty alleviation tool.

Along with other policy reforms in Myanmar, Government of Myanmar has identified microfinance as one of the key poverty reduction tools to tackle down the critical poverty issue. The president reaffirmed the government's plan to reduce extreme domestic poverty from the current 26 per cent to 16 per cent of the population by 2015, endorsing, among other initiatives, the development of the microfinance

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[59] Making access possible, Synthesis Note, 2014

sector. During the workshop on Rural Development and Poverty Alleviation held on May 2011, the following eight fundamental tasks were laid down to address the poverty;

- development of agricultural productivity
- development of livestock breeding and fisheries
- development of rural small scale productivity
- development of micro saving and credit association
- development of cooperatives tasks
- development of rural socio-economy
- development of rural energy
- environmental conservation

Thus, microfinance plays an important role for financial inclusion as well as poverty reduction in Myanmar. Although there are many financial services providers such as state owned banks, private banks, registered pawn shops, microfinance institutions (MFIs) microfinance outreach is quite large compared to other financial services providers. So, improving access to financial access through microfinance will achieve the higher policy objectives for poverty reduction and economic growth.

If microfinance services providers can deliver the wide range of client centred and demand driven products such as credit, saving, insurance, remittance services at a reasonable cost to meet the needs of unbanked people in Myanmar, microfinance is a great potential and it has a unique position to fill up the financial inclusion gap as microfinance institutions are booming and the network is large reaching out the marginalized rural poor in Myanmar.

4. Legal Structure of Microfinance in Myanmar

Microfinance was first introduced to Myanmar in 1997 by UNDP and was implemented by a special MoU with authorities (case by case basis). Microfinance operations were initially carried out in Delta area (Ayeyarwaddy Division), Dry Zone and Shan State and the selection of villages for microfinance operations was based on HDI such as socio-economic indicators, income estimates etc.

Microfinance Law: The Microfinance Business Law was enacted on November 30, 2011. Main objectives of this law include reducing the poverty, to promote the socio-economic life of the grass-root people, to nurture the habit of saving and to encourage the new small-scaled business and cottage business. The Law allows granting licence to local and foreign institutions, partnership firms, companies, cooperative societies, banks and other non-banks financial institutions for conducting microfinance activities in Myanmar. To be licensed microfinance institutions (MFI), the following are the key requirements.[60]

- Have a legal status as cooperative, an NGO, or private local or international company or organization
- Have minimum capital of 15 million Kyat for non-deposit taking and 30 million for deposit taking
- May provide loans and voluntary deposits (for the time being)
- Have a maximum lending rate of 30% per annum or 2.5% per month
- Have a minimum rate of deposits of 15% per annum or 1.25% per month
- Loan interest capped at 2.5% per month (effective rate)
- Maximum loan size capped at 50 million Kyats

Under the Rural Development Poverty Reduction Working Committee, Microfinance Business Supervisory Committee implements the policy and Microfinance Business Supervisory Enterprise is responsible for licensing and monitoring of MFIs.

According to the microfinance law, the MFI can carry out the following business

1. Issuing micro credit services
2. Receiving deposit
3. Remittance
4. Insurance services
5. Borrowing money from the local and abroad
6. Other financial services (allowing the use of mobile payment system)

The law applies the following institutions entitled the microfinance institutions but the supervision of the MFIs for the cooperatives not under the microfinance supervisory enterprise and falls under the Ministry of Cooperatives.

1. Local and foreign institutions
2. Partnerships
3. Firms
4. Companies
5. Cooperatives societies
6. Banks and non financial institutions

[60] Microfinance Law & Directives, December 2011, unofficial translations, Microfinance in Myanmar Sector Assessment, 2013

Debates/issues

With the existence of microfinance law, many MFIs have entered to the market. Although the law attempts to govern the MFIs for efficient services delivery, to help unbanked to reach financial services through microfinance, there are some issues with regards to the law. Some of the key issues are summarized as follows;

- As interest rate for loan is capped, it is difficult for MFIs to expand their outreach and deliver market driven products due to high operation cost and inflation. The cap of the interest rate is a likely to be the challenge for the sustainability of MFIs due to high operation cost in making financial services available to remote areas in Myanmar

- The law limits the loan size (maximum loan size is limited to 5,000,000 Kyats). This maximum loan size is very small for small and medium entrepreneurs (SMEs) to set up the small business or expand the business if MFIs intend to provide loans to SMEs.

- Although the laws stated about the monitoring for MFIs, the monitoring procedures are not clear and monitoring mechanism is still weak.

- MFL law does not govern the cooperatives which are also carrying out the microfinance activities across the country.

5. Desk review on general situation of microfinance, findings from meeting with some financial institutions and communities

5.1. Over view of current microfinance sector in Myanmar

Myanmar financial sector is underdeveloped and less than 20 out of 100 people have access to formal financial services. According to the report from Proximity Finance, out of estimated 51.4 million populations, about 70% are rural population. In rural areas, 53% are excluded from formal finance than in cities 47% (Ayeyarwaddy news). Myanmar microfinance sector is composed of banks, cooperatives, NGOs, informal and semiformal sector, specialized agricultural development companies and governmental organizations. Informal sector consists of money lenders and friends and relatives while semiformal sector comprises of registered pawn shops and community based organizations such as village revolving funds, village savings and credit groups. Banks include state-owned banks such as Myanmar Agriculture Development Bank (MADB), Myanmar Economic Bank and the public bank such as Small and Medium Industrial Development Bank and Myanmar Microfinance Bank.

Among the financial institutions, MADB shares the largest outreach of loan disbursement across regions in Myanmar. The Figure 1 illustrates the snapshot of financial service providers in Myanmar.

Figure 1 Financial service providers

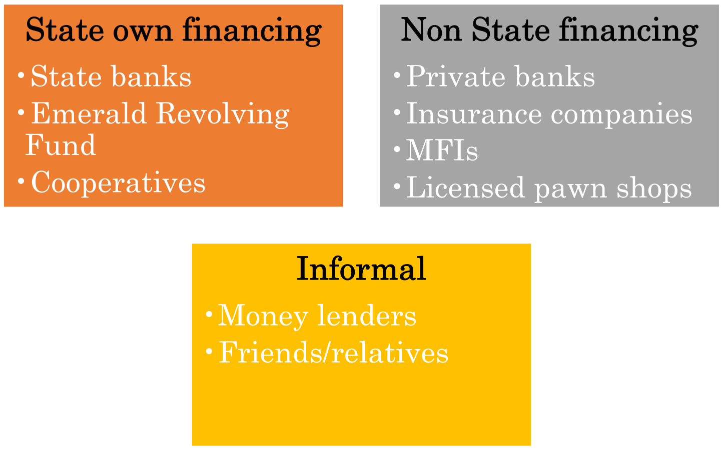


Table 1 shows the snapshot of the implementation status of microfinance institutions in Myanmar. The data is obtained from Myanmar Microfinance Supervisory Enterprise (MMSE). Therefore, the data is valid for only MFIs which registered in MMSE and cooperatives and state owned bank (MADB) outreach is not counted here.

Table.1 Current licensed microfinance institution implementation status

Type of Microfinance Institutions	No
Total license MFIs	215
Deposit taking MFIs	123
Non-deposit taking MFIs	92
Profit taking MFIs	184
Non profit taking MFIs	30
Microfinance operation areas (state and regions)	15
Microfinance operating townships	201
Microfinance operating wards	1641
Microfinance operating village tracks	2577
Microfinance operating villages	6087
Loan disbursed (Kyat in millions)	288413.00
Saving (Kyat in millions)	35281.87
No of microfinance borrowers	977,177

Source: Myanmar Microfinance Supervisory Enterprise (2015)

5.2 Discussion on key financial services providers

5.2.1. Myanmar Agricultural Development Bank (MADB)

Myanmar Agricultural Development Bank is one of the largest credit providers to rural communities. Myanmar Agricultural Development Bank (MADB) is the state-owned financial institution. The former Myanmar Agriculture Bank, the subordinate organization of Ministry of Agriculture and Irrigation was set up in 1953 then renamed it as MADB in 1976. The current legal structure of the bank is based on Myanmar Agriculture and Rural Development Law in 1990 and supplementary order in 1991. Myanmar Agriculture and Rural Development was renamed as Myanmar Agricultural Development Bank in 1997. MADB law defines that mission of MADB is to contribute socio-economic development of rural areas through providing financial services to agriculture and livestock sector but the bank at present can only cover the loans to farming activities.[61] MADB's capital is obtained from saving deposits from rural savers (8% interest rate per annum) and borrowing from Myanmar Economic Bank with the 4% interest rate per annum).[62] MADB is under the supervision of Ministry of Agriculture and Irrigation and not under the Central Bank of Myanmar (CBM). The auditing to MADB is not done by CBM but by Auditor General Office, which is in charge of auditing of every governmental institution while CBM is only authorized to audit governmental financial institutions.

Loans structure/terms of loans /products

Types of loans disbursed by MADB are agricultural base. Seasonal loans (annual loans) term is 1 year. Seasonal loans include moon soon, winter and pre moon soon. Disbursement of seasonal loans accounted 90% of the total loan disbursement. Seasonal loans are for Paddy (most loans), ground nut, pulses, sesame, cotton, jute, maize, mustard and sugar cane. Term Loans are for capital investment such as purchase of pump set, power tiller, and tractor, plantation for green tea, coffee, orchid, rubber, palm oil, citronella grass and solar salts. Loans to palm oil plantation disbursed 5 years ago, according to government order, but it was an exceptional case. It is also learnt that MADB never disbursed loans to companies.

61 JICA, Data Collection Survey on Agriculture Sector in The Republic of Union of Myanmar, p.65

62 MADB presentation,2015

Myanmar Agricultural Development Bank (MADB) provides:

- Annual loans/seasonal loans (up to 12 months)
- Short-term loans (2-4 yrs)
- Long-term loans (>5 yrs) for capital investment
- Max. 100,000 Ks/acre for rice, limited to 10 acres & 200,00 Ks/acres for other crops
- Interest rate -8.5% annually

The requirements for application of loans are as follows;

- Land as collateral (Assessment Survey on Agriculture by JICA, 2013 states that MADB provides loans not requiring collaterals but by group-based lending without mortgage)
- Only group loans guaranteed by all members (7-10)
- For the term loans, 2 persons as guarantors are required and 50% of saving deposit is used as collateral
- Form 7 (Land certificate) or the recommendation document from Land Department to prove that the borrower truly own the land
- Loan application form
- National registration card
- Household registration

The interest rate is 50 cents per 100 Kyats and the loan has to be repaid after 6 months for loan disbursal. The borrower can borrow 100,000 Kyats per acre till 10 acres.

Implementation process (architecture)

Loans are approved after the review by the village credit committees. These committees are made up of local authorities, Ministry staff and farmer representatives but MADB staff do not involve in the review process. 80% of loans disbursed are for rice farmers and remaining 20% are for farmers growing oilseeds, pulses, cotton and culinary crops. The bank is financed by Central Bank of Myanmar. MADB is required to contribute 75 % of its net income to the government and the remaining 25 % is kept as reserve fund. Loan amount is fixed by crops. The following table shows the snapshot of MADB loan program.

Table 2 Loan program of MADB

Item	Seasonal Loan			Term Loan
	Monsoon (Apr-Aug)	Winter Loans (Sep-Dec)	Pre-monsoon (Jan-Feb)	
Purpose	Crop Production (seasonal loan)	Crop Production (seasonal loan)	Crop Production (seasonal loan)	Procurement of Farming Tool, equipment
Loan Term	1 year	1 year	1 year	3-4 year
Interest Rate	8.5% year	8.5% year	8.5% year	8.5% year
Grace Period	1 Crop Season	1 Crop Season	1 Crop Season	1 year
Loan Limit	100,000 Kyat/ac (Max 10 acre)	100,000 Kyat/ac (Max 10 acre)	100,000 Kyat/ac (Max 10 acre)	Individual Assessment by MADB
Mortgage Guaranty	Group-based Lending (5-10 person)	Group-based Lending (5-10 person)	Group-based Lending (5-10 person)	Real Estate (land, building)
Total Lending(2012)	426 billion kyat	127 billion kyat	4 billion kyat	13 billion kyat

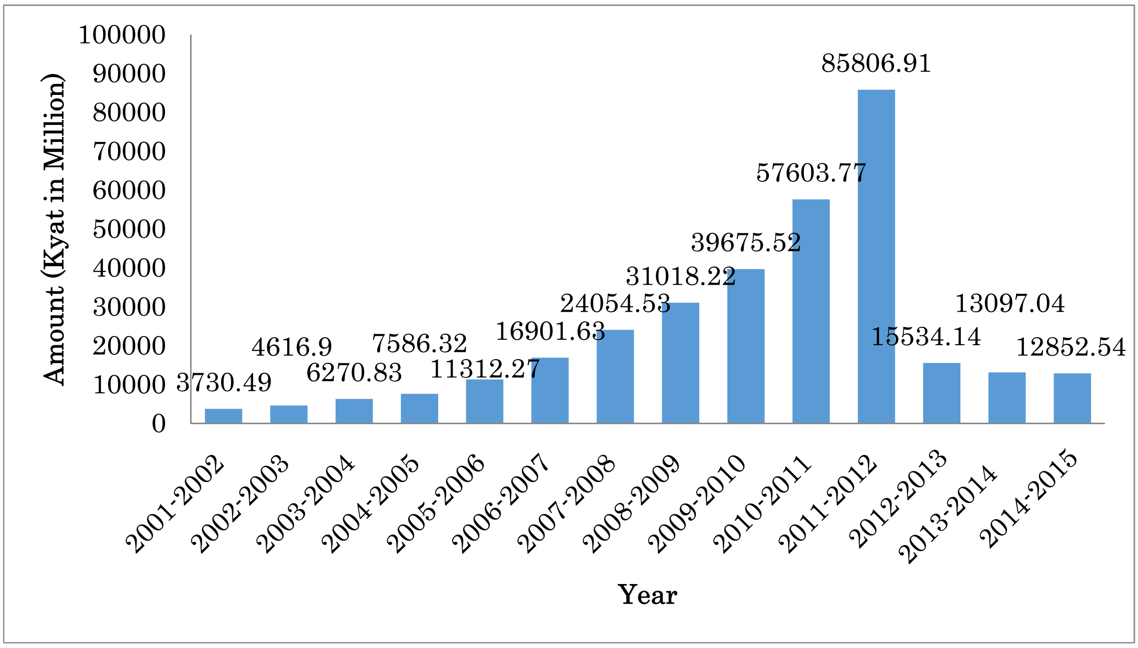
Source: MADB (2013), Assessment survey on Agriculture, JICA, 2013,

Note: 100,000 Kyats/acre is equivalent to 247,100 kyat/ha

Saving Deposit at MADB

The following graph shows the saving deposited at MADB. The saving has gradually increased from 2001 till 2012. The saving peak period is in 2011-2012 and sharply decreased between 2012 till 2015. One possible reason might be the increase of borrowers in 2011 and 2012 thus saving of borrowers also increased. It is also learnt that there is a dramatic fall of saving after 2012s. In the meeting with MADB, it is learnt that the depositors could not withdraw their saving from the bank before the new regime. So, the possible reason of sudden decline of saving amount might be "withdrawal of saving by farmers as a counter action against the restriction on saving accounts under military government. After 2010, the depositors can take out their savings from the bank and took out their savings from the bank as a result the saving has decreased from 2012 onwards. Although compulsory saving exists, high inflation and resultant negative real interest rate discourages farmers' depositing behaviour.

Figure 2 Saving Deposit of MADB

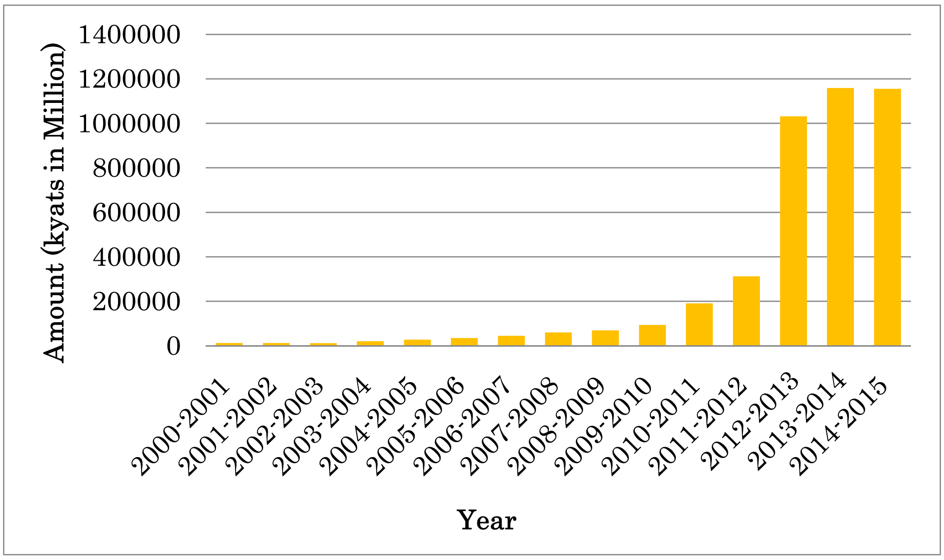


Source: MADB (2015)

Seasonal Loan Distribution

The following figure shows MADB seasonal loan distribution rate. It is learnt that loan distribution has increased dramatically starting from the fiscal year 2011-2012 due to the increase of loan size. Seasonal loan amount increasing 2010-2011 afterwards, due to increase in loan rates per acre.

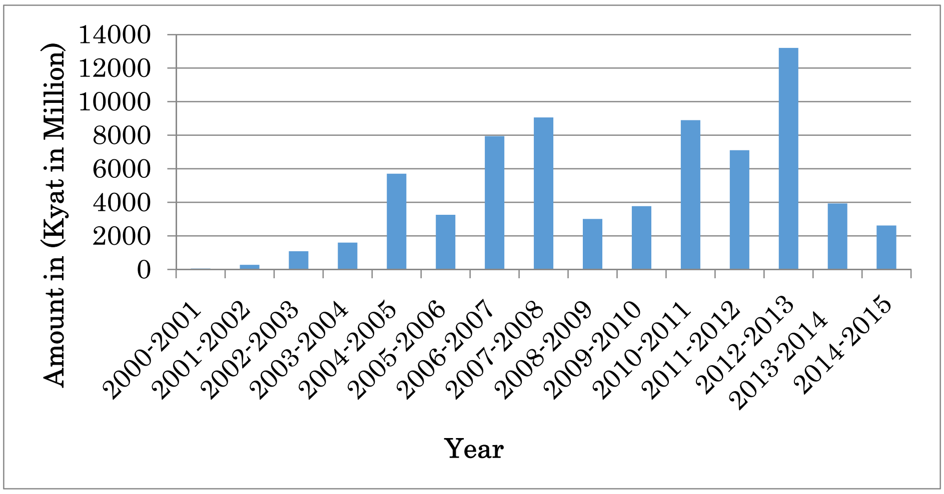
Figure 3 Seasonal Loan distributions by MADB (2015)



Development Loan distribution by MADB

Figure 4 illustrates the Development Loan Distribution by MADB. The development loan distribution reached to the highest in 2012-2013, but it decreased dramatically in 2013-14 as MADB loan distribution is mainly focused on seasonal loans.

Figure 4 Development Loan Distribution of MADB



Source: MADB (2015)

Issues/Debates for MADB

- About 80% of loans granted by MADB are targeted mainly for rice producing households and it is difficult for farmers growing other vegetables and crops to have access to loans
- MADB does not disburse loans to landless and poorest segments of the rural society. Therefore, a large number of poor farmers and those who cannot prove the land ownership have to rely on microfinance managed by NGO and informal money lenders.
- MADB does not have financing for other players along the value chain/ fruits, vegetables and any value-added products. MADB loans products are only agro-based and lack of loan diversification.
- Although MADB is one of the largest loans providers to farmers, it has only limited banking services and outreach due to high transaction cost and capital constraint. MADB faces liquidity constraint, as it has heavy reliance on subsidized funding from the Central Bank of Myanmar (CBM) and Myanmar Economic Bank (MEB)
- Farmers complained that loan disbursal is not on time.
- Farmers also pointed out about the inflexible repayment schedule (Borrowers have to repay back loans at the assigned date, if they cannot repay loans in time, they cannot ask for next loan. Only after they have repaid the former loan, they are eligible to apply for the next loan. It is also learnt that the farmers and village had to struggle a lot to pay back the loans on behalf of the default farmers as MADB practised the next loan suspension for the default.)
- Farmers face difficulties to repayment occur due to weather shocks and bad harvest etc. Some farmers default the loans. Major reasons of default included inability to sell the grains right after the harvest (the loan repayment period) due to due insufficiency of post farm facilities, immediate need of money for the preparation of the next crop right after the harvest, poor yield etc)
- Farmers also raised the issue of the requirement of Form 7 (land title) in the loan application process as some farmers do not have official land title.
- MADB loans cannot cover the small farmers
- MADB, being legal authorization under Ministry of Agriculture and Irrigation, the legal structure is unclear and it is only supervised by the ministry itself and auditor general office not under the supervision of central bank
- MADB is financed by Myanmar Economic Bank to carry out financial services such as loan distribution, they shows a great concern for sustainability
- MADB faces poor Data management system and IT technology

5.2.2. Cooperatives

The first cooperative society law was adopted in 1992 which repealed the Union of Myanmar Co-operative Societies Law of 1970. Then, Co-operative Society rule was adopted in March 1998. Department of Co-operative regulates the operations of existing co-operatives. The Cooperatives Law (1992) and Regulations (1998) gives strong government's influence over the cooperatives, including the power to "liquidate" cooperatives as well as register and reviews their office-holders and proceedings (LIFT 2014). Financial cooperatives are organized under the Union of Savings and Credit Federation (tertiary level society). Moreover, the Minister of Co-Operatives, and the Union of Savings and Thrift Co-Operatives , the Microfinance Bank has been registered to offer microfinance services and the Bank will give out without collateral loans for low income families through Central Cooperative Society.

With the existence of microfinance law, many institutions entered to microfinance sector. One of the obvious things is the emergence of cooperative society. According to "Consultancy on Cooperative System in Myanmar (2014)", the government of Myanmar intends to create over 5000 new cooperatives per year, with an aim of establishing one cooperative in every village as a means of increasing MFI penetration and reducing poverty.[63] In terms of provision microfinance, cooperatives accounted for more than a half of microfinance organisations, their activities has mainly being focused in urban areas (JICA 2013). The following table shows the cooperatives society loan disbursement in Myanmar till the end or 2014.

[63] Consultancy on Co-operative Systems, 2014, p.12

Table 3 Cooperatives Society Microfinance Operations

No	Regions/States	Town ships	Society/Vi llage	Members	Share (Kyat Million)	Savings (Kyat Million)	Loan Disburseme nt (Kyat Million)
1	Nay Pyi Taw	8	506	60,768	327.862	1,444.244	3,591.620
2	Kachin	11	392	25,521	322.321	1821.83	3,451.098
3	Kayah	6	146	13,774	65.923	459.763	1,825.846
4	Kayin	7	309	17,885	133.256	810.285	1,670.523
5	Chin	9	275	13,512	99.447	474.981	1,303.244
6	Sagaing	35	5,307	330,592	1,935.419	6,086.398	32,839.193
7	Tanintharyi	10	107	14,777	107.247	1,262.802	2,330.444
8	Bago	28	3,920	251,256	1,349.331	4,511.077	26,152.162
9	Magwe	25	2,167	158,912	1,125.588	3,493.656	1,6371.660
10	Mandalay	28	3,110	414,382	2,268.852	8714.94	40,975.092
11	Mon	10	407	33,160	278.618	1,848.188	5,238.500
12	Yakhine	17	492	29,258	310.813	1,545.519	2,352.904
13	Yangon	44	1,250	168,699	792.476	5,431.538	15,133.169
14	Shan	43	1,502	132,524	1,809.289	10,035.716	19,395.825
Total		307	23,102	1,949,450	12,477.172	56,827.198	200,921.205

Source: Ministry of Cooperatives (2014)

Issues /Debates

- A key challenge is its reputation associated with badly managed economic activities of the socialist era.
- Moreover, Todd and Sanda (Rural Finance, 2013) point out that because of the top-down approach of the cooperatives has been basically “a tool for government influences.” There is a major need to reform the cooperatives sectors to respond to the needs of the local communities.
- Financial services provided by cooperatives are mostly subject to the Ministry of Cooperatives, rather than relevant financial authorities. Cooperatives providing financial products of micro in nature are not subject to the regulatory authority of MMSE, though cooperatives which acquired microfinance licenses would be (LIFT 2014). The cooperative system continued to play an important role in the government effort to provide financial assistance to the rural poor, and effective function has important implication for the citizen’s trust in public service provision (Irrawaddy 2013)

- As most local community level organisations in Myanmar, cooperatives required some major reforms to become effective representation of the community needs, including in the financial service provision for rural agricultural development. Policy changes in the cooperative sector could include restricting the cooperative system to meet the new political and market situations as well as ensuring financial products provided by cooperatives meet the industry standards.

5.2.3. Other financial institutions (MFIs): outreach, lending methodologies, strengths and challenges

According to the statistics from MMSE, there are licensed 215 MFIs. Among them 123 are deposits taking and 92 are non deposit taking MFIs. Many of the financial services provided by MFIs are loans and saving. The loan size may differ from organization to organization. However, the minimum loan size is said to be 50000 Kyats and maximum is 500000Kyats. Apart from the provision of loans, some MFIs also provide the other financial literacy trainings and business development skill courses but it is still limited. Many of the MFIs are still weak in conducting market research to develop new financial products to meet the market demand. Only a few MFIs are using innovative technology such as mobile money or mobile payment which seems great potential for the future financial services outreach. A large number of MFIs use the group based lending strategy in the loan provision. The following summarized the common lending practices of MFIs.

- Advocacy with village authorities and villagers
- Meeting with communities
- Training
- Group Forming
- HH information survey on client (very rare)
- Loan disbursement
- Loan collection
- Regular meeting with clients

Table 4 illustrates the coverage of some key MFIs in Myanmar.

Table 4 Coverage of major MFIs in Myanmar (INGOs/NGOs)

Name	Coverage	Estimated number of borrowers	Loans disbursed	Saving
UNDP	26 Tsp, Delta, Dry Zone and Shan	400,000	US$ 60-65 million	Not available
Pact Myanmar	8607 villages	849,944 (total no of clients)	US$ 207.4 million(85.5 million-agriculture loan)	Not available
Microfinance delta Company Ltd.	10 Tsps in Yangon	1038	111,500,000 Kyats	5,682,151 Kyats

Source: Author's own data collection from MFIs

Issues/Challenges

In the meeting with some key MFIs, the MFIs expressed their key challenges and barriers. One of the barriers for newly MFIs to enter the market is licensing issue. Time consuming and lengthy procedure to get the license hinder newly MFIs to enter the market. MFIs are also facing the shortage of skilled and experienced staffs. Moreover, MFIs also pointed out about the review of the current microfinance law (such as interest rate cap and unclear regulations). MFIs voiced that interest rate ceiling also deters to extend their outreach due to the high operation cost, inflation and exchange rate issues.

5.2.4. General Discussion on current financial services delivery and financial inclusion

In the community meeting with villagers in Mon State, it is learnt that the credit demand is still high compared to the credit supply by Myanmar Agriculture and Development Bank, Emerald Revolving Fund from the state and other financial services providers such as INGOs and NGOs. In the agriculture sector, though farmers get paddy loan amounted to 100,000 Kyats for 10 acres of land from the MADB, the loan does not cover the input costs at all. There are also many farmers who cannot apply for the loans due to the documentation requirements especially those who do not have land ownership certificate (Form 7).Another constraint of farmers is repayment time to MADB. The loan repayment is during the harvest time. As the farmers need to repay back the loan to MADB on time, they have to sell rice in low price and they have less bargaining power to the traders and they have to sell rice in low price. The farmers voiced that long term paddy loans will be more beneficial for them. Moreover, majority of the loans from MADB are targeted to farmers, thus landless and poor are excluded and these people mainly count on informal providers. "It is estimated that half of credit are from the informal channel, and these funds are not deposited in the financial system, thus it brings no benefit for the investment in the national level."(Enhancing Access to Finance for Unbanked People in ASEAN Region, 2014, pp.53)

Small and medium business entrepreneurs also mainly rely on informal channel of credit due to collateral requirement and lengthy and complicated procedures. Many business entrepreneurs who have collateral take loans from the private banks rather than state owned banks. Due to collateral requirement to access the loans from the banks, the entrepreneurs encounter difficulty to get credit for their business expansion.

6. Discussion of other neighbouring countries' experiences

India Case

In the case of India, microfinance sector stands as a potential contributor in the government's agenda of "financial inclusion". The focus of financial inclusion confined to bare minimum access to saving bank account without frills to all though it has been viewed wider perspective internationally.[64] As a policy framework for formal financial sector development, the government put an emphasis on financial inclusion for the excluded population by the formal financial system. To achieve this, the government of India has nationalized banks with the aims to help the people in the remote areas to have access to financial services. Despite the nationalization of banks, deposit mobilization, disbursal of credit in rural areas and banks credit remains by and large inaccessible to poor. The poor are ignored by the formal financial sector due to high transaction cost and poor repayment which imposed high risks for the banks thus banks are reluctant to enter rural financial market. According to Rajasekhar (1994), the problems include absence of linkages of credit with marketing, inadequate staff and managerial deficiencies within the banking system. To overcome this gap and to achieve financial inclusion for the poor, since1999, the government of India made linkages Self Help Groups with banks as a national priority through its periodic policy and budget announcements and learnt that this program is growing at a pace of about 2.5 million households annually. This program is said to be largest and fast growing microfinance in terms of its outreach and sustainability.[65] (Dr. Jeet Singh et al, 2012)

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[64] Dr. Jeet Singh and Dr. Preeti Yadav, 2012,p.3

[65] Dr. Jeet Singh and Dr. Preeti Yadav, 2012, "Microfinance as a tool for financial inclusion and reduction of poverty*", Journal of Business Management & Social Sciences Research (JBM & SSR), ISSN No: 2319-5614, Volume 1, No.1, October 2012*

India used microfinance as a tool for the financial inclusion of rural India. Shankar S., 2013 stated the critical need of financial inclusion due limited financial services available, lack of formal saving system, lack of diverse credit, remittance and insurance products. With the realization of the need, microfinance was used as a tool to provide the wide range of services at a affordable cost to the marginalized community, linking MFIs with the banks and SHGs, these movement helped filled up the gap between formal financial markets and informal groups. MFIs played the significant role in facilitating financial inclusion in India.

Philippines Case

In Philippines, 90% of the businesses are microenterprises and these enterprises employ 37% of the country workforce and main source of their livelihood for 40% of households. Most of these enterprises had little access to formal credit. Formal credit institutions (banks and credit unions) had little interest on low income households and micro enterprises due to their small size and difficulty in assessing creditworthiness.

The past Philippines' 'government programs for poverty alleviation in 1960s and 80s focused on direct credit and guarantee programs but resulted in limited effectively and outreach at a great cost in government budget.[66] Learning these experiences, the government made reforms to develop a market oriented financial and credit policy that supports private institutions.[67] The government did not focus on actual provision of credit but created the enabling policy environment. National Strategy for microfinance was formulated by the National Credit Council (NCC) in 1997. The strategy focuses on the greater role of private microfinance institution in credit provisions, development of policy environment which facilitates the increased participation of private sector in microfinance, market-oriented financial and credit policies and non-participation of government line agencies in the implementation of credit and guarantee programs.[68] The main microfinance service providers are banks, NGOs and cooperatives.

In line with the reform, the Microenterprise Access to Banking Services (MABS) Program was implemented with the support of USAID in 1997 to address the limited access to banking services, and other low income people to gain wide range of financial services so that all sectors of the society can participate in a growing economy. The objective was to help private banks develop the capability to profitably provide services to microenterprise sector. The program focused on rural banks

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[66] G>L> Lianto, M.P. Geron and M.G Tang, Directed Credit Programs: Issues and Framework for Reform, Manila, October 1999.

[67] J. Almario, E. Jimens, P. B. Roman, The Development and Implementation of a Uniform Set of Performance Standards for All Types of Microfinance Institutions in the Phillipines, August 2006.

[68] National Credit Council, " National Strategy for Microfinance," Policy Notes, Manila, 1997

because they have a large collective network and low cost suggested that they were the best to offer microfinance services. Moreover, as they emphasized on saving mobilization strategy, banks eventually source their financing needs from private capital without relying on the government and international donors.

This MABS program introduced the new approach in delivering microfinance services and this is based on international best practices tailored to meet the needs of Philippines especially in the rural parts. The MABS approach is based on market research and pilot testing to ensure that products were suited to clients' needs. The program introduced new savings and loan products including micro insurance and housing microfinance for microenterprises and small-scale farmers and applied new innovative technologies such as mobile banking to expand the financial services delivery. MABS approach includes capacity building to banks, conducting market research, developing client-responsive products, proper credit and background investigation, and cash flow analysis and collecting loan payment on time. The market research survey informed the products and services the bank should focus on targeting both untapped low-income households and large micro and small enterprise sector. The program focus on saving mobilization and offer wide range of products such as loans (micro agricultural loan services, housing loan, micro-insurance for low income households, deposit services and mobile money services to expand outreach to rural clients.

In line with the national strategy, Phillipines government encourages the private sector involvement in microfinance services. As a result, Phillipines microfinance institutions have shown the high performance level and developed the wide financial products and services to include unbanked people in financial inclusion world.

7. Conclusions and policy recommendations

- Although many MFIs and financial institutions are operating and delivering wide range of financial products, it is found that only a few MFIs regularly conduct the market survey to develop financial products suited with the need and demand of the clients. It is recommended that conducting market research is will help to deliver the demand driven wide range of financial products (eg-affordable remittance services operated by MFIs) to reach the goal of the financial inclusion agenda.

- Saving rate is still low and saving mobilization is greatly required.

- The study also found that the proper rigorous research on impact evaluation to see to what extent the microfinance clients have been benefited is still lacking. Research on impact evaluation microfinance are weak and this kind or research can help develop better microfinance programs

- It is recommended to review the microfinance law (eg- interest rate cap, unclear monitoring procedures for MFIs and cooperatives: ie microfinance activities undertaken by Cooperatives are under the supervision of Ministry of Co-Operatives. There is a lack of clarity about the supervision of financial cooperatives with microfinance operations and co-operatives that have obtained MFI license.[69], interest rate cap etc)
- It is also recommended to build up the capacity of Microfinance Supervisory Committee to be able to monitor MFIs in efficient manner.
- MADB has not been an effective lender regardless of outreach and its loan disbursal. Moreover, MADB does not function as fully-bank function and it only provided loans and accepted saving. As financing for MADB is largely reliance on Myanmar Economic Bank, it is difficult for future sustainability.
- To reform or strengthen MADB (due to some constraints such as limited outreach and loan size, loans not disbursed in time, liquidity constraint, inflexible repayment system, lack of diversification of loan products, late delivery of loans).
- To seek alternative credit access by linking with commercial banks so that MADB can cover large outreach, extend loan size and produce demand driven products as MADB has its limited liquidity
- Strengthening mobile banking: technology, outreach or mobile, financial system, rules and regulations is highly recommended. To reach the unbanked rural communities, timely development and implementation of effective regulatory systems of mobile banking is required. Mobile money technology can help reduce the operation cost and extend the outreach of financial services delivery to reach to unbanked people in remote areas as the mobile penetration rate becomes gradually high.
- Further studies are required to find out the burdens of microfinance clients in repaying back their loans and factors behind why they have to take bridge loans from others including formal and informal lenders in order to repay back loans in timely manner

[69] Livelihoods and Food Security Trust Fund, “Consultancy on cooperative Systems”,p.13, 2013

- It is necessary to consider how to link between banks and microfinance institutions and Self Help Groups to make financial services available to the unbanked people.

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Part IV Socio-Economic System and Redistribution

Chapter 9

Expanding Social Security Scheme: An Alternative Health Financing Approach toward UHC in Myanmar

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Contents

1. Introduction

1.1. Rationale of the study

Achieving toward Universal Health Coverage (UHC) is becoming the priority of health system of both low and middle income countries. Many developed countries already achieved their universal health care coverage while many developing countries are still trying to achieve. Universal health coverage means to an end ensuring that everyone obtains the health services they need without financial hardship. The most effective way to deal with financial risk of paying for health services is to share it, and the more people who share, the better the protection.

Universal coverage is not a one-size-fit-all concept; nor does coverage for all people necessarily mean coverage for everything. In order to achieve universal health coverage, countries must raise sufficient funds, reduce the reliance on direct payments to finance services, and improve efficiency and equity. Many countries employs different health financing mechanisms to achieve universal health coverage. There are four main health financing approaches; 1) general tax revenue; 2) social health insurance; 3) private health insurance; and 4) community health insurance.

Health financing reform becomes the core part of health sector development in low and middle income countries. In 1993, Myanmar National Health Committee developed National Health Policy and exploring alternative health financing approach is one of the strategic area of the National Health Policy. Following the 1993 National Health Policy, series of health financing mechanisms have been introduced to reduce financial burden for health care. The government has imposed the user fees at the public health facilities to those are affordable with the exemption to the poor.

The new government of Myanmar has called for health care sector reform and aimed to achieve universal health coverage by 2030 (Health in Myanmar, 2012). According to long term goals of health financing reform agenda, Myanmar is planning to expend the Social Security Scheme (SSS) to cover formal sector, to implement township based health care financing schemes, social safety net and maternal and child voucher programs as pilot projects.

Myanmar still have fragmented subsidies programs which prioritize to the vulnerable population such as maternal and child through general tax revenue. Still the policy makers need to decide by which means they want to cover its population and develop its health financing strategy.

This paper try to explore the perception of stakeholders for the feasibility of expansion its coverage to larger portion of population toward universal health coverage.

1.2. Research Objectives

1) To explore stakeholder's perception on feasibility to expand the coverage of social security scheme
2) To identify the challenges and opportunities for social security scheme regard to health financing reform
3) To learn from international experiences on how they make transition from lack of financial protection to universal coverage

1.3. Research Method

This study is based on in-depth interview with key stake holders from social security board, secondary data and literature review from the international from the region and other successful countries. In early 2015, the data on perception for the expansion the coverage of social security scheme was collected from seven departments of social security board by in-depth interview with the director of each department. The in-depth interview was focused on their experiences of implementation of experiences, the challenges and opportunities if the scheme is expend its coverage.

2. Background of Myanmar Health Care System

2.1. Service delivery

Myanmar practice the pluralistic system in providing health care services with the mixture of public and private providers. However, Ministry of Health (MoH) takes leading role in planning, service provision and regulation both public and private health providers. MoH is providing holistic health care services including preventive, curative and rehabilitative care to the people according to social objectives set by National Health Committee (NHC). The Department of Health provides comprehensive health care services to all citizens.

Other Ministries such as Ministry of Defense, Railways, Mines, Industry, Energy, Home and Transport also provide medical care to their employees. Apart from public health facilities, local NGOs such as Myanmar Maternal and Child Welfare Association (MMCWA) and Myanmar Red Cross Society (MRCS) and international donors also provide some fragments of health care services to fill the gap of health care needs of people (Health in Myanmar, 2012)

2.2. Health Financing

Myanmar is one of the highest out-of-pocket spending for health care in South East Asia and also on the world. Health financing in Myanmar had various experiences from time to time along political reforms. After gaining independent from British Colonial from 948-1962, the revenue for health financing is mainly from general taxation as the country followed the National Health Services (NHS). Still the government taxation was the major source of health financing with some international assistant during 1962 to 1974. Myanmar adopted new constitutional law in 1974 and afterward health care services were provided according to the National Development Plan (NDP). Since that time the private sector has been growing in importance for health care financing (Aye et al, 2007). The low investment in health sector leads the country toward one of the highest out-of-pocket spending in the region.

2.3. Health financing reforms Initiatives (1990-2010)

In 1993, the National Health Committee has developed the National Health Policy which comprise the fifteen guideline and one of the guideline is that "To explore and develop alternative health care financing system". To implement the National Health Policy, the government has initiated six alternative approaches of health financing in order to response to high out-of-pocket payment. The different means of health financing mechanism can be classified as 1) paying wards or rooms in the public hospitals; 2) user fees for Government Drug Supplies from Central Medicine Store Depot (CMSD); 3) user fees for diagnostic services such as laboratory, X-ray, ECG; 4) Community Cost Sharing for essential drugs; 5) private services by service staff at public hospitals; and 6) Hospital Trust Fund (Aye et al, 2007).

The user fees system intent to charge diagnostic and medical cost from the rich and provide exemption to the poor. Hospital Trust Fund is to finance poor patients who cannot pay the cost of health care at public hospitals. The policy for the Trust Fund is "ONE BED ONE LAKH"; it raises 100,000 Kyat per bed to the hospital by the donation from the community. The Trust fund is normally kept as a saving account at a bank, and the annual interest is utilized according to the trust fund management committee or the hospital management committee (Aye et al, 2007).

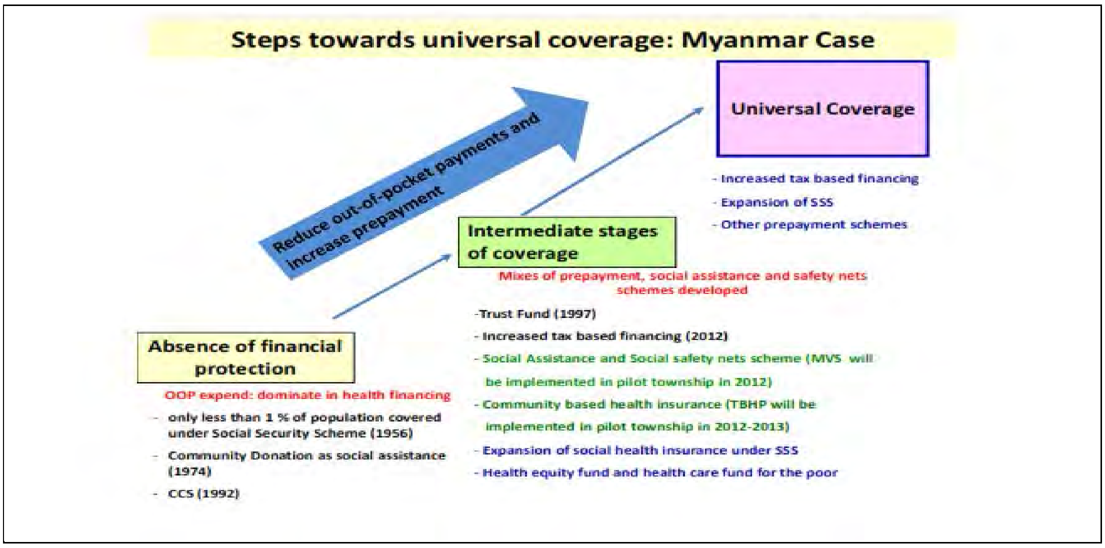
The revenue from user fees is broken down into three parts: 1) 50 percent contribute to government revenue, 2) 25 percent are used for purchasing medicine and medical equipment and 3) the last 25 percent are for maintenance of health facilities. However, there are no clear criteria for the poor to obtain exemption and many challenges are coming up at the implementation level (Aye et al, 2007).

2.4. Health financing reform initiatives (2010 onward)

Despite of its initiatives to health financing reform during the last two decades, current revenues of health financing are from three main sources: general taxation, private household contribution as out-of pocket payment, and social security system and international assistants. International assistant mainly focus on communicable diseases, and public health problem to fill the gap of public health services. During the new government term, government health expenditure in percentage of GDP increased from 0.02% in 2010-2011FY to 0.99% in 2014-15 FY. However, it is still lower than in other South East Asia nations. (Health in Myanmar, 2014).

According to *Health in Myanmar 2012*, the roadmap for universal health care coverage is developed to achieve universal coverage by 2030. According to long term goals of health care financing, Myanmar is planning to expend the SSS to cover the formal sector, to implement township based health care financing schemes, social safety net and maternal and child voucher programs as pilot projects and extend social security scheme during intermediate term and then will increase tax-based, expand social insurance and other prepayment schemes at later stage of transition toward universal health coverage (Health in Myanmar, 2012)

Proposed Roadmap toward to Universal Health Coverage in Myanmar



Source: Health in Myanmar (2012)

In 31st January 2014, regarding financing reform, President U Thein Sein has urged to establish health insurance system at meeting on uplifting the health standard of Myanmar. Following the guidance of president, twelve task forces were formed to improve the uplift the health standard of Myanmar. “Task Force on Universal Health Coverage” is one of the task forces among twelve and series of technical consultations discussions were done regarding with health financing reform (Health in Myanmar, 2014).

Again at the National Health Committee (NHC) meeting on 29th April 2014, the chairman, vice president Dr. Sai Mauk Kham, also stressed to uplift health standard of Myanmar as part of health sector reform. According to guideline of chairman of NHC, five workshops were conducted in June 2014 and workshop on health financing aiming toward universal health coverage was also conducted on 12nd and 13th June 2014 (Health in Myanmar, 2014)

The nine strategic areas have been developed to achieve universal health coverage according to the long term goal. Among those, four main strategic areas directly concerned with health financing reform are; 1) identifying essential health package; 2) developing alternative health financing mechanisms to reduce catastrophic health expenditure; 3) reviewing current health policy and adjust to overcome the challenges toward UHC and; 4) reforming governance and administration to achieve UHC.

The pilot project for private health insurance has been recently introduced in major cities of Myanmar; Yangon and Mandalay. The private health insurance scheme is run by Myanmar Insurance Department, Ministry of Financing and it is only intend to cover the poorest population of Myanmar.

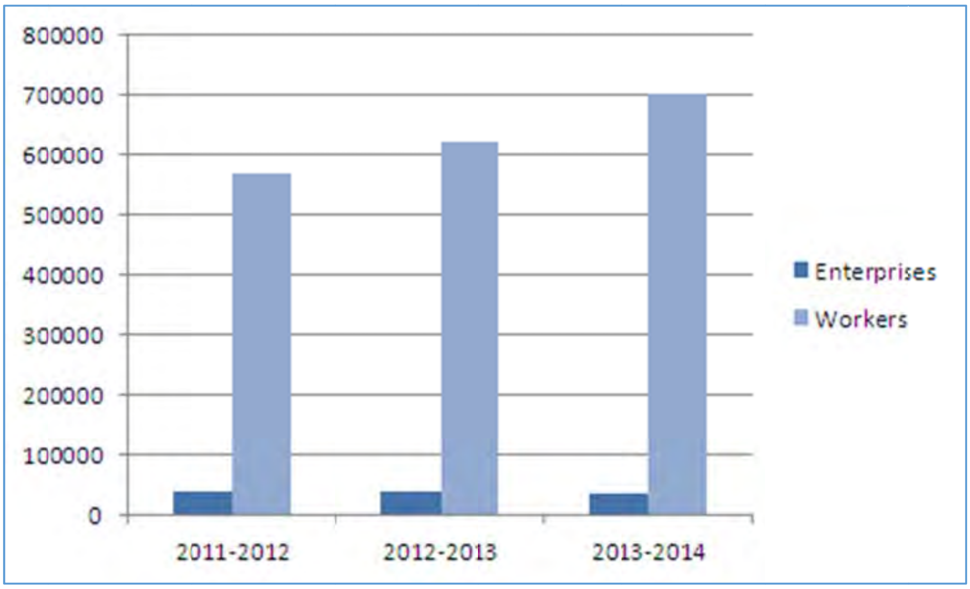
The discussions on health financing reform is ongoing process and there is no decision from high level policy makers for specific financial approach toward UHC.

2.5. Social Security Scheme

Social Security Scheme (SSS) has introduced in 1956 according to 1954 Social Security Act. SSS has been implemented by the Social Security Board (SSB) under Ministry of Labor, Employment, and Social Security. According to the law, SSS covers workers from public and private sectors. The new social security law has been enacted on 31st August 2012 and the implementation is started from 1st April 2014. Despite long history of establishment, it covers over 1% of total population and about 2% percent of working population (SSB, 2015).

However, the new government started its reforms including social sector. Recently, the number of insured workers has increased significantly from 595764 in 2011-12 FY to 706750 in 2013-14 FY.

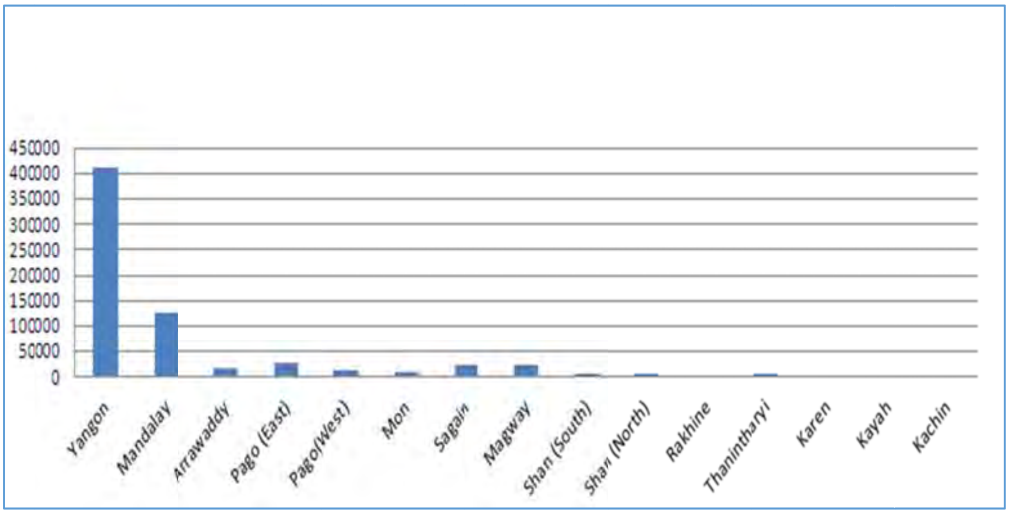
Number of Enterprise and Worker Registered at SSB (FY 2011-12 to 2013)



Source: MDRI-ILO Technical Report (2014)

Among states and regions, the number of insured workers is the highest in Yangon region and lowest in Kayah State. According to Myanmar statistical yearbook data, in 2010-11 there are 276,493 insured workers in Yangon region while only 917 insured workers in Kayah State.

Distribution of registered workers by state and region (2013)



Source: MDRI-ILO Technical Report (2014)

According to 2012 Social Security Law, SSS covers both state-owned and private enterprise with more than five employees. The registered workers at SSS is dominated by workers from private enterprises which accounts 76% of total registered workers and 26% are from state-owned enterprise (SSB 2014). The self-employed and professional personnel are eligible for the voluntary registration at social security scheme.

Currently, SSS has been implementing two major schemes; “Health and Social Care Fund” and “Employment Injury Fund”. Under “Health and Social Care Fund”, medical benefits, sickness cash benefits, funeral grants, maternity benefits, paternity benefits and family benefits has been provided. The benefit for work-related injuries are provided under “Employment Injury Fund”. The contribution for “Health and Social Care Fund” is 2% from both employers and employees respectively and the employers have to contribute 1% for “Employment Injury Fund”. In schemes stated in the law but currently not active are “Disability benefit, superannuation benefits and survivors benefit fund” and “Unemployment benefit fund”. The SSB is planning to strengthen existing schemes and then extend the rest of scheme in the future.

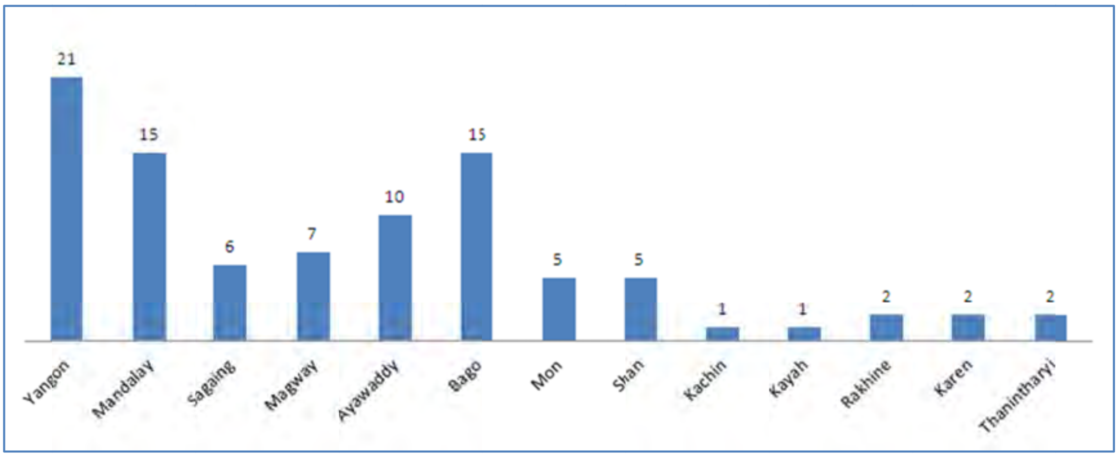
Contribution rate and benefits for active scheme

Type of Benefit	Fund	Contribution Rate
Medical benefit	"Health and Social Care fund"	Employer 2% Employee 2% (Employee 2.5% and employer 2.5 % of the workers is older than 60 years old)
Sickness cash benefit		
Funeral grant		
Maternity benefit		
Paternity benefit		
Work Injury benefit	"Employment Injury Fund"	Employer 1%

Source: Social Security Board

Social security board provide health care services to the registered workers mainly through its own health facilities and refer to public health facilities in case of health services are not available at worker's hospitals and clinics. SSB runs one 250-bed worker's hospital in Yangon, and one 100-bed hospital in Htan Tabin Township in Yangon Region, and one 150-bed hospital in Mandalay. It has also opened 93 clinics to provide medical care to the insured workers in 13 states and regions across the country with the exception of Chin State. SSB has been trying to improve its health service provision by renovating of existing health facilities, recruiting more health workers, running mobile medical unit to the factories, and piloting contract with private health care providers.

Distribution of social security clinic by state and region (2013)



Source: Social Security Board

3. International Experiences on Social Health Insurance

3.1. Concept of Social Health Insurance

Social Health Insurance (SHI) is based on pay roll contribution from both employees and employers as a percentage of salary. Usually, the SHI fund is independent from the general government budget and managed by independent agency to collect and pool and purchase the services. The contribution rate is linked with and reflected the cost of services provision. The members of SHI are usually mandatory by law and self-employed workers could join the voluntary (HSRC-DFID, 2001).

3.2. Preconditions for Social Health Insurance

A number of preconditions need to be presented before introducing social health insurance. The factors such as: 1)level of income, 2)structure of economy, 3)administrative cost, 4)administrative capacity and 5)level of solidarity within the society influence the speed of SHI transition toward universal health coverage (WHO, 2004).

The higher income per capita, the more capacity to contribute to SHI fund. The increase of pay roll tax to SHI fund subsequently reduce the government burden to subsidize the low-income. So economic growth is likely to speed up the transition of SHI. Another influencing factor is the relative size of informal and formal economy. Moreover, the country economy dominated by industrialized formal sector has better less administrative burden than those heavily rely on informal sector such as agriculture and self-employed. The ratio of rural and urban population effects administrative cost of the scheme. The administrative cost of run SHI in urban cities is lower than those area with wide spread population. Besides, the better administrative capacity speed the transition of SHI and the solidarity also influence the coverage of SHI (WHO, 2004).

3.3. Transition toward universal health coverage through SHI

Whatever type of health financing mechanism a country decides to adopt, the transition to universal coverage may take several years, even decades. Historically, achieving universal health coverage through SHI takes longer time even in industrialized countries. The transition period from the conception of law to achieve UHC take 127 years in Germany, 79 years in Australia, 118 years in Belgium, 36 years in Japan, 26 years in Republic of Korea and 20 years in Costa Rica. The extending the coverage from 25-50% of population take shorter period than moving from 50% to 75% coverage (WHO, 2004).

Japan is one of the developed country has achieved UHC through social health insurance. Japan's social health insurance rooted from voluntary community health insurance schemes in the early nineteenth century. In 1922, the first compulsory health insurance law for employee was passed. In 1835, Fukuoka Prefecture started a community-based health insurance and the government scaled up these schemes into national level in the 1930s. In 1938, the "National Citizens Health Insurance Law" was passed to meet the needs of rural poor, farmers and self-employed in rural areas and small companies. This insurance coverage had increased dramatically and covered from 2% to 51.2% of the total population even though the registration is voluntary basic (WHO, 2004).

In 1945, health insurance coverage reached 60% of total population by voluntary and compulsory schemes. The coverage increased up to 90% of population during the post- World War II period and Japan achieved its universal coverage 1961. It took Japan 36 years achieved its UHC from the first law was passed in 1922 (WHO, 2004).

Japan has achieved its UHC with 36 years while other countries faced challenges to reach its full coverage. Japan has strong economic development with its income per capita and the economic structure, administrative capacity of the scheme. These factors facilitated the country to reach it universal coverage.

Republic of Korea's (ROK) health financing reform is another success stories and it took only 26 years to achieve universal coverage. Korea National Health Insurance has launched in early 1997 according to Medical Insurance Act and covered the companies with more than 500 employees. After two years of first implementation, the coverage of health insurance was expanded into the enterprises with more than 300 employees, school teachers and government officials. In 1983, further expansion of coverage up to companies with more 15 employees have been done. The last groups to register into the scheme are self-employed from urban and rural area. Korea took 26 years to achieve universal health coverage from its implementation of first 1963 Health Insurance Act (K. Xu, 2010).

In 2000, Korea has done a major reform in its health financing system by merging over 400 health insurance schemes into single scheme and administered for revenue collection, pooling fund, and purchasing the services under National Health Insurance Corporation (NHIC). Another parallel system, Insurance Review and Assessment Services (HIRA), has been developed to review the claims and assessment. These two bodies are regulated and administered under Ministry of Health, Welfare and Family Affairs (Xu .K, et al, 2010).

Vietnam is another country trying to achieve universal coverage through mixture of social health insurance with subsidies to the vulnerable groups. Vietnam has covered 64% of total population in 2012 and targeted to expand up to 80% population by 2020. Currently, the 32 million of population are uncovered by any type of health insurance and these population from informal sector. Vietnam social health insurance was implemented in 1993 to cover the employees from both public and private-owned enterprises. In 2003, the coverage to the poor, ethnic minorities and vulnerable groups were expanded through "Health Care Fund for the Poor (HCFP)". In 2009, the HCFP merged with the national health insurance scheme to reduce the fragmentation (Barroy. H et al, 2014).

Vietnam still faces challenges in management as the schemes are highly fragmented and only marginal amount of fund are cross subsidized among the schemes. The lessons learns from Vietnam health financing system is that the highly fragmented and multiple fund created the challenges in resources management, monitor and ensure equity and efficiency of resource allocation. Vietnam is planning to take further reform of its health financing system to consolidate these fragmented schemes into single national health insurance to improve harmonization and redistribution (Barroy. H, et al, 2014).

4. Results, Discussions and Conclusion

This section will elaborate the in-depth interview results with key implanting stakeholders from social security board on their perception on expansion the population coverage of social security scheme. The discussion will highlight their perception on challenges and opportunity if the scheme is expended beyond enterprise workers.

4.1. Why social health insurance to achieve UHC in Myanmar?

Social insurance in Myanmar is well-established since 1956 and the scheme has covered employees from both private and public-owned enterprise. According to sharing from stakeholders from social security board, the scheme used to be strong and able to provide quality services before the 1970s. The major political transition and economic policy shifted to market economy made the scheme stagnant to extend its population coverage.

However, major reform had been done in social security board after 2010 election when new government came into power. The new social security law has been passed in August 2012. After new law passed, social security board has reformed internal organization such as recruit more human resource (medical and non-medical staff), develop IT system for better premium collection, benefit provision and management. In 2014, Myanmar has done its major reform in social security scheme by launching new social security scheme with the new contribution rate and benefit package.

4.1.1 Revenue Collection

According to interview with insurance department, in term of revenue collection, SSB has experience as it has been operation over five decades. The revenue collection used to by paper work and start from 1st April 2014, the process for premium collection use computerized system but still keep the paper document for check and balance during the initial period.

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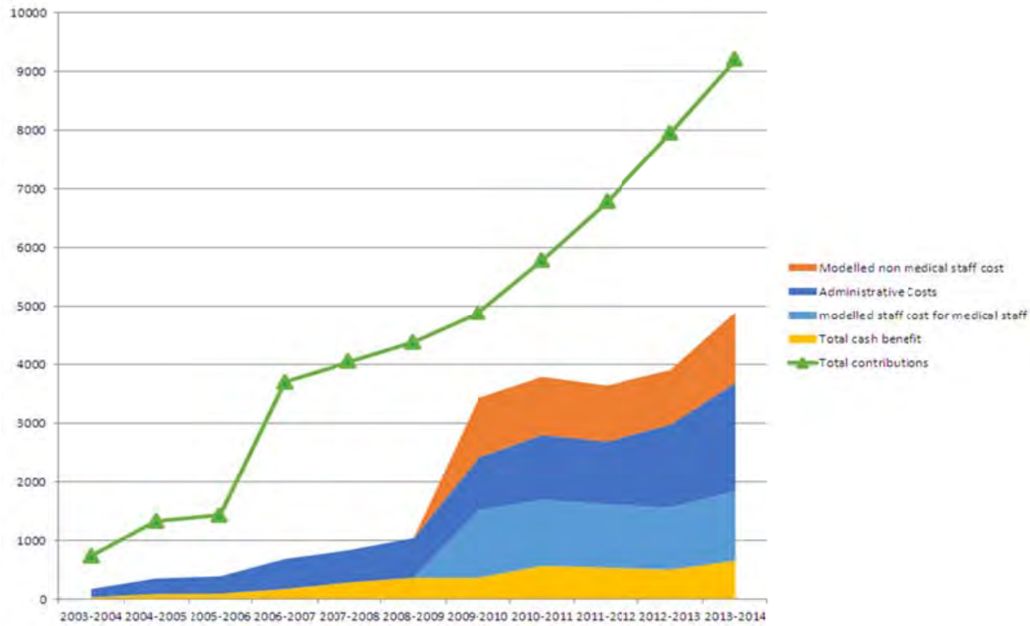
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Modelled non medical staff cost
Administrative Costs
modelled staff cost for medical staff
Total cash benefit
Total contributions

Chapter 10

Myanmar Migrant Workers and Their Remittances

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Abstract

Migrant remittances could improve the livelihoods of recipients' families in the source country. On the other hand, if those remittances to origin country are through formal channel, it could also enhance the foreign reserve in balance of payment account. In most of developing countries, remittances flows are more stable than foreign investment and other international aids. It has been estimated that remittance flow to developing countries is at $404 billion in 2013 with accelerating growth to an annual average of 8.4% a year in 2014-2016.

With regards to the remittances flow to Myanmar, the World Bank report, 2013 estimated that total remittances flow to Myanmar is about $3 billion. There is no exact data of migrants' remittances volume in Myanmar as the sending channel mostly uses through informal way. However, scholars and policy makers are aware of these migrants remittances could impact to individual household welfare as well as macro economic impact to the country. Therefore migrants issue and their remittances flow into Myanmar has grabbed the attention of all stakeholders during the transition period of Myanmar.

In this survey finding of Mon state revealed that three main reasons have influenced in people migration to abroad. The first reason of migration to abroad is due to the bad business in their hometown followed by the second reason of the migration is due to the lack of job opportunity. And the third reason of household migration is due to the need of working capital for their business. These findings have highlighted that external migration of people from Mon state is significantly affected by economic reason and employability reason. When people are deciding to migrate, families have to manage the cost for migration. In this regards the need of money to use for migration is critical for household who have to find out sources of money and the availability of credit sources in their community play major role in smoother

process of migration channel. It is good for local people who are living closer to neighboring country Thailand may need to use the money for migration is lesser than people who are coming from any other far regions of Myanmar.

The findings have shown that migrants' families spent their income with remittances for investment and buying farm facilities. This finding has highlighted migration and remittances could impact to family welfare positively. However, 40 % of migrants' families are taking loan for the use of migration cost and 50.3% of them were received loan from their friend and relatives. In addition, 30% of families were supported by family members. Interestingly, 29 % of families were sold out their assets to use for migration cost. Only 3 % of migrants have spent their owned money to go abroad and the rest of 3 % borrowed from agents/brokers who helped in migration process. Moreover, 45.3 % of migrants' families are buying gold as their saving due to unattractive and poor trust on banking services. These findings have shown that credit sources in their community are very limited and it is also an opportunity to those who are interested to provide the loan/saving platform so as to fulfill the space for unbanked population. Nowadays, in developing countries like Philippine and Bangladesh has given financial services to migrants and families through MFIs(Microfinance Institution).Myanmar still don't have introduced yet this MFIs scheme to unbanked migrants. Linking migration and microfinance has the potential to expend opportunities for migrants and their families as well as their communities and county, if the planned and approach are managed in a proper way .

Contents

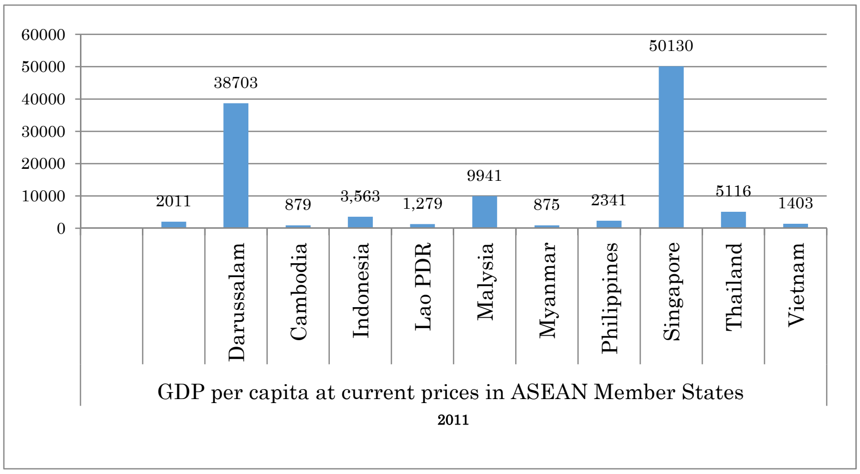
1. Introduction

According to the 2010 World Bank database shows that Myanmar is included in the list of top ten countries in which mentioned that 9th largest country receiving remittance in Asia Pacific and the volume of remittances is around \$0.2 billion. However, the true size of the remittance flows into Myanmar is under reported as remittances are coming through informal channel. In 2012, formal remittance market for Myanmar oversea workers has opened; its competition to informal (hondi) remittance market is still unsuccessful. Although formal remittance market is at the early stage, the inflow has been increased year by year. Once the formal remittances market had opened in 2012, the inflow of remittances only came from Malaysia and the amount is USD \$ over 200 thousand. After 2012, remittance inflows from Singapore, Thailand and other countries have been increased and the amount of remittances coming through formal flow is USD \$ over 100 million. This trend of likely to increase due to the upward trend of migration from Myanmar to international countries. Therefore, formalizing remittances must take into account the advantages of informal systems for migrants, so as to retain the accessibility of these long standing systems. Governments and international bodies most often favour formal remittances, as they are reliable and regulated. Informal remittances, however, are usually more accessible, particularly for migrants in low income categories. Undermining informal transfer methods would likely widen inequality and be counterproductive to overall poverty alleviation and development efforts.

Migration was almost negligible for a period of until previous military government which is almost 60 years. After civilian government has taken place and initiated the historic reform, legal and illegal migration is taking into consideration of policy issue. The out flow of Myanmar migrant has increased rapidly after 1988 when the political instability and wide spread poverty occurred across the entire country. Since, Myanmar was isolated for many years, people seeking out for better job in abroad has not recognized and considered illegal with lack of better protection and management policy in migration issue. However, after the historic reform has taken place in 2011, the issue of migration has been critical in Myanmar and the GOM has developing measures to support migrants in terms of their basic human and labour rights in foreign countries. Recent population census has shown that Myanmar population is 51.4 million which is not included the out migration around 10 % that estimated by IOM report in 2009. It is extremely hard gathering accurate data on total population of migrants and remittances flows into the country. Among the South East Asian countries, people of Myanmar are migrating especially Thailand, Malaysia and

Singapore. There are approximately 2 to 4 million of Myanmar migrants are in Thailand. However, labour organizations from Thailand have been estimated that there are a million of Myanmar migrants are still undocumented. Thai government has announced that Myanmar migrants who are holding pink card (which is valid for 6 months) have to apply temporary cards in coming March, 2015; otherwise, they will be detained to those who are not changing to temporary cards. Thai government has issued those pink cards for illegal migrants about 575,596 in October 31st, 2014.[70]

Table 1.1. GDP per capita at current prices in ASEAN Member States



ASEAN Economic Community Chart book 2012

According to the table (1.1) data has shown that among the ASEAN counties , GDP per capita in Myanmar is lowest unit while Singapore GDP per capita is the highest followed by second Darussalam and Thailand is at the third largest. These GDP per capita has been indicating the stronger and stable economy status that country has which drive for rising per capital GDP of each country. It is also become pull factor to people migration decision.

Singapore has imported skilled migrant to boost up the growth of economy. Therefore, Myanmar skilled migrants are moving to Singapore due to the higher wages offering and standard of working condition. It has been estimated that there is around two hundred thousand of Myanmar workers are in Singapore and it can be classify 3 types of migrant workers such as citizen, permanent residence, employment pass and domestic workers. Citizen and permanent residence are referring to be residents while non residents are considered to those who are studying or working in Singapore temporarily. PRs have the right to apply citizen and to stay in Singapore permanently and are eligible for government-sponsored housing and military services for young

[70] Unpublished information source received from Ministry of Labor.

adult males. However, they have no right to vote for elections. Domestic workers are referring to unskilled, working as maid, construction workers and workers at dock yard etc.

In addition, the attraction of sending a large number of Myanmar migrants to Malaysia is to be asylum seeker and to go to the third country is also pull factor for migration. The approximation number of Myanmar migrants from 100,000 to 500,000 is in Malaysia. Industrial development and labor shortage in Thailand have been pull factors to neighboring countries Myanmar, Lao and Cambodia. Moreover, the closer border connectivity and good economy of Thailand have been push factor for Myanmar people to move Thailand and work for better payment. There is approximately over two million of Myanmar migrants are working in Thailand. And, migrants in Malaysia are working at restaurant, construction, fisheries, wire production etc.[71]

Table 1.2.

Registration year	Countries	Official number after registration	Estimated number
Mar-12	Thailand	1.45 million	2 to 4 million
Mar-12	Malaysia	250,000	100,000 to 500,000
Mar-12	Singapore	Not available	100,000 to 200,000
Mar-12	Korea	6309	4000 to 100,000
Mar-12	Bangladesh	Not available	2,000 to 100,000
Mar-12	Japan	8577	7000 to 15000

Source: Andy Hall (2012)

Majority of Myanmar migrants are working as general workers in abroad. However, payment scheme is different depend on countries although they are working as general workers. According to the minimum wage law of Thailand, migrant workers received 300 Baht a day which is equivalent to 10 US $. Nevertheless, this wage law is only affected to registered migrants and influenced to some provinces especially Bangkok. Unregistered migrants and migrants from some provinces for instance Tak,Ranong ,Kan Chanaburi are probably paid cash which are lesser than minimum wage.[72] In Korea, migrants received 5 US $ per hour in which, they can earned 40 US dollar for 8 working hours in a day. This wages are much higher than wages received from Singapore, Thailand and Malaysia for low skilled general workers. However, there is a significant difference in utilizing for migration cost. According to the interview with officer from Ministry of Labor and Employment has

[71] Andy Hall,2012, Mahidoll
[72] IOM,2014 survey results

mentioned that official migration cost shall not exceed 4th times of workers' salaries in abroad. Therefore, migration cost to Thailand's border line is only 150 US dollar and Valdation contract through MOU is mostly 2 or 3 years.

Table1.3. Salary scheme of Myanmar workers in labor

	Malaysia	250 $ in a month
	Japan	1021 $ in a month
	Singapore(general workers)	Between 446 - 669 $ in a month
	Singapore (S pass)	Between 1636 -1859 $ in a month
	Singapore (Domestic)	Between 450 – 500 $ in a month
	Macau	Between 751-1377 $ in a month
	Korea	5 $ in an hour
	Thailand	300 $ in a month

Sources: Ministry of labor

Salaries of the S-pass holders (hold at least diploma) are around 1636 to 1,859 and Employment Pass (hold degree which is accepted internationally) workers are above 2,000 to maximum 4,000 sin dollar. Salary range for domestic workers are between 450 – 500 $ in a month and general workers received between 446 - 669 $ in a month.Especially in Singapore, despite government has formatted salary skill to pay for the employees who have enough education level and experiences, Myanmar workers received the salary amount above table shown are under the official rate, otherwise, employer would prefer to hire their citizenship. Malaysia, Singapore, Thailand, Korea and Japan employ semi-skilled Myanmar migrants particularly in medical personnel, construction planners/architects and electronics professionals and other manufacturing processes. [73]

[73] Myanmar and Migrant Workers: Briefing and Recommendations, by Andy Hall, April 2012

Table 1.4.

Thailand	Singapore	Malaysia
Construction Agriculture and husbandry Fishery related Agriculture related Garment production and sales Domestic work Selling food and drink Whole sale, retail trade and vendor Husbandry related	Domestic workers Nurses, medical personal Accountants Engineers Architects Mechanics Information Technology Electronic professionals	Restaurant Construction Fisheries Wire production Services
Source : Andy Hall 2012, Mahidol		

1.1. Sending labor through Memorandum of Understanding (MOU) between Two Countries

GOM has started legal migration in sending Myanmar workers to abroad. There are two countries that Myanmar has MOU for sending labors such as Thailand and Korea. Malaysia is now in the GOM's plan signing MOU with Myanmar. The number of oversea workers sending to Japan has been increased. In the past, Japan has mainly used the oversea workers from China about 80 percent. After the island disputes occurred between China and Japan, the demand of oversea workers from China has reduced and accepting workers from Myanmar and Vietnamese has been increased .This trend is likely to be upward for the need of labor demand in construction sector as Japan will be host in upcoming 2020 Olympic game which is need to be finished and ready for construction of playgrounds and other buildings.[74]

Recent Ayeyarwaddy news has revealed that there are over three million Myanmar migrants have been documented and stamped MOU (Memorandum of Understanding) on the passport of migrant for visa extension so that migrants do not need to go back Myanmar for reporting process at Myanmar Immigration Department (Ayeyarwaddy, Feb, 15, 2015). Total number of unskilled migrants in Thailand is highest as MOLE has resisted all the undocumented migrants by giving official cards and the total number of migrants in Thailand is currently 1,680,556. MOLE has sent

[74]Ayewaddynews.Feb, 15, 2015)

Myanmar migrants to Thailand through border line (Myawaddy) and charged for migration cost is less than 200 dollars because employment agency has sent them to the closet proximity of Thailand where employers will be waiting to pick up their workers who are supposed to work in their factories. According to the spoken person of MOLE had mentioned that migration cost to Thailand is lowest than other countries. And, they also have policy in reducing migration cost which is not higher than the 4^{th} time salary which is given by employers of host countries. According to the MOLE data, total 31,834 of migrants have sent to Thailand through formal channel in 2014.

Second largest Myanmar migrants are residing in Malaysia. In the past, the aim of Myanmar migrants in Malaysia is to be asylum seeker and going to the third countries afterwards. After the country political reform has taken place, accepting the asylum seekers and refugees from Myanmar have been suspended, because, There are 60,384 of total migrants who were sent by MOLE and have taken accountability in making sure the protection of migrants' right by collaboration with international development partners in accordance with the MOU between two countries. There are currently 202 employment agencies in Myanmar (Ministry of Labor and Employment website). However, only very few agents have given good job status in abroad. According to the news which released in end of 2013 from Singapore employment agency, there are over twenty thousand of house maids are working in Singapore. [75]Nevertheless, total number of Myanmar workers in Singapore is the smallest comparing to Thailand and Malaysia.

1.2. Migrants Sending through Official Channel

There are only a few countries have connected to Government agencies for instance Korea. Thailand, Malaysia, Japan. According to the official data received from Ministry of labor, total registered migrant population in Thailand is over 1.6 million. Of total Myanmar workers in abroad are about 1.9 million.

[75] (www.thithtoolwin.com/2015) The Ladies News Journal.

Table 1.5.

Sending countries	1990-2013	2014	Total
Thailand	82797	31834	114,631
Card issuing to undocumented migrants	1680556		1,680,556
Malaysia	102,153	23,463	125,616
South Korea	14,846	4,082	18,928
Singapore	11,994	430	12,424
Libya	111		111
Cambodia	10		10
Japan	566	387	953
Switzerland	1		1
Brunei	12		12
UAE	693	12	705
USA	18		18
France	8		8
Germany	2		2
Qatar	287	17	304
Kuwait	38		38
Hong Kong		159	159
Total	1894092	60384	1,954,476

Sources: Ministry of Labor

Currently, Myanmar financial system is structured as banks and non-bank financial institutions. In this regards, banks consists of Central Bank of Myanmar, 4 state owned Banks, 19 Domestic Private Banks and 9 international banks recently have received licenses. Non banks consists of (1) State owned insurance Enterprise and (12) Private owned Insurance companies. There are four main private banks have received authorized licenses in providing workers remittance (CB, AGD, KBZ and Ayeyarwaddy Bank). These 4 banks have accepted workers' remittances only from Thailand, Malaysia and Singapore as larger number of Myanmar workers are working there than other countries. Unlike Western Union, these four banks have provided special services fee with very low amount to Myanmar workers. However, no popularity of using this official channel among Myanmar community in abroad. All these four banks have linkages to Money Gram (England), Western Union (US), X-press Money (Dubai), IME, May Bank, CIMB, Sin post, Krohn Thai Bank, Bangkok Bank, Siam Commercial Bank etc. Beneficiaries are not only unskilled migrants also included white collar workers. According to the above illustrated figures, the inflows of remittances through formal channel from Singapore and Malaysia are higher double than remittance inflows from Thailand. The highest remittance inflows are coming from Singapore. In this particular issues, the size of the remittance volume is doesn't relate to the number of migrant population but it may relate to the individual earning, awareness in using formal banking channel, time availability and convenience location while going to the banks for using services.

1.3. Remittance Inflows through Formal Channel

Table 1.6.

Sr	Financial year	Malaysia	Singapore	Thailand	Other countries	Total
1	2012 (Feb-March)	275,633.03				275,633.03
2	2012-2013	3,295,514.09	852,651.03	431,697.71	51,470,474.87	56,050,337.70
3	2013-2014	1,881,535,92	2,758,730.66	2,231,497.58	131,548,561.02	136,538,789.26
4	2014-2015 (Dec)	3,914,494.62	6,035,003.35	1,993,868.42	152,412,084.67	164,355,451.06
	Total	7,485,641.74	9,646,385.04	4,657,063.71	335,431,120.56	357,220,211.05
	Average	2,495,213.91	3,215,461.68	1,552,354.57	111,810,373.52	89,305,052.76

Sources: Ministry of Labor and Employment

1.4. Remittances Markets, Formal and Informal Channel

Since the largest sizes of migrants are working in Thailand, this study made the scope to focus on the characteristics of migrants from Thailand. The best reason for choosing the informal channel is easiest way and the most convenience way that is transfer via Hundi because they just make a call to the agent and the money is already send to home in Myanmar even sometimes had not paid the money in Thailand yet, thus using Hundi is much more convenience for them. For the transfer fee they do not know exact amount for the currency exchange rate and they do not know how much for the fees that they had been charged. They just paid as the Hundi asked for example: 3200 Baht for 1 lakh Kyat and it is sometimes the rate were up to 3500 THB to 1 lakh Kyat. They do not think it is cheap but then according to the conveniences, they paid for that rate and they think it is fair enough. Western Union provides no fees remittance service but still people are using Hundi as always. Majority of migrant workers in Thailand here are from remote area in Myanmar. It is not convenient for migrants' family to withdrawal the remittance unless Western Union has scatter branches in many remote places. Even the market is varying and there are more choices, Hundi is still well known and more used than any other channel at present.

1.6. Strengths ofAgents to Compete the Formal RemittanceMmarket

Agents are able to open and reached to migrant community at their factories area. Also open during the weekend and some of them are open at the Myanmar restaurants. No time limitation to contact with agents/brokers. Majority of factories used cash payment system for migrants' salaries. Hondi dealers are taking over in this informal channel for many years. The reasons to using Hundi channel is because it is easy, no complex process, convenience and reliable to them. They know there are so many banks that have been providing remittance services but then there were no one in those we had found were using formal remittance services.

1.7. Ways to Expand Informal Channel to Formal Channel

Remittance counters from domestic and abroad should also open in weekend so that Myanmar workers are able to come during their off days. Employment agencies should also involve for helping and educating migrants about the financial knowledge. Non-bank institutions should be considered to provide authorized license to enhance efficiency and competition to reduce the cost for users. Ensuring transparency of fees charged exchange rate applied .Standardization of protocols and messaging formats .Banks need to advertize their services and banking knowledge to the migrants and recipients'' community.

1.8. Constraints of Mobile Banking Implementation in Myanmar

The biggest constraint for extending the banking services of oversea remittances is lack of infrastructures and technology. Unlike other country, fiber system has not widely use in Myanmar. Even where cards are accepted, payment terminals often don't work and are hindered by poor Internet and telephone connectivity and insufficient power supply[76] .Out of date in using software system in banking sector is major issue. And insufficient number of ATM machine in rural and urban has been discouraged of people using banking system and ATM cards. There are 1,000 of ATM machines are operating in Myanmar which is only one bank possesses in other countries like Thailand for instance Kasikorn bank has over 1,000 of branches.[77] Thailand, with a population of 68 million, has total 47,759 ATMs, and 264,236 Thai merchants have payment terminals, according to the Bank of Thailand.[78]

Despite mobile banking has started recently, it is still needs supporting from international banks or telecom industries to create the modern banking software system and more importantly, internet connection and distribution of cheaper mobile phone to 70 % of rural population and strong guarantee system and security of mobile system to receive the trust of users are the way forward in getting public attention in using mobile banking system operation. In order to upgrade Myanmar mobile banking system, cooperation with international banking sectors and their investment is critical.

There are 6 domestic banks have giving mobile banking services (CB,AYA,MyKyat,YOMA) and are in the final stage for indentifying the major constraints in system operation. Among them Yoma Bank has joint partnership with Telenor mobile industry to overcome the technology and capital requirement to penetrate the market.[79]

The main problem for implementing mobile banking in Myanmar is bank population is only 20% of total population using formal financial services.[80] The system of the mobile banking is sending money through mobile phone, however, the habit of using cash is addicted to Myanmar people. And, it is also need to have people trust in the name of bank which is operating the system. Nevertheless, if the system is widely spread in rural and urban, the number of mobile banking users would have increased. In order to increase the mobile banking system, the need of agents entering into the market is vital. Agents can be everyone such as small shop owners; mobile phone shops, restaurants and are able to strengthen the agent network. In this regards, micro credits and oversea remittances are able to transfer through mobile network. Moreover, telephone bill, electricity bill could also transfer through this system.

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[76] www.bloomberg.com by Sanat Villikappen,October 21, 2013
[77] Interviewed note of U Than Lwin, Director of KBZ Bank
[78] www.bloomberg.com/news/articles/2013-10-20 by Sanat Vallikappen, October 21, 2013
[79] www.mmtimes.com, November 24,2014
[80] Central Bank of Myanmar(www.centralbankofMyanmar.org)

Table 1.7. Labor Force Participation and Employment Situation in Myanmar

Table 7 Labour Force Participation and Employment

	Poverty Transitions				2010 Poor
	Entries	Escapes	Chronic Poverty	Non Poor	
Labour Force Participation Rate	67.1 (0.91)	69.4 (0.83)	71.4 (0.82)	65.1 (0.60)	69.4 (0.58)
Unemployment Rate (6 months)	3.7 (0.85)	0.3 (0.01)	1.1 (0.22)	0.4 (0.01)	2.4 (0.34)
Unemployment Rate (7 days)	4.6 (0.91)	1.7 (0.32)	3.0 (0.40)	2.1 (0.23)	3.6 (0.34)
Underemployment Rate (7 days)	37.8 (1.96)	40.0 (1.46)	38.7 (1.78)	36.8 (1.48)	38.0 (1.63)

ource: IHLCA Survey 2009-2010

2. Literature Reviews

2.1. Causes of Migration

The trend of migration is increased due to the causes of political, economic, social, environmental and geographic situation in source and host country. Each of these causes for migration is primarily affected by the pull and push factors.

2.2. Social factor

The pushing factor from the social perspective is that people are being marginalize and alienated in their country. Since, people are preferred avoiding for social pressure, they plan to migrate legally or illegally to other country.

2.3. Political factor

The second cause of migration is political persecution and instability in the country affect to a larger number of people migrations. Some migrants are impelled to cross national borders by war or persecution at home. These migrants may be considered refugees or asylum seekers in receiving countries. The 1951 Geneva Convention Relating to the Status of Refugees defined the qualifications for such migrants and bound signatory countries not to return these newcomers to places where they could be persecuted. According to the text put forth by the Convention, a refugee is "some who is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religious, nationality, membership of a particular social group, or political opinion" (1951 Convention Relating to the Status of Refugees). In 2011, the total worldwide "population of concern," which includes refuges, asylum seekers, internally displaced persons and stateless persons was estimated to number 35.4 million people; 10.4 million of those people were refugees. Additionally, 80 percent of the refugee population was hosted by developing, rather than developed nations[81] (UNHCR Statistical Yearbook 2011).

2.4. Environmental Problems

Environmental problems and natural disasters often cause the loss of money, homes and jobs. In the middle of the 19th century, for example, Ireland experienced a famine never before seen in the country's history. By late fall 1845, the main staple of the Irish diet, the potato, was practically wiped out. With the government not clear on how to respond, many people died of starvation. The famine killed hundreds of thousands and forced millions of Irish to flee. Between 1841 and 1851, the Irish population decreased by 1.6 million people, or approximately 17% of the total population, due to starvation and emigration[82]

Other push factors include "primitive" conditions, natural disasters, poor medical care, as well as slavery and political fear.

2.5. Migration, Employment and Development Connection

The connection between migration and employment, as a link between international migration and economic development is critical for poverty reduction. The major reason for migration is the wages gap between the migrant receiving and the migrant sending country. When wages increase with economic development in host country that attract the people decision to migrate in sending country. However the earnings of migrants in their host countries are lower than those of native workers as migrants often lack the necessary qualifications and knowledge of the local language.   Conversely, risen wages with the job opportunity in sending country that will attract the people to come back and work in their origin country. If economic growth continues to be stable and developed in origin countries with reducing income differences, regional disparities will be significantly reduced and migration will decrease further. Meanwhile, human migration also affects the host country. The host country can benefit from the immigrants as most immigrants are willing to be paid a lower price for labour. This creates job loss for the natives and will cause issues between the native people and immigrants. The host country can also benefit from the immigrants because if they are highly educated, they can educate younger generation of the host country, hence giving a brighter future to the next generation of the host

[81] UNHCR Statistical Year Book 2011
[82] Daniels 2002

country.

2.6. Migration Cost

There are two types of migration. Those are internal and external migration. Internal migration is defined by rural and urban migration. The term external migration is referring to people moving from one country to another by which expensive cost for migration is considered critical. In this migration cost it is classify by two types of costs which are direct cost and indirect cost. Direct costs include information cost for job matching services, documents costs and transportation costs etc. The indirect costs include psychology cost which is due to the affect of family separation and the cost of being unable to participate in the political situation in the destination country. In other countries especially migrants sending countries Philippine, Bangladesh for example are trying to regulate the distributions of these costs between migrants, employer, government and employment agency. In Myanmar, migrants who cross border to neighboring countries like Thailand, Bangladesh, India travel by bus or cross sea route has relatively low cost, while those who are flying to destination with highly variable cost.

In Bangladesh, Governments indirectly regulate migrant transportation costs via the prices charged by national or flag carriers as well as their policies towards discount airlines and schedules. For example, it is far cheaper to fly from Bangladesh to Malaysia than to Gulf Cooperation Council (GCC) countries because of the presence of discount air carriers on the Bangladesh–Malaysia route. In Bangladesh, migrants who are taking loan with 10 percent interest to use for the requirement of migration cost.[83]

Bangladeshi Government proposed the new model of microfinance at the (GFMD) Global Forum for Migration and Development in 2007. GFMD had submitted donor fund to create sustainable pre departure loan program. These new model replace the beneficiaries of pre-departure loan for clients are migrants and repayment will be coming through remittances. In this arrangement, better control and screening of employment contract between NGO, recruitment agencies, bank and government are important in the consideration for loan agreement. Many migrants in Bangladeshi have loan burden for pre-departure cost and they pay 10 percent of interest per month on loan to migrate. Most Bangladeshi female migrants going abroad where they works as domestic workers with the two years contract. Many of them stay in abroad five or more than two year contract before returning towards their

[83] Reducing the Cost Burden for Migrant Workers: A Market based Approach, , Philip Martin , August 30, 2009

homeland. [84]

In the case of Philippine, the government creates three agencies to serve and protect migrants, such as Philippine Overseas Employment Administration (POEA),[i] Overseas Workers Welfare Administration (OWWA) and Reintegration of Overseas Foreign Workers (OFWs). This centre stand for regulating recruitment and provides pre departure orientation, labour attaches stationed at consulates abroad provide assistance to migrants, operating centres in areas with the concentration of covering the cost of emergency repatriation and provides various services to migrants' families in the home land. The costs for these activities are covered by migrants in abroad. Legal agreement for unskilled Filipino migrants must work in abroad at least three years to repay the debt.[85]

2.7. Migration and Remittances

A risen remittance generally associated with the reduction of overall poverty in the migrant sending country. Most of survey findings revealed that Migrants' families use the remittances mostly in consumption rather than investment. Nevertheless, even the use of consumption in household could also generate their living standard such as in health care, education, durable goods like TV, fan, refrigerators and house repairing. Whether the uses of household spending are investment or consumption, their spending will produce some job creation through local multiplier affects. Therefore, recipients' spending will encourage other many households to go abroad instead of working in the farming activities in which labour supply in the farming will reduce and use remittances as a substitute for farm earnings. In the macroeconomic point of view, this issue might be considering results of reducing domestic labour supply.[86]

3. Research Methodology

3.1 Objective of the research

Objective of the research is

The 1st to examine the remittance sending channel through informal method. The 2nd

[84] Reducing the Cost Burden for Migrant Workers: A Market-based Approach ,Philip Martin, August 30, 2009

[85] Migration and Employment,OECD,2009,Page 13

[86] Migration and Employment,OECD,2009 Page 8, Jeff Dayton-Johnson (OECD Development Centre), Antje Pfeiffer (GTZ), Kirsten Schuettler (GTZ), Johanna Schwinn (Consultant)

is verifying the pattern of recipients' spending and saving behaviours. The 3rd is to analysis the sources for migration cost and the 4th is availability of loan sources in migrants' families residing areas. The 5th is investigating the characteristics of migrants' families' consumption/saving behavior.

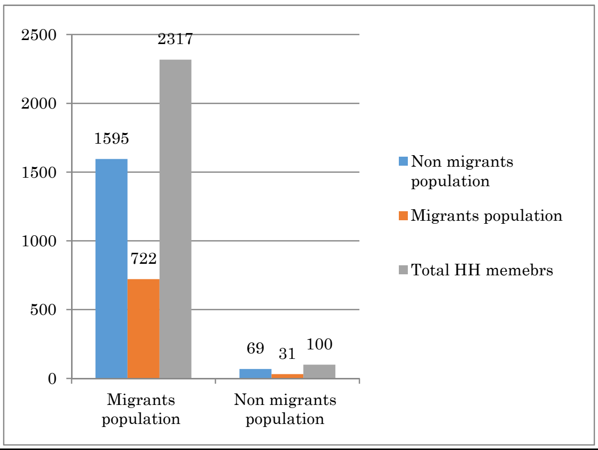
3.2 Research Questions

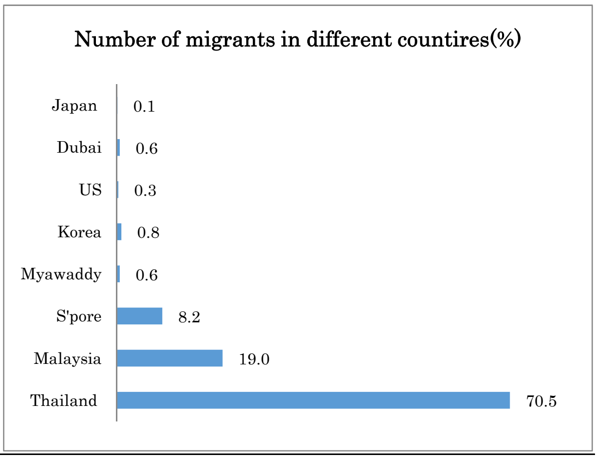
1. What are characteristics of Myanmar migrant families in Mon state?
2. What motivation factor affect to causes of migration to household?
3. What channel that migrants used to send the money and what reason for choosing those channels?
4. What are spending/saving behaviors of recipients' in household consumption?
5. How do families afford for migration cost when they decide to migrate?
6. What credit sources are available in the native town of migrants' families?

Migrant's transfers can potentially play an important role in least developed countries and it is important to understand how recipient households perceive and use them. The question on what remittances represent for the households is still a topic of debate. The way remittances are spent on consumption or investment goods is strictly determined by the context of the analysis. Some countries are able to promote a productive use of remittances better than others. This study contributes to the existing debate by investigating on migrants' characteristics, the use of remittances on household expenditure behavior in Mon state. The data used the 2010 data which was collected by CESD staffs in Mon state. Household sample size was collected total 435 in 5 villages named Mawlamyaing, Paung, Thanphyuzayat, Chonezone and KyikeMayaw. Snow ball sampling was used with the structure questionnaire as well as special trained to local enumerators with the close supervision of team leaders while conducting the survey in Mon state. The data conducted focusing on household with migrants moving mainly to abroad. It is therefore, can be considered the transfer could differ not only in their amount but also respect to their origin and can affect how they are perceived by the receiving households.

4. Survey Findings

Table 4.1. and 4.2. Population of migrants and non-migrants (numbers & %)



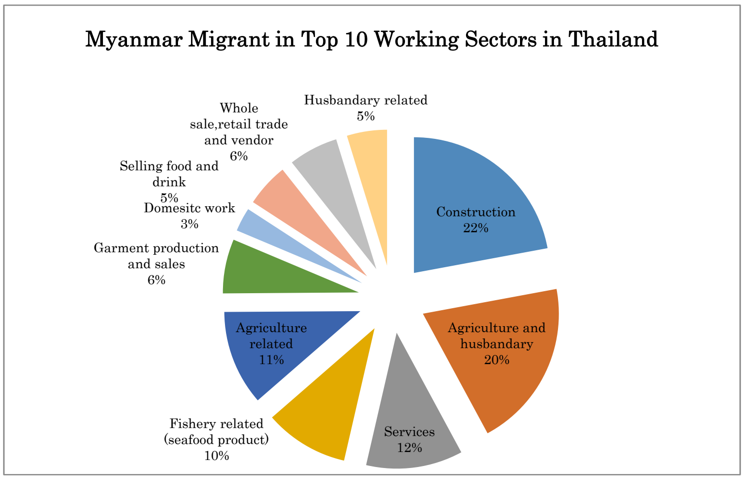


Of the total household population 2317, the number of migrant population is 31 % and non migrants' population is 69 %. Among the 31 percent of migrants' population, the highest 70.5 % were migrate to Thailand. The second 19 percent of migrant population moved to Malaysia and third largest population of migrants go to Singapore. Of the total population sample, 0.6 % of people moved to just Myawaddy which is border township of Myanmar and Thailand. According to these findings, household members from Mon state are largely moving to Thailand than other countries.

Top 10 working sectors of Myanmar migrants in Thailand

In general majority of unskilled migrants in Thailand are working at 3D jobs which indicate the jobs that migrant's are working in dangerous, dirty and degrading work environment. Most of their jobs do not need special skill but are relating to risk of their live, health and social status. According to the data in the table ( ) has shown that larger share of Myanmar migrants are employ at the construction sector (89%), agriculture and husbandry (83%),services (52%), and fishery related sector (52%) etc. (Department of Employment, Ministry of Labour,2012.

Table 4.3.

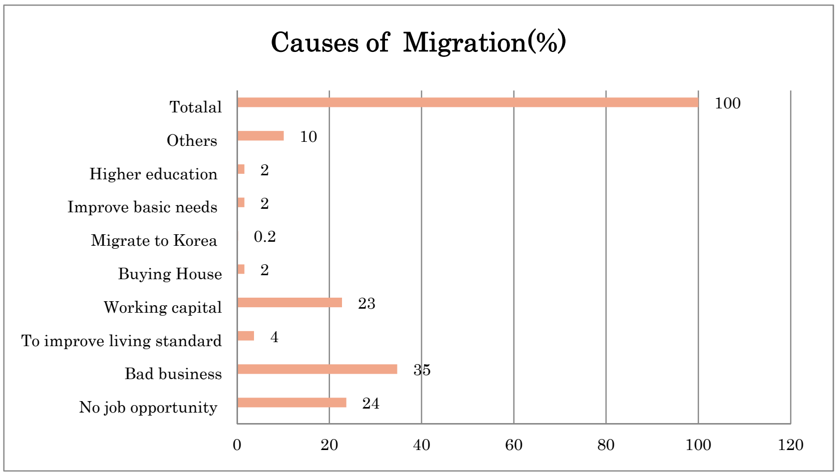


Source: Department of Employment, Ministry of Labour (as of May, 2012)

Causes of Migration

In terms of the causes of migration which is illustrated in this figure (4.4), has shown that at least 2 or 3 household members are working in Thailand in each of the family. According to the results, 35 % of migrants moved to abroad due to their bad business in hometown followed by the second highest of 24 % population were migrated due to the lack of job opportunity. And 23 % of household migration reason is due to the need of working capital for their business and 10 % of populations were with the other reasons for migration. These findings have highlighted that external migration is significantly affected by economic reason, accessible to employable jobs and credit need for running business.

Table 4.4.



Characteristics of migrants' families' expenditure in Mon state

The data showed that international remittances have the stronger effect on the household expenditure behavior consumed on food, durables goods, education and investments are items in the budget share in which the average differences between treated and non treated households significant. Those receiving international transfers spent on average less on food and more on social, education and investment. These results provide some signal in productive use of remittances. In the figure, it has shown that 32 percent of household spent for supporting materials in their investment. The second largest portion is used for buying assets and repairing cost for firm's materials. Food expenditures are used around 3 percent, health and education expenditure used 8 and 5 percent. Interestingly, 9 percent of expenditures go to donation which is equivalent to the cloths and home accessories which are, indeed, higher than health, education, food and the rest of others expenditure.

Table 4.5. Migrants' families' expenditure in Mon state

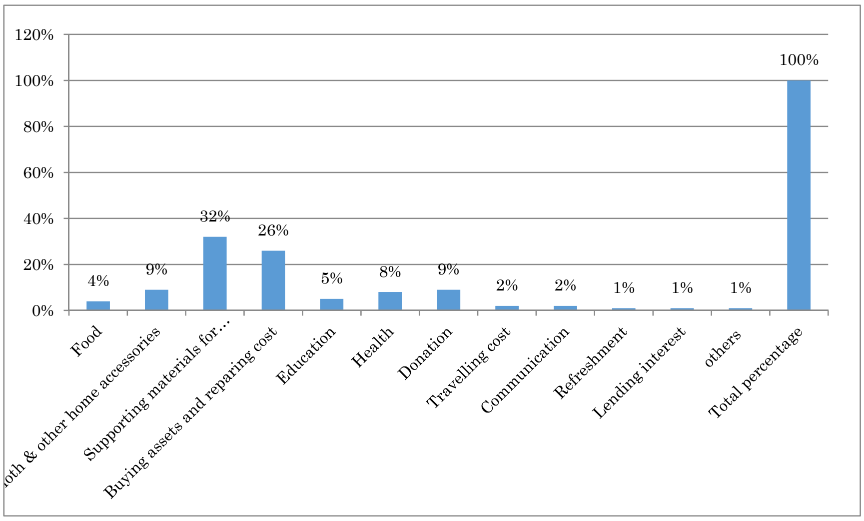
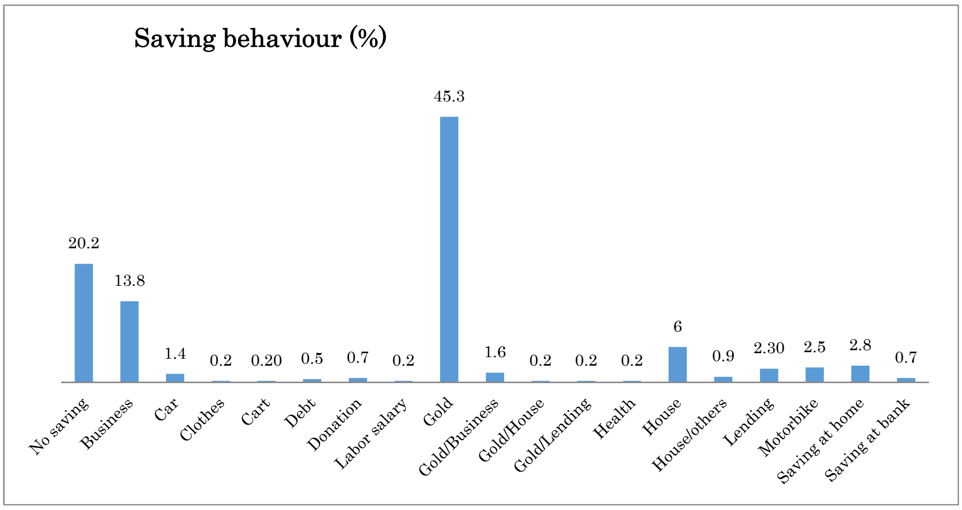
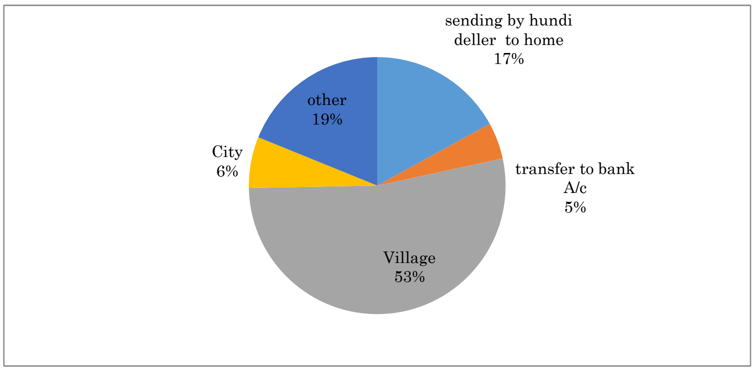


Table 4.6. Saving Plan of Recipients' Families



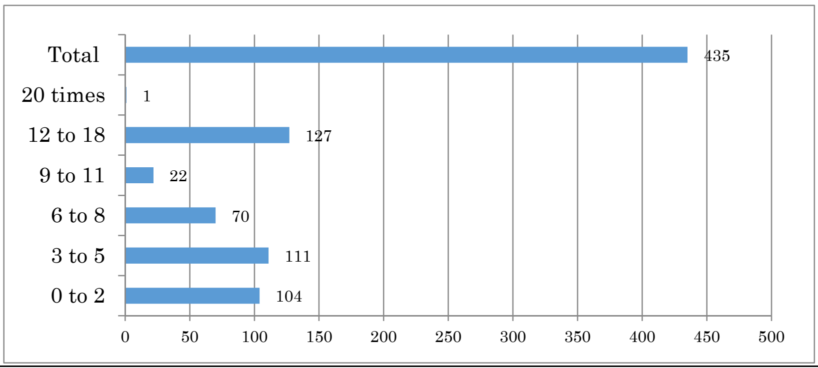
Migrants' families are saving money in different ways. In the figure we can actually see that majority of them are not saving their money at bank. Among the total 435 samples, only 3 of them are saving at bank. And, 12 of them are saving money at home individually. And, 88 of them do not have any saving activities. Largest group of them 45% recipients' are saving gold instead of money. Since inflation in Myanmar has led to the value of saving kept in bank deposits fall rapidly, therefore, household members are prefer in saving gold which is more profitable and have much more trust as a store of value. After a major bank's crisis in 2003, three banks were completely collapse which affect to the lack of trust on banking system. However, 66 of them are saving money for future business investment or to expend their existing business in certain period of time. Third largest group 26 of them is saving money for buying house in the future. The characteristics of the rest of recipients are saving money for buying motorbike or lending to others.

Table 4.7. Channel for Money Transfer



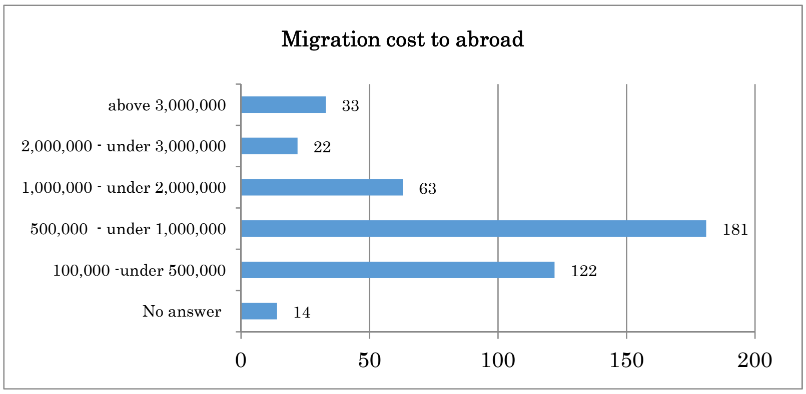
The survey findings revealed that the most instruments for using money transfer channel is significantly dominance by informal funds transfers. Within the informal funds transfer, hundi is the dominance device. They are giving indifferent ways of money transfer schemes. Using bank in Thailand is impossible for illegal Myanmar migrants due to the requirement of documents in filling the forms. Although legal migrants have bank accounts, they are not preferred using formal channel. Because, formal banks are opened during the working hours which is inconvenience for migrants going to the banks and also they have to work at least 6 days in a week. Migrants prefer in sending money at anytime through convenient channel. As demonstrated in figure (4.7), 53 % of hundi from Thailand sent to the village's hundi dealer which is the home town of recipient family.17 % of recipients have received the remittance at their home with the door to door services that given by hondi dealers . And, 6 % of recipients need to go to the city of their township to withdrawal the remitted money from hondi dealer. Among them only 5 % of hondi dealers sent the money to bank where migrants' family have to come to withdrawal it.

Table 4.8. Remittances Transfer Times within a Year (2009)



The above figure has shown that frequency of remittances transfer times use to occur quite often due to the needs of recipients asking migrants to send the money. The results of this finding have proved that migrants are not saving their salary in order to send the big amount at one time within a year. In the figure has shown that 127 of migrants have 12 to 18 times in sending money while 3 to 5 migrants have 111 times. Continuously, 104 times were sent by 2 migrants and 1 migrants sent by 20 times. Lastly, 9 to 11 migrants sent 22 times plus 6 to 8 migrants sent 70 times in a year.

Table 4.9. Migration Cost to Abroad

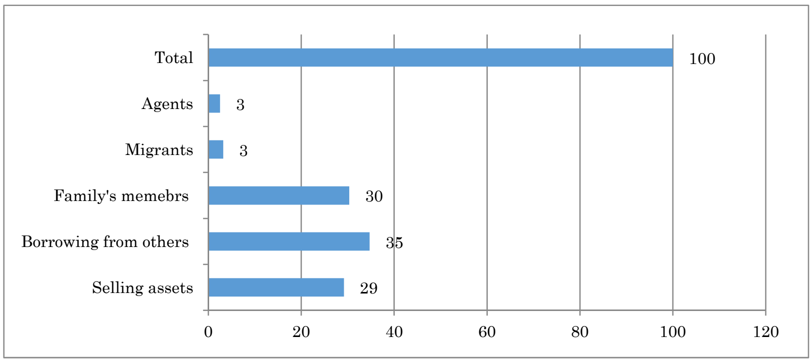


The cost of sending remittance is a key driver of remittance flows. Consequently, reducing remittance cost has been identified as a key policy objective to facilitate these flows.

The cost of migration is very much depending on the countries and also destination of migrants who come and moved to oversee. In the past the movements to abroad especially Thailand and Malaysia is mostly used informal channel and highly rely on broker in moving and finding job. In this regards, financial cost for migrating to those who are living closer to the border are minimum with worker able to cross working through the forest or some regions are far distant to the closet region in Myanmar crossing over to Thailand.

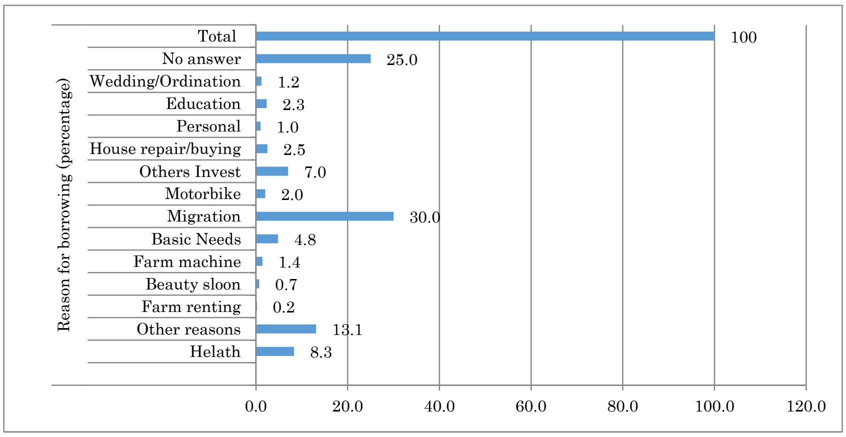
Two ministries of Labor from Myanmar and Thailand started MOU for Myanmar migrant workers for issuing passports and providing visa for Migrants to work in Thailand. After historical reform has started in 2011, there has been tremendous engagement between Myanmar and host countries to make legal migration to provide visa for oversea migrant worker.

Table 4.10. Sources for Migration cost



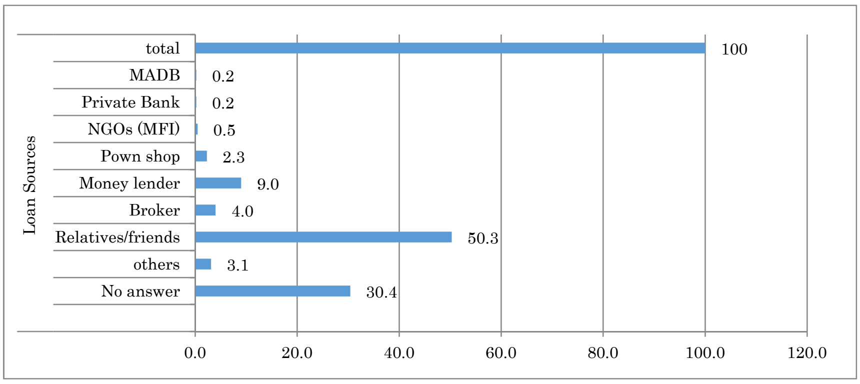
Constraint of migration is associated with the cost of migration in which migrant and family member has to find the sources of money to utilize for migrating. If they don't have enough money, have to borrow or selling their owned assets. In the figure (4.10) has illustrated that 35 % of families have had borrowed from others (money lender, friend, pawn shop). And, 30 of families were supported by family members. Interestingly, 29 % of families were sold out their assets to use for migration cost. Only 3 % of migrants have spent their owned money to go abroad and the rest of 3 % borrowed from Agent/broker who helped in migration process. Having social network to migrants may find alternative ways to support travelling to abroad by helping information, location, transportation and suitable agents. Social capital for migration process in Myanmar is primarily important when migrants are planned to go abroad. Noticeably, migrants' families, relatives, friends and community play major roles in supporting of especially for migration cost. There is no initiative of government, private or NGOs body in Myanmar yet for the lending mechanisms in migration process. If there is a mechanism for reducing the pre departure debt will be beneficial for potential migrants and their families.

Table 4.11. Reason for Borrowing Money



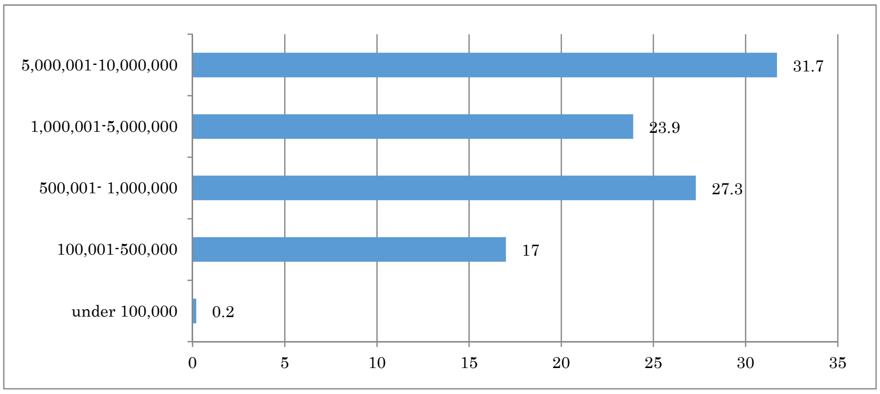
Credit needs for household members are critical issues in Myanmar. In this regards, availability of credit sources are lowest unit among the ASEAN countries. Majority of population has been relying on their relatives and money lenders. Mon state, survey findings have revealed that the highest percentage of reason for borrowing is due to the need of money which is 13.1 %. The second highest particular reason for borrowing is in order to use for oversee job in migratory process. Therefore, the need of loan to utilize for going abroad is also significantly important for families and potential migrants. And, the smallest reason for borrowing loan is utilizing in renting firm. However, there are missing value of 51.3 per cent respondents are not answering this question.

Table 4.12. Loan Sources in %



Availability of loan sources in community is very much critical for the household members. Since the banking sector and formal financial institutions are under developed, access to credit is major constraints in Myanmar. There are only one significant source is community , friends, relatives and family members who are very much closed and has stronger network which is one of the valuable human capital in Myanmar society. The survey findings also have shown that 40.5 per cent of respondents were received loans from their relatives and friends. However, this network is not covering the whole population in which the demand of credit market in Myanmar is potential market to expend the credit supply in rural and urban.

Table 4.13. Total Loan Amount (percentage)



Household members who borrowed loan amount in Mon state are mainly come from relatives and friends who have shown in the previous figure so have continued in the figure by revealing the size of loan. It has shown that household members who took the larger loans which are 5,000,001 and 10,000,000 kyat and are 31.7 per cent at the highest level. Although sources of access to loan is limited the size of loans that respondents received are very large.And, the next figure has shown that 109 of respondents were received the total amount kyat 140,200,000 which is between 1 per cent to 5 per cent.

Table 4.14. Total amount of remittance sent within a year (n=435/2317)

Countries	Migrants	Non Remitters	Remitters	Amount in USD $	Percentage
Thailand	509	263	246	446,760	44.3
Malaysia	137	34	103	225,350	22
Singapore	59	8	51	263,200	26
Myawaddy	4	3	1	0	0
Korea	6	0	6	53,600	5.3
USA	2	1	1	2,000	0.2
Dubai	4	1	3	11,700	1.2
Japan	1	0	1	6,000	1
Total	722	310	412	1,008,610	100%

Although individual remittance flows to Myanmar is smaller amount, the total volume of remittance flows within a year is over one million US $ dollar which is mainly coming through informal channel. However, the amount of remittances and remitters are precisely related to where remittances are coming from. Despite the number of Myanmar migrants in Thailand are largest; the amounts of their remittances and percentage of remitters are significantly smaller than remittance flows from Singapore, Malaysia and other advanced countries. In the figure has been shown that Malaysia and Singapore have larger remittances volume with higher number of remitters followed by other countries like Korea, USA, Dubai and Japan. However, 246number of migrants from Thailand sending remittance of the total 509 migrants' population. There is a relationship between the differences of worker earning, skill level and educational background.

Table 4.15. Summary of sending remittances amount picture within a year

Total	1,008,610
Minimum	30
Average	2,606
Medium	1,500
Mode	1,200

The above table 4.15. has shown that the average remittances amount to families have received about 2,606 $ in a year. And, the frequency of remittances to

Myanmar is about 1,200 $. Surprisingly, the minimum amount of remittance sent by migrants within a year is 30$. Migrants from Thailand must remit to full fill their family expenditure. However, sometimes they could afford to send only 30 $ as minimum amount. This figure is representing that how vulnerable migrant income in Thailand working as low skill workers.

5. Summary and Concluding Remarks

Although Myanmar has transformed into rapid political and economic reform in 2011, it will take several years to strengthen the foundation economic institutions. Among the South East Asia countries, GDP per capita in Myanmar is lowest until now and job opportunity for low skill workers in Myanmar is still limited. Therefore, Migration trend of Myanmar will keep increased although Myanmar migrant workers are working 3D jobs in other countries and small individual remittance sending to Myanmar. It is critical for Ministry of Labor to enhance the protection of Myanmar migrants in abroad and to ensure that grabbing positive impact from migration and remittances to increase the growth of economy. There are also no accesses for Myanmar migrant workers for health insurance, medical services and educational opportunity for their children in host and receiving countries. Therefore, it should provide for education and health care for migrants' children.

Evidence has shown that migrants' families spent their income with remittances for investment and buying farm facilities. This finding has highlighted migration and remittances could impact to family welfare positively. However, 40 % of migrants' families are taking loan for migration and 50.3% of them were received loan from their friend and relatives. Moreover, 45.3 % of migrants' families are buying gold as their saving due to unattractive and poor trust on banking services. These findings are an opportunity to those who are interested to provide the loan/saving platform so as to fulfill the space for unbanked population. Nowadays, in developing countries like Philippine and Bangladesh has giving financial services to migrants and families through MFIs(Microfinance Institution).Myanmar still don't have introduced this MFIs mechanism to unbanked migrants. Linking migration and microfinance has the potential to expend opportunities for migrants and their families as well as their communities and county, if the planned and approach are managed in a proper way .

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Appendix Part

Appendix 1 (to Part I)

(Information Memorandum)

Myanmar's Fiscal Regime in Extractive Industries and Extractive Industries Transparency

Min Zar Ni Lin
(MDRI-CSED)

1. Background

Myanmar is the largest country in mainland Southeast Asia, and 40th largest in the World, bordered by China to the north, Laos to the east, Thailand is the southeast, Bangladesh to the west, India in the northwest, and with the Bay of Bengal to the southwest. It has a population of about 53.26 million. Myanmar is an ethnically diverse country, comprising eight major ethnic national races with about 135 ethnic groups. Also it is rich in natural resources, which is represented by a major share of export revenue and significant contribution to the National Income. The reserves of natural gas are estimated at 410 billion cubic feet onshore and 11 trillion offshore (35th highest in the world). In addition, Myanmar is the largest jade producer in the world and produces 95% of the world's supply of jade.

Historically, Myanmar's economy is dominated by the agriculture sector and around (70) percent of the population is located in rural areas[87]. However, today, less than 20% of agricultural land is used for farming. Before the 1960s, Myanmar was one of the wealthiest countries in Southeast Asia. It was once the world’s largest exporter of rice and exported 75 percent of the world’s teak. However by 1987, Myanmar had become one of the least developed nations in the world, according to the United Nation’s ranking. Myanmar became independent from British rule in 1948 and practiced parliamentary democracy until 1962. In 1962, the socialist government took power and changed the system of government to a state planned socialist economic system. Due to the economic failures of the socialist government, a pro-democracy demonstration erupted nationwide in 1988. After that, the socialist government was replaced by a military government, and practiced a market based, crony capitalism economy and an authoritarian political system until 2011. During the military regime, Myanmar ranked 149th out of 187 countries in the Human Development Index (HDI)

[87] The Republic of the Union of Myanmar, Population and Housing Census of Myanmar. (2014). Provisional Results

report in 2011[88], and ranked near the bottom of the Corruption Perceptions Index (CPI) list[89]. After two decades of military government rule, the multi-parties election in Myanmar was held in November 2010, and a government led by U Thein Sein was formed. Before 2011, the level of budget transparency in Myanmar had stagnated, and it is hard for citizens to access the government budget and revenue collected, in public. Starting from FY 2012-13, the Government has been publishing the draft budget discussed in parliament in the state newspaper and in the National Gazette, but detailed revenue information is not included.

Under President Thein Sein's government, Myanmar opened up a new chapter through a triple transition - from authoritarian regime to democratic political system, from centrally planned economy to market based economy, and from decades-long conflict to a peace process. In late 2012, the Government of Myanmar developed the Framework for Economic and Social Reform (FESR), to outline policy priorities and strategies of reform and to provide linkages to the exiting government’s programs and the 20 year long-term National Comprehensive Development Plan. In FESR, good governance, better natural resource management and transparency in Extractive Industries become one of the prioritized strategies of the Government of Myanmar in order to escape the curse from its resource wealth.

In December 2012, the Government of Myanmar committed to implement EITI principles and established the Myanmar EITI leading authority, headed by a Union Minister of the President's Office. In February 2014, the Myanmar EITI Multi-Stakeholders Group was formed, which is comprised of government, companies and civil society representatives, to implement transparency and good governance in the extractive sector. In January 2013, the Government of Myanmar established the National Energy Management Committee, chaired by the Union Minister of Energy, and developed the National Energy Policy with the objective of energy security for the sustainable economic development of Myanmar.

Myanmar’s ease of doing business ranked by the World Bank increased to 177th out of 189 countries in 2015, compared to 182nd out of 189 countries in 2014. The ranking in the Corruption Perceptions Index increased to (157) out of (175) countries in 2013, compared to (172) out of (174) in 2012. According to the International Monetary Fund, Myanmar's GDP is projected to increase to US$ 60.3 billion in FY 2014-15 from US$ 56.2 billion in FY2011-12.

Extractive sector development in Myanmar is still at an early stage with potential to develop, compared to its competitors from other ASEAN countries. According to Fraser Institute

88 The Human Development Index is a measure of achievement in the basic dimensions of human development across countries, prepared by the United Nations Development Programme.
89 The Corruption Perceptions Index is prepared by Transparency International, and ranks countries and territories based on how corrupt their public sector is perceived to be.

Annual Survey of Mining Companies (2014), Myanmar is the most attractive country to invest in the mineral sector among ASEAN countries.[90] Within this context, Myanmar has made some progress on fronts, to promote broad social and economic development. However, within a framework of limited information, the result of current development is mixed with uncertainty as to whether this progress will contribute to the country's economic development and the wealth of its citizens.

This paper is intended to understand the current institutional and fiscal regimes of the extractive sector of Myanmar and to examine how EITI implementation in Myanmar contributes to the extractive sector development of Myanmar. In addition, this study is intended to articulate the further discussion and research beyond EITI for better natural resource governance.

2. Overview of Extractive Industries in Myanmar

Myanmar has a huge number of known mineral occurrences including gold, copper, zinc, tin, nickel, lead, manganese, tungsten, iron ore, limestone, coal, rubies and jade, oil and natural gas. Oil and gas and mining extractive resources in Myanmar still remain a reliable strategic sector for the national economy. Extractive industries contributed (41.9%) of total export revenue in FY 2004-2005 and the share of extract industries has increased to (54.3%) in FY 2014-2015. In the past, most mining projects were operated by state owned enterprises and the mining law and policy are designed mainly for state owned enterprises. Additionally, there are proper environmental related guidelines and provisions in mining law and regulations. Around 2009 - 2011, the Myanmar government privatized over 95% of mining projects and encouraged private sector participation in the mining sector. Most of the private investors are domestic due to limitations in foreign direct investment (FDI) law. In some cases, some foreign investors use a local proxy for mining operations and exports. Therefore, in 2013, the Myanmar government enacted a new foreign direct investment law to attract foreign investors and create an enabling investment environment. To align with new FDI law, the Ministry of Mines also amended the exiting mining law and submitted it to parliament in early 2014. The amended mining law is currently being discussed in parliament and is expected to be approved in the early of 2016.

The total amount of foreign investment has grown to US$ 3226.565 million in FY 2014/15 (as end of 28/2/2015), compared to US$ 47.382 million in FY 2002/.[91] In the year 2014

90 Fraser Institute Annual Survey of Mining Companies (2014) by Taylor Jackson. Survey Director; Kenneth P.Green.
91 Yearly Approved Amount of Foreign Investment (By Sector). Directorate of Investment and

(budget), the non-tax contribution of the oil, gas and mining sectors to the state's budget reached approximately 6.5% of GDP.[92] Natural resources contribute significantly to Myanmar's national budget, with natural gas revenues providing the largest source of foreign income for the government. Gas, and to a lesser extent oil, revenue contributes to Myanmar's budget through both direct and indirect channels (tax and non-tax revenue). In 2012–13, natural gas exports to Thailand, by far the largest single commodity sold, totaled $US 3.5 billion or 30% of total exports from Myanmar.[93]

The Myanmar government launched a bidding round for 18 onshore oil and gas producing blocks in January 2013 and for 30 offshore blocks in April 2013. Of these, a total of 16 onshore and 20 offshore blocks were awarded. Myanmar has a total of 104 oil and gas blocks including 53 onshore and 51 offshore blocks, with 16 onshore and 19 offshore blocks in operation as at May 2015.[94] .

The extractive industry contributes not only to the national income, but also plays a major role on generating foreign currencies for the national economy. The export earning of the extractive sector was approximately 44% out of the total country exports in 2014-15 year[95] (Figrue-1). Natural Gas production is one of the main drivers of economic growth in Myanmar. Myanmar was one of the world's first oil producers, exporting its first barrel in 1853.[96] Gas exports were estimated at US$3.6 billion in 2012/13 and up from the record of US$3.3 billion in 2011/12.[97] Myanmar's oil and gas sector attracts the largest share of foreign investment, accounting for $13.6 billion, or 40 percent, of total accumulated foreign investment through September 2014 and 93 percent of non-tax revenue of total State Owned Enterprise (SOEs) for the utilization of state owned properties came from the oil, gas and mineral sectors in FY 2013/14[98] (Figure-2). According to the Internal Revenue Department Large Tax Payers List in FY 2013/14, oil and gas companies were listed as top 10 corporate taxpayers.

Nevertheless, the status of development of the extractive sector in Myanmar is still critical.

Company Registration (DICA).

92

93 Thet Aung Lynn and Mari Oye, June 2014. "Natural Resources and Subnational Governments in Myanmar: Key considerations for wealth sharing."

94 Aung Shin and Pyae Thet Phyo. 11 May 2015. "No more bidding on oil and gas blocks planned until at least 2016, says senior MOGE official". *Myanmar Times.* http://www.mmtimes.com/index.php/business/14386-no-more-bidding-on-oil-and-gas-blocks-planned-until-at-least-2016-says-senior-moge-official.html

95 Central Statistical Organization (CSO), Myanmar

96 Institutional and Regulatory Assessment of the Extractive Industries in Myanmar, Adam Smith International, MDRI-CESD (2014)

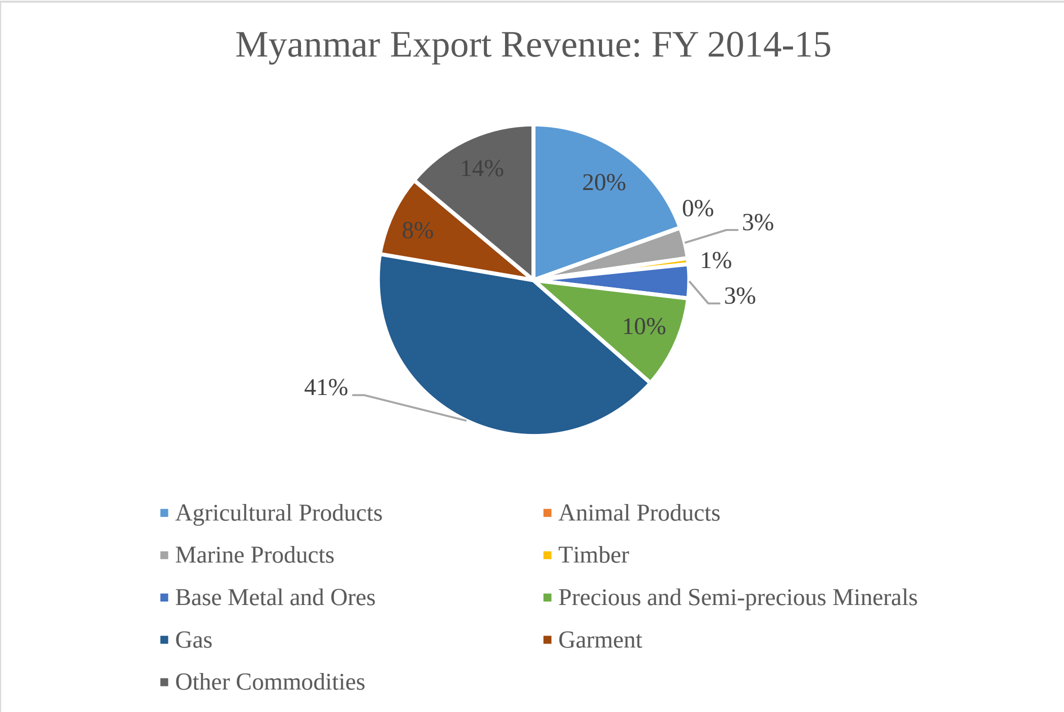
97 Myanmar Economic Monitor (October 2013). World Bank. http://www.worldbank.org/content/dam/Worldbank/document/EAP/Myanmar/Myanmar_Economic_Monitor_October_2013.pdf

98 Ministry of Finance, Myanmar

Illegal extraction activities in the mining, oil and gas sectors occur throughout the country, which resulted in a loss of national revenue and social and environmental damage. Because of a lack of public consultation and law enforcement for extraction activities, the tensions between communities and companies are going on in many areas. For example, at the Latpadaung copper mines (operated by Chinese companies) conflict is one of the significant consequences of tensions between the project and communities. Up until 2012, there was no mandatory requirement by law for projects to conduct environmental and social impact assessments (ESIAs). The Environmental Conservation Law was promulgated on 30th March 2012 and rules and regulations were enacted in June 2014. Currently, the Ministry of Environmental Conservation and Forestry is preparing ESIA guidelines and they are expected to be finalized shortly. Under the 2008 constitution, the administrative power for the extractive industry is shared between the union government and the state and region governments. However, the state and region governments' involvement in extractive sector management and revenue collection is limited. Therefore fiscal decentralization is very much in the early stages. According to Production Sharing Contract (PSC) and existing Mines Law, all revenues goes to the central government. However state and region governments collects some fees for the state and social development fund based on the area of licenses. (Interview with the Minister of Ministry of Mines in Shan State). Decentralization related clauses were included in the new amended mining law, currently being debated in parliament, for example transferring the control of permits for 'small scale' and artisanal mining to state and region government control[99].

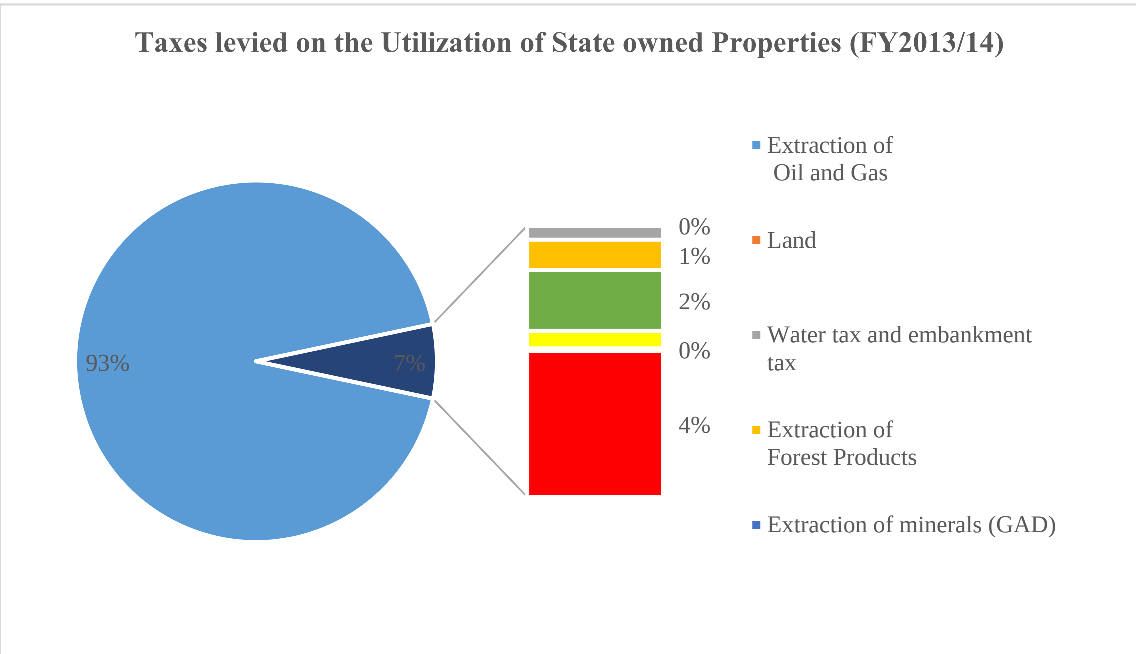
[99] Thet Aung Lynn and Mari Oye, June 2014. "Natural Resources and Subnational Governments in Myanmar: Key considerations for wealth sharing."

Figure-1: Export revenue by sector



Source: Central Statistical Organization (CSO), Myanmar

Figure-2: Taxes levied on the Utilization of State Owned Properties (FY 2013/14)



Source: Ministry of Finance, Myanmar

3. Governance Structure of Oil and Gas sector and Financial Liability of Companies

Myanmar's proved gas reserve is 0.28 trillion cubic meters[100] and its crude oil proved reserves are estimated to be around 0.05 billion barrels.[101] The Ministry of Energy (MOE) is responsible for the country's oil and gas sector, for exploration of crude oil and natural gas and for manufacturing and production of petrochemicals and petroleum products. There are four enterprises and a newly created permanent secretary office under the Ministry of Energy (see Figure (5)).

(1) Permanent Secretary Office (former Energy Planning Department)

Energy Planning Department (EPD) has been the key player in the ministry to direct energy-related issues, and was responsible for energy policy formulation, management and coordination in Ministry of Energy. EPD has also been the main regulator involved with signing Production Sharing Contracts with international oil companies. In the ministry's new structure, EPD has been abolished and replaced with the "Permanent Secretary Office" as part of reforms starting from 1 April, 2015.

(2) Myanma Oil and Gas Enterprise (MOGE)

Myanma Oil and Gas Enterprise (MOGE) is responsible for upstream activities of the oil and gas sector, land transmission of oil and gas to overseas destinations, and coordinating the PSCs in both onshore and offshore areas, on behalf of Ministry of Energy.[102] MOGE has corporatized parts of its services of drilling, seismic acquisition and pipeline construction/ maintenance, and has a plan to corporatize in the future.

(3) Myanma Petrochemical Enterprise (MPE)

Myanma Petrochemical Enterprise (MPE) is responsible for the downstream petrochemical sector in Myanmar. MPE has three petrochemical refineries and a number of processing plants which consists of five fertilizer factories (ammonia and urea), three liquefied petroleum gas plants, one methanol plant, bitumen plant and one carbon dioxide recovery plant.[103] MPE produces petroleum and petrochemical products such as gasoline, diesel, aviation turbine fuel (ATF), urea fertilizer,

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100 BP Statistical Review of World Energy, 2015 Main Indicators, http://knoema.com/)

101 Zaw Min Aung, MOGE, Myanmar Oil and Gas Week, Yangon (2014) (Suggest changing this reference to BP Statistical Review of World Energy, 2015 Main Indicators, http://knoema.com/ as a source that is able to be referred to and validated

102 MOGE. July (2011)

103 Aung Kyaw Htoo. MOE. Opportunities for Cooperation in Myanmar Petroleum Energy Sector. Yangon (2012)

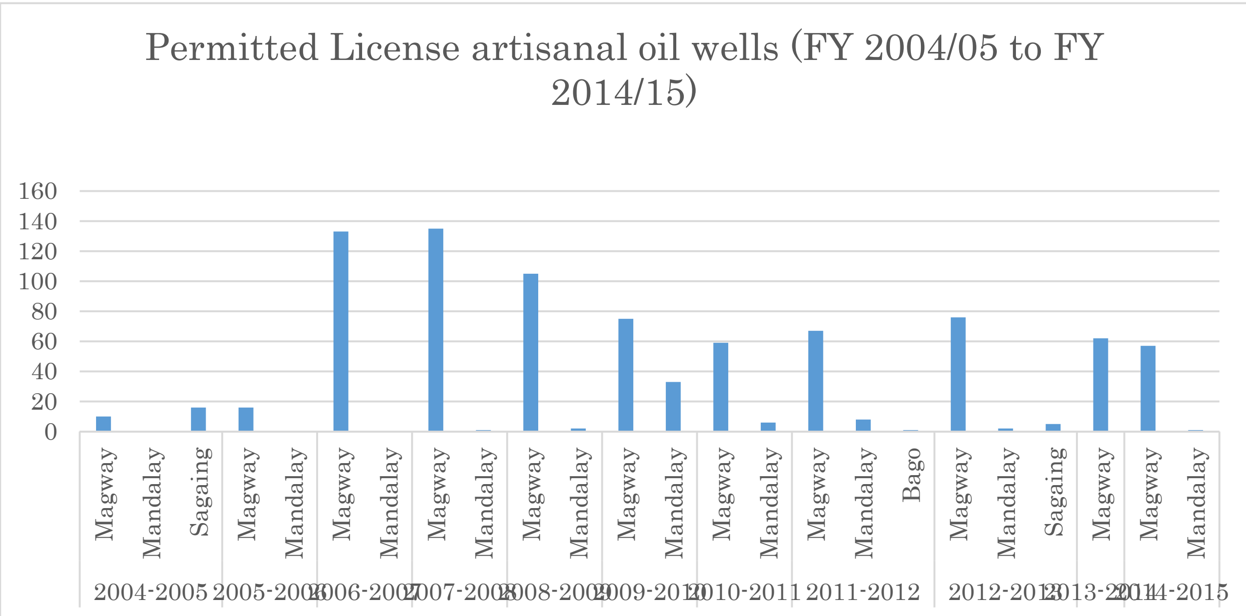
liquefied petroleum gas (LPG), petroleum coke, bitumen, carbon dioxide in both solid and liquid forms and methanol.

(4) Myanma Petroleum Products Enterprise (MPPE)

Myanma Petroleum Products Enterprise (MPPE) is responsible for marketing and distribution of petroleum products.

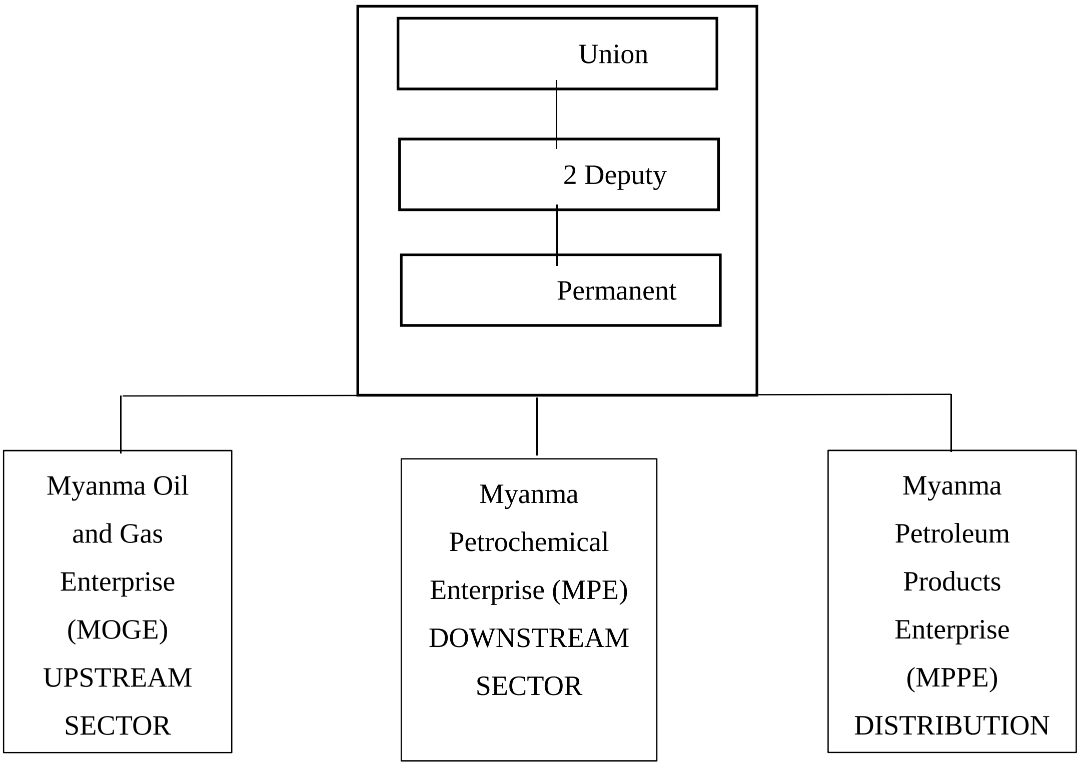
Four existing projects, Yandana Project, Yetagun Project, Shwe Project and Zawtika Project, are currently producing and exporting to Thailand and China, which generates over US$ 2 billion in export revenue annually. Apart from that about ten projects are in exploration and development stage. In 2013, the government opened up onshore and offshore block bidding for new discoveries, and awarded 16 onshore blocks in October, 2013 and 20 offshore blocks in March, 2014. In FY 2014/15, Ministry of Energy issued 58 licenses for artisanal oil wells, which are notably located in Myanmar's Magway Region (refer to Figure (4)).

Figure (4): Permitted License artisanal oil wells (FY 2004/05 to FY 2014/15)



Source: Ministry of Energy

Figure (5): Ministry of Energy – Organizational Structure



Key laws and legislation governing the oil and gas sector include the Oil-Fields Act 1918, Oil-Fields Rules 1918, Petroleum Act 1934 and Petroleum Rules 1934. However, the legislation is not generally applied or in practice for upstream activities, and the production sharing contract (PSC) between private operators and MOGE is the key legal instrument governing the extractive activities. In addition, the State-Owned Economic Enterprises Law (1989), Foreign Investment Law (2015), rules and Myanmar Investment Commission (MIC) Notification (2013) are also important legal instruments for investors.[104] In the new model production sharing contract, approval of MIC of an Environmental Social Impact Assessment (ESIA) and Environmental Management Plan (EMP) are also required steps prior to commencing operations[105], although these requirements were not included in previous production sharing contracts. Some of the components of the fiscal regime of the standard terms of PSC are highlighted below (see figure (7)). According to the PSC agreement, Oil and Gas Company has financial obligations to state for the extractive activities as describe below:

Royalties

[104] Myanmar Upstream Oil and Gas Sector, Myanmar Legal Services Limited, April 2014
[105] Model contract 2013

Royalties are based on volume of production or value of the resource extracted. In accordance with the new PSC contract (2013), a contractor will pay to the Government of Myanmar a royalty equal to 12.5% of the value of available petroleum. The royalty rate of the previous contract before 2011 was 10% of the value of available petroleum.

Cost Recovery

Cost Recovery is a reference to the portion of oil and gas produced and retained by the contractor in order to reimburse the costs associated with exploration, development and production of the project. Under the new PSC arrangement for offshore projects, the maximum ratio of cost recovery is based on the water surface level and availability of petroleum. Not all costs incurred by the contractor are recoverable. For example, data fees are not recoverable. A contractor needs to get approval of MOGE. The contractor is allowed to carry forward any costs that are not recovered from previous years.

Participation ratio

The Myanmar government has the right to participate in the production when the project is commercially viable. The contractor shares net profit of income tax with MOGE (on behalf of Government). Under the contract arrangement, MOGE has a right to participate by up to 20% of equity shares of the project, after commercial discovery.

Profit split

This refers to the amount of revenue or production remaining after subtracted royalties and costs of recovery from gross production revenues. This is then split between the contractor and Government in accordance with the split ratio formula in the contract (see figure (6)).

Figure (6): Production split on profit petroleum between MOGE and contractor

	Onshore		Offshore			
BOPD			600 feet or less		More than 600 feet	
	MOGE%	Contractor %	MOGE %	Contractor %	MOGE%	Contractor %
Crude Oil	60 - 90	10 - 40	60 - 90	10 - 40	60 - 85	15 – 40
Natural Gas	60 - 90	10 - 40	65 - 90	10 - 35	60 - 85	15 - 40

Source: MOGE, standard terms and conditions of production sharing contract (as of 9.7.2012)

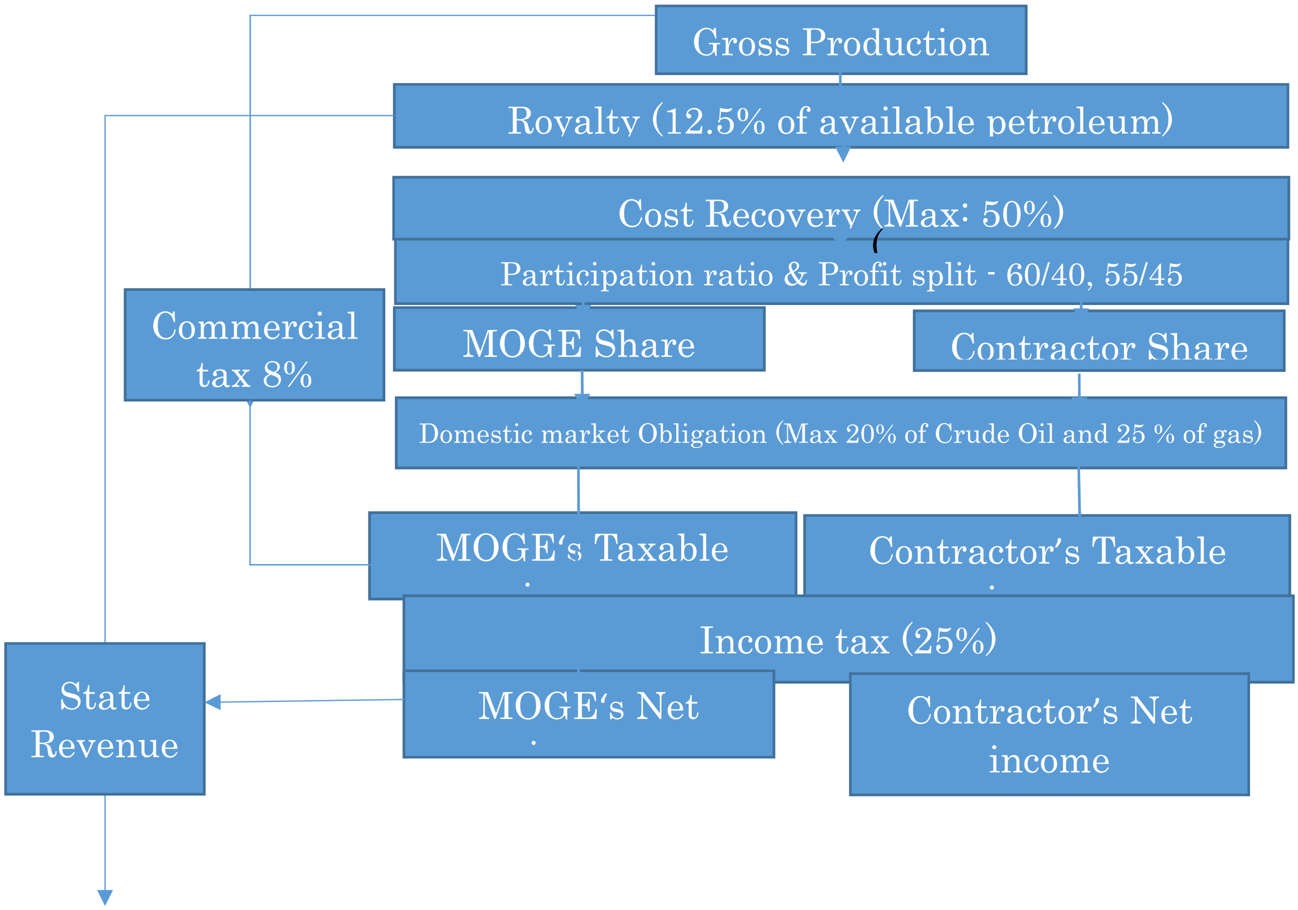
<u>*Domestic Obligation*</u>

In order to ensure that contractors are also held responsible for fulfilling the domestic needs of the country, contractors provide an obligatory share of production to meet domestic market demand. The proportion of domestic market obligation is up to 20% of the crude oil allocated to the contractor and up to 25 % of natural gas allocated. The MOGE purchase price from the contractor is equivalent to 90% of fair market values.

<u>*Corporate Income tax and Commercial tax*</u>

After deducting royalties, cost recovery and profit split shares, the contractor and MOGE's profit is subjected to corporate income tax in accordance with the Myanmar income tax law. Current corporate income tax is 25% of net profit. According to the new income tax law, companies also have an obligation to pay 8% commercial tax on natural gas production, although this agreement is not included in the production sharing contracts entered into by MOGE before 2010. In this regard, MOGE pays the commercial tax to the internal revenue department of the Ministry of Finance, including the proportion from the contractor.

Figure (7): Mechanism of productions/profit sharing agreements



4. Governance structure of Mining Sector and Financial Liability of Companies

Myanmar is rich in a wide range of minerals as well as precious stones. The Ministry of Mines (MOM) is responsible for implementing the mineral policy and legislation, for planning and administration, and for enforcing the laws and regulations related to the mining sector. There are two departments and four enterprises under the Ministry of Mines.

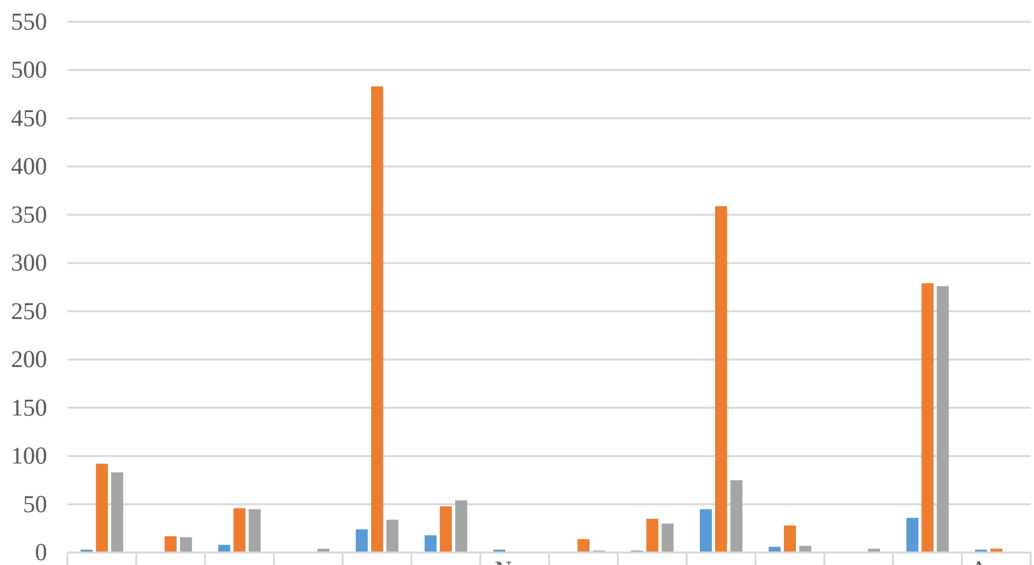
Department of Mines (DOM) is responsible for formulating the mineral policy, acting as the regulatory body and is responsible for issuing licenses and collecting royalties. Therefore DOM is also responsible for the inspection and safety of mines as well as mineral and environmental conservation in accordance with the Mines Law (1994). Department of Geological Survey and Mineral Exploration (DGSE) is responsible for geological mapping, mineral prospecting and exploration. DGSE is currently setting up a minerals database which is similar to the mining cadastre. The Mining Enterprises are the No.1 Mining Enterprise (ME-1), No.2 Mining Enterprise (ME-2), Myanmar Gems Enterprise and Myanmar Pearl Enterprise. Each enterprise is responsible for undertaking mining, production and marketing of minerals and precious stones related under each enterprise (see Figure (9)).

In 2015, Ministry of Mines had issued about 150 large-scale licenses and 1,046 small-scale licenses throughout the country. Mainly production is tin – tungsten, copper, antimony, iron, coal, industrial minerals, marbles, granite, magnesia dioxide, gold and lime stone. In addition, over 600 licenses have been issued for exploration. All mines are now either Joint Venture (JV) or have been privatized. Most mining is currently operated on a small or medium scale. The Ministry of Mines is currently developing a systematic database of mineral resources with the assistant of the government of Finland, and has integrated data into the ASEAN mineral database as a pilot. According to the Department of Geological Survey and Mineral Exploration, Ministry of Mines had completed a 1:50,000 scale geological survey, but 1:25,000 survey has not yet been completed.

Myanmar is one of the largest jade producers, and about 90% of production is exported to China. Most of the jade mines are small and artisanal, and located in some of Myanmar's conflict areas. Therefore, it is hard to estimate how much revenue is generated from this sector.

The laws and legislations governing the mining sector are Myanmar Mines Law 1994, Myanmar Mines Rules 1996, and Myanmar Gemstone Law 1995. The amended Myanmar Mining Law is still being debated by the Parliament. Up until 2013, Myanmar did not have environmental protection related laws and regulations for the mining sector. The law on land use, licensing, and tax collection related to the mining industry are complicated and often have contradicting points. Up until FY2014-15, jade and gem companies/ projects were not required to pay other taxes, apart from the jewelry tax to Ministry of Mines. It is because according to Myanmar Gemstone Law (1995), it stated that those companies paying royalty have the rights to exempt from payment of tax under any other existing laws (such as Income Tax Law, Commercial Law) in respect to sale of gemstone. In this regard, Myanmar Gems Enterprise collects 10% of sale of jade and gems (Jewelry Tax). Then 3% out of 10% goes as the revenues of MGE/ MOM and 7% is transferred to Ministry of Finance. However, under the new income tax law, jade and gem companies now have obligations to pay corporate income tax to Ministry of Finance, in addition to the jewelry tax. The Internal Revenue Department (IRD) under the Ministry of Finance has now right to collect tax on sale of jade, gems and precious stones no matter any other law exempt from the payment of tax. Therefore Ministry of Mines waived the 10% of sale of jade, gems and precious stones which stipulated in 1995 gemstone law. In this regard, the IRD will charge 15% of sale of jade, gems and precious stones in accordance with Income Tax Law (2015).

Figure (8): Permitted mining licenses till FY 2014/15

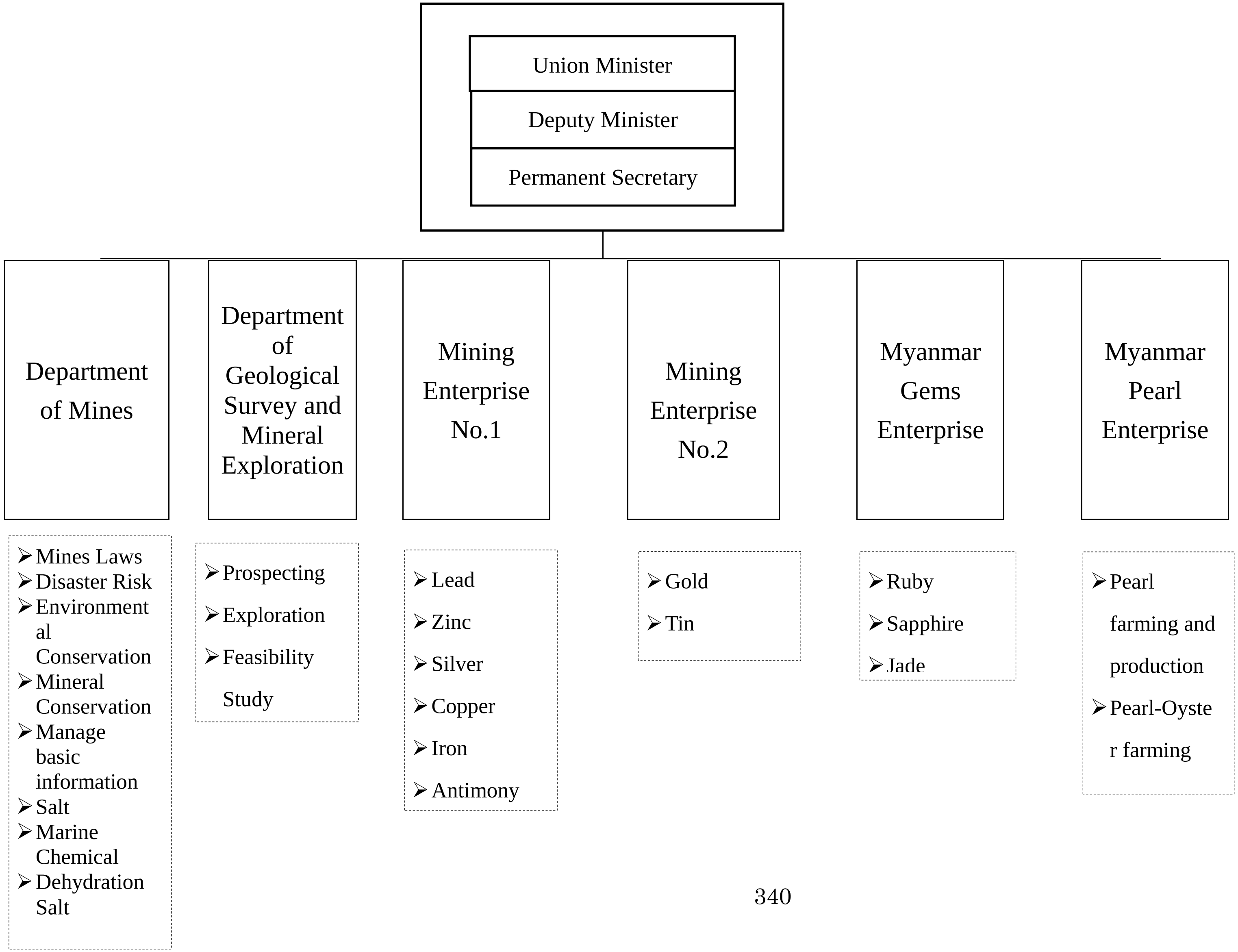


	Kachin	Kaya	Kayin	Chin	Sagaing	Tanniharyi	Nay Pyi Taw	Bago	Magway	Mandalay	Mon	Rakhine	Shan	Ayeyarwaddy
Large	3	1	8	0	24	18	3	0	2	45	6	1	36	3
Small	92	17	46	0	483	48	0	14	35	359	28	0	279	4
Exploration	83	16	45	4	34	54	0	2	30	75	7	4	276	0

Large Small Exploration

Source: Ministry of Mines

Figure (9): Ministry of Energy – Organizational Structure



Financial liability of the mining company

The Myanmar Mines Law (1994) defines mineral in four categories, which are Gemstone, metallic mineral, industrial mineral and stone, and governs the mineral prospecting, exploration and production activities. Apart from taxes revenue collected by the Internal Revenue Department (discussed in section (5)), non-taxe payment made by mining companies to the budget department via Ministry of Mines (MOM) can be summarized as: fees, royalties and mineral tax (either in kind or in cash) for production split.

Fees

The mining permit holders has obligation to pay dead rent fees to the Ministry of Mines within 30 days after the fiscal year, depending on the type of mineral and stage of mining activities (The Myanmar Mines Rule, 1996). License fees and dead rent fees are collected by the Department of Mines and the fees are transferred to the budget department of the Ministry of Finance as a non-tax revenue.

Figure (10) : Dead Rent fees per square kilometer

Sr.	Type of Minerals	Prospecting Period		Exploration Period					Feasibility Study Period		Developing Period			Production Period
		1st Yr	2nd Yr	1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr	1st Yr	2nd Yr	1st Yr	2nd Yr	3rd Yr	1-15 Yrs
1.	Industrial Minerals (or) Stone	0.5	1.0	1.0	2.0	4.0	6.0	8.0	8.0	12.0	14.0	16.0	20.0	20.0
2.	Metallic Minerals	1.0	2.0	2.0	4.0	8.0	12.0	16.0	16.0	16.0	18.0	21.0	24.0	30.0
3.	Precious Metallic Minerals	2.0	4.0	4.0	8.0	16.0	24.0	32.0	32.0	32.0	36.0	42.0	48.0	60.0

Source: Ministry of Mines

Royalties

According to the Mines Law (1994), royalties are needed to be paid – (1) 5% to 7.5% for gemstone, (2) 4% to 5% for precious metallic minerals, 3% to 4 % for metallic minerals; and (4) for industrial mineral or stone at the rate of 1% to 3%. However, this rate is not fixed though described in the Law and the Ministry has right to revise the rate and payment of royalty. The royalties fee is charged on value of mineral sale, not a production based royalty.

The current rates of royalty for mining projects are following –

Royalty rates for Minerals

Type of Mineral	
Metallic Minerals	3% to 4%
Precious Metallic Minerals	4% to 5%
Industry Minerals	1% to 3%
Ruby, Sapphire, Jade and Diamond	20%
Other Gems	10%

Production Sharing Contract arrangement

Globally, production sharing contracts (PSCs) are commonly used in the petroleum industries, but rarely in the mining industries. However, production sharing contract system is used in Myanmar, which is simple and easy to administer. The mineral prospecting and exploration activities are under the supervision of the Department of Geological Survey and Mineral Exploration (DGSG). Once, the exploration stage is successful, the investor needs to enter into a production-sharing contract with one of the state-owned enterprises of the Ministry of Mines. In the production sharing system, the investor needs to bear 100% of investment of the project, both capital and recurrent, of the mining operation. The cost of operation will be deducted from the gross value of the mineral produced to calculate the net profit mineral. This is then shared between investor/companies and mining enterprises in accordance with the PSC signed by both parties.

The production split ratio varies, and ratio is negotiated between concerned Mining Enterprise and investor/ companies, based on type of mineral and reference prices (London Metal Exchange rate). In general, 30/70 and 35/65 in between Mining Enterprise and investor/company. In some instances, Ministry of Mines receives its share of production in kind such as gold, tin-tungsten. And then sell this in kind revenue to the Central Bank of Myanmar. Apart from this practice, the payment is based on fixed amount per production permit for some minerals. For example – for the small scale gold mines permit, 24 ticals per year for 20 acres or less is needed to pay.

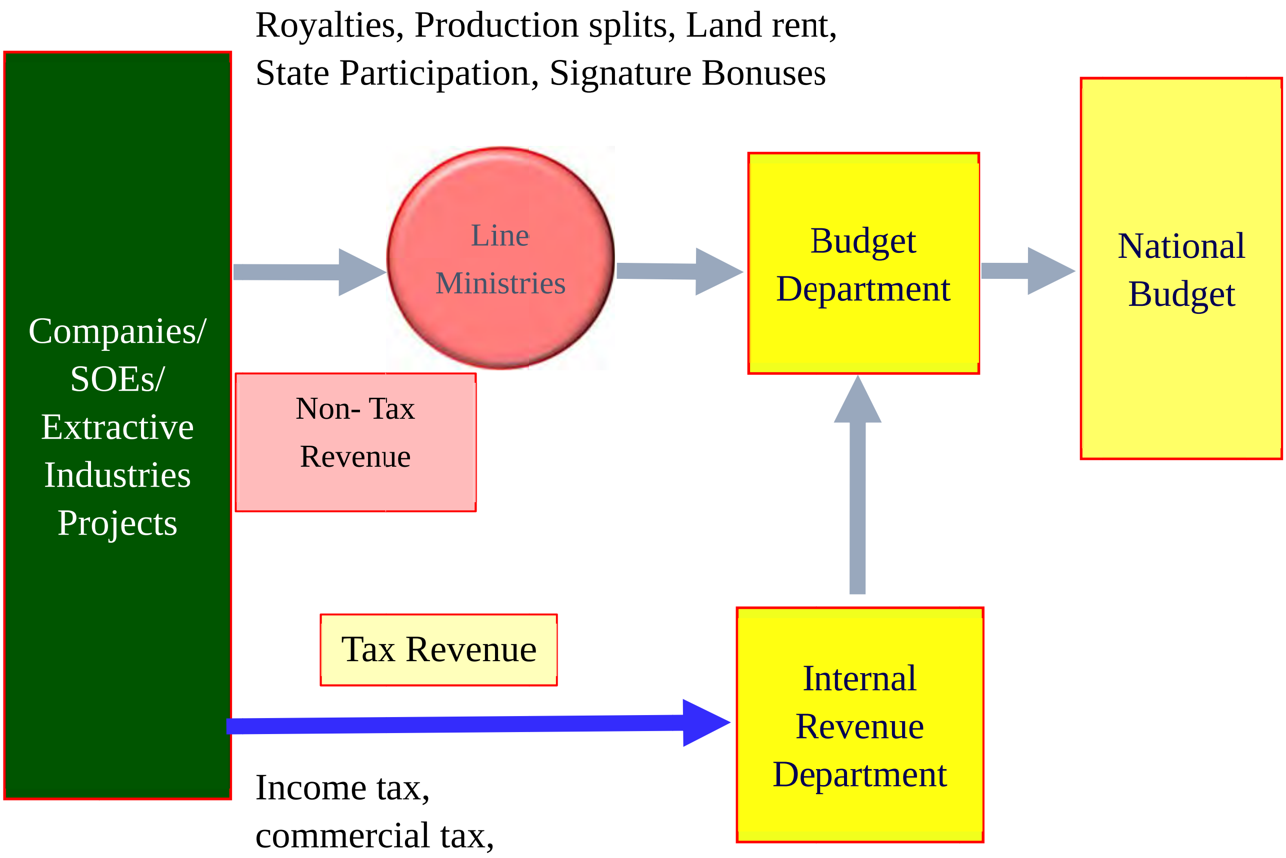
5. Taxes Payment and Revenue flow of extractive industries in Myanmar

The major current fiscal regime for oil and gas and mining sector is based on production sharing contract (PSC). Under this arrangement, the companies are contracted by Government (Ministry of Energy and Ministry of Mines) and are agreed to share in the production in accordance with ratio in PSC. In general, the fiscal provisions of production sharing agreement constitute two components; taxes and non-taxes. Tax revenue is mainly collected by agencies under the Ministry of Finance, and non-taxes revenue is collected by the line ministries (figure (11)).

According to Thura U Thaung Lwin, chair of the Tax Advisory Borad of Myanmar, many companies fail to register at the Internal Revenue Department for tax assessment and there are about 320,000 taxpayers, which is approximately 6% of population of Myanmar, and 16,000 companies pay the tax through the Company Circle Tax Office (CCTO). In 2012/13, the revenue to GDP ratio of Myanmar is about 23 %. But tax to GDP ratio is only about 7 % in 2012/13 and about 8% in 2014/15[106] , which is the lowest ratio in ASEAN countries.[107] As shown in figure (13), out of SOEs under the 14 Ministries and Central Bank of Myanmar, the contribution of extractive industries related ministries (especially Ministry of Energy) to National Budget is very significant. It highlighted that the proportion of non-tax revenue collected by the extractive line ministries is critical for the national budget.

106 Myanmar Times, Govt targets 10% for tax to GDP ratio, April 2015
107 Jan Gottschalk, Overview: Fiscal Sector in Myanmar, Workshop by the International Monetary Fund and Ministry of National Planning and Economic Development

Figure (11): -Basic Revenue collection mechanism



<u>Taxation</u>

Under the current tax system in Myanmar, out of 18 types of taxes, corporate income tax, commercial tax, stamp duties and state lottery are collected by the Internal Revenue Department (IRD) of the Ministry of Finance. The tax revenue collected by IRD share 78% of total tax revenue, and the rest is collected by the other concerned ministry and transferred to the budget department of the Ministry of Finance (figure 11). The tax assessment entity by the IRD is based on the companies (not base on project) and there is no differentiate taxes from extractive industries and non-extractive industries. Companies can participate in various business activities, no matter extractive industries or not. In this regards, it is very difficult to estimate exact share of extractive industries collected by the IRD department. Based on the various sources, it is estimated that over 50 percent of income tax alone is from extractive sector[108].

Corporate Income Tax (CIT)

In accordance to 1974 income tax law of Myanmar, company has obligation to pay income tax based on the profit of company. The calculation is based on total income of company for

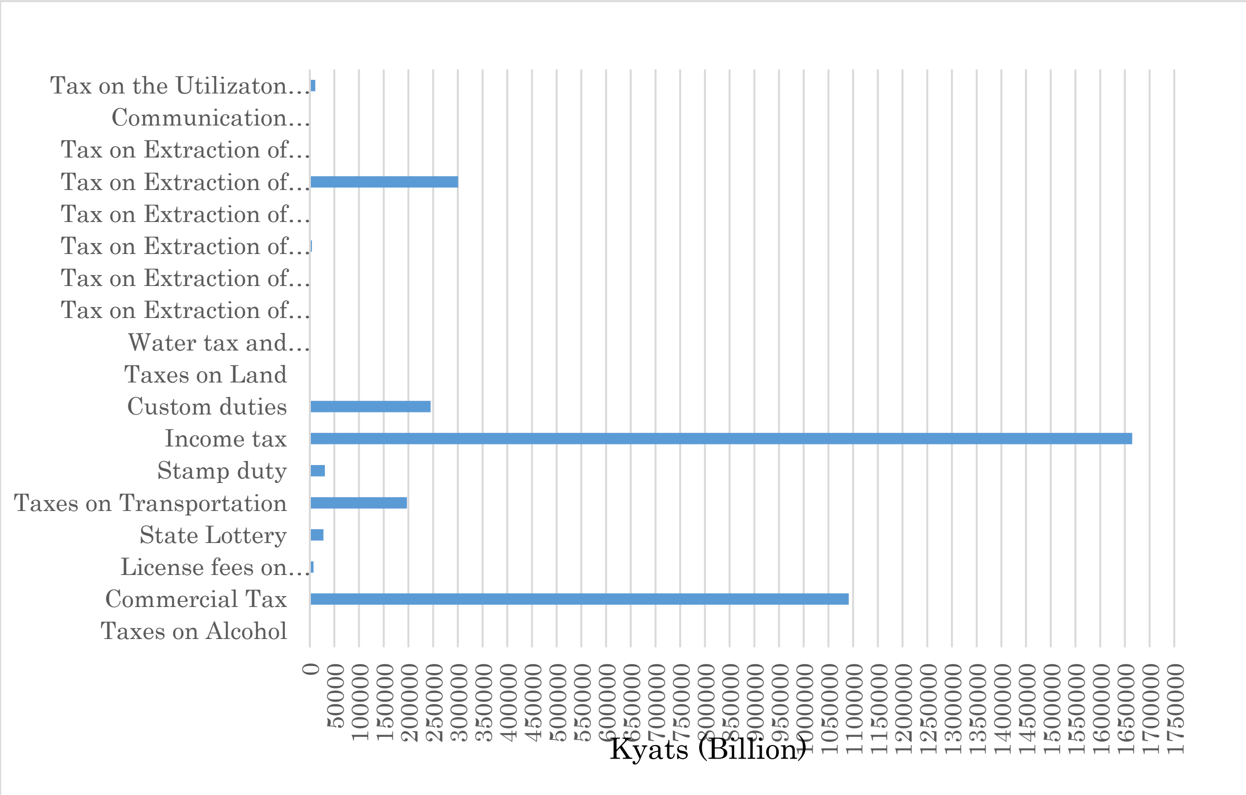
[108] Author's estimation

the corresponding taxable year, which is from 1st April to 31st March. In accordance with Union Tax Law 2015, If the companies is registered in Myanmar according company act or with the approval of Myanmar Investment Commission, the income tax rate is 25% of net income of company. Same as private company, the state owned enterprises also have obligation to pay 25% of their profit to the Internal Revenue Department (IRD).

Commercial tax

The commercial tax in Myanmar is levied on the sale of goods and services, which is enacted in 1990. According to this law, a company needs to announce a taxable statement to the tax department every three months and has obligation to pay tax annually. If a company is absent to pay the tax in time, IRD has right to fine 10% of the taxable amount that the company needs to pay. In accordance with the Union Tax law (2015), the commercial tax rates of export of natural gas, crude oil, raw precious stone and finishing precious stone and jewelry are as described in figure (14). In this regards, Commercial tax is collected by the Customs Department, on behalf of IRD, and then the tax is transferred to the IRD. For the companies, joint venture with Myanma Oil and Gas Enterprise (MOGE) for offshore projects, MOGE has to pay commercial tax on behalf of them because there is no obligation for those companies to pay commercial tax before FY 2013-14 period.

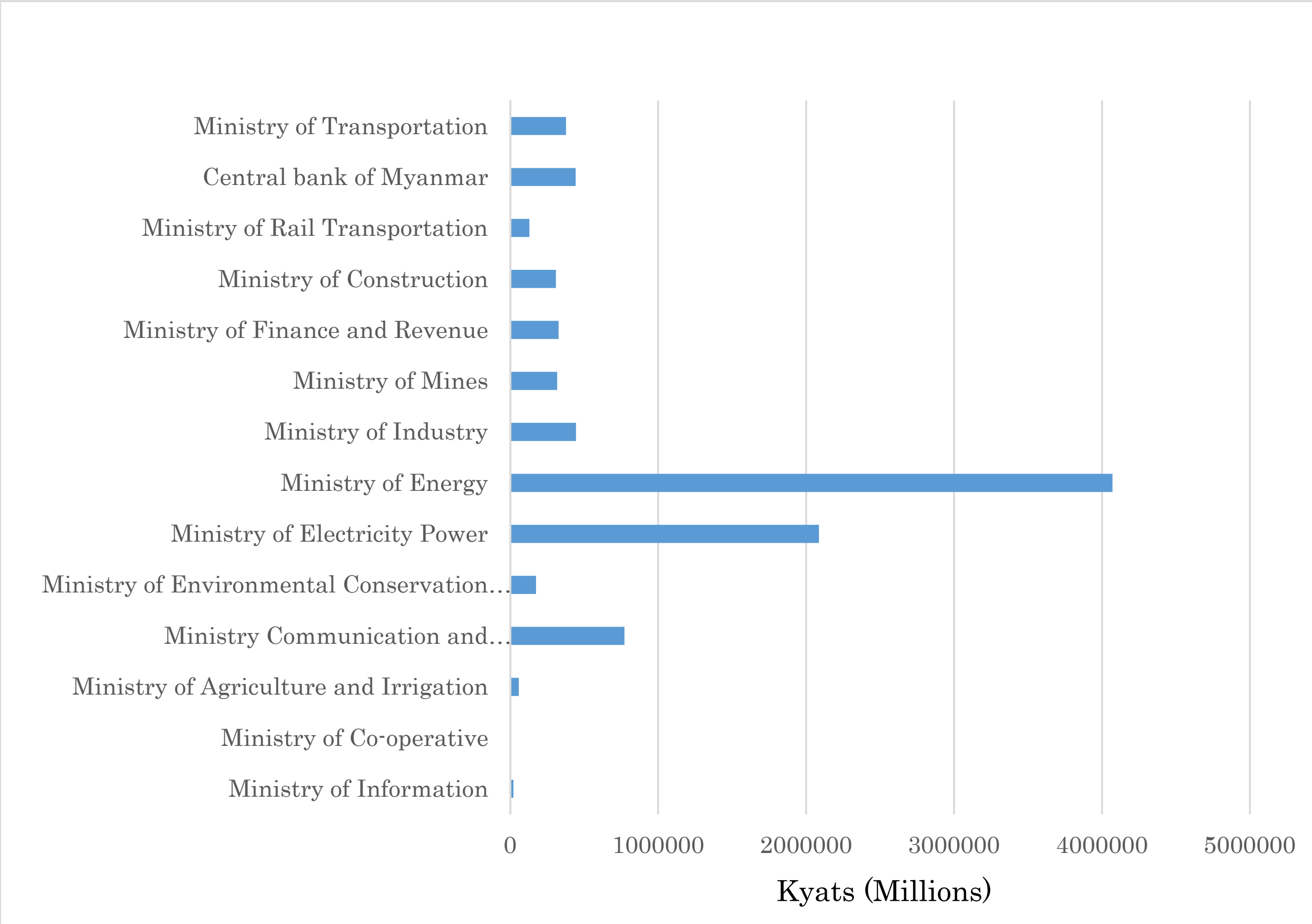
Figure (12): Myanmar Total Revenue (FY 2013-14)[109]



Source: Budget department, Ministry of Finance

109 Revised estimate

Figure (13): Revenue contribution by State Owned Enterprises (FY 2013/14)



Source: Myanmar Budget (2014-15)

Figure (14): Commercial tax rate for natural gas, crude oil and precious stone (FY 2015-16)

	Items	Percent (%)
1	Crude Oil	5
2	Natural Gas	8
3	Jade, Rubby, Diamond, Sapphire and other precious stones (Raw)	15
4	Jade, Rubby, Diamond, Sapphire and other precious stones (finishing goods) and Jewelry	5

Source: Union Tax Law (2015)

Revenue flows from extractive industries

Revenue flows within the extractive industries in Myanmar is different depend on the types of payment, type of hydrocarbons and mineral resources and Ministries. Figure (15) and (16) is a chart of how taxes and royalties flow directly from the mining company/project into the state budget through a range of government agencies. As shown in these figures, central government agencies are primarily responsible for collection of most revenue from extractive industries. The revenues flow is end up at National Budget, and those revenues are distribute through budget process. However, in oil and gas sector, 55% percent of MOGE profit goes to MOGE's other account (OA) as a re-investment capital. 20% of MOGE goes to budget department and 25 of profit transfer to the Internal Revenue department as a profit tax (figure (17)).

Figure (15): Revenue Flows from mining project: Gold (payment in-kind)

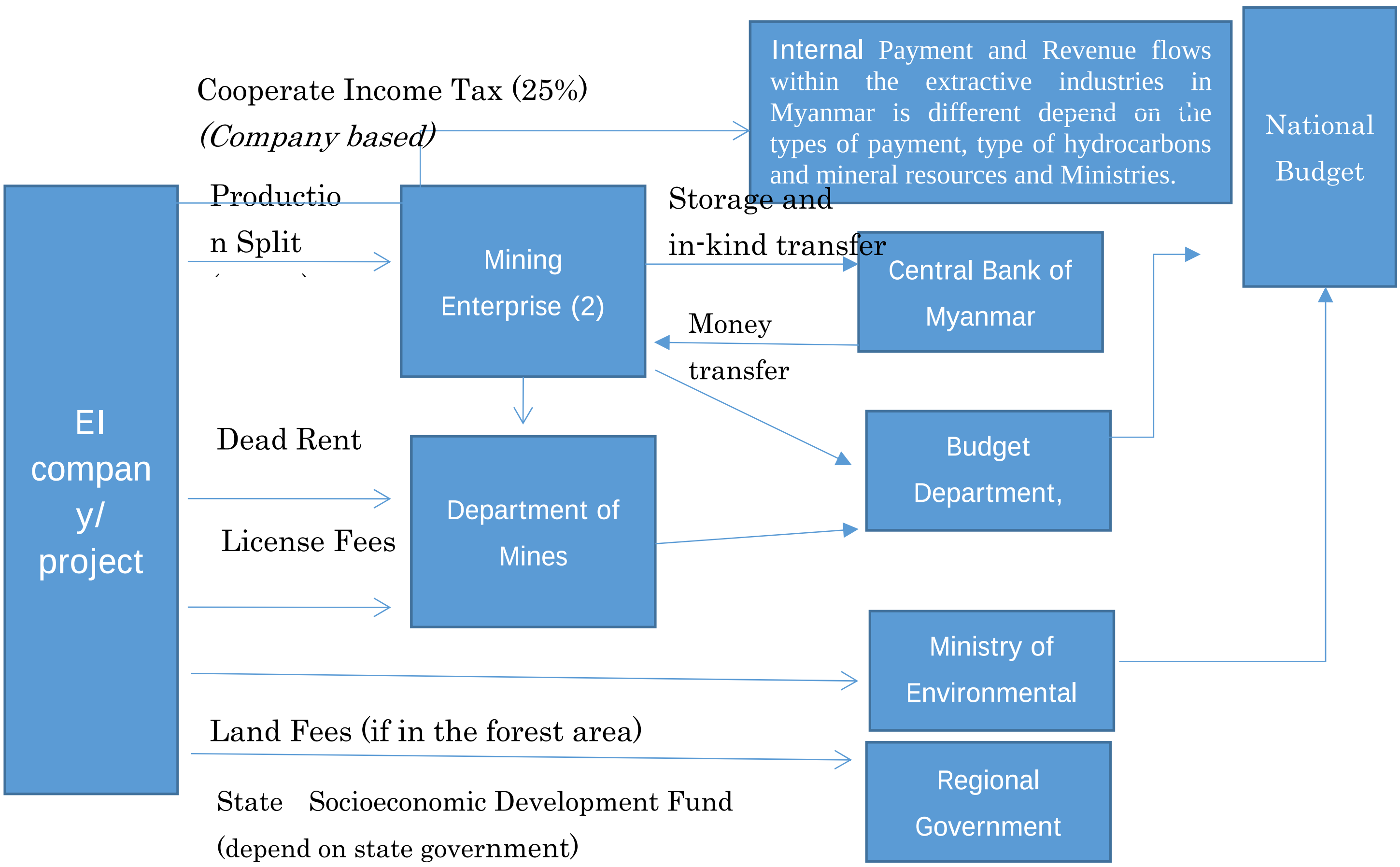


Figure (16): Revenue Flows from mining project: Copper (payment in-cash)

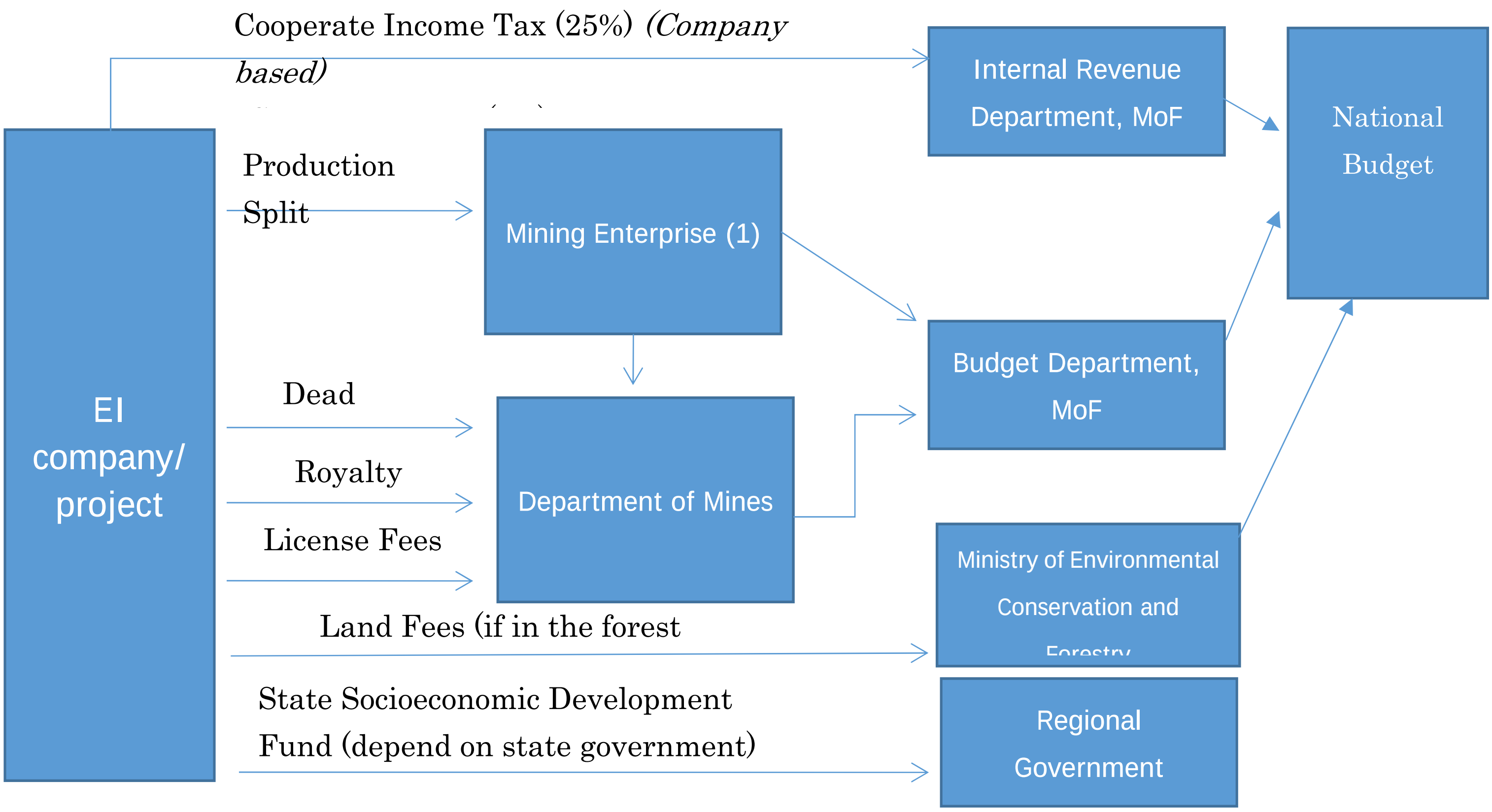
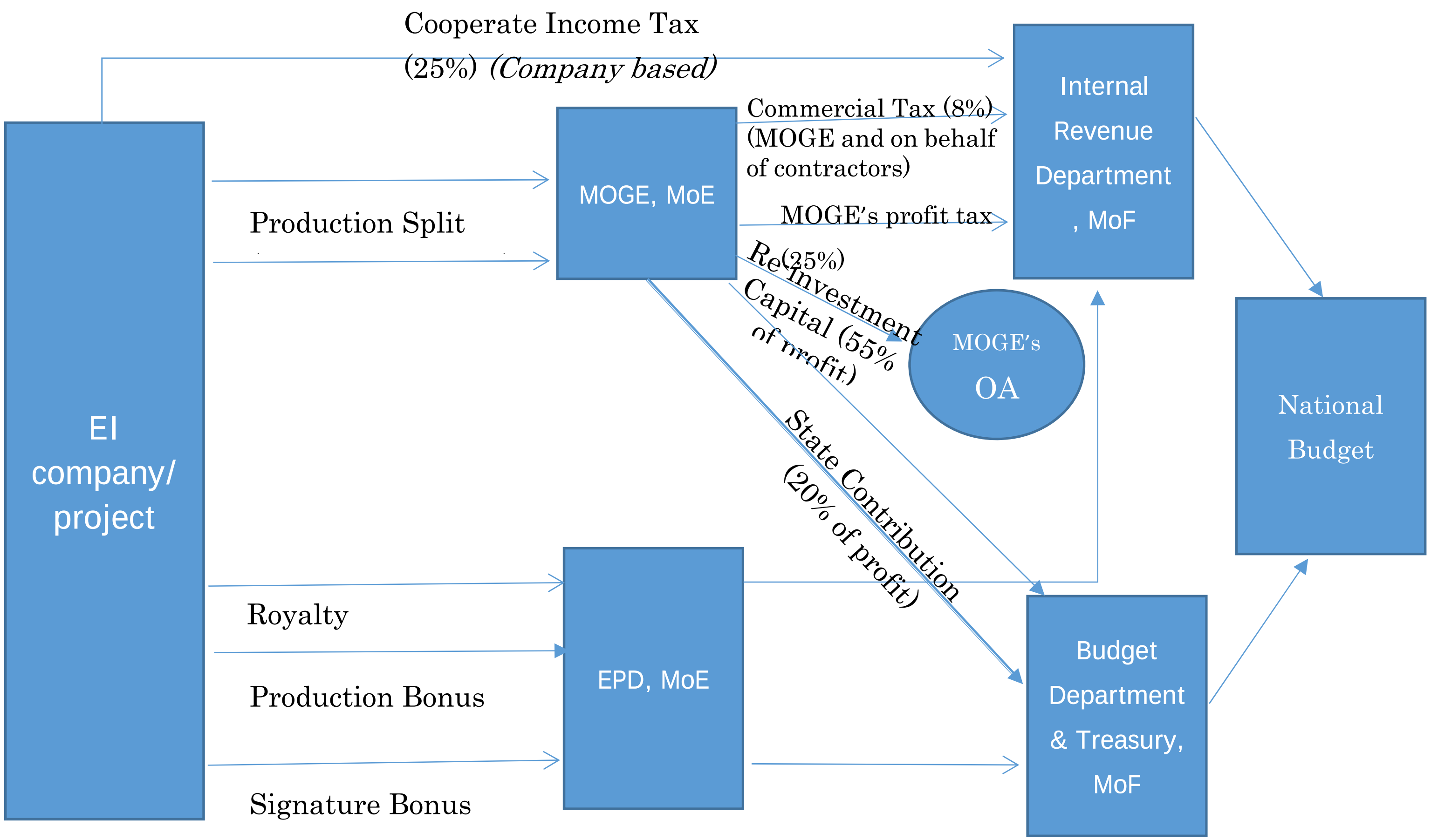


Figure (17): Revenue Flows from Oil and Gas project



Extractive Industries Transparency Initiative (EITI) History[110] and implementation in Myanmar

It has been controversial whether natural resources are a "curse" or a "blessing". Although some resource rich countries benefit, others lose despite the richness of natural resources. Natural resources generally provide for economic growth and development in some countries such as Norway or Botswana, while many countries are cursed by natural resource wealth especially in developing countries. Consequently, the phenomenon of resource curse was becoming stronger and stronger. This phenomenon also entered into academic discussions. Many scholars argued that resource abundance combined with poor institutions leads to the resource curse, and socioeconomic development does not occur automatically although a country has an abundance of resources. The academic literature and research suggested that promoting the transparency in revenue in the resource sector is a starting point to overcoming the resource curse. Various non-governmental organisations (NGOs) and civil society organisations (CSOs) stepped up a "Publish What You Pay" (PWYP) campaign, promoting the disclosure of the amount of payments made by extractive companies, including tax paid to the government. But extractive companies are concerned about the risk on competition among companies and investors, by disclosing data and information of their extractive operations. In September 2012, the UK Prime Minister, Tony Blair, initiated the idea of transparency in extractive industries in his speech at the World Summit on Sustainable Development in Johannesburg. Later, the UK government brought global stakeholders from civil society, companies and government representatives to discuss a reporting standard, to implement transparency in the extractive sector.

Twelve EITI principles and criteria were agreed at a conference in London in June 2003 to increase transparency of payments and revenues in the extractive sector and to contribute to better natural resource governance. Accordingly, the EITI source book was produced in 2015, which provides the guidelines on how to produce the reports for transparency. Later, the international advisory introduced the EITI validation guide, which set out the indicators for EITI implementing countries, the EITI criteria and principles. In 2006, the EITI international secretariat was established to provide oversight and support to the EITI implementing countries.

EITI implementation has two core components:

Transparency: oil, gas and mining companies disclose their payments to the government, and the government discloses its receipts. The figures are reconciled by an Independent Administrator, and published in annual EITI Reports alongside contextual and other

110 https://eiti.org/eiti/history

information about the extractive sector.

Accountability: a multi-stakeholder group (MSG) with representatives from government, companies and civil society is established to oversee the process and communicate the findings of the EITI Report, and promote the integration of EITI into broader transparency efforts in that country

EITI aims to defeat the resource curse and bring benefits to the country for economic growth and poverty reduction through transparency and accountability. EITI implementing countries are needed to publish extractive companies' payment to government and government's receipt from extractive companies, and identify the discrepancy between the revenue government received and the companies' payments made to government, to ensure all revenue from the extractive sector goes to the national budget without any loss. In addition, the government needs to publish the contextual information of extractive industries along the value chain of extractive industries, in accordance with the EITI standard.

In order to implement this, the collaboration of government, civil society and companies needs to be established, via a "multi-stakeholders group (MSG)", to oversee the implementation, through a dialogue process among stakeholders. The MSG dialog platform is where trust can be built among stakeholders for solutions, information shared and views/idea exchanged, and consensus-based decisions made. An EITI champion of the country is also needed to identify the support (especially political support) of the MSG for EITI implementation. Up to 2015, there are 48 EITI member countries, (16) candidate countries and (28) compliant countries. Three ASEAN countries have implemented EITI and Myanmar is one of them.

In July 2012, in an interview with the UK Financial Times, President U Thein Sein stated "We are preparing to be a signatory to the Extractive Industries Transparency Initiative to ensure that there is maximum transparency in these sectors and try to make sure the benefits go to the vast majority of the people and not to a small group. The most important thing is to have completely transparent financial accounting to ensure that everyone knows where the revenues from these extractive industries are going." During a visit by the EITI International Secretariat to Nay Pyi Taw on 16 July 2012, the government confirmed its intention to implement EITI. In December 2012, President Thein Sein issued Presidential Decree 99/2012 which formally established EITI and states the government's intention and commitment to implement EITI. In December 2013, President Thein Sein said "we want to use the EITI to ensure that resources are developed and managed in a transparent manner for the sustainable benefit of our people. Becoming a member of EITI will be a tangible result from these reforms."[111]

The first "large multi-stakeholder meeting" was held in December 2013, during a visit to Myanmar by Ms. Clare Short, Chair of the EITI international board, and the composition of MSG membership was agreed. In February 2014, the Myanmar Extractive Industries Transparency Initiative (MEITI) MSG was established officially according to the notification of the Myanmar EITI leading authority, chaired by a Union Minister of the President's Office. The MEITI-MSG is composed of 21 members, including 6 key government representatives, 9 CSOs representatives and 6 private sector representatives, and led by the Chair of MSG and Vice Chair of MSG (see below).

Myanmar EITI key stakeholders

MEITI Leading Authority

Chair: Minister, President's Office (3)

Secretary: Minister, Ministry of Finance

Members: Minister of Energy, Minister of Mines, Minister of Environmental Conservation and Forestry, Minister of Electric Power.

National Coordinator

Executive Director, the Centre for Economic and Social Development of the Myanmar Development Resource Institute (MDRI – CESD)

Myanmar EITI MSG

Chair: Deputy Minister, Ministry of Finance

Vice Chair: Deputy Minister, Ministry of Energy

Members: (6) government representatives (Ministry of Home Affair, Ministry of Environmental Conservation and Forestry, Ministry of Energy, Ministry of Mines, Ministry of Finance and Auditor General Office), 9 civil society representatives, 4 oil and gas companies' representative and 2 mining companies representatives.

The MEITI- MSG approved the Myanmar EITI application and submitted it to the EITI international board on 7 May, 2014. On 2 July, 2014, at the EITI international board meeting, Myanmar was admitted as a candidate. According to EITI international board decisions,

[111] The World Bank. Sourced on 25 August 2015 from http://www.worldbank.org/en/news/feature/2014/07/14/eiti-candidacy-approval-is-a-transparency-breakthrough-for-myanmar

Myanmar needs to produce its first EITI report by January 2016 and to complete EITI validation processes by an independent validator by late 2017.

Initially, MEITI MSG had agreed to look at the oil, gas sector and mining sectors for possible Myanmar EITI scope, and recruit an international independent administrator to define which companies and government entities should be included and disaggregate levels for payment streams.

Milestones of EITI in Myanmar

Year	Month	Activities
2012	December	Presidential Decree 99/2012 established the Leading Authority and committed the government to working with the private sector and CSOs for implementation of EITI.
2013	April	The Leading Authority issued a letter committing the government to work with all stakeholders and establishing the government 'working committee' for the purpose of EITI implementation.
	May	MEITI team and stakeholders attended EITI Global Conference, Sydney – May 2013
	August	The first meeting of CSOs and the government about EITI was held on 2nd August at Myanmar Insurance Enterprise in Yangon.
	October	The first meeting of the government and private sector at Myanmar Insurance Enterprise in Yangon. A wide range of private sector representatives attended, including representatives from both the international and national oil, gas and mining sectors (e.g. Wanbao, MFMA, Petronas, MPRL, Total, Chevron, Shell)
	November	The first workshop bringing all stakeholders from every state and region in Myanmar, including representatives of CSOs, the government, parliaments, and the private sector, was held on 16-17 November in Nay Pyi Taw.
	November	On 18 November, a large multi-stakeholder meeting was held in Nay Pyi Taw at which Union Minister U Soe Thane, the champion of the EITI which Senior Minister U Soe Thane reconfirmed the government's commitment to work with CSOs and companies to implement EITI.
	December	EITI Chair the Rt. Hon. Clare Short's visit on 9-10 December She also met the President U Thein Sein during her visit.

Year	Month	Activities
2014	February	The Leading Authority's formal notification establishing the MSG (18 February 2014)
	May	Submission of Myanmar EITI Candidacy Application (7 May 2014)
	July	Myanmar became an EITI Candidate Country (2 July 2014)
	October	Myanmar hosts the 28th EITI Board Meeting on 14-15 October and the Natural Resource Governance was held after the Board Meeting in Nay Pyi Taw.
2015	January	The EITI Secretariat Unit was established under the Budget Department of Ministry of Finance.
	May	Mandalay Region Sub-National Unit was successfully formed.
	July	Magway Sub-National Unit was successfully formed.
	June – current	Scoping Study is being conducted to identify the scope for the Myanmar EITI 1st Report.

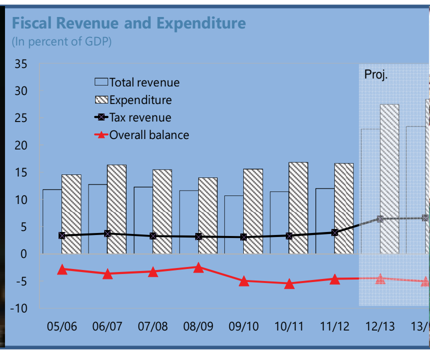
Appendix 2 (to Part III)

Corporate Governance System of Policy-Based Banks: Case Study of Construction & Housing Development Bank

Ngu Wah Win
(MDRI-CESD)

Corporate governance system of policy-based banks: Case study of Construction & Housing Development Bank

Ngu Wah Win
Research Associate
MDRI-CESD



Content

- Introduction
- Statement of the problem
- History of CHD Bank
- Current situation
- Methodology

Literature review on State Housing Banks

- ❑ Housing – basic human needs
- ❑ Goal of affordable hosing
- ❑ Types of state housing banks
- ❑ Model failed in many countries
- ❑ State housing bank failings

Underlying principle – basic facts

- Population ≈ 60 million
- National population growth rate = 1.3%
- Urban population growth rate = 2.9%
- Rural: urban ration = 76:34
- Urban poverty rate = 21%
- Size of main cities:

NPT = 0.9 m, Yangon = 5.9 m, Mdy = 1.5 m

Department of Human Settlements and Housing Development

Department of Human settlements and housing development

Preparation of urban and regional development plans requested by towns/ cities and regions

Formation of Housing Delivery systems

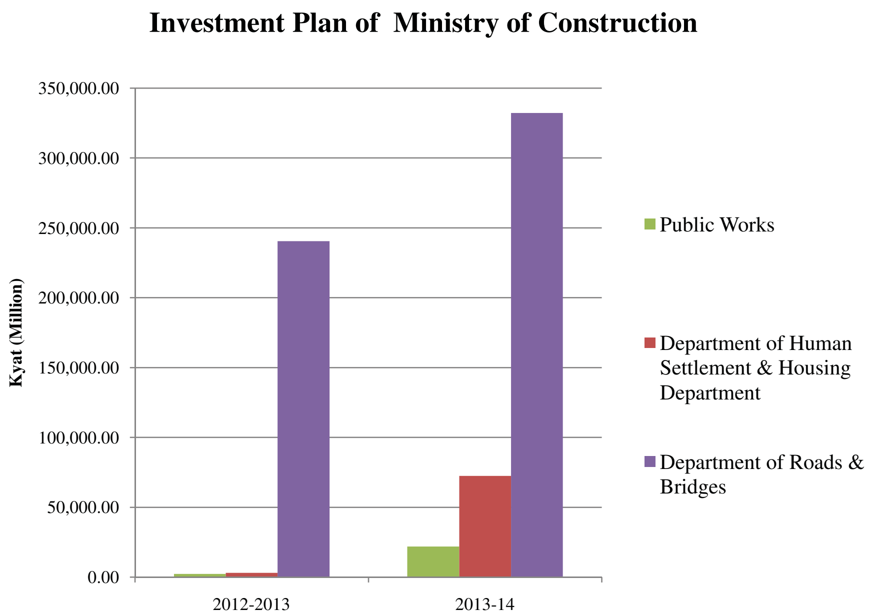
Preparation of Housing Scheme and programme

Implementation

Implementation of Dev plans are carried out by respective regional and local authorities

Source: Ministry of Construction

Investment plan of Ministry of Construction



9 times increased

23 times increased (two housing projects, Ayeyar won and Yadanar Housing projects in Dagon Sait Kan (West district of Ygn))

Profile of the CHDB

- Public Company Limited
- Founded in Jan 11, 2014
- 2 branches in Yangon region so far

- Paid up capital by Ministry of Construction and public share holders as per Company Act
- From Authorized capital 100 Billion Kyats, the CHDB gives loan. (Source: The Irrawaddy Vol. 1 No. 7, Feb 16, 2014)

MDRI CESD

Objectives of the CHDB

- To address the housing needs of public in a sustainable manner
- To purse through poverty eradication strategy by offering acceptable mortgage loan to borrowers
- To extend into the future as development financial institution while following the government priorities
- To provide financial support in such development activities as building new roads and bridges
- To support better communication
- To introduce financing mechanism for supporting poverty alleviation and home ownership for every citizen

MDRI CESD

Core Banking services

- Sources of Fund: Selling shares, deposits, corporate bond and debenture
- Uses of Fund: Short term loans, Mid term loans, Long term loans
- Others banking services: remittance, credit card/ debit cards, ATM cards, insurance, hire purchasing, leasing and mobile banking

Terms and Conditions of Housing Loan of CHDB

- land as collateral and loan term is short term but need to make extension
- CHDB lend only 30 % of the value of land and building
- CHDB lend 80% of the value of the **government/ state project**

Source: The Irrawaddy Vol. 1 No. 7, Feb 16, 2014

Terms and Conditions of Housing Loan of CHDB

- CHDB lend after the contract between the land owner and the construction company (or contractor)
- The contractor need to deposit 20% of the value of land and building
- Loan interest is 13 % and need to be paid every three months.

Source: The Irrawaddy Vol. 1 No. 7, Feb 16, 2014

Housing finance by CHD Bank

- Interview with U Win Zaw (MD of CHDB)
- Focused SME Construction Companies but the term is 1 to 3 years and 13% p.a
-

The Trade Times Journal Vol2 No 96

Current Housing Finance in Myanmar

- Owner Finance
- Contractor Finance
- Owner-contractor Finance

  (Owner : Land ,

  Contractor : labor, construction materials)

❖ Housing projects are largely done by private sector.

MDRI CESD

Affordable housing projects in Mya last 20 years

- Kyan Sit Thar Housing, December Garden Housing (East Dagon)
- Yuzana Garden City (Dagon Seikkan)
- Mahar Myaing Housing

MDRI CESD

Affordable housing projects by DHSHD

- Two pilot projects in 2013-14
- Ayarwon Affordable Housing
- Yadanar Affordable Housing

2014-15

- Dagaon Seikkan
- Hlaing Tharyar – 2 affordable housing projects

Current affordable housing projects by YCDC

- for middle-income, Will supply at 2015

- Bo Ba Htoo Housing (North Dagon)
- Bo Min Yaung Housing (North Dagon)
- Pin Lone Housing (North Dagon)
- Irrawaddy Housing (East Dagon)
- Housing Estate at University (East Dagon)

At least 140,000,000 Kyats, deposit 20 or 30 lakhs first and 50,000 Ks for monthly payment

Source: burma.irrawaddy.org/%E1%81%80_yangon/2012/11/24/26304.html

Current affordable housing projects in Mya

19th February 2014, Myanmar Ahlin Newspaper

ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ နယ်နိမိတ်အတွင်း မြို့ပြအိမ်ရာစီမံကိန်း၊
တန်ဖိုးမျှတအိမ်ရာစီမံကိန်း၊ မြို့ပြအိမ်ရာစီမံကိန်းနှင့် ယာဉ်ရပ်နားစခန်းအဆင့်မြင့်ယာဉ်ရပ်နားရန်
အဆောက်အအုံစီမံကိန်းများကို အကျိုးတူပူးပေါင်းဆောင်ရွက်မှုအခြေခံဖြင့်
အကောင်အထည်ဖော်ဆောင်ရွက်ရန်အတွက် တင်ဒါခေါ်ယူခြင်း

၁။ မြန်မာနိုင်ငံ ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ နယ်နိမိတ်အတွင်း အောက်ဖော်ပြပါနေရာများ၌ မြို့ပြအိမ်ရာစီမံကိန်း၊ တန်ဖိုးမျှတအိမ်ရာစီမံကိန်း၊ မြို့ပြအိမ်ရာစီမံကိန်းနှင့်ယာဉ်ရပ်နားစခန်း၊အဆင့်မြင့်ယာဉ်ရပ်နားရန် အဆောက်အအုံစီမံကိန်းများကို အကျိုးတူ ပူးပေါင်းဆောင်ရွက်မှုအခြေခံဖြင့် အကောင်အထည်ဖော်ဆောင်ရွက်ရန်အတွက် ပြည်တွင်းကုမ္ပဏီများ၊ နိုင်ငံခြားကုမ္ပဏီများ၊ ပြည်တွင်းကုမ္ပဏီနှင့် နိုင်ငံခြားကုမ္ပဏီတို့ပါဝင်သောဖက်စပ်လုပ်ငန်းများ (Joint Ventures)မှ တင်ဒါတင်သွင်းနိုင်ရေး ဖိတ်ခေါ်အပ်ပါသည်-

(က) မြောက်ဥက္ကလာပမြို့နယ်၊ ရွှေပေါက်ကံ၊ ပုဂံလမ်းနှင့် ဟံသာဝတီလမ်းထောင့်၊ မြေဧရိယာ ၁၀. ၉၃ ဧကခန့် (မြို့ပြအိမ်ရာစီမံကိန်း ဆောင်ရွက်ရန်)
(ခ) ဒဂုံမြို့သစ်(မြောက်ပိုင်း)မြို့နယ်၊ ရာဇဓိရာဇ်လမ်း၊ မြေဧရိယာ ၄၀. ၄၉၃ ဧကခန့် (မြို့ပြအိမ်ရာစီမံကိန်းဆောင်ရွက်ရန်)
(ဂ) ဒဂုံမြို့သစ်(အရှေ့ပိုင်း)မြို့နယ်၊ မင်းရဲကျော်စွာလမ်း၊ မြေဧရိယာ ၁၀. ၀၀ဧကခန့် (တန်ဖိုးမျှတအိမ်ရာစီမံကိန်းဆောင်ရွက်ရန်)
(ဃ) ကြည့်မြင်တိုင်မြို့နယ်၊ ဈေးကြီးလမ်း၊ မြေဧရိယာ ၀. ၃၆၄ဧကခန့်(မြို့ပြအိမ်ရာစီမံကိန်းဆောင်ရွက်ရန်)
(င) ပုဇွန်တောင်မြို့နယ်၊ မဟာဗန္ဓုလလမ်းနှင့် သိမ်ဖြူလမ်းထောင့်၊ မြေဧရိယာ ၃. ၀၆၈ ဧကခန့် (မြို့ပြအိမ်ရာစီမံကိန်းနှင့် ယာဉ်ရပ်နားစခန်းဆောင်ရွက်ရန်)
(စ) ပုဇွန်တောင်မြို့နယ်၊ ၄၅လမ်း၊ မြေဧရိယာ ၂. ၅၆၀ ဧကခန့် (မြို့ပြအိမ်ရာစီမံကိန်းနှင့် ယာဉ်ရပ်နားစခန်းဆောင်ရွက်ရန်)
(ဆ) ကမာရွတ်မြို့နယ်၊ လှည်းတန်းလမ်းနှင့် ထန်းတပင်လမ်းထောင့်၊ မြေဧရိယာ ၁. ၀ဧက၏ တစ်စိတ်တစ်ဒေသ ၀. ၁၀၃ ဧကခန့် (အဆင့်မြင့် ယာဉ်ရပ်နားရန်အဆောက်အအုံစီမံကိန်းဆောင်ရွက်ရန်၊ P.A.E စနစ်)။

၂။ အဆိုပါစီမံကိန်းများအတွက် အကောင်အထည်ဖော်ဆောင်ရွက်ခြင်းကို ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီက အတည်ပြုသည့် အစီအစဉ်များနှင့်အညီ တည်ဆောက်လုပ်ကိုင်ရန်ဖြစ်ပါသည်။

၃။ သက်ဆိုင်ရာစီမံကိန်းဆိုင်ရာအချက်အလက်များကို တင်ဒါတင်သွင်းသူများ လိုက်နာရန်ညွှန်ကြားချက်များ (Instructions to Tenderers)တွင် ဖော်ပြထားမည်ဖြစ်ပါသည်။ မိမိဆောင်ရွက်လိုသော စီမံကိန်းတစ်ခုချင်းအလိုက်တင်ဒါများကို သီးခြားစီတင်သွင်းရန်ဖြစ်ပါသည်။

၄။ တင်ဒါများကို ငွေကြေးဆိုင်ရာအဆိုပြုလွှာနှင့် ကျွမ်းကျင်မှုနည်းပညာဆိုင်ရာအဆိုပြုလွှာဟူ၍ စာအိတ်နှစ်ခုဖြင့်တင်သွင်းရန် နှင့် တင်ဒါတင်သွင်းသူများ လိုက်နာရန်ညွှန်ကြားချက်များနှင့်အညီ ပြုစုဖော်ပြရန်ဖြစ်ပါသည်။

၅။ တင်ဒါတင်သွင်းသူများသည် တင်ဒါဆိုင်ရာ သိရှိလိုသောအချက်အလက်များကို အင်ဂျင်နီယာဌာန(အဆောက်အအုံ) ရန်ကုန် မြို့တော်စည်ပင်သာယာရေးကော်မတီသို့ ရုံးချိန်အတွင်းဆက်သွယ်မေးမြန်းနိုင်ပါသည်။

၆။ တင်ဒါစာရွက်စာတမ်းများကို အထက်ဖော်ပြပါလိပ်စာ၌ ၂၅-၂-၂၀၁၄ ရက်မှစတင်၍ ရုံးချိန်အတွင်း ဝယ်ယူရရှိနိုင်ပါသည်။ မြို့ပြအိမ်ရာစီမံကိန်းများ[မြောက်ဥက္ကလာပမြို့နယ်၊ ဒဂုံမြို့သစ်(မြောက်ပိုင်း)မြို့နယ်]နှင့် တန်ဖိုးမျှတအိမ်ရာစီမံကိန်း[ဒဂုံမြို့သစ် (အရှေ့ပိုင်း)မြို့နယ်]အတွက် တင်ဒါစာရွက်စာတမ်းများ အပြည့်အစုံကို ရန်ကုန်မြို့ မြန်မာ့နိုင်ငံခြားကုန်သွယ်မှုဘဏ်၊ငွေစာရင်းအမှတ်1-DA -06-91886(MFTB)သို့ ပြည်ပငွေစာရင်းလွှဲပြောင်းမှု (Overseas account transfer)နည်းလမ်းဖြင့် တစ်စုံလျှင် USD 300 (အမေရိကန်ဒေါ်လာ သုံးရာတိတိ) ပေးသွင်း၍ဝယ်ယူနိုင်ပါသည်။ သို့မဟုတ်မြန်မာကျပ်ငွေ ၃၀၀,၀၀၀(ကျပ်သုံးသိန်း တိတိ)ကို အင်ဂျင်နီယာဌာန(အဆောက်အအုံ)ရုံးတွင် ငွေသွင်းချလန်ရယူပြီး ရန်ကုန်မြို့တော်ဘဏ် ငွေစာရင်းအမှတ် DY-9 သို့ပေးသွင်း ၍ ဝယ်ယူနိုင်ပါသည်။ စာပိုဒ်၁(ဃ)(င)(စ)နှင့်(ဆ) တွင်ဖော်ပြထားသော စီမံကိန်းများ၏ တင်ဒါစာရွက်စာတမ်း အပြည့်အစုံ တစ်ခုစီ အတွက် USD 500 (အမေရိကန်ဒေါ်လာ ငါးရာတိတိ) သို့မဟုတ် မြန်မာကျပ်ငွေ ၅၀၀,၀၀၀(ကျပ်ငါးသိန်းတိတိ)ကို ပေးသွင်း၍ ဝယ်ယူနိုင်ပါသည်။ ပေးသွင်းငွေအတွက် မည်သည့်အကြောင်းနှင့်မျှ ငွေပြန်အမ်းမည်မဟုတ်ပါ။

၇။ တင်ဒါများကို ၂၀၁၄ခုနှစ် မတ်လ ၃၀ ရက်နေ့ ၁၄း၀၀နာရီမတိုင်မီ အထက်ဖော်ပြပါရုံးသို့ တင်သွင်းရပါမည်။ နောက်ကျ တင်သွင်းသောတင်ဒါများကို လက်ခံစဉ်းစားမည်မဟုတ်ပါ။

၈။ မြို့ပြအိမ်ရာစီမံကိန်းများ[မြောက်ဥက္ကလာပမြို့နယ်၊ ဒဂုံမြို့သစ်(မြောက်ပိုင်း)မြို့နယ်]နှင့် တန်ဖိုးမျှတအိမ်ရာစီမံကိန်း [ဒဂုံမြို့သစ်(အရှေ့ပိုင်း)မြို့နယ်]၏တင်ဒါများနှင့်အတူ တင်ဒါတင်သွင်းမှုအာမခံအဖြစ် USD 50,000(အမေရိကန်ဒေါ်လာ ငါးသောင်းတိတိ) တန်ဖိုးရှိဘဏ်အာမခံ ပါရှိရမည်ဖြစ်ပြီး ယင်းဘဏ်အာမခံကို ပြည်တွင်း(သို့)မြန်မာ့နိုင်ငံခြားကုန်သွယ်မှုဘဏ်မှ လက်ခံနိုင်သော ပြည်ပဘဏ်မှထုတ်ပေးခြင်း ဖြစ်ရပါမည်။ စာပိုဒ်၁(ဃ)၊ (င)၊ (စ)နှင့် (ဆ)တွင် ဖော်ပြထားသော စီမံကိန်းများ ၏တင်ဒါများနှင့်အတူ တင်ဒါတင်သွင်းမှုအာမခံအဖြစ် USD 100,000(အမေရိကန်ဒေါ်လာ တစ်သိန်းတိတိ)တန်ဖိုးရှိ ဘဏ်အာမခံ ပါရှိရမည်ဖြစ်ပါသည်။

၉။ တင်ဒါဖွင့်လှစ်ခြင်းအခမ်းအနားကို ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီရုံး၌ တင်ဒါတင်သွင်းသူကိုယ်စားလှယ်များရှေ့မှောက်တွင် ပြုလုပ်မည်ဖြစ်ပါသည်။ တင်ဒါဖွင့်လှစ်မည့်နေ့ရက်နှင့်အချိန်ကို တင်ဒါတင်သွင်းသူများသို့ အကြောင်း ကြားပါမည်။

တင်ဒါခေါ်ယူရေးလုပ်ငန်းကော်မတီ
ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ

Call for tender for joint venture with YCDC on Urban housing plan, cost sharing housing projects, car parking projects

MDRI

CESD

Doubts and Criticism

- Though the objective is to lend those who want to buy low cost housing, it is only **possible for the land owners** to borrow from CHDB.

- Though one of the objective is to lend those who want to buy Condos, apartment and house, it is **not possible** for this service so far

MDRI

Source: The Irrawaddy Vol. 1 No. 7, Feb 16, 2014

CESD

Research objective

- To explore how housing financing policies could be developed and improved within politicians, authorities, the banking communities and other interest groups

Research Questions

- What are the potential of the policy to address affordable housing?
- What are the allocation criteria? What are the repayment rates for developers and low income buyers? To what extent were they affordable to low-income groups?
- What are the major problems which prevent sustainable housing policy implementation? How CHDB can achieve the balance between efficient banking operations and pursuing its social goals?

Methodology

- Desk Review - housing finance
- CHDB's terms and conditions on the borrowers
- Interview with the stakeholders of the bank
- Interview with the developers who borrow from DHSHD – private and government
- Field Survey – former affordable housing projects implemented by DHSHD and YCDC at different periods
- Allocation criteria for the affordable, low cost, cost sharing housing projects by DHSHD and YCDC (Which income level can afford governments' affordable housing projects by which level of housing projects ?)

MDRI CESD

Research Team

- Dr. Zaw Oo – Supervisor
- Ngu Wah Win – Research Associate
- Phoo Pwint Phyu – Research Associate
- Research Assistants

MDRI CESD

THANK YOU

Final Report

Agriculture and Rural Development Working Group

Final Report of the Agriculture and Rural Development Working Group

Contents

List of Figures

List of Tables

Executive Summary

The Japan International Cooperation Agency (JICA) launched a three-year program to support Myanmar's economic development in April 2012, headed by Dr. Konosuke Odaka, Professor Emeritus of Hitotsubashi University, Japan. The main objective of the program is to submit policy recommendations to both the Government of Myanmar and Japan for the development of Myanmar's economy, based on research and field surveys by academicians. The Agriculture and Rural Development Working Group headed by Dr. Koichi Fujita, Professor, Center for Southeast Asian Studies (CSEAS), Kyoto University, Japan, is one of the three working groups organized under the program. Dr. Makoto Inoue, Professor, the University of Tokyo and Dr. Ikuko Okamoto, Professor, Toyo University, also joined the working group.

The Agriculture and Rural Development Working Group conducted field surveys with counterpart institutions in Myanmar such as Yezin Agricultural University, the Forestry Research Institute (FRI), the Department of Agriculture (DOA), the Myanmar Agricultural Development Bank (MADB), the Myanmar Rice Federation (MRF), and the Myanmar Rubber Planters and Producers Association (MRPPA).

The major focuses of the research are 1) agricultural and rural finance, 2) rural land classification and utilization, 3) rice sector development, 4) rubber products sector development, and 5) institutional aspects of rural development. For the purpose of investigating agricultural/rural finance issues in Myanmar, several study villages were selected from different agro-ecological zones: the Central Dry Zone, the Ayeyarwady Delta, Shan State, and Mon State. Household-level surveys were conducted in the study villages. Research on MADB was also carried out, including field visits to several of its township-level branches. The research results and policy recommendations are summarized in Chapter 3 and Appendixes A to D.

In order to investigate rural land classification and utilization, a research team headed by Professor Makoto Inoue carried out field surveys in the Central Dry Zone and Shan State with assistance from FRI. In Shan State, two study villages were selected from Kyauk-me Township and household surveys were conducted. The research results and policy recommendations are summarized in Chapter 5.

With regard to the research for rice sector development, two important issues are chosen: 1) development potential of groundwater irrigated summer paddy production, and 2) rice export and contract farming, with special reference to the experimental business model known as "rice specializing companies." The research results and policy recommendations are summarized in Chapter 1.

Research on the rubber products sector was carried out with assistance from MRPPA. Key economic agents in the sector such as state-owned rubber estates, state-owned tire factories, private rubber estates, private rubber processors, rubber brokers, and rubber smallholders were interviewed. In addition, two study villages were selected from Mon State for household surveys. JICA also organized a study trip at Surat Thani Province, Thailand, in which 4 government officers (2 from the Department of Industrial Crops Development, Ministry of Agriculture and Irrigation and 2 from the Ministry of Commerce) and 2 persons from MRPPA participated. The results of the research and policy recommendations are summarized in Chapter 2.

Finally, but importantly, research on institutional aspects of rural development was carried out mainly by Professor Ikuko Okamoto. The research results and policy recommendations are summarized in Chapter 4.

An executive summary of the major research results and policy recommendations (except Appendixes A to D) is as follows.

Chapter 1 Selected Issues in the Rice Sector

The rice sector is one of the key sectors determining the development path of Myanmar's agricultural sector. Since the early 2000s, government regulations in the rice sector have been gradually relaxed and currently it is transforming from an industry in which production only meets people's subsistence needs to one with a more commercial nature, which is now successfully exporting over one million tons of rice per year.

Chapter 1 explores the following two issues for the purpose of enhancing the development of the rice sector: 1) the possibility of expanding private tube-well irrigated summer paddy cultivation, and 2) the current conditions of rice exports and required improvements in export business, as well as the experience of rice specializing companies (RSCs) that were expected to lead the export sector.

1-1. Development potential of private tube-well irrigated summer paddy production

1) Contrary to our expectations that there is substantial room for exploiting groundwater resources using private tube-wells for the development of summer paddy production, the survey results show that the reality is quite the opposite. There is no such development potential given the present technical and economic conditions.
2) However, in the medium to long run, if diesel oil-operated tube-wells can be converted to electricity-operated wells through rural electrification, the irrigation cost can be substantially reduced, which would enable profitable summer paddy cultivation for the vast area of "medium land" in the upper part of the Ayeyarwady Delta. Moreover, if India's demand for black gram imports continues to be sluggish, promising crops other than black gram should be more seriously sought out. One option is summer paddies with tube-well irrigation.

1-2. Rice Exports and Contract Farming: Lessons from Rice Specializing Companies

1) Although Myanmar's rice exports have been on an increasing trend since the early 2010s, it is largely due to the increase of exports to China. To reduce the risk of price volatility arising from dependence on limited markets, diversification of export destinations is necessary.
2) For this purpose, quality improvement efforts in rice production, processing, and marketing are urgently required, which include the expansion of utilization of quality seeds, upgrading processing facilities, and reducing logistical costs. Along with improvement in the quality of rice, a better marketing strategy is necessary to gain a better market reputation and to explore new markets.
3) The RSC model was an early attempt to commercialize Myanmar's rice industry initiated by the government to enhance rice production and exports. The main feature of the model lies in the introduction of contract farming and building a comprehensive supply chain. However, the experiment did not follow through with its initial design and did not lead to the building of a comprehensive supply chain, although we need to realize that there were uncontrollable factors such as climate, which negatively impacted the results. While the majority of the companies stopped operating as RSCs, those that remained mainly focused on credit provision to a limited number of farmers, due to the increasing default risk of the farmers.
4) There are two future directions that an RSC can take: First, contract farming, which may be feasible if it targets a small number of farmers, and specifics such as quality seed and special varieties are dealt with. The past experience of the RSCs shows that contract farming with a large number of farmers while procuring general varieties is difficult to sustain. Even the largest RSCs struggled to overcome the problem of farmers' defaults. This experience shows that if a large area and number of farmers are targeted, both the transaction costs and risks tend to be too large to manage. Furthermore, differentiating between paddies produced by contracted and non-contracted farmers is virtually impossible. However, if they are for seeds and special varieties, the criteria for quality and price can be clearer for both the RSCs and farmers.
5) Even if the contract farming may concentrate on specific varieties or products, it is very likely that changing weather patterns or other risks may affect negatively to maintain stable contracts between agricultural buyers (in this case RSCs) and farmers. In order to cope with these risks from uncontrollable factors such as weather, introduction of a sort of insurance for both sides would be worth considering.
6) At the same time, if the government decides to promote contract farming (which does not limit to that of rice), establishment for some legal framework (i.e. such as contract farming law) to guarantee the stable contract and enforcement will be necessary.
7) The second direction is for those RSCs that decide to only focus on credit provision. They no longer have to stick to contract farming or being RSCs. Since the legal framework for microfinance is now in place, a microfinance scheme can be promoted under this particular

law. This will be further enhanced by the fact that farmers can now mortgage land to legally borrow money, using their own land certificate as collateral. On the other hand, we have observed that there is no legal provision for the activities of the RSCs. In legal terms, the RSCs did not have sufficient transparency in transactions, and at the same time, there was insufficient consideration for the occurrence of problems such as defaults. Given the existence of various channels of small-scale loans, the entire system should be mutually consistent and sufficiently transparent.

Chapter 2 Rubber Sector and Policy

1) Rubber production in Myanmar registered a sharp increase after the turn of the century. The harvested area became 4 times larger and the yield per hectare almost doubled, resulting in nearly a 7-fold increase in production during the last decade or so. Nevertheless, if compared to the other leading rubber-producing countries such as Thailand, Indonesia, Malaysia, Vietnam, India, and China, the performance of Myanmar's rubber products sector is far from satisfactory, exemplified by the fact that per acre yield in Myanmar is less than half of the leading countries.
2) The Myanmar government had long been implementing policies, such as nationalization of private estates and introduction of a state procurement system at below-market prices, which had negative effects on the rubber products sector. Such negative policies have all been abolished now, but positive policies have yet to be introduced.
3) There are 27 state-owned rubber estates, but they are generally suffering from the budget constraints. Hence, there are many areas with old rubber trees, resulting in low productivity, and they cannot pay normal market wages to the tappers and so are obliged to employ low-skilled tappers. The frequent damage to the rubber trees is the other major cause of low productivity. However, note that all the state-owned rubber estates were privatized on the basis of Joint-Venture with private companies and local individuals in August 2013.
4) There are 2 state-owned tire factories in Thaton and Bilin, Mon State. They also suffer from budget constraints, especially foreign exchanges for importing raw materials other than natural rubber. Hence the capacity utilization of the facilities is extremely low, while the salaries of a large number of idle government employees are still being paid. The other major problem with the old tire factory in Thaton is its old-fashioned technology and facilities, which resulted in a high cost structure with no power to compete against imported tires. Note that, however, the Bilin Tire Factory was leased out to Yangon Tire Co. on November 1st, 2014.
5) There are many private rubber estates and at least some of the estates are efficiently managed and providing rubber products of the highest grade (RSS1) to private tire companies, such as the Yangon Tire Factory. They lead the technological innovation of the sector through their private nurseries and as core members of MRPPA.
6) Approximately 90% of rubber planters in Myanmar are smallholders with less than 20 acres (8 ha). A weak financial position is the most serious problem they face. International migration, especially to Thailand since the mid-1980s, enabled at least some of them to finance their rubber plantation development. But still, they usually borrow from moneylenders including rubber brokers at high interest rates, which prevents them from improving their livelihoods.
7) MADB should extend seasonal loans to rubber smallholders. The Myanmar government should abolish commercial taxes imposed on rubber products in every stage of its internal trading. Instead, we recommend that the government introduce the cess system to rubber product exports, and invest the tax revenue in a replanting program for old rubber trees and also in the research and development of the rubber products sector. Upgrading smallholders by organizing them into cooperatives is a key for both raising rubber productivity and improving the quality of rubber products (See the figure below).

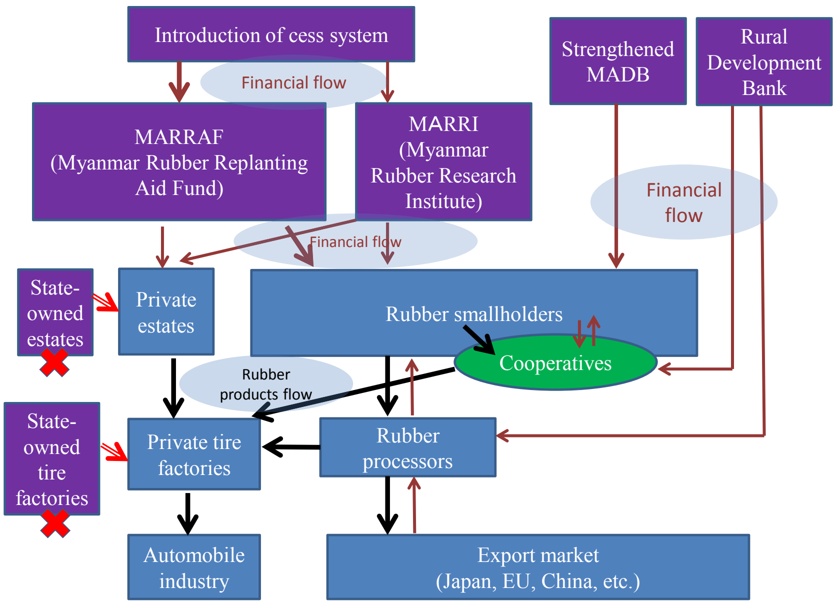


Figure: Reformed Rubber Products Sector in Myanmar

Chapter 3 Rural Finance and Policy

Rural financial markets at the village level are usually very complicated, especially in Myanmar where there are various types of informal lenders, and in recent years various types of formal and semi-formal lending institutions have arisen, including MADB, cooperatives, the PACT Global Microfinance Funds (PGMF), UNDP, and village-level credit unions assisted by CBOs.

The purpose of this research is to get detailed information on rural financial markets at the village level by selecting several study villages from different agro-ecological zones in Myanmar, and mainly based on the findings and insights from the field surveys, to submit policy recommendations for rural financial sector development in Myanmar. The selected study villages are located in the Central Dry Zone (3-1-1), the Ayeyarwady Delta (3-1-2), Shan State (3-1-3), and Mon State (3-1-4). The major borrowing sources in each village are as listed below.

Table: Financial Institutions in the Study Villages

		Microfinance Type I			Microfinance Type II			Informal		
									Interlinkage with other	
	MADB	PGMF	Ministry of Coopera-tives	RSC	UNDP Self-Reliance Group	Credit unions (Wong Metta)	Village Common Funds	General	Merchants	Advance wage
Central Dry	small	○	○				○	◎	◎	small
Delta	◎	○	small	○			small	◎	◎	◎
Shan State	△/○	○	△/○		△	○	○	◎	◎	small
Mon State	△						?	◎	◎	?

Source: Prepared by author.
Note: RSC--Rice Specializing Companies.

1) MADB provides seasonal loans at a subsidized interest rate of 8.5% per annum to farmers mainly in the Delta village, because of that it is located in the major rice-producing regions. However, the amount provided in the Central Dry Zone (CDZ) village and the Shan State villages is less, because it places priority on the rice sector. The farmers in the Delta village are satisfied with the increased loan amounts in recent years (100,000 kyat per acre upto 10 acres), but frustrated by the often delayed disbursement of loans.
2) The Ministry of Cooperatives recently started to distribute 50,000-100,000 kyat loans for 6 months at a 2.5% per month interest rate in a large rural area, including the CDZ village and one of the two Shan villages. Although the loan size increased substantially with lower interest rates very recently, it seems that its effect is remained rather limited.

3) The PACT Global Microfinance Funds (PGMF) is actively undertaking its microfinance program in the CDZ, Delta and Shan villages at a 2.5% per month interest rate. Borrowers need to make payments once every two weeks. It has been observed that they did a good job targeting landless and small-scale farmers both in the CDZ, Delta and Shan villages. Many borrowers used the loans for production purposes, including livestock, small business, handicraft, etc.
4) The UNDP Self-Reliance Group (SRG) program is observed only in the Shan villages. UNDP provided some seed money to the groups, with which members started to borrow at an interest rate of 2.5-3% per month, usually for 6 months, and thus accumulate their funds.
5) It is worth paying attention to the fact that the village-level credit unions (Wong Metta) are widely organized in Shan State by a Buddhist CBO. The credit union is operated by savings mobilized from village members without any external money. Although the growth of credit unions depends on various factors including the location and the extent of socio-economic development of each village, an important point is that it has a social welfare scheme (for hospitalized members, delivered babies, the elderly, and funerals) that is paid for by utilizing a portion (50%) of its interest revenue.
6) Rice specializing companies play a supplementary role in meeting the cost of paddy production since about one-fourth of farm households are utilizing their credit (22.2%) in the Delta village. The credit is either in the form of cash, in-kind, or both at an interest rate of 2% per month. However, it is not available to every farm household as the farmers' credibility is scrutinized both by the lending companies as well as the local authorities. Since the provision of credit is supposed to be a part of contract farming, RSCs were to buy back the paddies from the farmers to whom they provide credit. However, the majority of farmers did not choose to sell/pay back by paddies, signifying that RSCs were actually functioning only as a credit provision institution.
7) Some villages keep common funds for various objectives, such as religious affairs, education, health, or general development. These common funds can come from villagers' money or from outside donations. Some of these funds are lent out to villagers with interest so the fund will grow with time if managed properly. The CDZ village had three common funds (health, education and religious) and was meeting certain credit demands of villagers, though the amount is rather small. However, in the Delta village the dependency on common funds was lower. The capacity for managing these common funds may differ depending on the region as well as the level of experience with village-based collective actions.
8) It seems that the recent diversification and increased flow of formal and semi-formal loans mentioned above had a positive impact on rural financial markets, especially by lowering the interest rates in loans from informal lenders; typical interest rates decreased from 5% (with collateral) and 10% (without collateral) to 3-4% and 7-8% respectively. However, it is observed everywhere that informal loans, especially those from moneylenders (including brokers of agricultural commodities such as jaggery, maize, and rubber) persisted. A major reason is that they lend money when borrowers need it and usually in much larger amounts than the formal and semi-formal lending institutions, so far as they think the loans can be recovered. The other important reason is that they can wait for repayment relatively flexibly depending upon the conditions of the borrowers, which is vital for the poor.
9) In the Delta village, advance wage payments to agricultural laborers and marginal farmers were prevalent. The wages are provided 2-3 months before the working periods (mainly in the lean season) at a lower wage rate than the actual (expected) wage rate. The estimated interest involved in such advance wage payments is remarkably high, ranging from 10% to even 150% per month (the majority are in the range of 20-40%). This signifies difficulties among agricultural labor/marginal farmer households in financing their basic consumption throughout the year, either through their own income or the normal informal loans.
10) MADB should, 1) diversify its loan portfolio, 2) modify the current unsustainable funding model in which it highly depends on funds from Myanmar Economic Bank (MEB) with

huge subsidies as soon as possible, because if MADB reduces the loan rate per acre to the rates before 2008/09 due to a shortage of funds, it will hurt a large number of farmers.

11) Consumption smoothing and coping with emergencies are as vital as livelihood development for the rural poor. Grameen Bank-type microfinance such as the PGMF (Microfinance type 1) is more suited to livelihood development than consumption smoothing. Credit unions which operate mainly based on their own savings such as "Wong Metta" in Shan State (Microfinance type 2) should be promoted for the purpose of providing loans for consumption smoothing, including investments in education, house construction and others. Village common funds (VCF) can also play the same role.

12) Exploitative informal loans are largely persisted, basically not because of the insufficient injection of money through microfinance institutions, but because of the underdeveloped Microfinance type 2 above mentioned, since informal loans are used mainly for emergency purposes. Microfinance type 1 is not suitable for mitigating the problem arising from the strong demand for credit in emergencies. The microfinance type 2 should be given more priority after the microfinance type 1 developed to a certain degree.

Chapter 4 Rural Development and Collective Action

For the promotion of rural development, community-based and participatory approaches have been widely emphasized in the past few decades. This trend stemmed from the realization that the top-down approaches taken in rural development schemes had not yielded their expected outcomes. Benefits of participatory approaches are generally found in the facts that 1) the usage of local knowledge would yield more efficient and favorable results, 2) local residents would have more of an incentive to volunteer their efforts if they are included in the decision-making process and have ownership of the projects, and 3) as a result, these projects would have a greater chance of being sustainable after completion.

Since the present government is making serious efforts toward rural development and poverty reduction, it is useful to consider how to strategically utilize Myanmar's rural society's rural development capability. To ensure the best use of rural society's capabilities, and while realizing that there are limitations, it is essential for government and development practitioners to fully understand the characteristics of Myanmar's rural social structures. More specifically, we need to identify the proper unit of collective actions and the possible functions they can achieve.

1) For community-based development projects, the basic unit most capable of mobilizing resources (monetary and human capital) is the village, not the village tract.

2) A well-functioning village should be equipped with the following mechanisms and capable of the following functions: i) a decision-making mechanism; ii) the creation and maintenance of village-based organizations; iii) resource mobilization mechanisms; and iv) enforcement mechanisms.

3) Village-based collective actions can be most successful when they meet the public needs of the village's residents, such as education, health, religion, and infrastructure.

4) Rural development projects can be very effective if they are designed to draw from the full potential of the village's resources. If any village is not fully aware of its potential itself, inputs from outsiders (including the information of the successful cases in other areas/villages) may help them to nurture their capacity to mobilize resources for their development efforts.

5) If a certain project needs capital that cannot be raised within the village, matching funds from donors or the government can be useful. Even in government-led programs, some internal mobilization could be effective for raising a sense of ownership among the village residents.

6) Even given the same structure, different villages will have different resource mobilization capacities and organizing capabilities depending on their location, their experience with collective actions, and the goals of their collective actions. Therefore, policy makers and project organizers should be aware of such possible differences and try to carefully identify what is suitable for specific areas and villages.

7) As previously noted, a village has capability to form committees of various kinds for specific objectives when there is need. However, with the increase in projects in rural areas in the past three years in Myanmar and in response to these projects' demand, some villages may now have

more committees than they can actually manage. Some balance should be maintained in forming committees and actual projects.

Chapter 5 Community Forestry and Shifting Cultivation Stabilization Policy

Based on a review of land use and forest policies, the following issues were regarded as important: (a) Even though it was remarkable that the Land Use Scrutinizing Committee on Land Use and Land Allocation was able to make such excellent recommendations that settled most of the issues caused by illegal land use (730,000 ha) in Permanent Forest Estates, the area of shifting cultivation (*shwetpyaung taungya*) in border areas was not included in the committee's data while the total area of shifting cultivation (estimated area: 2,430,000 ha) is more than three times as large as illegally used land, (b) As pointed out by the CF National Working Group, absence of the persons and department/section in charge of CF in the Forestry Department (hereinafter FD) and poverty in the community are among the important issues to be tackled, (c) Before introducing a REDD+ mechanism, consideration of social safeguards and creation of a benefit sharing mechanism among stakeholders are indispensable.

In addition to the field surveys in the Central Dry Zone Area to clarify the significance of forest resources for the people and in northern Shan State to understand the changes in upland farming systems and trial of CF, as well as the above mentioned policy review, let us make the policy recommendations shown below.

(1) Establish an integrated CF policy: In order to execute the integrated CF policy through coordination within MOECAF and with other ministries such as the Ministry of Livestock and Fishery, the Ministry of Agriculture and Irrigation, and the Ministry of Cooperatives, the government should establish a new division under FD.

(2) Diversify the main actors in CF to ensure flexibility: While CF Instruction specifies that Forest User Groups (hereinafter USGs) are the main actors in CF, there are actually three types of CF management by three main actors in the field: individual management of allotted land by individual persons/households, collective management by groups of villagers, and communal management by villages. It is recommended to legalize these three main actors by making a definite statement in the instruction or law. Other actors' commitments such as management by contract managers/caretakers and co-management between villagers and village tract/township offices of FD and DZGDs/timber companies should also be optional. It is best for the local people to select appropriate options in accordance with their circumstances.

(3) Illustrate CF management models: Forest management models for obtaining diversified benefits are shown in the table below. Applicability of these management models depends on the legal category of CF land, which affects the main actors of CF management. The management model should be modified in accordance with the actual situation of a field.

(4) Introduce CF in permanent and semi-permanent upland fields: Intercropping CF in farms, hedgerow CF around farms as well as block CF in farms could apply to permanent and semi-permanent upland fields (taungya). The priority of community forestry in farmlands should be to provide alternative sources of cash income. For sustainable production and utilization of fuelwood, conserving degraded natural forests around and near farmland and establishing fuelwood plantations should be considered.

(5) Introduce CF in shifting upland fields: The following principles can be effective in finding a compromise between the people and FD— (a) People should not open/cut primary forest any more. (b) People should keep their system in which they shift their upland fields with a certain fallow period. (c) People should get short-term, medium-term, and long-term incomes by planting trees such as Mezali (*Cassia siamea*) for firewood, and *Sterculia spp.* for resin in five to seven years, and fruit trees around the upland fields. (d) People should select one of the options to make use of the fallows. Possible options are to let the field regenerate naturally after harvesting crops, and to plant trees and NTFP to get income from the fallows that would be cut again for the next cropping season. (e) People should make fire-belts to avoid spreading of fires to the surrounding forest when they cut and burn the bush/forest fallow again.

(6) Other recommendations related to CF as a climate change policy: (a) reduce the burden on the local people, (b) elaborate on CF as an adaptation policy, (c) make good use of principles, criteria

and indicators of existing certification schemes, and (d) consider how to distribute the profit among stakeholders.

Table: Proposed management models for CF in the Central Dry Zone Area

Model	Benefit	Main actor	Land category
1: Natural forest management	Timber/fuelwood	Individuals/FD	Reserved forest
		Individuals	Vacant, fallow, and virgin lands
2: Watershed natural forest management	Water for daily life	Contract manager / USG / village	Degraded reserved forest
3: Plantation forest management	Timber/fuelwood/NTFP	Contract manager / USG / village	Vacant, fallow, and virgin lands
4: Agroforestry	Agricultural crops / livelihood / timber / NTFP	Individuals	Degraded reserved forest
		Individuals	Degraded vacant, fallow and virgin lands
5: Fuelwood forest management	Fuelwood	Timber company	Degraded reserved forest
		Village tract	Degraded vacant, fallow and virgin lands
6: Tree conservation	Timber/fuelwood	Individuals/FD	Private farmland

1. Selected Issues in the Rice Sector

The rice sector is one of the key sectors determining the development path of Myanmar's agricultural sector. Since the early 2000s, government regulations in the rice sector have been gradually relaxed and currently it is transforming from an industry in which production only meets people's subsistence needs to one with a more commercial nature, which is now successfully exporting over one million tons of rice per year.

This chapter explores the following two issues for the purpose of enhancing the development of the rice sector: 1) the possibility of expanding private tube-well irrigated summer paddy production, and 2) the current conditions of rice exports and required improvements in export business, as well as the experience of rice specializing companies that were expected to lead the export sector.

1-1. Development Potential of Private Tube-well Irrigated Summer Paddy Production

Since the 1980s private shallow tube-well irrigation has developed extensively in eastern South Asia such as West Bengal (India) and Bangladesh, contributing to the dramatic increase in rice production (Fujita, 2010). In contrast, no such movement has been observed in Myanmar so far.[1] The irrigated land ratio in Myanmar still remains around 16% (2.11 million ha) and the major source of water is surface water obtained either through canal gravity irrigation or pumping water from rivers or streams. On the other hand, the utilization of groundwater is quite underdeveloped. Although the Water Resources Utilization Department (WRUD) was established in 1995 they have concentrated more on the pumping of surface water. After its establishment, the department installed 327 river pumping stations including special pumping projects to irrigate 201,095 acres, but it introduced 5,298 deep tube-wells and 3,067 shallow tube-wells to irrigate only 41,966 acres (MOAI, 2013: p.40). Currently, groundwater development by the private sector is also very limited in Myanmar.

This section examines the development potential of private tube-well irrigation in Myanmar for increased summer paddy production, based on a quick 3-day field survey conducted in February 2014 in the major private tube-well developed areas in the Ayeyarwady Delta, i.e., the four townships of Kyaungonn, Yegyi, Kyonpyaw, and Kankyidaung, which are located in-between the two towns of Hinthada and Pathein.

1-1-1. Ecological Conditions of the Ayeyarwady Delta and Crop Choice

Roughly speaking, the Ayeyarwady Delta can be classified into three regions: first, the lower basin which lies south of the Labutta-Bogalay-Pyapon line, where salinity is the major problem for crop cultivation especially in the summer season; second, the region in-between the Labutta-Bogalay-Pyapon line and the Pathein-Nyaundoun line, where surface water irrigation by pumps for summer paddy production is feasible and has actually been developed since 1992/93 in particular; and third, the upper basin which lies north of the Pathein-Nyaundoun line, where surface water irrigation is infeasible and pulses, especially black gram, are the major crops in the summer season, followed by monsoon paddy.

These four townships, where private tube-wells are diffused for summer paddy production, are located just in the northern edge of the Pathein-Nyaundoun line. Since groundwater irrigation by tube-wells is usually much costlier than surface water pump irrigation, farmers in the second region have no incentive to use groundwater. However, in the summer season farmers in the third region, especially near the northern edge next to the second region, have the option of growing either pulses without irrigation or summer paddy with tube-well irrigation, probably according to topographic and other economic conditions.

1-1-2. Survey Results

[1] The Summer Paddy Program which started in 1992/93 in Myanmar achieved a sharp increase in the area of summer paddy cultivation mainly in the Ayeyarwady Region, but the major irrigation water source was surface water, not groundwater. Farmers introduced small pumps with diesel oil-operated engines for lifting surface water left in the summer season. See, for example, Fujita and Okamoto (2000).

Table 1-1 is a summary of the results of the field survey conducted in February 2014. Generally speaking, the farmland in the four townships can largely be classified into three types: very low land, low land, and medium land. The general land use pattern in 2014 is as follows.

In the very low land, the depth of flooding in the monsoon season is too deep to grow any crops and summer paddy is the sole crop that can be grown in the summer season. Farmers normally need to provide irrigation water 6 times per season (once every two weeks) by tube-wells. As the table shows, if farmers rent a tube-well they need to pay 10 baskets of paddy (roughly 400,000 kyat) per acre to the tube-well owners. Besides that, farmers need to purchase diesel oil to operate the tube-well, which amounts to 41,850 kyat per acre. Hence, the total irrigation cost is 81,850 kyat per acre, equal to 18.6% of the gross production of summer paddy. The net profit margin is 166,900 kyat per acre, equivalent with 39.9% of the gross production.[2]

In the low land farmers usually double crop rice, if irrigation water is available in the summer season. Farmers, however, normally need to irrigate summer paddy 12 times per season (once a week), exactly double the rate for very low land. Thus the total irrigation cost is 123,700 kyat per acre, equal to 28.1% of the gross production of summer paddy and the net profit margin reduces to 125,050 kyat per acre (28.4% of the gross production value).

In the medium land, on the other hand, farmers usually use a cropping pattern involving the monsoon paddy―black gram. As the table shows, the net profit margin of black gram production is only 77,250 kyat per acre, much lower than summer paddy in low lands (125,050 kyat). Note however, that the market price of black gram was abnormally low at the time of the survey due to the sluggish import demand from India.

Case 1 in the table shows the case in which the price of black gram is assumed to be 20,000 kyat per basket (instead of the actual 13,500 kyat). As the table shows, under that assumption the net profit margin is 142,250 kyat per acre, larger than summer paddy in low lands. In other words, in a scenario in which black gram is at such a high price, it is possible that farmers might choose black gram in low lands, instead of summer paddy.

Case 2 shows the case in which farmers choose to grow summer paddy in medium land. According to the interview with local farmers, if summer paddy is grown in medium land, farmers need to irrigate 24 times per season (once in every 3-4 days). The result is that the total irrigation cost is now 207,400 kyat per acre and the net profit margin is 41,350 kyat per acre, much smaller than the case of choosing black gram, even under the low market price of black gram at the time of the survey.

1-1-3. Discussions

The survey results mentioned above indicate that contrary to our expectations that there might be much room for exploiting groundwater resources via private tube-wells for the development of summer paddy production, it was found that the opposite is true. There is no such development potential given the present technical and economic conditions. However, it should be noted that farmers in West Bengal (India) and Bangladesh grow summer paddy (*boro*) in medium land by applying irrigation water very frequently (roughly 24 times per season as mentioned above). What are the differences between Myanmar and West Bengal (India) or Bangladesh?

First, all the private tube-wells in the study area of Myanmar run on diesel oil while in West Bengal, the majority of private shallow tube-wells are electric. Usually electric tube-wells are much less expensive than diesel tube-wells. Furthermore, the State Government of West Bengal provides a large amount in subsidies to the supply of electricity for agricultural purposes (Fujita, 2010: pp.106-107). At the same time, however, we need to keep in mind that roughly two-thirds of the shallow tube-wells operated in Bangladesh run on diesel oil. The issue of energy source alone (electricity or diesel oil) cannot explain all the disadvantages of the Myanmar farmers.

Second, there might be a significant difference in rice prices between the two regions. In other

[2] The technological characteristics of the private tube-wells observed in the study area are as follows. The depth of tube-wells is from 80-200 feet and one tube-well can irrigate 10 acres on average. The diesel engines (7-13 horsepower) are imported from China. Tube-well owners (cum-farmers) usually use their tube-wells to irrigate their own farmland. In other words, the groundwater market is inactive in Myanmar unlike Bangladesh and West Bengal in India.

words, due to some policy distortions, the rice prices in Myanmar might be substantially lower than in West Bengal (India) and Bangladesh.[3]

Conclusions and Policy Implications

The development potential of private tube-well irrigation for increased summer paddy production in Myanmar was investigated in this section, based on a quick 3-day field survey conducted in February 2014 in the four townships in the Ayeyarwady Region.

Contrary to our expectations that there might be much room for exploiting groundwater resources by using private tube-wells for the development of summer paddy production, the survey results show that the opposite is true. There is no such development potential given the present technical and economic conditions. However, in the medium or long run, if diesel tube-wells can be converted to electric tube-wells through rural electrification, the irrigation cost can be substantially reduced, which would enable profitable summer paddy cultivation for the vast area of medium land in the upper part of the Ayeyarwady Delta. Moreover, if India's demand for black gram imports continues to be sluggish, more serious efforts should be made to look for other promising crops that can be grown in the medium land. One option is summer paddy cultivation with tube-well irrigation.

[3] See Fujita (forthcoming), for instance.

Table 1-1 Current Situation and Development Potential of Private Tube-well Irrigation

	Current						Case 1 (black gram price=20,000 kyat/bsk)				Case 2 (double irrigation to summer paddy in medium land)			
	Very low land		Low land		Meduim land		Low/Medium land				Medium land			
	Summer paddy				Black gram		Summer paddy		Black gram		Summer paddy		Black gram	
	Volume	Amount (kyat)	Volume	Amount (kyat)	Volume	Amount (kyat)	Volume	Amount (kyat)	Volume	Amount (kyat)	Volume	Amount (kyat)	Volume	Amount (kyat)
Production (A)	110 bsk	440,000	110 bsk	440,000	10 bsk	135,000	110 bsk	440,000	10 bsk	200,000	110 bsk	440,000	10 bsk	135,000
Cost														
Seed	2 bsk	8,000	2 bsk	8,000	7 pyi	8,750	2 bsk	8,000	7 pyi	8,750	2 bsk	8,000	7 pyi	8,750
Land preparation		80,000		80,000		0		80,000		0		80,000		0
Chemical fertilizer	Urea 1 bag	22,000	Urea 1 bag	22,000		0	Urea 1 bag	22,000		0	Urea 1 bag	22,000		0
	Compound 1 bag	26,000	Compound 1 bag	26,000		0	Compound 1 bag	26,000		0	Compound 1 bag	26,000		0
Growth facilitator		0		0	0.5 liters	10,000		0	0.5 liters	10,000		0	0.5 liters	10,000
Herbicide	0.2 liters	4,000	0.2 liters	4,000		0	0.2 liters	4,000		0	0.2 liters	4,000		0
Insecticide	0.2 liters	4,000	0.2 liters	4,000	0.5 liters	9,000	0.2 liters	4,000	0.5 liters	9,000	0.2 liters	4,000	0.5 liters	9,000
Irrigation diesel oil	6 times	41,850	12 times	83,700		0	12 times	83,700		0	24 times	167,400		0
Irrigation equipment rental	10 bsk	40,000	10 bsk	40,000			10 bsk	40,000			10 bsk	40,000		
Harvesting	15 mandays	33,750	15 mandays	33,750	12 mandays	27,000	15 mandays	33,750	12 mandays	27,000	15 mandays	33,750	12 mandays	27,000
Threshing	6 mandays	13,500	6 mandays	13,500	1 hour	3,000	6 mandays	13,500	1 hour	3,000	6 mandays	13,500	1 hour	3,000
Total cost (B)		273,100		314,950		57,750		314,950		57,750		398,650		57,750
Profit margin (A-B)		166,900		125,050		77,250		125,050		142,250		41,350		77,250

Source: Field survey by author in February 2014.

1-2. Rice Export and Contract Farming: Lessons from Rice Specializing Companies

Since the early 2000s, government regulations in Myanmar have been gradually relaxed, especially in relation to rice marketing. This is because rice production reached a level that met the government's expectations, to some extent, and the government felt comfortable enough to let the rice production sector advance to the next stage. As a result, the sector transformed from one where production only met peoples' subsistence needs to a sector with a more commercial nature, including increasing exports.

In its efforts to promote the commercialization of rice production and exports, the government introduced a new rice business model, i.e. rice specializing companies (RSCs). In 2008, the government urged the major export/import companies (not limited to those engaged in agricultural trade) to establish RSCs. In December 2013, there were 59 registered RSCs accounts. As will be discussed later, the establishment of RSCs aimed at building a comprehensive private supply chain that covered the rice sector from production to export. These changes in the government's stance toward the rice production sector were inherited by the new government and they have been further strengthened.

Upon the opening up of the country, more reports on Myanmar's agriculture and marketing are now available. These reports refer to RSC as a new business model that might have the potential to be a catalyst for the rice sector (Wong, 2013:37-39; Dapice, 2010:26-28). Nevertheless, in-depth information on RSCs is rather limited. In 2013, it is reported that most of the RSCs had halted their actual operations, but the reasons for the same and their status thereafter are not well documented.

This section has two aims. First, we will review the current conditions of rice exports in Myanmar and identify the areas that need to be improved. Second, we will examine the experience of RSCs and draw lessons for the commercialization and development of Myanmar's rice sector. The analysis of RSCs is based on interviews with some RSCs, conducted in September 2013 and August 2014, with the support of the Myanmar Rice Federation.

The following parts consist as follow. The first section reviews changes in rice export policy briefly, followed by the current status of rice export in general. The following section will take up some RSCs and analyze their operation. The third section examines to what extent RSCs meet the government initial expectation to lead the rice sector. The last section is the policy implications and recommendation.

1-2-1. Changes in Rice Export Policy

In the long history of Myanmar, rice is the crop which has been most subject to government interventions and regulations, simply because of its economic and political importance. However, since the early 2000s, government regulation has been relaxed gradually especially in the area of marketing. The rice policy under the Socialist and the military regime was a package of compulsory cropping, compulsory delivery system under which farmers had to sell paddy at pre-determined prices and the state maintained a monopoly of rice exports (Myanma Agricultural Produce Trading: MAPT).[4] An increase in foreign exchange earnings through rice exports might have been one of the goals during the initial phase of the socialist period. But ensuring a sufficient domestic supply of rice at low price gained more importance in the later years. Therefore, the government pushed for production increase by using the compulsory cropping system under the military regime. It also purchased part of the produce at below-market prices and rationed this rice to public servants and the army. Moreover, the government monopolized exports to repress the price of domestic rice. Although these policies caused many market distortions resulting in depressing rice farmers' incomes, they at least achieved production increase, to a certain level, by the early 2000s[5] (Fujita and Okamoto, 2009).

With this increase in production, the government gradually introduced liberalization in rice marketing. In April 2003, domestic marketing was liberalized through the abolishment of both the

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[4] The changes in rice policy and the performance of the rice sector under the military regime, see Takahashi (2000), Fujita and Okamoto (2009), Okamoto (2009), Fujita (2013).

[5] Rice price plunge in 2001 can be regarded as evidence that the rice domestic market is reaching saturated condition.

compulsory delivery system and the system of rationing rice to public servants. At the same time private rice export was liberalized. However, the labialization took a complicated manner: rice export quotas were allotted to private companies/traders, and the export earnings in dollars were to be shared equally between the government the private companies (since 10% export tax was levied, the share was 45% each), and the government paid the costs for exports that accrued to the private company's share (45%) in local currency. However, at this stage, the government was not determined to launch full-scale liberalization; hence the framework for opening up the industry to private exporting became rather tepid. Since the domestic rice price rapidly increased after the announcement of opening the industry up to export, private exports stopped by the government in January 2004. However, the right to export rice was not handed back to MAPT. Since then, the Myanmar Economic Corporation (MEC) or Union of Myanmar Economic Holding (UMEHL) became the main actors in rice exports (Wong, 2013:11).

In December 2007, the government re-announced the opening up for private exporting, and a quota system was introduced. For the first year, the quota was allotted to those traders in three major producing areas (Ayeyarwady, Bago and Yangon). The following year (2008 monsoon rice), the amount of quota allocation remaining after the MEC and UMEHL took their quotas,[6] was allotted by the Myanmar Rice Industry Association (MRIA) (Kubo and Tsukada, 2013:151).[7] Compared to the 2003 scheme, we may say, the liberalization of private rice export moved a step further in 2007.

Under the new government, the quota system has been abolished, and rice export is fully liberalized as of 2012. In principle, anyone can gain permission to export rice by applying for an export license. The government has now drastically changed its policy stance regarding the management of the rice market. Several interventions and regulations for achieving self-sufficiency and stabilization of rice prices had been in place for a long time. However, the present government believes that utilizing a market mechanism would be better and can yield a virtuous cycle in the areas of production and marketing, eventually allowing the country to become the big rice exporter it once was in the 1930s. The current target is to export 4.3 million tons by the fiscal year 2019/20.[8]

1-2-2. Current Status of Rice Export

Table 1-2 shows the changes in rice exports. After 2007/08, when the private export market was opened, an increasing trend was noted in exported volumes. By 2012/13, the volumes reached 1.4 million tons—double the previous year's level and the largest amount exported since the 1960s.

This growth is due to the increase of rice exports via border routes (Muse) estimated at 800,000 tons, i.e., 57% of the total amount.[9] As the border trade amount has been included only since 2012/13, one may wonder whether the increase would be as drastic if this amount had been included in the previous years as well. However, the traded amount via border routes in the previous years presented very low levels at 77,000 tons, nil, and 136,000 tons in 2009/10, 2010/11, and 2011/12, respectively. One of the main reasons behind this jump is the increasing support price of paddy in China. According to Dapice (2013:3), the support price was raised from \$272 in 2010 to \$421 in 2013, while the paddy price in Myanmar remained around \$200. This huge price difference pushed the exports to China. Moreover, export prices tend to be higher for Muse (border trade) than for normal trade (Table 1-3). Occasionally, the difference reached \$60–\$100 per ton.[10] Thus, everything else being equal, exporters would prefer to export via border routes.

6 According to Kubo and Tsukada (2013:152), these two companies accounted 54% of rice export in 2010.
7 It was upgraded to Myanmar Rice Federation (MRF) in 2012.
8 Source is MRF.
9 Calculated based on the figures of MRF document.
10 Interview with rice traders in Mandalay in August 2014.

Table 1-2 Changes in Rice Exports (10 thousands of tons)

2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
18	18	1.5	36	67	82	54	71	140	119

Note: Includes border trade since April 2012

Sources: *Selected Monthly Economic Indicators Dec 2011*
Selected Monthly Economic Indicators March 2014
Statistical Yearbook 2011

Table 1-3 Export Prices of Rice (25% Broken) (US$/ton)

Date	Myamar		Thailand	Vietnam	India
	Normal Trade	Border Trade			
2014/11/12	330-340	365-375	350-360	365-375	370-380
2014/12/16	350-360	365-375	365-375	370-380	370-380
2015/1/28	330-340	365-375	350-360	365-375	370-380

Source: Myanmar Rice Federation

Despite promising export figures in the past two years, rice border trade with China remains under very complex conditions as follows.

1) There was a problem concerning its legal status. From Myanmar's side, the rice export to China was regarded as legal; however, China regarded it as illegal because there was no sanitary and phytosanitary (SPS) agreement. In other words, Myanmar rice has not met the quarantine standard required by the Chinese government.

2) This illegal status signified that it involved high risk. In other words, rice imported via the Myanmar border could be a target for crackdown by the Chinese government. In fact, such an incident occurred in July 2014. Two Chinese traders were arrested on the Chinese side for holding illegal rice, and a huge amount of rice was seized by the authorities. After this incident, traders in Myanmar considered selling rice via border routes too risky. It got further riskier since the Chinese government decided to strictly regulate any rice import from Myanmar since September 2014.

3) The nature of the trade also determines who can enter the business. Generally, Burmese traders cannot directly deal with Chinese traders, as this requires sound and detailed knowledge, updated information on the Chinese market, and skills for communicating with Chinese traders. Thus, brokers and traders who are based in Muse and can communicate in Chinese play a significant role in such situations. Traders in the production area entrust their rice to these traders in Muse.

4) In March 2012, a rice trading center was inaugurated in Muse in response to the rapid increase in trading volume. Membership increased from 62 to 300 members by 2014. Trading is implemented by showing samples and negotiating on an individual basis. Besides facilitating trade, the trading center also aims to strengthen the bargaining power of Myanmar traders by organizing them.

5) The absence of a large-scale stock yard on the Myanmar side was also becoming a setback. Because of the illegal status on the Chinese side, all stock must be stored on the Myanmar side until the final agreement is implemented. (For other crops that are traded legally, such as maize and pulses and beans, there are stockyards on the Chinese side). Thus, to maintain an available space for new income-generating rice, traders needed to sell older stocks at undesirable prices.

6) The Myanmar and Chinese governments agreed to legalize rice trade in November 2014; however, the practical procedures were slow to begin. It is reported that 200,000 tons of official export to China shall begin in 2015, half of which will be via border.[11] However, some uncertainty remains.

7) Emergence of a Chinese market as Myanmar's rice export destination is promising. However, high dependence on a single country would be risky. As indicated by World bank (2014 b), the price of rice in Myanmar has been very volatile. In fact, after the de facto halt of exports via border routes, domestic prices plunged by approximately 17.5% compared with those in the same month in the

[11] *Myanmar Times* 22nd-28th December 2014.

previous year.[12]

8) Another setback is the logistics cost. Freight costs from Yangon to Muse are reportedly about $80 per ton[13]. This cost is actually higher than the cost from Yangon to African countries, which is $65 per ton (World Bank 2014a: 26). Thus, there is significant room for improvement in this aspect.

Apart from China, Africa is the main destination for Myanmar's rice export and accounts for approximately three-fourths of total exports (World Bank 2014a:4–5). It is easy for Myanmar to export rice to Africa and China, as the quality does not matter match in these markets. Currently, approximately 90% of Myanmar's exported rice is of 25% broken quality. In addition to this, there is a market reputation problem as well. Even with the same quality of rice in terms of specification, Myanmar rice fetches lower prices than that of neighboring countries (Table 1-3). To increase the export volume, diversification of export destinations is necessary. For this purpose, improvement in the quality of exported rice as well as the market reputation is required.

As described in the background section, establishing RSCs was an early attempt initiated by the government for increasing exports as well as improving the quality of rice production and marketing. Thus, the following sections will examine this experience in detail.

1-2-3. Overview of RSCs

RSCs are first established in the major rice producing area in Lower Myanmar, and about half of them (29 companies) are established within two years from the start of the scheme (Table 1-4). Then it expanded to other area of the country. Since Sagaing (especially Shwebo Township) is one of the major rice producing areas in Myanmar and its location is suitable for export to China, several RSCs were established. In the similar manner, the ones in Rakhine State might be aiming to export to Bangladesh. We can note that RSCs were also established in Kayin, Mon and Shan States in 2011. However, this appears to be a bit strange as these areas are basically rice deficit areas. And as will be discussed later, the incentive for RSCs, i.e. export quota on a preferential basis, was gradually abandoned in the same year. Thus we need to find out other motivations for these RSCs.

Table 1-4 Year of Establishment and Location of RSCs

Year	Number of RSCs	Ayeyarwady	Bago (West)	Bago (East)	Yangon	Sagaing	Kayin	Rakhine	Mon	Shan	Unknown
2008	1	1									
2009	28	19	4	3		1		1			
2010	9	3	3			1		2			
2011	15	3	2	2	1	2	1	1	1	1	1
2012	6	1		1	1	1				2	
Total	59	27	9	6	2	5	1	4	1	3	1

Source： Myanmar Rice Federation

The initial model of RSCs is as follow. A RSC is comprised of a leading company based in Yangon and local shareholders such as rice miller, traders and farmers. Leading company is not necessarily those who engage in agricultural trade and marketing. Capital provided by the leading company is 80-85% in most cases. The scheme aims to link the big companies with sufficient capital in Yangon and those local marketing agents and producers who are equipped with the local knowledge so that the supply chain from production to export can function smoothly. Further, to avoid the competition among RSCs, the rule of "One township One RSC" was initially enforced, but gradually it was relaxed as we will see later in the case studies.

RSCs were expected to contribute in the following three areas.

(1) Credit provision to farmers

As widely discussed, poor credit access has been the major problem in rural Myanmar. While increasing the credit supply through official channel, the government expected RCSs to be another

[12] *Irrawaddy* , 30th October 2014.

[13] This figure is based on the interview with MRF.

channel for farmers to get loans for rice production. For this purpose, a RSC makes contract with farmers to provide not only the crop loans, but also quality seeds and chemical fertilizer as a sort of package to farmers. Then farmers will repay the credit either by cash or by the product. The interest rate is uniformly set at 2% per month.

(2) Increase in rice export

As noted earlier, since the domestic supply of rice has reached to a stabilized level, the government came to have ambition to increase rice exports. By allocating the export quota to RSCs on a preferential basis, it was aimed to encourage companies and traders, including those who were not in the rice business, to establish RSCs.

(3) Improvement in quality

In order to increase Myanmar's rice quality requires various improvements in the process of production, milling and transportation. Especially, the expanding usage of quality seeds is one of the issues that recently stressed both at the government and private level. Most of farmers in Myanmar use seeds obtained from their own field. They usage of quality seeds is not common because of non-availability of seeds appropriate to the area, lack of sufficient supply and non-development of seed market. RSCs are expected to fill the gap, by incorporating the provision of quality seed into the package of contract farming. Further, in the processing area, while the government encouraged RSCs to build new rice mills, it also handed over the MAPT mills in order to increase the mills that can produce good quality rice.[14]

1-2-4. Current Status of RSCs – From the Interviews with 13 RSCs

Table 1-5 is the RSCs which the author interviewed, which shows established year and geographical distribution of interviewed RSCs.

(1) Structure of RSCs

The actual structures of RSCs are grouped in three. One group is those RSCs which have leading companies based in Yangon, and this leading company is supposed to play a big role for investment as well as export, as instructed by the government (Company No.1 to 7). The second group is those which are consisted of local shareholders only and do not have leading companies (Company No.8 to 11). The last group is the main actor is the local shareholders and millers, but has established different company for export and the both does not necessarily have a link as a supply chain (Company No.12-13). In this report, let us call them as 1) city-centered group 2) local only group, and 3) local-centered group.

Among the city-centered group, the leading companies of Company No.1, 2, 3, 4, and 7 are very prominent business groups in Myanmar, which have been very active in both agricultural and non-agricultural trade.

The leading company of No.5 and 6 are the major agricultural inputs companies. Both types of RSCs are managed by the staff dispatched from the head quarter together with the local directors selected from the local shareholders. In other words, in the case of city-centered group, the involvement of the leading companies in the management tends to be rather strong. However, the exception is No.7, as the role of leading company is only provision of working capital and the management decisions are basically entrusted to the four local directors(all of them are rice millers).

[14] This is rather minor points, but the government seems to expect RSCs to play a role in social welfare in addition to these three objectives RSCs were instructed to use 25% of their profits to build schools and clinics or provide scholarship in respective townships. However, only a few RSCs follow this instruction.

Table 1-5 List of Interviewed RSCs

No	Region	Year Established	Leading Company	Type of Leading Company	No of Local Shareholders
1	Ayeyarwady	2009	○	Construction/Trade/Fuel	35（Traders 17, Rice Millers 3, Other 15）
2	Bago(West)	2009	○	Construction/Trade	47（Traders 30,Rice Millers 17）
3	Bago(West)	2009	○	Agricultural trade	Unknown
4	Ayeyarwady	2009	○	Construction/Trade	22（Traders 11, Rice Millers 5, Other 5）
5	Ayeyarwady	2009	○	Fertilizer/Pesticide	17（Traders 5, Rice Millers 2, Fertilizer Trade 10）
6	Ayeyarwady	2010	○	Agricultural Machinery	4（Traders 1, Rice Millers 2、Farmer 1）
7	Ayeyarwady	2009	○	Agricultural trade	20 (Rice Millers 20）
8	Ayeyarwady	2009		-	50→100 （Types are unknown）
9	Ayeyarwady	2009		-	50（Traders 20, Rice Millers 12, Farmers 28)
10	Bago(West)	2009		-	15（Traders 3, Rice Millers 8, Farmers 4）
11	Bago(East)	2011		-	None
12	Shwebo	2011	△	Agricultural Export	11(Rice millers 2 ,Brokers, 3, Farmers 6)
13	Shwebo	2009	△	Agricultural Export	7(Rice miller 1, Agricultural Machinery 1, Farmers 5)

Source:Authors'survey.

(2) Motivation of RSCs

For majority of RSCs, the major motivation of setting up RSCs was undoubtedly to obtain the preferential provision of rice export quota.

However, some companies had other motivations as following.

・ No.5, which is the fertilizer company, established the RSC because of a desire to prevent others from others encroaching on their specific type of business, and consequently their market, as the RSC package was supposed to include the provision of agricultural inputs. No.5 was not particularly keen on the rice business, per se.

・No.6 also had more interest in investing rice milling (including the 100 ton scale drying facilities), and in line with it, the leading company decided to establish an RSC.

・ In the case of No.7, the leading company’s interest in rice business/export was rather weak, and its establishment of an RSC was simply a move to respond to the government’s call (thus almost the entire management of the RSC is entrusted to the local directors).

・No.11 was established by a local rice miller-cum-trader. This rice miller-cum-trader started providing credit to farmers in 2009, even before establishing an RSC. This move was in response to the request from the Division Peace and Development Council as a relief to farmers who were affected by the Cyclone Nargis.[15] Under the new government, the miller-cum-trader set up the RSC to continue the credit provision with her own resources, since it could no longer count on the budget of the division/region. In other words, for this RSC, the primary concern of establishing an RSC was not to export or construct a supply chain, but rather the formalization of credit provisions to farmers.

・ No.12 and No.13 are established by the large-scale rice millers who have been operating in the area long time. Since the area is now famous for producing quality rice (Shwebo Paw San Hmwe), they are eager to improve the quality of paddy. By setting up a RSC, the miller was able to gain the credibility from the farmers and be able to recommend good fertilizer and seeds to farmers.

(3) Selection of farmers for contract

Adoption of contract farming is the main feature of RSC scheme. Generally speaking, one of the keys for sustainable contract farming is the selection of target. Most RSCs excluded marginal farmers from its target list because of risk of default was believed to be higher; instead farmers more than 5 acres, or even 10 acres in some cases, were the main target. The concrete ways of selecting farmers of 13 RSCs were as follow.

1) Consultation with local authorities (Nos. 1, 2, 3, 4, 8, and 10)

The majority of RSCs consulted with local authorities, such as the township administration office, the relevant township department, and the village administrator, to check the creditworthiness of the farmers applying for contract. These are organizations having knowledge of and information about individual farmers. Further, by involving these official entities, the RSCs are expected to gain their cooperation in the event of a farmer's default. This is especially true for the case of a city-centered RSC, where the contracted number of acres and number of contracted farmers tended to be large due to the difference in the amount of working capital involved in their operations. Some local centered RSCs which have a rather large number of contract farmers also use the information from the local authorities. Thus, coordination with these local authorities became essential. At the same time, since this RSC scheme was not initiated by the private sector, but rather by the government, the local authorities were urged to cooperate with the RSC. The examples of selection method are as follow.

・ No 4 utilize the network within the village. Let us suppose that there is a village tract that consists of five villages. The RSC selects five representative farmers, one from each village in the village tract. One farmer will be the village tract administrator. These five will then select the candidate farmers from each village and compile a list of eligible farmers. The list is submitted to the RSC, and each farmer's acreage holding is cross checked with the local authorities such as the DOA or the SLRD to confirm the acreage. If the RSC finds the farmer to be credible, then a contract is drawn up.

・ No. 8 called a meeting and then explained their intended program to all farmers. Those who were interested in a contract could enter into one, but this required the village administrator's recommendation.

・ No. 10 did not set the upper limit of the contracted number of acres for credit provision in the first year. Also, the RSC found that some farmers applied for credit for more acres than they actually cultivated. To avoid this, the company cross checked the application using information issued by the DOA on the number of cultivated acres of the farmer in question.

2) Selection based on the personal network and knowledge of the local rice millers and traders (Nos. 7, 9, 11, 12 and 13).

Some RSCs depended on the local shareholder's personal network and the knowledge they have accumulated on long-time operations in each producing area.

・No. 7 has four directors. Each director takes responsibility for the specific village tract with which

[15] The DPDC provided loans from its budget to this miller-cum-trader at the interest rate of 2.5% per month and the miller-cum-trader granted loans to farmers at the rate of 3% per month.

they have had a long-term business relationship. The directors avoided being involved in a contract in another director’s area of responsibility. As a result, the contracted farmers were those about whom each director had full knowledge in terms of their cultivation and household conditions.

・No. 9 initially drew up a contract without the careful selection of farmers. In the first two years, the company provided credit to almost all farmers who applied for it. After facing default problems, this RSC reduced the number of farmers substantially (to one-fourth) to those with whom the director had a close relationship.

・No. 11, which is the company run by the miller-cum-trader, used its own personal network for selecting farmers, but tried to obtain some official endorsement by requiring the signature of the Township Administrative Office and the DOA.

・No.12 and No.13 draw contracts with farmers via their agents. Both of them have 25-30 agents who have been doing business long time with them. These agents select the credible farmers based on their experience. In addition, No.12 asks for official endorsement from village tract administrator, the DOA and the SLRD.

3) Selection according to the knowledge accumulated in the process of selling agricultural inputs (Nos. 5 and 6).

The main business of the leading companies of No. 5 and 6 is the sale of agricultural-related inputs. They normally have some sales agents in rural areas (in the case of agricultural machinery and mechanics-cum-agents). These agents have some knowledge of the individual farmers, which they accumulate in the process of selling inputs and machinery and issuing bills and collecting payment. For example, No. 5 sells fertilizer on credit, and its unrecovered rate is less than 1%, so it is very confident when determining a farmer’s creditworthiness. No. 6 also uses information collected by mechanics-cum-agents, who are responsible for selling machinery and collecting payment.

(4) Contents of Contracts

Table 1-6 indicates the credit provided per farm household. These are figures for the 2011 monsoon crop, when all 13 RSCs were engaged in contract farming. The provided inputs (fertilizer and seeds) were converted into cash terms. 50,000 kyat per acre or 500,000 kyat per farmer seems to be a rough standard. Some RSCs provided farmers with this amount for all the acres in their holdings and according to the farmers’ credibility, whereas others set an upper limit per farmer.

Table 1-6 Provided Amount per Farm Household (2011 Monsoon Paddy)

No	
1	50,500k/ac Max 10 ac
2	45,000k-10,000k/ac Max 10ac
3	50,000k/ac Max 10 ac
4	50,000k/ac Max 10 ac
5	50,000k/ac According to the farmer's credibility/ No upper limit
6	50,000k/ac According to the farmer's credibility/ No upper limit
7	25,000k-50,000k/ac According to the farmer's credibility (Upper limit is unknown)
8	55,000-87,000k Max 10 ac（No upper limit for those with credibililty）
9	42,000k/ac Upper limit is unknown
10	35,000k/ac According to the farmer's credibility/ No upper limit
11	30,000-150,000k/ac According to farmer's credibility/ No upper limit
12	70,000-80,000k/ac Max 5ac
13	50,000-100,000k/ac Max 500,000k/person

Note:Fertilizers and seeds are converted to cash value.

Source: Author's Survey.

The following are the four contracting patterns observed.

1) Credit amount was decided according to the production pattern and purchasing price. A minimum amount to be sold to the RSC was specified in the contract (No. 1)

RSC No.1 grouped the contract into the following three categories: 1) contract with farmers who produced quality seed, 2) contract with farmers who used the seed provided by the company, 3) contract with farmers who used their own seed. The purchasing price was set according to the variety and collecting point. In the contact form, the specifics of the paddy to be delivered were given. If the pre-agreed contract price was lower than the market price, the company would purchase the paddy at the market price, whereas if the price was higher than the market price, the company would buy at the contracted price. In the case of monsoon paddy for 2012, the minimum amount of paddy to be sold to the RCS was set at 25 baskets per acre, and the farmers were free to sell the rest of the paddy to anyone.

2) Only the provided value of credit was noted in the contract, and the contract price and minimum amount to be sold to the RCS was only verbally stated (No. 8)

In the case of monsoon paddy for 2012, the minimum amount to be sold was 40 baskets per acre, the contracted price was 4,000 kyat per basket for *Emata* rice. The market price in the harvest season was 3,800 kyat per basket; thus this price worked out as the guaranteed price for the contract farmers at least for 40 baskets. However, this price and the minimum amount were not specified in the contract form, but they were offered verbally. Along with these contracts, the company sold fertilizers and diesel fuel, on credit, in some village tracts. These sales could be repaid either by cash or paddy.

3) The amount of credit and the price were specified in the contract, but there was no minimum amount to be sold to the RSC is set (No. 2)

The minimum guaranteed price was noted in the contract form. If the market price was higher, the company would purchase at the market price. In the case of monsoon paddy for 2012, the contract price was 3,500 kyat per basket and was almost equal to the market price. The loan could be repaid either by paddy or cash; thus, no minimum amount to be sold to the company was set in advance.

4) Only the amount of credit was noted in the contract form. Neither the price nor the amount to be sold was specified (Nos. 3, 4, 5, 6, 7, 9, 10, 11, 12, 13).

Among the 13 companies, this pattern was the most frequent one (10 RSCs). Neither the price nor the amount to be sold was specified in advance. If a farmer could repay the debt by cash, they did not have to sell the paddy to the specific RSCs. In other words, we may consider that the RSCs were not doing a “contract farming” business, but rather they were simply providing credit to the farmers.

Although farmers had a choice in repaying either by cash or paddy, in reality, because of the higher transportation costs of selling to the RSCs (since they need to carry the paddy to the place that RSCs specify), they tended to sell the paddy to the millers and brokers in their neighborhood. It is with that money that the farmers repaid their debt to RSCs.

A common feature among the RSCs was that credit was disbursed between June and August, and the repayment date was set for the end of January of the next year (some set the repayment date as four months after the loan provision. In this case, farmers needed to repay their loans earlier). This means that farmers had to repay their debt once the harvest season started, and the market price is generally the lowest at this time. From the companies’ management standpoint, it was rational to set these dates, but this meant the farmers had less room within which to await the higher prices that occurred later in the season.

When the contract was drawn up, the farmers were required to form a group of 5–10 persons for joint responsibility. This was intended to strengthen the mutual monitoring among the contracted farmers. For example, when No. 4 entered into a contract with less than five farmers from a village, it did not try to combine farmers from another village to the same group. This is because if the farmers came from different villages, the mutual monitoring did not work. It was even noted that, as a “joint responsibility,” the company normally did not demand that members actually repay others’ defaults. Rather, the system was adopted to urge mutual monitoring among the farmers and to collect necessary information in the case if any problems occur.

5) Changes in the contracted acres and the farmers

As shown in Tables 1-7a and 1-7b, contract farming either substantially decreased or completely stopped after 2011. This trend was clearer for those city-centered RCSs that had a larger area under their contracts.[16] In other words, though the government expectation was to increase the credit volume provided to farmers via RSCs, this did not happen as expected.

There are four RSCs (Nos. 3, 6, 10, 12) that completely stopped contract farming in 2013. No. 3 had a rather large area under contract, but it completely stopped entering into lending contracts with farmers and did not have any plans to restart. In 2012, No. 6 reduced the area under contract and then changed policies to provide fertilizer only in 2013. No. 10 did not engage in contract farming for the 2012 and 2013 monsoon seasons, but planned to restart contract farming from the beginning of the summer paddy season in 2013. No12 stopped because the increasing competition with fertilizer companies and seed companies.

Three RSCs reduced the area and number of farmers under contract; these were Nos. 1, 2, and 9. In the case of No. 2, the contract was only drawn up for hybrid and basmati rice production, and this arrangement was considered to be at an experimental stage.

The rest of the RSCs did not expand the area under contract after 2011 either. Those that maintained the previous level of contract or that showed a slight increase were Company Nos. 5, 7, 8, 11 and 13. No. 8 may have been an exception as it drastically increased the contracted area in its second year of operation and continued to do so thereafter. However, the number of farmers under contractual relationships decreased in 2013, so that the companies changed their strategies and concentrated more on credible farmers by increasing the number of acres per household under contract.

[16] Only the status of monsoon paddy is shown here. Except for the one company located in a non-summer paddy area, all other RSCs had contracts for summer paddy cultivation. However, the area under contract was much smaller for summer paddy. No. 4 also provided credit for summer-paddy cultivation, but did not buy back the paddy.

Table1-7a Contracted Area (Monsoon Paddy Only)

No	2009	2010	2011	2012	2013
1	35,929	45,822	60,416	17,809	4,859
2	2,000	11,654	49,257	70	-
3	8,000	16,665	25,000	25,000	-
4	11,000	20,000	29,978	27,969	29,242
5	3,222	7,000	4,000	954	6,000
6	-	1,000	14,000	4,130	-
7	3,374	2,250	7,272	6,549	5,354
8	3,157	11,782	12,272	13,116	13,914
9	1,024	2,500	3,648	n.a.	n.a.
10	7,404	6,864	11,000	-	-
11	4,030	9,241	6,000	6,000	6,000
12	-	-	700	700	-
13	1,500	1,500	1,500	1,500	1,500

Sources: Documents from the MRF and individual RSCs, and Interviews with RSCs

Table 1-7b Changes in the Number of Contracted Farmers

No	2009	2010	2011	2012	2013
1	4,823	6,490	6,867	3,311	2,173
2	500	3,403	6,556	24	-
3	n.a.	n.a.	3,689	3,689	-
4	400	2,319	4,184	3,940	4,358
5	559	700	378	122	400
6	-	102	2,730	n.a.	-
7	182	129	663	605	498
8	203	1,457	1,608	1,754	1,322
9	n.a.	n.a.	200	50	50
11	192	537	120	120	120
12	-	-	1,000	1,000	-
13	100-200	100-200	100-200	100-200	100-200

Sources: Documents from the MRF and individual RSCs, and Interviews with RSCs

6) Categorization of RSCs according to operating patterns

Examining the operation patterns of the 13 RSCs shows them to be diverse. They can be categorized based on their business orientation as follows (the figure in parenthesis shows the company numbers):

・Export, seed production (1, 2)

・Export (3)

・Domestic sales, seed production (9, 10, 11)

・Domestic sales (4, 7, 8, 12, 13)

・Promotion of agricultural inputs sales (5, 6)

In addition to credit provision to farmers, the other objectives of the RSCs which the government had in mind were quality improvement through the increased use of quality seed and to increase exports. However, among the 13 RSCs, only three companies continued to export on a certain scale (Table 1-8).

・No. 3 is export oriented company, but it purchased rice on the market and polished it before exporting, it completely stopped contract farming.

・ Nos. 1 and 2 seem to have been shifting their emphasis to seed production while keeping some export volume. As noted earlier, two companies are currently doing contracting farming for seed production and other specific varieties, but on a limited scale.

・Six RSCs are ready to export rice, depending on the export market situation. However, their main focus is sales in the domestic market.

Table 1-8 Rice Exports of RSCs (Ton)

	2009	2010	2011	2012
1	5,500	21,270	5,500	1,688
2	79,989	60,277	25,793	6,096
3	0	30,821	20,040	1,000
4	0	9,991	4,850	0
5	0	0	0	0
6	-	-	-	0
7	0	0	0	0
8		0	3,688	25
9	0	0	400	0
10	0	0	1,000	0
11	-	-	0	0
12	-	-	5,041	0
13	0	0	0	0

Source: Myanmar Rice Federation.

・Among them, Nos. 10 and 11 are more concerned with quantity, rather than quality, since they are delivering rice stock to the army and for prisoners.
・Nos. 4, 7, and 8 recognize the importance of quality seed for improvement in rice quality, and No.8 is actually attempting to produce rice by inviting Taiwanese technicians to assist with seed production. However, the supply is far from sufficient.
・Nos.12 and 13 are the most quality sensitive as they deal with high quality rice (Shwebo Pawsan) in the domestic market. For these companies, export is only a marginal business and currently they send some summer rice to Muse.
・For two RSCs, of which the main business is sales of agricultural inputs and machineries, the export data clearly shows that they are not interested in the export business.

In summary, as of September 2013, there were no RSCs that had developed according to the initial business model, i.e., by building a supply chain from contract-farming production to exporting.

1-2-5. Factors behind the Discrepancy from the Initial Model

Why did the RSCs not (or why were they not able to) follow the initial model? There are three possible reasons:

(1) The non-recovery problem in relation to farmers' debt

When we consider the amount of credit provided to farmers, it was kept at a rather low level during the initial year since both the companies and farmers were not familiar with contract farming. It was in the third year, that is, the 2011 monsoon season, when most RSCs increased the volume of credit provided to farmers. Unfortunately, however, this was the same year that the paddy harvest suffered from heavy flooding. Most of the rice farmers in Ayeyarwady and Bago were affected by the floods. What made it worse was that the second crop, the pulses, which is important to farmers as an exported-oriented cash crop, also suffered from the sharp decrease in the international price, which was half that of the previous year. Therefore, farmers could not repay their debt, and the recovery rate of the major RSCs drastically worsened (Table 1-9). There was even an RSC for which the non-recovery rate reached 50% (No. 2). To recover the debt as much as possible, Nos. 1 and 2 decided to reduce the interest rate to 1.25% per month once 6 months were completed since the provision of credit. If a farmer took longer than one year to repay their loan, no interest was charged. With this difficulty of recovering debt, many RCSs needed to reduce the area and number of farmers they supplied credit to or stop contract farming in the following year.

This is specific reasons for RSCs for those in the Lower Myanmar. Nos.12 and 13 did not go through this problem, because 1) it did not have weather problem, and 2) even they set up RSCs, the operation itself was a sort of continuation of their long-term business and they basically dealt with the farmers with sufficient credibility.

Table 1-9 Loan Recovery Rate
(Monsoon Paddy 2011)

RSC	
1	18%
2	50%
3	15%
4	1-2%
5	1%
6	5%
7	Under 1%
8	N/A
9	25%
10	2%
11	1%
12	N/A
13	N/A

Source: Authors' survey.

(2) Fading incentives for rice exports

As noted earlier, the major incentive for setting up RSCs was access to an export quota on a preferential basis. However, since 2011, rice exporting was gradually liberalized, and by 2012, these incentives disappeared. Initially, to get a quota, each company had to show an established management record as an RSC, i.e., contracted acres and the number of contracted farmers. However, once exporting became liberalized, it no longer had any significance.

What hindered the increasing exports around that time further was the appreciation of the local currency. It may have influenced RSCs interest in exports further. Table 1-10 indicates the changes in the rice export price of two major export countries (Thailand and Vietnam) and Myanmar's domestic rice price (the *Emata* variety) for 2011. Only the data for the retail price was available, which is slightly higher than the wholesale price. However, we can note that the domestic price level is considerably higher than the export price level of these two countries. This is only the author's hypothesis, but the abolishment of the rice export quota in 2011 is based on the fact that the quota, itself, lost its real meaning.

Table 1-10 Comparison of Export Prices (2011, 25 % broken) (US$/ton)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Thailand	472	490	476	465	460	468	490	520	550	556	594	597
Vietnam	455	420	426	428	430	466	530	415	524	524	515	464
Myanmar Domestic Retail Price	512	502	508	524	542	549	528	564	527	516	526	506

Source: Myanmar domestic price CSO *Selected Monthly Economic Indicators*, October 2012
Export price: Myanmar Rice Federation, Exchange rate JETRO Yangon

(3) Constraints on capital mobilization

One of the problems of this scheme may have been capital mobilization. RSCs need to prepare capital for contract farming as well as for exporting. This may be possible for RSCs that are backed by a large business group, but others may consider it a big burden.[17] The interest cap (2% per month) also affects this. Some RSCs argued that with a commercial lending interest rate of 17% per annum (in September 2012, it was reduced to 15%), 2% per month was not sufficient, considering the transaction costs and default risk.

1-2-6. Evaluation of the RSCs Scheme

Let us examine to what extent the RSCs achieved their three initial objectives of credit provision, export increase, and quality improvement.

[17] Interview with No. 5.

(1) Credit Provision

As already mentioned, the interest rate of the package provided by the RSCs was uniformly set at 2% per month. This was very cheap credit for farmers, given that the informal rates ranged from 8 to 10% per month for farmers without collateral. At least the credit supplied by the RSCs supplemented the crop loans of the MADB, which had been very limited until 2011. Further, in some areas, the favorable impact of lowering informal rates after the activities of the RSC began (where township No. 4 operates).

As noted in the section on the selection of contract farmers, however, the target is basically those farmers with medium- and large-size land holdings, that is, marginal farmers are excluded (of course, if the informal interest rates were lowered due to the presence of an RSC, we could say there was an indirect benefit). As Dapice (2011:27) points out, the farmers involved with the RSCs were not the majority. Thus, if the government expects the RSCs to play a major role in poverty reduction in rural areas as a whole, this may be an unrealistic expectation. After 2011, when most RSCs had reduced the number of contracted farmers, due to the spread of the default problem, the contribution of the RSC as one of the channels of crop loans also declined.

Given the fact that the RSCs accepted either cash or paddy as loan repayment, we may say that the RSCs, in nature, were more like companies specializing in credit provision. In fact, it has been a common practice for rice millers and traders to provide various forms of credit to farmers for long time in Myanmar, including advance purchases of paddy (*zaba pei)*. It is well assumed that those traders and millers who participated in the RSCs' scheme had such experience. This type of credit provision has been informal, although the government never cracked down on it. In this context, as in the case of No. 11 clearly shows, the framework of the RSCs was utilized as an institutional setup in which non-financial institutions could provide loans to a large number of farmers in a relatively wide geographic area. Before the Microfinance Law was enacted in 2011, the RSCs provided the only official framework for private sector to finance rice farming in Myanmar.

In line with this trend, No. 5 is setting up a microfinance organization and plans to finance medium- and large-scale farmers in Upper Myanmar. However, this is not directly related to the RSCs' activities. There is a high possibility that this type of a move could become more active in coming years.

(2) Export increase

Judging from the current status, it is difficult to conclude that the RSC scheme contributed to an increase in Myanmar's rice exports. The cases of the 13 RSCs show that there are more companies that put weight on domestic marketing rather than on exporting. It is very indicative that No. 3, which aims to expand rice exports, procures rice in the market and exports while completely avoiding contract farming under an RSC scheme.

(3) Improvement of rice quality

There was almost no distinctive contribution by the RSCs to an improvement in the quality of rice because of the following reasons:

First, providing quality seed is difficult. Almost all RSCs recognize its importance. However, both the domestic production and market supply are limited. Let us consider a case of a farmer with 10 acres of land. An RSC can provide him with quality seeds for only 2 acres. Therefore, the farmer uses the seed from his own field for the remaining 8 acres. When the RSC purchases paddy from this farmer, paddy from both fields can easily be mixed, whether intentionally or unintentionally. Then, it is almost impossible for the RSCs to discern the origins of the paddy and to maintain a certain quality.

Second, a certain amount of paddy is always required so as to allow the RSC to run its milling facilities and to effectively use its working capital. Therefore, the RSCs purchase paddy from non-contract farmers as well. At the same time, some farmers sell paddy to other farmers under the purchasing farmer's name. They do this by taking a commission fee from them.

Therefore, even if the RSCs launch contract farming with an aim to improve rice quality, strict control of rice quality has been difficult because there are various chances for the quality to be compromised during both the production and marketing phases.

Conclusions and policy implications

This section reviewed the changes in export policy, the current status, and the experience of RSCs as a new rice business model. The following are the summary and recommendations.

1) The current increase in rice exports largely depends on the Chinese market. To reduce the risk of price volatility arising from dependence on only a few markets, diversification of export destinations is necessary.
2) For this purpose, quality improvement efforts in rice production, processing, and marketing are urgently required, which include the expansion of utilization of quality seeds, upgrading processing facilities, and reducing logistical costs.
3) Along with improvement of the rice quality, more marketing efforts are necessary to gain a better reputation in the market.
4) The RSC model was an early attempt to commercialize the rice industry initiated by the government to enhance rice production and exports. However, the experiment did not follow through with its initial design and did not lead to the building of a comprehensive supply chain, although we need to realize that there were uncontrollable factors such as climate, which negatively impacted the results.
5) There are two future directions that an RSC can take: First, contract farming, which may be feasible if it targets a small number of farmers, and specifics such as quality seeds and special varieties are dealt with. The past experience of the RSCs shows that contract farming with a large number of farmers while procuring general varieties is difficult to sustain. Even the largest RSCs, such as Nos. 1 and 2, struggled to overcome the problem of farmers' defaults. This experience shows that if a large area and number of farmers are targeted, both the transaction costs and risks tend to be too large to manage. Furthermore, differentiating between paddies produced by contracted and non-contracted farmers is virtually impossible. However, if they are for seeds and special varieties, the criteria for quality and price can be clearer for both the RSCs and farmers.
6) Even if the contract farming may concentrate on specific varieties or products, it is very likely that changing weather patterns or other risks may affect negatively to maintain stable contracts between agricultural buyers (in this case RSCs) and farmers. In order to cope with these risks from uncontrollable factors such as weather, introduction of a sort of insurance for both sides would be worth considering.
7) At the same time, if the government decides to promote contract farming (which does not limit to that of rice), establishment for some legal framework (i.e. such as contract farming law) to guarantee the stable contract and enforcement will be necessary.
8) The second direction is for those RSCs that decide to only focus on credit provision. They no longer have to stick to contract farming or being RSCs. Since the legal framework for microfinance is now in place, a microfinance scheme can be promoted under this particular law. This will be further enhanced by the fact that farmers can now mortgage land to legally borrow money, using their own land certificate as collateral. On the other hand, we have observed that there is no legal provision for the activities of the RSCs. In legal terms, the RSCs did not have sufficient transparency in transactions, and at the same time, there was insufficient consideration for the occurrence of problems such as defaults. Given the existence of various channels of small-scale loans, the entire system should be mutually consistent and sufficiently transparent.
9) Some RSCs faced difficulties in mobilizing working capitals for all operations they were to engage. If the government pushes further the improvement in quality not only in production but also in processing, more financial support (such as cheap credit) has to be provided to renovate or install new rice mills and other facilities.
10) In promoting these types of small-scale loans, there is one point that needs to be avoided. As the case of the RSCs has shown, there is a tendency for the Myanmar government to give some responsibility to private companies in playing a role in social policy such as poverty reduction. Of course, private companies do have some social responsibility, but they are basically profit-making organizations. There might be some companies that respond to the

government's call from a political viewpoint for a short period of time, but this cannot continue for long. Social policy should be promoted from the medium- and long-term perspective, and it is the government's responsibility to do so.

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2. Rubber Products Sector and Policy

2-1. Current Situation of Rubber Products Sector in Myanmar and Challenges Being Faced

At present, the contribution of the rubber products sector in Myanmar in terms of gross domestic product is rather limited (less than 1%). It is also estimated that the sector currently employs between only 350,000 and 400,000 workers, mainly in the plantation or upstream sector linked to planting and production of raw natural rubber. However, the development of the sector, more particularly of its industry, could have a high socioeconomic impact and become a driver of job creation. The rubber products sector strategy holds significant promise in terms of contributing to the export performance of Myanmar, while also driving improvements across the sector export value chain (Republic of the Unions of Myanmar, 2014). In addition, the rubber products sector has the potential to develop as a key industry to support the automobile industry in Myanmar in the future.

The purpose of this section is to analyze the current situation of Myanmar's rubber products sector, including production, processing, and marketing and to show the challenges for medium- and long-term development of the sector.

2-1-1. Rubber Production in Myanmar

Figure 2-1 shows the production, harvested area, and yield of rubber in Myanmar from 1961-2012. As it demonstrates, rubber production in Myanmar registered a sharp increase after the turn of the century. The harvested area became 4 times larger and the yield per hectare almost doubled, resulting in a production increase of nearly 7 times during the last decade or so. It is a marvelous achievement, but nevertheless compared to the other leading countries such as Thailand, Indonesia, Malaysia, Vietnam, India, and China the performance of Myanmar's rubber products sector is far from satisfactory (see Figure 2-5 in the next section).

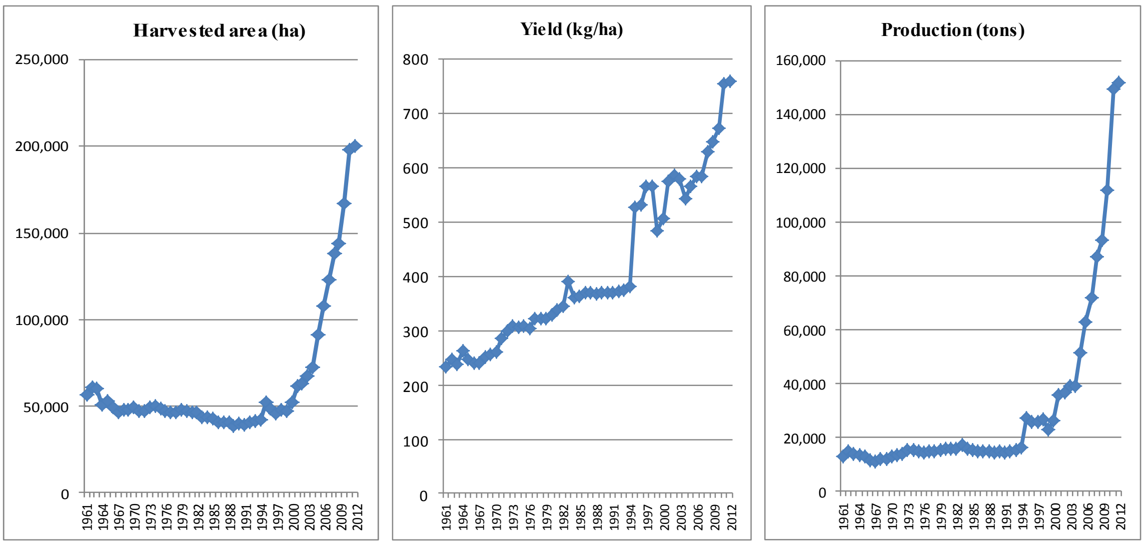

Figure 2-1 Production, Harvested Area, and Yield of Rubber in Myanmar, 1961-2011
Source: FAOSTAT

The yield, for instance, is around 1,600-1,700 kg/ha in the three leading countries of India, Vietnam, and Thailand, which is more than double the yield achieved in Myanmar. Moreover, the problems in Myanmar are not confined to the low yield level. The problems are numerous and appear as a very complicated issue. According to a recently published report on rubber products sector strategy, the currently major bottlenecks to export competitiveness for the rubber sector in Myanmar include (Republic of the Union of Myanmar, 2014: 30-35):

- low productivity
- inferior quality of planting materials and inputs

- planting of low yield cultivars
- low adoption of improved harvesting technology
- existence of old unproductive trees
- low quality
- lack of quality control systems and third-party certifications
- limited investments in training and technology
- low value addition
- low volume of production
- low capacity and skills set
- weak rules and regulations
- prohibitive taxation system
- energy supply and reliability
- limited access to funds
- the need for a specialized rubber research institute
- weakness of TSIs (Trade Support Institutions)
- limited transport infrastructure
- limited access to trade information
- absence of export promotion and branding efforts
- limited investment promotion

It is rather surprising, however, that almost all the problems were listed without analyzing the interrelations between the factors. We need to analyze the structure of the problem so that policy-makers can understand the priority and sequence of necessary policies, given the serious resource constraints faced by the sector.

2-1-2. Brief Historical Accounts

Understanding the historical background of the rubber products sector in Myanmar is essential for any policy recommendations, hence we first briefly describe its history, including policy issues.

It is reported that rubber (*Heavea brasiliensis*) was firstly introduced to Myanmar in 1876, immediately after it was transplanted from its native place in Latin America (Amazon) to London. The commercial planting of rubber in Myanmar started in 1905, with its area gradually increased to 9,900 acres in 1909, 72,000 acres in 1920, and 115,000 acres in 1940 (Hla Myint, 2008). Then it reached 140,000 acres (56,000 ha) by the early 1960s (Figure 2-1). A support program for rubber smallholders of the Food and Agriculture Organization of the United Nations (FAO) started in 1957, though it was short-lived.

In 1962 when Ne Win took power and the military regime started, many rubber estates owned by both local citizens and foreigners were nationalized during the period of 1964-1973.[18] In addition, the state procurement system was soon introduced for almost all the agricultural products including rubber, leaving virtually no profit margins in the hands of private estate owners/managers and rubber smallholders.[19]

On the other hand, however, the government has made rubber a priority crop in national development plans since 1979. The government sought assistance from international organizations to replant rubber plantations with high-yielding cultivars and to modernize the deteriorating rubber products industry, which resulted in a two-phase Rubber Rehabilitation Project, implemented with credit from the International Development Association (IDA) from 1979-80 to 1984-85 (Phase I) and from 1984-85 to 1992-93 (Phase II). The United Nations Development Programme (UNDP) and FAO supported the project with technical assistance (Hla Myint, ibid).

[18] Some private estates managed to escape from the nationalization, nevertheless even in such cases, a party committee consisting of 5 members managed the estates, with devastating consequences for the private estates (interviews with a few private estate managers in Mon State in September 2013).

[19] A private estate manager in Mon State mentioned that sometimes they even had to buy rubber from the market in order to satisfy procurement obligations. But he also mentioned that they usually "cheated" the government officials and sold rubber illegally to Penang and/or Singapore.

In the meanwhile, in 1981 construction of a state-owned tire factory was started in Thaton with technical assistance from Czechoslovakia and it started operation in 1985 with a total number of 1,200 workers. Natural rubber, the raw material, was supplied mainly from state-owned rubber estates.

In 1988 when the socialist regime ("the Burmese Way to Socialism") finally collapsed, the instability spread throughout the rural areas. A private estate owner mentioned that his estate was attacked by the local inhabitants and that both rubber trees and facilities were largely destroyed.[20] But when such incidences were terminated all the planters and producers including smallholders enjoyed the liberalized marketing of rubber. Rubber produced in Myanmar was exported to Korea and Japan.[21]

The UNDP and FAO continued to provide assistance to the plantation crops industry through the Applied Research Center for Perennial Crops (ARCPC) Project, which was implemented from 1991 to 1994 (Republic of the Union of Myanmar, ibid: 5). The ARPCP was established in 1991 in the suburban area of Mawlamyine City and it was granted funds and technical support in the field of research and development.

However, in 1994 when the UNDP/FAO project was finished the government formed a new organization called the Myanma Perennial Crops Enterprise (MPCE) and introduced the state procurement system to rubber once again. Rubber planters and producers including smallholders had to sell 45% of their products to the government at prescribed low prices. According to a private estate manager interviewed in September 2013, the procurement prices were 50-100 kyat lower per pound (453.6 grams) than the market prices. The state procurement system was not abolished for a little over 10 years until 2005.

The mid-2000s was an epoch-making period for the rubber products sector policy of the government. In 2004 the 27 state-owned rubber estates were transferred from the Ministry of Agriculture and Irrigation to the Ministry of Industry. The Myanma Rubber Planters and Producers Association (MRPPA)[22] was established in March 2005 as one of the members of the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI). Finally, in 2006 a new enterprise named Myanma Industrial Crops Development Enterprise (MICDE) was formed under the Ministry of Agriculture and Irrigation by merging the former five enterprises: i.e., MPCE, Myanma Farms Enterprise (MFE), Myanma Cotton and Sericulture Enterprise (MCSE), Myanma Sugarcane Enterprise (MSE) and Myanma Jute Enterprise (MJE). Note that MICDE was renamed to the Department of Industrial Crops Development (DICD) with effect from 2012-13, and DICD again was merged with Department of Agriculture (DOA) with effect from 2015-16.

As Figure 2-1 shows, the Myanmar rubber products sector developed rapidly since then. However, we are obliged to say that the Myanmar government simply stopped the negative policies imposed on the sector, but by and large, has yet to start formulating and implementing positive policies in a real sense. MRPPA, on the other hand, started to play an important role in promoting rubber products sector development in Myanmar. In 2007, for instance, MRPPA became a member of the International Rubber Research and Development Board (IRRDB).

2-1-3. Recent Development: Rubber Area Expansion and Changes in Export Destinations

(1) Expansion of rubber planted area

Figure 2-2 indicates in which part of Myanmar the recent rapid expansion in rubber planted area happened. It should be noted that the expansion in rubber area is shown here in terms of planted area, not harvested area.

The figure shows that the area expansion occurred from the mid-1990s to the early 2000s first,

[20] Interviewed in September 2013. Another private estate manager said that they employed private armed forces to protect their estate.

[21] Information based on an interview with a female rubber processor-cum-merchant in Thaton, who had been employed by the government since 1964 to classify rubber products, and after 1988 she moved into the private rubber trading business.

[22] The number of members of MRPPA and is branches (at states and regions) is roughly 6,000, including 350 "active" members. The 350 "active" members include 300 rubber planters (10% of them own more than 100 acres), 40 rubber merchants/exporters, and 10 rubber processors. In Mon State, the association has 10 branch organizations in every township.

and then from the mid-2000s until very recently, especially in the new states/regions, including Tanintharyi, Kayin, Shan, and Bago. It should be noted, however, that the planted area grew by 2.4 times during 1999/2000-2009/10 even in the old state of Mon. A large-scale reclamation of lands, especially land classified as vacant, fallow, and virgin lands, seems to have happened in recent years in Myanmar, including Mon State. And more importantly, the rapid area expansion is accompanied by a sharp increase in the average yield per hectare (Figure 2-1). The adoption of modern high-yielding cultivars has started in a wider area, regardless of new plantations or replanting of old rubber trees.[23]

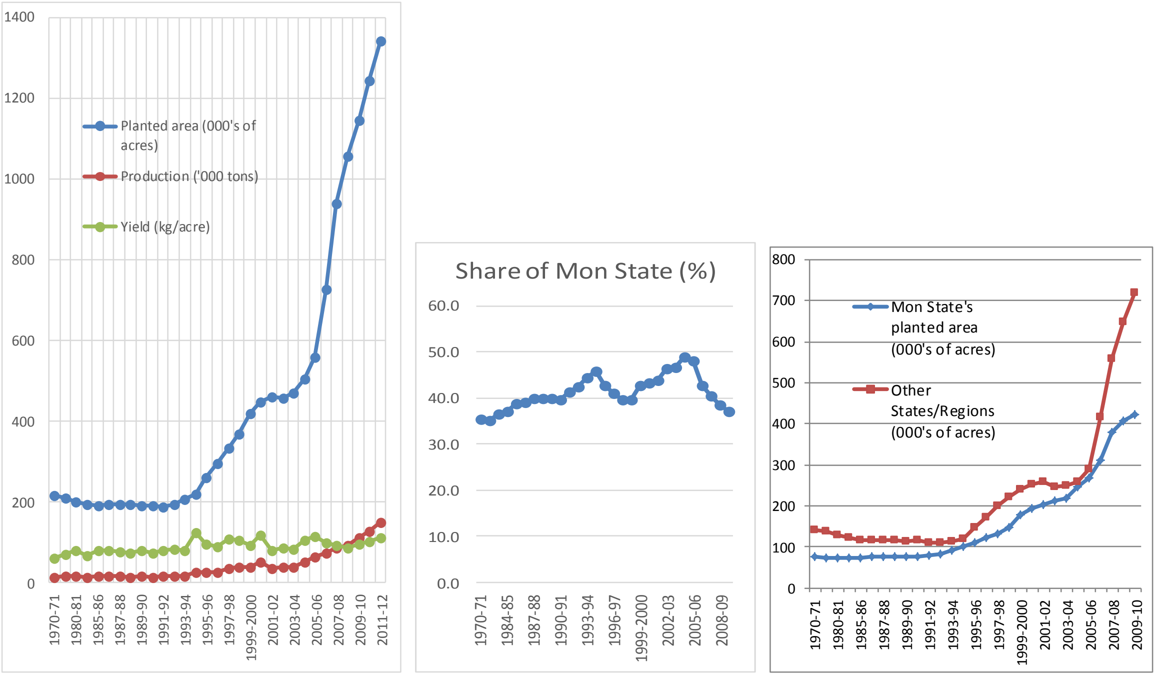

Figure 2-2 Planted Area of Rubber and Share of Mon State
Source: Ministry of Agriculture and Irrigation, Union of Myanmar

(2) Changes in export destinations

Figure 2-3 shows the recent performance of rubber product exports from Myanmar. First, it can be seen that the rubber export price jumped in 2010/11 and remained at that high level until 2012/13 when the price declined sharply, approaching the previous low of 2009/10 since September 2014.

Second, the major export destinations of rubber products from Myanmar have experienced a rapid change since 2009/10. The share sent to China increased from 50% to nearly 80% whereas the share sent to Malaysia declined from nearly 40% to less than 15%. China became an overwhelmingly important export destination for Myanmar rubber products. Most of the rubber products are exported by the border trade through Muse, Shan State.

[23] See, for instance, the case of the two study villages in Mon State (Appendix D).

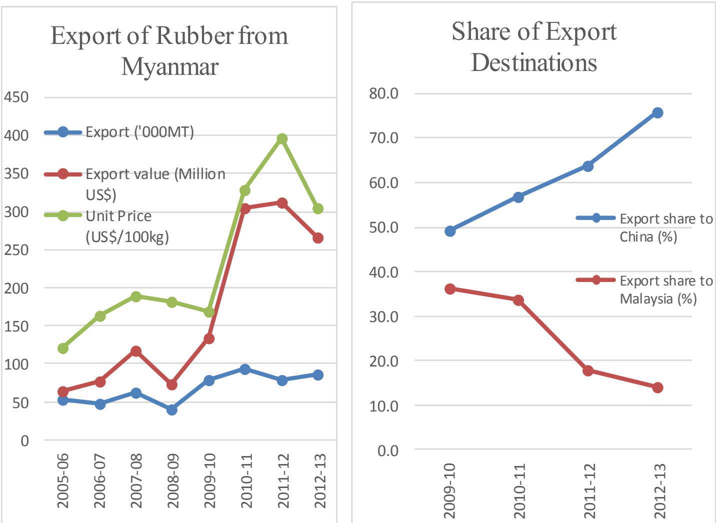

Figure 2-3 Export of Rubber Products from Myanmar
Source: MRPPA

2-1-4. Basic Structure of Rubber Production, Processing and Marketing in Myanmar

Figure 2-4 illustrates the current basic structure of the rubber products sector in Myanmar. Smallholders with less than 20 acres (8 ha) account for roughly 90% of all rubber planters. Usually, they process latex into USS (unsmoked sheets) and sell them to private processors/exporters through rubber brokers (middlemen). The private processors/exporters own smokehouses and process USS into RSS (ribbed smoked sheets). On the other hand, there is an estate sector, both private and state-owned. Rubber estates usually have smokehouses and process latex into RSS via USS. Actually, however, in addition to RSS, there are a few factories processing TSR (technically specified rubber), but for simplicity they are omitted from the figure because of the small numbers. Currently in Myanmar, most of the rubber products are exported in the form of RSS.

RSS is classified into five grades: RSS1 to RSS5. RSS1 is the best quality rubber, which is used for producing high-quality tires.[24] At present many large-scale private estates can produce RSS1 and sell it at higher prices mainly to the sole private tire factory in Myanmar—the Yangon Tire Factory. However, the major rubber products in Myanmar are RSS3 and RSS5, which are purchased at low prices and exported abroad, especially to China.

[24] It should be noted, however, that Myanmar's classification is not compatible with the international one; RSS1 in Myanmar is equivalent to RSS3 according to international standards.

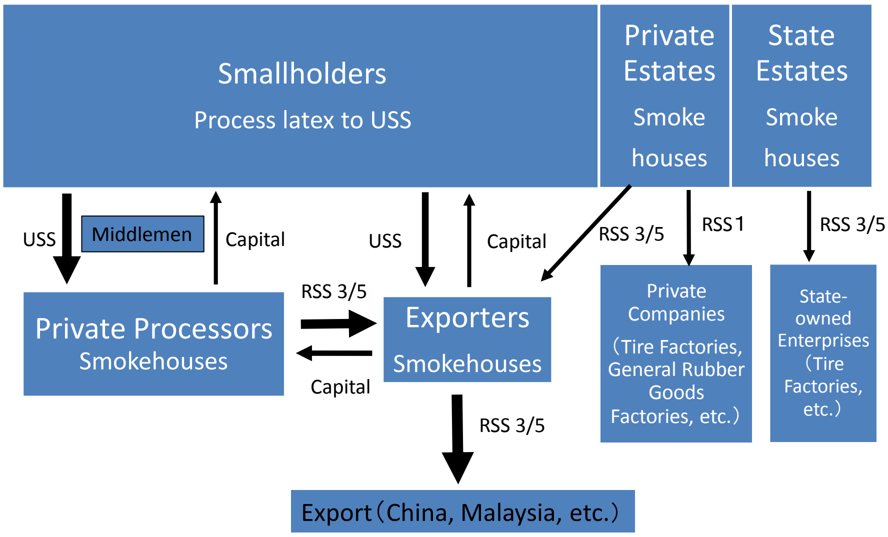

Figure 2-4 Rubber Products Sector in Myanmar
Source: Prepared by author.

2-1-5. Major Agents in Rubber Products Sector

In September 2013 a field survey was conducted to investigate the rubber products sector for a week in Mon State.[25] The survey covered various economic agents in the sector, including state-owned rubber estates, state-owned tire factories, private rubber estates, RSS processors/ merchants, and rubber smallholders. Then the next month, we visited Mon State again to participate in an IRRDB-MRPPA International Workshop on the Development of the Rubber Industry for Smallholders in Myanmar held at Mawlamyine on October 23-24, 2013, which afforded us the opportunity to visit the biggest rubber exporter office. After that, in November 2014, we conducted a household survey in two study villages in Mon State (see Appendix D).[26] Below are the findings from these surveys.

State-owned Rubber Estates

The Mayangone Rubber Estate is one of the 27 state-owned rubber estates under the Ministry of Industry II, located near Kyaikto town.[27] It was first established in 1918 as a private (Indian) rubber estate but was nationalized in 1962. In 2004 it was transferred from the Ministry of Agriculture and Irrigation to the present Ministry.

It has a total of 4,113.7 acres, of which 3,812.6 acres are rubber plantation area. But tapping was conducted in only 2,125 acres when we visited the estate in September 2013. The major clone was RRIM600,[28] which accounted for roughly half of the harvested rubber trees. Old trees of more than 30 years, which urgently need to be replanted, account for 800 acres of the planted rubber trees.[29]

[25] Dr. Konosuke Odaka, Professor Emeritus, Hitotsubashi University and the head of the Myanmar Economic Development Support Program of JICA participated in the survey.
[26] The household survey in November 2014, including its preparatory work in July 2014, was financed by a Grant-in-Aid from the Ministry of Education, Culture, Sports, Science and Technology in Japan.
[27] Ministry of Industry (I and II together) has 27 state-owned rubber estates.
[28] A high-yielding cultivar developed at the Rubber Research Institute of Malaysia (see Table D-6 in Appendix D).
[29] It seems that many state-owned rubber estates are facing the same situation of having too many old and unproductive rubber trees that need to be replanted. According to the manager of a private rubber estate (YST Rubber Estate mentioned later), a state-owned rubber estate located in Thanbyuzayat has 2,800 acres of rubber plantation, but it has only 300 acres of recently replanted trees.

Recently they replanted 55 acres with such clones as PB 260,[30] RRIM 600, and RRIM 602. They have their own nursery (33.7 acres).

The estate has two smokehouses but the total production of RSS in 2012/13 was only 244,575 lbs. versus the target of 654,000 lbs. The major reasons for the low production include: 1) old and unproductive trees, 2) failure in tapping due to poor tapping techniques. Note that because of the low wages they offer to the tappers (1,500-2,000 kyat/day; 1,000 kyat lower than the prevailing market wage rate), skilled workers cannot be recruited. Moreover, input of chemical fertilizers is limited to one-third of the recommended amount (one bag each of urea, TSP and MP per acre), which seems to contribute to the low yield as well. The maximum production was recorded in 2004/05 at 900,000 lbs.

The quality-wise production of RSS was as follows: RSS1—12.5%, RSS2—6.3%, RSS3—19.4%, RSS4—20.2% and RSS5—24.8%. They sold the products to the two state-owned tire factories.[31] The remainder includes mainly cup lump, which is processed into TSR.

The estate employs 36 staff members and about 300 workers. Previously, they recruited workers from the local area, but after 2009 recruitment became difficult and in 2013 approximately two-thirds of the workers came from Ayeyarwady, Bago, and so on. They live in cottage houses on the estate. Usually, a husband and wife will work together as tappers and manage 600 rubber trees. The peak season is from October to December when the yield becomes double. Tapping is stopped from July to August, when tapping workers are engaged in weeding. They start tapping at 2 a.m. until 6 a.m. and collect latex from 8-10 a.m. At noon they put formic acid in and dry it until 6 a.m. the next morning to produce USS. After that USS is put in the smokehouse for 7 days, with the temperature kept at 120-130 degrees centigrade. The branches of cashew trees are the main fuel.

It seems that budgetary constraints are the largest problem of the estate, which results in low productivity, low quality RSS, and the delay in replanting old trees, etc. In September 2013 when we conducted the survey the estate was planning to enter a joint venture with the private sector. And the 27 state-owned rubber estates were finally privatized on the basis of Joint-Venture with private companies and local individuals with effect from August 2013.

State-owned Tire Factories

In Mon State there are two state-owned tire factories: the Thaton Tire Factory and the Bilin Tire Factory. The information of the two factories obtained in September 2013 is shown below.

The Thaton Tire Factory, located in Thaton, started operation in 1985 with technical assistance from the Government of Czechoslovakia. The number of staff members (including workers) at that time was approximately 1,200. Renovation of some facilities was undertaken thereafter with technical assistance from China and Taiwan. But by and large, its facilities seem to be outdated. The factory manager frankly admitted that the cost of producing tires is roughly 20% higher than imported tires (mainly from China).

The total production of tires in 2011/12 and 2012/13 was only 40,000, compared to the record of 120,000 in 2009/10 and the production capacity of 150,000. Forty-five percent (45%) of tires are for light trucks, followed by tires for general trucks (40%) and tires for general cars (15%). The major reason for the low production was the sharp decline in budgetary allocation to the factory. In particular, due to the decrease in foreign exchange allocation from 12 million US dollars to 5 million US dollars the factory can no longer import enough necessary raw materials from abroad.[32]

The Bilin Tire Factory, located in Bilin, started operation in February 2010. The Government of China offered 33 million US dollars of assistance with the condition of repayment within 28 years at 3% per annum interest. The Myanmar government provided 11 billion kyat (11 million US dollars).

The number of staff members was 523, including 481 workers in 2013. One-third of the staff was transferred from Thaton Tire Factory and the rest were transferred from other state-owned factories such as sugar mills and liquor factories.

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[30] A high-yielding cultivar developed at the Prang Besar Estate, Malaysia (see Table D-6).

[31] The price in 2012/13 was as follows: RSS1—1,000 kyat/lb., RSS2—900-950 kyat/lb., RSS3—800-850 kyat/lb.

[32] The other problem, according to the factory manager, is the high cost of importing raw materials because of the economic sanctions of Western countries.

The major product is tires for general cars. The total production of tires was 26,000 in 2010/11 and 50,000 in 2011/12 in spite of a production capacity of 300,000. Because of the small budgetary allocation (especially foreign exchanges) from the government, they mentioned that they can operate the production line for only two months a year. The factory was waiting for the government's decision on whether it would be privatized or would enter a joint venture with the private sector. Note that thereafter the factory was leased out to Yangon Tire Co. on November 1st, 2014.

Private Rubber Estates

In September 2013 we visited two private rubber estates. The information we obtained is summarized as follows.

NG Estate, located in Thaton, is one of the largest private rubber estates in Myanmar, with a total area of 1,260 acres. It was started as a British rubber estate in the colonial era, which was purchased by a local entrepreneur after Burma (Myanmar) became an independent nation. It escaped from nationalization in 1962, but management of the estate was controlled by a government (party) committee. In 1988 the estate was attacked by local residents and devastated.

The owner-cum-manager of the estate gradually started to rebuild it, by replanting 15-20 acres every year. After 2008 the management became stable and after 2015 all the rubber trees planted on its 1,260 acres can be tapped. He has an old smokehouse built sometime before 1988.

He employs 90 tappers with monthly salary of 120,000 kyat and 50 daily workers paid 2,000 kyat/day in wages. Almost all his products are RSS1, which is sold to the Yangon Tire Factory. His estate produces nearly one-fifth of the total RSS (which the Yangon Tire Factory purchases).

He has a nursery and actively sells buddings or polybag buddings to rubber planters all over the country. The high-quality of his buddings or polybag buddings is well-known and he can sell at 600 kyat apiece, compared to the normal 250 kyat.

YST Rubber Estate, located in Thanbyuzayat, was established in 1924 as a British rubber estate with 2,800 acres of land. In 1962, the grandfather of the present owner purchased 800 acres and employed a manager to manage the estate.[33] However, a government (party) committee comprised of 5 persons controlled its management, resulting in very low productivity. In 1988, when many other private estates were attacked by local residents, the estate employed private armed forces that successfully protected them from attack.

In 1994 the present owner inherited the estate from his father and the manager also transferred management to his son. In this way, the owner family and the manager family have been working together for three generations. The owner family usually stays in Yangon and sometimes visits Thanbyuzayat to monitor the estate.

Ninety percent (90%) of rubber products are RSS1, which is sold to the Yangon Tire Factory, and the remaining 10% (RSS5) is sold to rubber brokers for export to China via Muse.

Rubber Smallholders

In order to understand the current status of rubber smallholders in Myanmar, we conducted a household survey (n=115) in two study villages (Kamawet and Kwan Hla) in Mon State (located in-between Mudon and Thanbyuzayat) in November 2014. The details are described in Appendix D. The major findings are summarized below. Note that the information cannot be generalized to all of Mon State.

(1) Some of the rubber smallholders had lowland paddy fields as well. Such farmers accounted for 26.5% in Kamawet and 28.6% in Kwan Hla. Of course whether they owned such fields or not depends on the locality of villages.

(2) Some of the rubber smallholders had only young trees waiting for tapping in the future. Such smallholders accounted for 35.3% in Kamawet and 33.3% in Kwan Hla.[34] It reflects that in and around the study villages there was much land classified as vacant, fallow, and

[33] The remaining 2,000 acres also managed to escape nationalization.

[34] In terms of area, the proportion of untapped trees was 56.3% in Kamawet and 56.9% in Kwan Hla, much higher than the proportion of smallholders, because many smallholders who already started tapping also had untapped rubber trees.

virgin land that has been reclaimed for rubber plantations in recent years. In fact, only 10-15% of rubber plantations owned by the sampled smallholders obtained land by inheritance and the remaining 85-90% of land was obtained by either purchase or reclamation.

(3) The average yield of rubber was 710 lbs./acre (796 kg/ha) in Kamawet and 649 lbs./acre (728 kg/ha) in Kwan Hla. However, the yield is expected to increase rapidly in the near future because there are many young rubber trees in both villages with high-yielding cultivars such as BPM 24, PB 260, RRIM 600, and RRIM 2000 series. The observed low yield of rubber in the study villages is also attributed to the lower input of chemical fertilizer due to the low rubber prices. In fact, the surveyed smallholders applied on average only 0.23-0.35 bags/acre of chemical fertilizer (mainly urea and compound) in Kamawet and 0.27-0.35 bags/acre in Kwan Hla.

(4) With regard to the usage of labor on rubber farms (application of fertilizers, herbicides and weeding, as well as tapping and processing into USS), many smallholders, especially small-scale smallholders, used only family labor. However, higher proportions of smallholders (41% in Kamawet and 23% in Kwan Hla) used hired labor for tapping. If rubber prices were higher more farmers would have used hired labor.

(5) In the processing of rubber almost all the smallholders used sulfuric acid instead of formic acid. Their USS was classified as USS3 or USS5, which could only be sold at low prices. However, at the same time, it is noted that Kwan Hla smallholders enjoyed higher prices than those in Kamawet, mainly because of the higher skills in rubber processing held by the Kwan Hla smallholders, who have much more experience working on rubber plantations in Thailand as mentioned later.

(6) Non-farm employment opportunities were underdeveloped in the study villages, especially for male workers. Many people, especially people from Kwan Hla, migrated to Thailand to work on rubber plantations. Migration to Thailand started in the mid-1980s and accelerated after the mid-1990s.

(7) The large-scale migration to Thailand over the past few decades resulted in higher income of Myanmar migrants and hence the accumulated savings contributed to promoting rubber products sector development in the native villages, including land purchases and rubber (re)planting. No less importantly, the migration to Thailand also contributed to technology transfer to Myanmar rubber smallholders, especially tapping techniques and skills.

(8) The rubber smallholders usually face an acute shortage of credit. First, the Myanma Agricultural Development Bank (MADB) does not have a credit scheme for rubber smallholders. At least partly because of that, many rubber smallholders rely on informal loans with high interest rates. Of the total informal loans obtained by farm households in the study villages, nearly 60% is used for various rubber-related purposes, including purchasing land, rubber planting, rubber farm operation and management, and rubber processing. However, it was found that credit dependency on rubber brokers was not so high (only 18-23%), due partly to the low rubber prices.

Rubber Processors/Merchants

In September 2013 we conducted an interview survey of 3 rubber processors/merchants, including a Paan (Kayin State)-based entrepreneur. Summarized below is the information we obtained.

Mrs. K (69 years old) entered the rubber trading business in 1988 after quitting her government position classifying rubber products, which she had been doing since 1964.

She has 7 smokehouses in Thaton with a total capacity of producing 250,000 lbs. of RSS per week. Her main business is purchasing USS from rubber smallholders and processing it into RSS (mainly RSS3) mainly for sale to 10 exporters.

She gets advance money from exporters and relends it to smallholders. In September, she provides loans to smallholders, 1-1.5 million kyat for a smallholder with 30 acres of rubber trees, for instance, and gets repayment time to time when she buys USS from the smallholders. The interest rate is nominally zero.[35] Although when and how much money smallholders repay is up to them, she collects all the repayment no later than June the next year. Note, however, if she lends in the form of chemical fertilizers instead of cash, she requests the entire repayment within 3 months. The necessary working capital is estimated 600 million kyat.

She mentioned that the biggest problem is the fluctuation of rubber prices and especially the sharp drops in prices that happen 3-5 times in a season. When that happens, she loses money and smallholders cannot repay their debt to her.

Mrs. KA and her relatives jointly manage a company named YS Rubber Trade in Mudon. They have their own rubber plantations with more than 350 acres. They have a few smokehouses and also rent 4 warehouses from the Ministry of Cooperatives. Since 1996 the business scale has become very large.

They purchase USS from approximately 100 smallholders, including petty rubber traders. Roughly two-thirds of the RSS they produce is RSS3 and the remaining one-third is RSS5. Note that the average price at the time of the survey was 990-1,000 kyat/lb. for RSS3 and the price of RSS5 was 50-150 kyat/lb., lower than RSS3. In addition, they sell low-quality USS (including cup lump) to TSR factories such as the Light House in Mudon or Yangon.

They also extend credit to smallholders extensively in the form of chemical fertilizer. Smallholders who receive fertilizer must sell their products to YS Rubber Trade and make payments every 7-10 days although when and how much money they repay is up to them. The necessary funds for purchasing chemical fertilizers for advance payment reach 100-150 million kyat (by self-finance).

Mr. NTA (29 years old) was born in Thanbyuzayat and graduated from Yangon University (Economics Institute) in 2004[36] and stayed in Paan, Kayin State with his wife and a son. His parents remained in Thanbyuzayat and managed their 200-acre rubber plantation.

He purchased 180 acres of vacant land from the Democratic Karen Buddhist Army (DKBA) in 2011[37][38] and planted rubber (BPM24) two years later. In 2012, along with 3 of his friends, he purchased land (with 10 million kyat) and constructed 4 smokehouses (with 28 million kyat) in the suburban of Paan City.

In 2012/13, he purchased 30 million lbs. of USS from approximately 100 smallholders and processed it to 20 million lbs. of RSS: RSS2—15%, RSS3—85%. He sold his RSS to 4 rubber exporters, including two big companies (one of which was the FB company mentioned later), with the share of the two exporters reaching 90%. The price of RSS3 was 900-1,100 kyat/lb.

Rubber Exporters

FB is the biggest rubber export company in Mudon (also in Myanmar), owned by a Chinese family. They have 20 smokehouses and 2 crumb (TSR) factories. In 2013/14, they purchased about 10,000 tons of USS (22 million lbs.), of which 40% was processed into RSS (RSS3) while 60% was processed into TSR (TSR20). In addition, they also purchased 15,000 tons of RSS from local processors-cum-merchants for export.[39]

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35 The smallholders, however, have an obligation to sell USS to her. She can offer a slightly lower price than normal, which can more than compensate for the interest.

36 Just after graduation in 2005 he started a mineral water factory at Thanbyuzayat with 7 of his friends. In 2013 he employed 30 staff members for the factory.

37 The land price was 180,000 kyat per acre. The land was originally granted from the Myanmar government to DKBA with a 30-year lease contract. Although the rubber trees were not yet ready for tapping, he intercropped green gram and employed 7 staff members and 30 seasonal workers (for 4 months).

38 According to a meeting with the Chief Minister of Kayin State on September 7, 2013, of the total 7.5 million acres, 2.2 million acres of vacant, fallow and virgin land were already distributed for rubber plantations (though only 60,000 acres are being tapped), with only 1 million acres of vacant, fallow and virgin land remaining. The priority of distribution is given first to local people in the state, and second to people in other states/regions, including Mon State. Note also that the protected forest area of the state was as large as 2.3 million acres.

39 Of the total 15,000 tons, 700 tons was purchased from Mrs. K mentioned above.

The largest export destination in 2011 was China (via Muse), but it shifted to Malaysia in 2012 because they have to wait for two months to get cash payment after delivery when exporting to China. They borrow money from 5 banks including 1 foreign bank in Singapore, and extend it to rubber processors and/or merchants 2 months before the season starts.

They employ a total of 150 staff members in their rubber business as a whole. They pay a monthly salary of 55,000 kyat to male employees and 45,000 kyat to female employees, plus over-time pay. They close the business in the off-season from June to September.

They mentioned that at first, they started a business importing skim milk, mosquito coils, etc. in Mandalay in 1990 and expanded their business activity to Yangon in 1995. The beginning of the rubber export business was that they purchased rubber products from the government and exported them to Malaysia and China in 2001. In 2002, they moved to Mudon and started the present business.

ARCPC

The Applied Research Center for Perennial Crops (ARCPC) was established in 1991 under the UNDP/FAO project as mentioned before. The target crops are rubber and oil palm. As of 2013, it had 68 staff members, including 7 in the administration section. However, the number of staff members with Ph.D.'s and master's degrees was only 1 and 6 respectively.

Under the Rubber Rehabilitation Project (Phase 1) (1979-80 to 1984-85), the first series clone trials were established in Mudon (50 acres: planted-1986, started tapping-1995) and in Thanbyuzayat (75 acres: planted-1987, started tapping-1996), respectively. And under the Rubber Rehabilitation Project (Phase 2) (1984-85 to 1992-93) the second series clone trial was established in Mudon (75 acres: planted-1990, started tapping-1997). Then, under ARCPC Project (1991-94) a rubber breeding program was initiated in 1999 and nine ARCPC clones (ARCPC 1 to ARCPC 9) were developed, of which six promising clones are under evaluation in 2013 at ARCPC.

Due to the severe budget constraints, the activity of ARCPC has been rather limited. However, after 2012, they started conducting training courses (10-14 days per course) that are open to the public, doing everything they can to contribute to society.

MRPPA

Formed in March 2005, Myanmar Rubber Planters and Producers Association (MRPPA), a non-governmental organization, comprises of the members of rubber planters, processors, traders and exporters and end-product rubber goods manufacturers. Its main objectives are to accelerate the overall development of Myanmar's rubber planting and production industry in the private sector, quantitatively and qualitatively as a whole, to improve income and living standard of the stakeholders involved in the industry and to contribute to the economy of the country.

Branches are formed at major rubber producing states and regions and at present there are six branch associations at Mon State, Tanintharyi Region, Kayin State, Bago Region, Yangon Region and Ayeyarwaddy Region respectively.

MRPPA has been an affiliated association of the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI) since formed in March 2005. It became a member of International Rubber Research and Development Board (IRRDB) with effect from 2007. Cooperating closely with IRRDB, MRPPA is disseminating the rubber technologies to local rubber sector through organizing technical workshops, sending trainees to trainings organized by IRRDB member research institutes and annually participating at IRRDB Annual Meetings and International Rubber Conferences.

In 2013-14 under the National Export Strategy (NES) Formulation Project implemented by Trade Promotion Department, Ministry of Commerce and International Trade Centre (ITC), MRPPA participated as the Rubber Sector Team Coordinator and successfully formulated the Rubber Products Sector NES jointly with the counterpart ITC Experts. The NES strategy has been approved by the President Office in December 2014 and all the related activities for rubber development (upstream, downstream, export, etc.) would be implemented in accordance with the NES Strategy starting from the year 2015-16.

Recently in an endeavor to establish a rubber quality certification system for export rubber from Myanmar, MRPPA supported by Trade Promotion Department, Ministry of Commerce has established a TSR rubber testing laboratory in 2014-15, with the technical assistance of Japanese government's

Ministry of Economy, Trade and Industry (METI) and the Overseas Human Resources and Industry Development Association (HIDA).

Summary and Conclusions

The current status of the rubber products sector in Myanmar contains a series of serious problems although it has been developing rapidly in recent years, especially after 2000. The major problems are summarized as follows.

1) The public sectors, including the state-owned rubber estates, the state-owned tire factories, and the research institute (ARCPC) suffer from serious budgetary constraints, which result in various problems such as outdated technology and facilities, lack of competitiveness with local private sectors or imported foreign products, underutilization of production capacity, wasted salaries paid to government employees, old and unproductive rubber trees, damaged rubber trees due to poor tapping techniques, lack of highly qualified human resources, and so on.
2) The private rubber estates are generally observed to be much more productive and efficiently managed. They are leading the whole sector by either producing high-quality RSS (for sale to modern private factories such as the Yangon Tire Factory) or supplying high-yielding cultivars through their own nurseries. In addition, they are the core members of MRPPA and are enthusiastic about leading smallholders in technology dissemination by hosting international workshops with their own pocket money, for instance.
3) However, it should be emphasized that roughly 90% of rubber planters in Myanmar are smallholders with less than 20 acres (8 ha) of land. Unless they develop, the real development of the whole sector cannot be expected.
4) The rubber smallholders in Myanmar are also facing a series of serious problems, which is "structural" in nature. One of the core problems is the financial constraints, including funds for replanting old trees and working capital for operation and management of their rubber farms. As mentioned above, many smallholders actually obtain the money they need for investment by migrating to Thailand or Malaysia. But at the same time, they depend on informal loans with high interest rates. The problem is exacerbated by the policy of MADB to exclude rubber smallholders from their customers for many years.

From a theoretical point of view, the rubber products sector does not have economies of scale, especially compared to the oil palm products sector (Hayami et al, 1990). The oil palm products sector requires a huge investment to process the oil. Moreover, the fruit of the oil palm easily spoils after being harvested. These characteristics generate strong economies of scale. In contrast, a much smaller investment is necessary to process rubber into RSS. And, although a much larger investment is needed to process TSR, the raw materials such as USS and cup lump do not spoil easily unlike oil palm fruits.

This means that the dominance of smallholders in Myanmar's rubber products sector is not necessarily a serious bottleneck for the development of the sector. Moreover, as we will investigate in the next section, Thailand achieved a remarkable success under appropriate government policy, although the dominant rubber planters are smallholders like in Myanmar.

2-2. Lessons from Thailand's Experience

Figure 2-5 shows the trends in rubber production, harvested area, and yield in the major Asian countries since the early 1960s until 2011. It can be seen from the table that until the late 1980s Malaysia was the biggest producer of rubber and that the per hectare yield level was the highest as well. However, after the 1990s Thailand grew rapidly as the biggest producer, followed by Indonesia. The Malaysian rubber sector did not merely appear to shrink relative to these other countries, but was actually shrinking. In terms of per hectare yield of rubber, Thailand was in the lowest group until the mid-1980s, but grew rapidly thereafter to become one of the largest producing countries in recent years, along with India and Vietnam. Note that Myanmar also started to increase its rubber harvested area and yield since the mid-1990s, but still its yield level remains the lowest among these countries; less than half of the highest group.

Note that 90% of rubber farmers in Thailand are smallholders with less than 50 rai (8 ha).[40] How did Thailand accomplish such a dramatic development in the rubber products sector? This is the major reason we are paying special attention to Thailand.

2-2-1. Institutional Set-up for Rubber Products Sector Development

In 1960 the Thai government recognized the need to replant old rubber trees with modern high-yielding cultivars and it established the Office of Rubber Replanting Aid Fund (ORRAF) to administer and implement a rubber replanting program, based on the Rubber Replanting Aid Fund Act on December 5th, 1960. ORRAF was modelled on an equivalent institution created in Malaysia in 1952; i.e., the Rubber Industry Replanting Board.

At that time, a considerable share of the rubber planted area contained trees that were over 25 years old and the yields were very low, owning to the planting material used (seedlings), farming technologies and the aging of the trees (Jocelyne Delarue, 2011: 9). This was because of the fact that village-level planting of rubber, in imitation of the large plantations, began in the 1920s and 1930s, primarily in southern Thailand east of Bangkok (ibid: 8).

ORRAF's financial resources come from two taxes levied on rubber sales, calculated on the basis of the sales certificates of processing or exporting companies. All the proceeds from the first tax—called the "cess" in English, but literally "replanting aid fund" in Thai—are transferred to ORRAF, which must use at least 85% of them to finance replanting (5-10% is used to pay ORRAF's operating costs and the remainder goes to agronomic research). The second tax is a customs tax on rubber exports, levied since the 1930s and dedicated in part to the financing of replanting (ibid: 10).

According to ORRAF, the Cabinet approved a levy (cess) to be collected from rubber exporters and an adjustment in levy rates was announced that has been in effect from October 1st, 2010, with rates as follows.

1) Smoked rubber sheets (RSS)
   (1) If the price of rubber[41] does not exceed 40 baht/kg, the levy rate is 0.90 baht/kg
   (2) If the price of rubber is 40-60 baht/kg, the levy rate is 1.40 baht/kg
   (3) If the price of rubber is 60-80 baht/kg, the levy rate is 2.00 baht/kg
   (4) If the price of rubber is 80-100 baht/kg, the levy rate is 3.00 baht/kg
   (5) If the price of rubber exceeds 100 baht/kg, the levy rate is 5.00 baht/kg
2) Natural liquid rubber
   Same levy rates as smoked rubber sheets, but with a 65% weight reduction
3) Concentrated liquid rubber or chemically enhanced concentrated liquid rubber
   Same levy rates as smoked rubber sheets, but with a 40% weight reduction
4) Chemically enhanced rubber
   Same levy rates as smoked rubber sheets, but with weight calculation based on purity proportion and quality of rubber as indicated on the approval certificate issued by the Rubber Research Institute, Department of Agriculture
5) Other rubbers such as block rubber, crepe rubber, rubber lumps, rubber scraps, etc.
   Same levy rates as smoked rubber sheets

According to ORRAF employees,[42] the total budget of ORRAF in 2013 was approximately 4,800 million baht, of which 4,200 million baht was used for subsidies for replanting rubber trees.

[40] 1 rai is 0.16 hectares.

[41] The Ministry of Agriculture and Cooperatives announces rubber prices used as the basis for calculating cess levies 15 days in advance, based on the prices of Class 3 smoked rubber sheets, Class 20 block rubber, and concentrated liquid rubber (60% d.r.c.) as the Free on Board (F.O.B) price for Bangkok (product price at the port of export), in order to set the monthly levy rates for exporters between the 1st-15th and the 16th to the end of every month.

[42] Interviewed by author on October 6th, 2014 at the ORRAF headquarters.

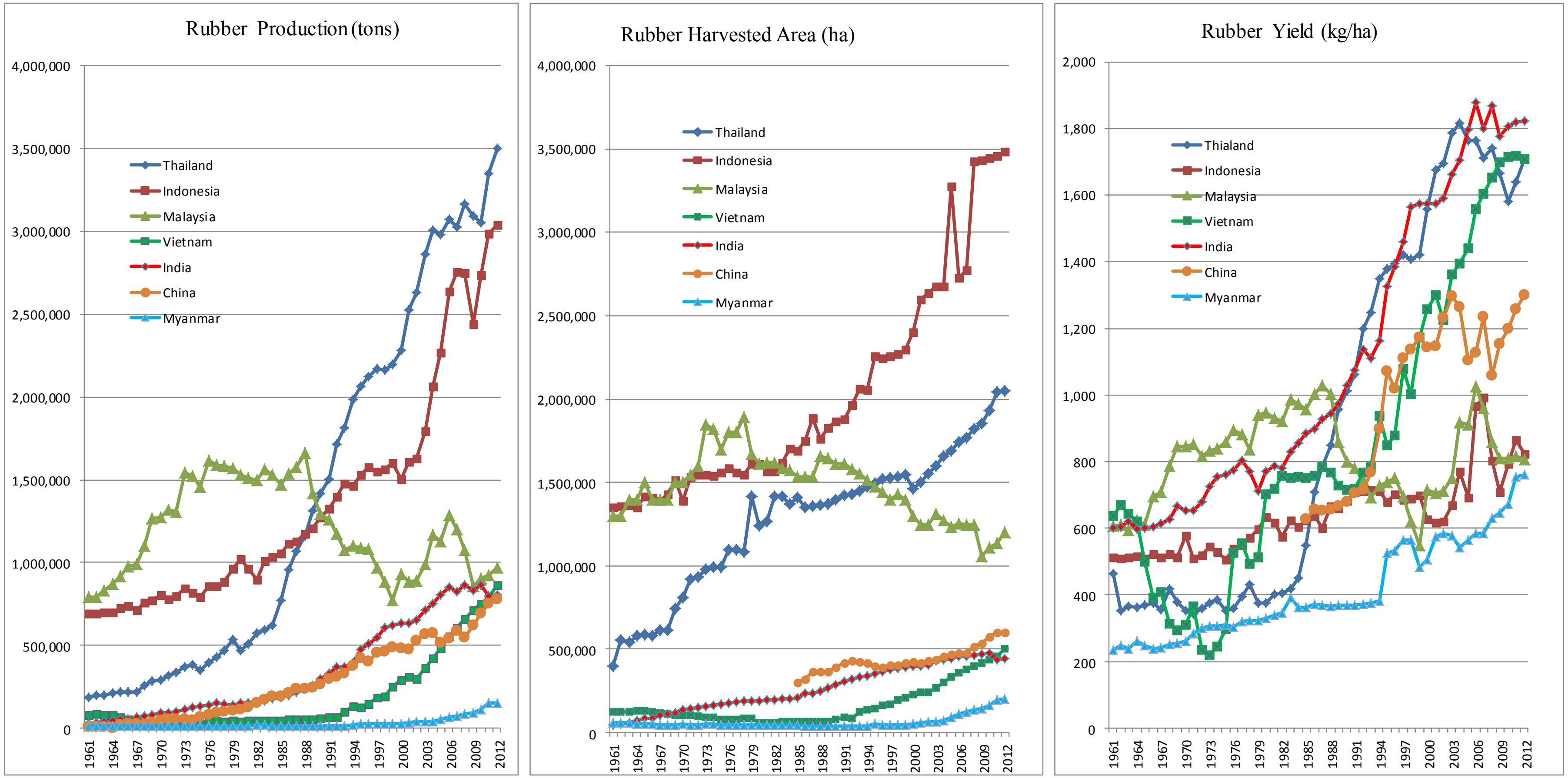


Figure 2-5 Trends of Rubber Production, Harvested Area, and Yield in Major Asian Countries
Source: FAOSTAT

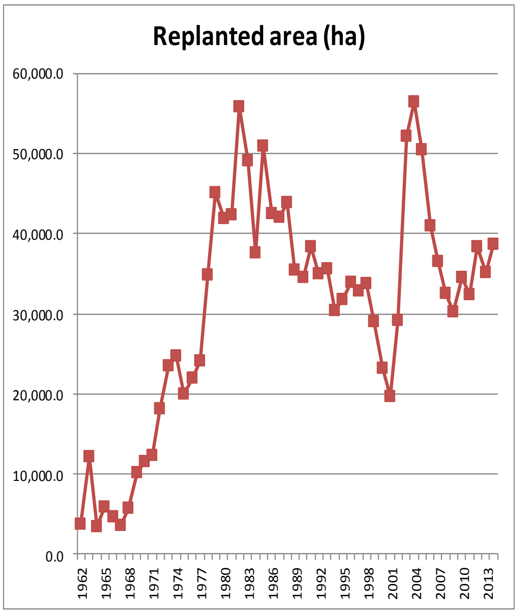
Table 2-1 shows the amount of subsidies given to rubber farmers for replanting. The real value of subsidies has been almost constant over time at the year 2000 prices at around 50,000 to 60,000 baht per hectare. This amount is given for 7 years until the rubber trees can be tapped. In 2014 the rate of subsidies is 100,000 baht per hectare (16,000 baht per rai), which we confirmed (in the field trip to Surat Thani Province in October 2014) is sufficient to cover all the costs for replanting.

Figure 2-6 illustrates the actual area replanted with the assistance of ORRAF and the harvested area (accumulated) after replanting. It is important to note here that when ORRAF assists in the replanting of rubber trees it provides not only financial assistance, but also technical assistance such as high-quality rubber clones,[43] chemical fertilizer, and extension services.

Table 2-1 Replanting Subsidies Paid by ORRAF, 1961-1997 and 2008

Period in effect	ORRAF subsidies (baht/ha)	ORRAF subsidies (constant prices in 2000 baht/ha)
1961-April 1966	9,375	63,932
May 1966-December 1968	11,563	73,497
January 1969-December 1975	12,500	63,188
January 1976-December 1979	17,500	56,572
January 1980-December 1980	24,375	58,201
January 1981-October 1982	26,563	54,853
October 1982-December 1986	30,000	57,565
January 1987-1995	33,125	48,995
1996-1997	41,250	46,628
2008	68,750	54,442
Average		57,778

Source: Jocelyne Delarue, "Thailand: The World's Leading Exporter of Natural Rubber Owning to its Smallholders", Working Paper 96, Research Department, Agence Francaise Developpment, January 2011.



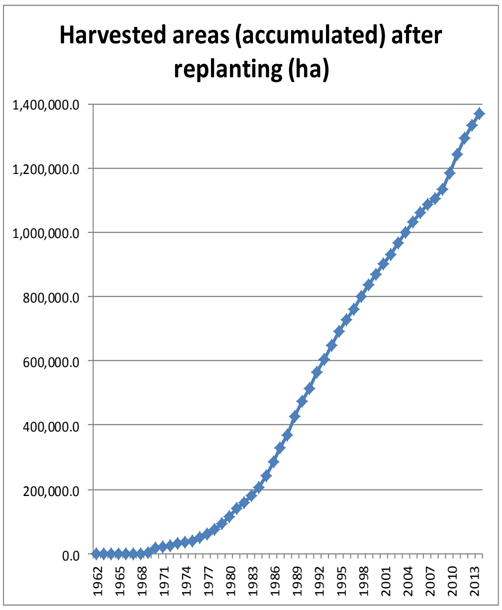


Figure 2-6 Replanted Area and Harvested Area after Replanting with ORRAF's Assistance

Source: ORRAF

[43] The Rubber Research Institute of Thailand (RRIT) is responsible for controlling rubber clones by a registration system, based on a law enacted in 1999. The number of registered clones is approximately 160 as of October 2014.

Now, if we look at Figure 2-5 again, we notice that the average yield of rubber in Thailand started to increase sharply only after the mid-1980s. The reasons for the time lag between the operation of ORRAF since the early 1960s and the rapid rise in yield after the mid-1980s seem to be twofold.

First, Figure 2-5 shows that Thailand experienced a rapid expansion in the rubber planted area until the early 1980s; during the two decades after the early 1960s the harvested area of rubber almost tripled. As ORRAF has not been giving subsidies for new plantations[44] it is plausible that most of the new rubber plantations established in this period failed to adopt modern high-yielding cultivars.

Second, as Figure 2-6 demonstrates, ORRAF's replanting program was not so popular among the rubber smallholders for the first 10 years and only after that did replanting with assistance from ORRAF accelerate. In the early 2010s roughly 70% of rubber harvested area in Thailand is replanted with ORRAF's assistance.

2-2-2. Other Functions of ORRAF

The rise of Thailand as the leading producer and exporter of natural rubber was not solely attributable to its replanting program mentioned above. Other important factors include: 1) organizing rubber smallholders into cooperatives or groups, 2) establishment of public rubber markets, and 3) technology transfer programs, for all of which ORRAF has played a central role.

1) Rubber farmer group

As of October 2014 there were 6,276 rubber farmer groups including registered cooperatives in the whole country. In Surat Thani Province, the number of cooperatives and other groups was 55 and 685 respectively. How do they function at the ground level? Case studies of rubber cooperatives undertaken in the Province in October 2014 are described below.

(1) Case 1—Ban Van Yai Cooperative

No. of members: 293

Rubber farm size is 5-70 rai, with a mode of 25-30 rai

Farmers within a radius of 10 km joined.

To become a member, one needs to pay 20 baht as a membership fee and purchase a minimum of 500 baht-worth of paid-up shares. The dividend rate is usually 10% per annum.

General meetings are held once a year.

Capital: 21 million baht (including 11.54 million baht of real estate assets)

Board members: 9

Monthly meetings are held.

2-year assignment and elected by vote

No salary but daily allowances for traveling are provided (30 baht/day)

Staff members: 9

Salary is from 5,600-19,000 baht/month.

Major functions

- Collecting latex and processing it into RSS (100 tons/year)
- Sale of chemical fertilizer (5.7 million baht/year)
- Sale of herbicide/fungicide (147,000 baht/year)
- Credit provision (3 million baht/year, upper limit is 500,000 baht or 80% of deposits with 9% interest rate for seasonal loans, upper limit of 150,000 baht for 3-year term loans with 9% of interest rate)
- Deposit-taking (2.2 million baht in 2013 with 2% interest rate[45])

History

[44] ORRAF was authorized to finance new planting since 1987, limiting initially to 15 rai (2.4 ha) per beneficiary. This planting program in the Northeast was financed out of the central budget from 1989 (Jocelyne Delarue, ibid: 15).

[45] Commercial banks offer 2-2.5% per annum interest for deposits.

- Established in 1968, with 72 members
- Registered as a cooperative society in 1992 with 57 members
  Established a rubber processing factory (latex to USS)
- Purchased land in 1993
- Established a smokehouse in 1997 with assistance from ORRAF (3 million baht) capacity of 1,500 kg/day
- Purchased a rubber block manufacturer in 2005 with assistance from ORRAF
- Constructed a warehouse in 2005 with assistance from RRIT (Rubber Research Institute of Thailand) (5.6 million baht)
- Constructed 2 additional smokehouses with assistance from the Cooperative Department (1.8 million baht plus 10% self-financed)
- Purchased a fertilizer mixing machine with assistance from the Cooperative Department (1.8 million baht)

(2) Case 2—Puang Prom Korn Cooperative

No. of members: 327

There is another cooperative with 270 members in the same *tambon*.

To become a member one needs to pay 300 baht as a membership fee, etc. and purchase 1,000 baht-worth of paid-up shares.

Board members: 9

No salary

Staff members: 6 permanent employees plus 9-10 occasional workers

Occasional workers are paid a piece rate of 2 baht/kg of RSS.

Profit: 10.6 million baht (2013), 3.5 million baht (2014)

Major functions

- Processing of latex into RSS (1,100 tons per year)
  To be sold to the central rubber market or Thai exporters in Hat Yai
  85 baht/kg (RSS) in 2013
- Sales of chemical fertilizer
- Sales of herbicide/fungicide
- Sales of formic acid
- Sales of bamboo
- Credit provision (1-year loan—4.5 million baht with upper limit of 100,000 baht, 2-year loan—8.8 million baht with upper limit of 200,000 baht; 10% interest rate for the first year and 9% for the second year)
- Deposit-taking (9.9 million baht with 3.5% interest rate)
- Cf. There is a BAAC (Bank for Agriculture and Agricultural Cooperatives) branch in the same *tambon*. As the Thai government imposes no tax on deposits to cooperatives people prefer cooperatives when they save but when people borrow they use both cooperatives and the BAAC.

History

- Established in 1994 with 26 members
  Constructed 7 smokehouses in 1994 with assistance from ORRAF
  Purchase USS (unsmoked sheets) and process them into RSS
- Constructed 7 additional smokehouses in 1997 with assistance from the Cooperative Department
- Constructed 3 additional smokehouses in 2013 with assistance from the Agricultural Extension Department

As the two cases demonstrate, the basic function of the rubber cooperatives in Thailand is to own rubber processing facilities (such as smokehouses), process latex or USS into RSS and sell it to exporters either directly or through the central/local rubber market (mentioned later). The notable point is that the Thai government (either through ORRAF, Cooperative Department, or the Agricultural Extension Department) provided the rubber processing facilities. It can be said that since the 1990s thanks to this system the Thai rubber smallholders were able to sell their latex (or USS) at higher prices because of the high quality RSS the cooperatives produced.

The other functions of the rubber cooperatives include: 1) joint purchasing of inputs such as chemical fertilizer, herbicide/fungicide, and formic acid (for processing latex into USS), 2) mutual financing through deposit-taking and credit provision.

Note that rubber farmer groups not registered as cooperatives are engaged only in rubber processing, not in other tasks such as joint purchasing of inputs and financing. The number of members in a group varies from 10-200.

Lastly, it should be mentioned that inspection is vital for every cooperative and farmer group. In order to supplement the shortage of staff members, ORRAF employs "inspectors" selected from reliable farmers and pays 30 baht per visit.

2) Public rubber markets

In the 1960s and 1970s there were no more than 20 processing and exporting firms in the rubber products sector in Thailand, including five principal buyers that accounted for 60-80% of the national output. This market structure allowed these exporters to keep farm gate prices relatively low. This situation changed in the 1980s, however, as Japan became the leading market for Thai rubber. Since the 1990s, moreover, RRIT and ORRAF helped to organize national-level public markets that offer higher profits for growers (Jocelyne Delarue, ibid: 18).

In August 1991 the first central rubber market was established in Hat Yai, which was followed by the establishment of the Surat Thani Central Rubber Market in 1997. As of October 2014 there were 6 central rubber markets in Thailand, including Hat Yai, Surat Thani, Nakhon Si Thammarat, Yala, Buriram, and Nong Khai.

According to the survey in October 2014 the Surat Thani Central Rubber Market was under RRIT and was managed by 17 staff members, including 12 laborers. Auctions were held early every morning and price information was transmitted very quickly to the farmers through cell phones.[46] There was a senior economist working in the market who analyzed the market movement. Of the total participants in the auction roughly 40% were farmers and the remainders were merchants. The senior economist suggested that the number of wholesalers and exporters increased during the last decade from 441 to 1,900 and from 18 to 176, respectively.

Besides the Surat Thani Central Rubber Market, there were 6 local rubber markets in the Province as of October 2014. An outline of the local rubber market we visited is as follows.

The name of the market was Waing Sa Local Rubber Market, which was established in 2003. It was managed as a cooperative society. The number of cooperative members was approximately 1,400 farmers (70%) and merchants (30%) who live within 100 km. Members were able to sell rubber (USS) at this market at slightly higher prices than at normal markets. Those who want to become a member have to pay a 100-baht membership fee and purchase paid-up shares (1 share is 50 baht). The dividend rate was usually 10% per year. The average transaction amount was 1,500-2,000 tons per month. The market was open for the whole year except April. It was closed on Saturday and Sunday. The market got 0.15 baht/kg as a commission. Note that the bidding price on October 7th, 2014 was 45.39 baht/kg.

The number of staff members was 11 and their salaries ranged between 10,000-36,000 baht/month. The manager rented land where the market is located and paid 0.03 baht/kg as rent. He did not have any vehicles other than a forklift. The forklift was purchased for 700,000 baht in 2011. According to him, the share of the 6 local rubber markets in total transactions in Surat Thani Province was less than 10%.

The conclusion is that thanks to the government efforts to establish and manage public rubber markets, growers receive nearly 90% of the FOB price in Thailand (Jocelyne Delarue, ibid; 19).

3) Technology transfer

Needless to say, training provided to growers during the rubber production phase is crucial, because mastering tapping techniques is a key determinant of a parcel's short- and long-term productivity (Jocelyne Delarue, ibid; 17). According to the ORRAF Surat Thani Provincial Office, they have 94 staff members, including laborers in 6 District Offices. Of the 17 staff members who

[46] Farmers can get the price information by 7 o'clock in the morning.

work in the Provincial Office, 4 staff members are allocated for the training program.

The most important training course is tapping, which is held 13 times a year. Roughly 30 farmers gathered for the 5-7 day course. The other training courses include productivity improvement, fertilizing technology, sustainable production, soil analysis, and so on. The total number of trainees (gross) is approximately 3,500 a year. The annual budget for the training programs is 3 million baht.

The other important institutional set-up is the system of “rubber teachers.” ORRAF employs some advanced farmers as rubber teachers and pays a daily allowance of 200 baht (plus some piece rate wages). The shortage of staff members is thereby supplemented by the system.

2-2-3. Private Merchants and Rubber Processors/Exporters

Finally, in order to understand how the rubber cooperatives or other groups compete with private sectors, we show below the case of a private rubber merchant and a private rubber processor/exporter.

1) Private rubber merchant

Mr. S (48 years old) and his wife have been engaging in the business since 1993. They purchased land in 1998 and after that the business grew. Besides the head office they have three branches for purchasing USS (and cup lump). The branches are located 20 km, 30 km, and 40 km away from the head office and the first two branches are managed by the owner’s brothers and the last one is managed by his wife. They have no smokehouses and just sell USS or cup lump to a large-scale rubber processing company (the Vong Bandhit Rubber Co.).

The total monthly purchasing volume is roughly 1,000 tons of USS and 30 tons of cup lump. They purchase 80% from farmers and the other 20% from small-scale merchants. When they buy USS or cup lump they pay up front. They never extend advance payments.

There are three grades of USS: 1, 2, and 3. Grade 2 USS has higher moisture content, which is processed into TSR, not RSS. Approximately 70% is grade 1 and the remaining 30% is grade 2. At the time of the survey, the purchase price of USS was 47 baht/kg and 46.5 baht/kg for grades 1 and 2 respectively. For reference, the price of grade 3 was 42 baht/kg, which is also processed into TSR after cutting it into pieces.

All USS and cup lump are sold to the Vong Bandhit Rubber Co., one of the largest rubber processing-cum-exporting companies in Thailand. The company rents their warehouses for free at first and then it pays 80% of the price after 5 days and the rest is paid after 15 days. The merchant’s profit margin is 2-2.5 baht/kg and 1-1.5 baht/kg for grade 1 and 2 respectively.

The necessary working capital is approximately 3 million baht. They borrow the money from Bangkok Bank at a 7-8% interest rate. Their deposits, on the other hand, are 0.5-1 million baht.

The number of staff members (including the owner, his wife and brothers) is 9, with salaries of 10,000-20,000 baht/month. They have 3 large dump trucks and the drivers are all Thai. However, 18 workers are all Myanmar people who have been working for anywhere from 2 to 10 years already.

2) Private rubber processor/exporter

The Pianpradit Rubber Company is owned by a Chinese person whose grandfather came to Thailand from China. The company was started in 1981 by the owner’s father. He purchased USS and processed it into RSS (using a 12-room smokehouse) and sold it mainly in Bangkok and Hat Yai. In 1986 an additional 3-room smokehouse was constructed. In 2014 the total production of RSS was 1,000-3,000 tons per month, which was exported to Japan and European countries such as France. Roughly 80% was exported to Japan, to companies such as Bridgestone, Sumitomo and Yokohama. Transactions with Japanese buyers started in 1982. The export license issued by RRIT has to be renewed every year.

The conditions that have to be satisfied by the Japanese and European buyers were very strict, especially at the beginning. Every year they needed to accept inspectors. The minimum lot is 20 tons (1 container) and they export 100-200 tons at a time. The export price is determined based on the price at the Singapore market.

They regularly borrow from Bangkok Bank and Kasikorn Bank. The number of staff members is 30 and they employ an additional 120 laborers, 30% of whom are Thai, 10% Lao, and the rest 60% Myanmar people. The wages they pay to the laborers is 300-400 baht per day, plus they provide free accommodations.

They have their own 100-rai rubber plantation. They purchased an old rubber plantation in 1993 and replanted the old trees in 2000 with ORRA's assistance (RRIM 600). The yield is 300 kg/rai in terms of USS and they employ 8 pairs of tappers (5 pairs from Northeast Thailand, 2 pairs from Myanmar and 1 pair from the local area). They pay 45% of the USS as wages, under the condition that the cost of chemical fertilizer and formic acid is shared between tappers by the same proportion.

2-3. Policy Recommendations for Rubber Products Sector Development

Let us now suggest some policy recommendations and a strategy for the development of the rubber products sector in Myanmar. We need to repeat here that the development of the sector, more particularly of the industry, could have a high socioeconomic impact and become a driver of job creation, because the sector is strategically very important for both the development of the export of rubber products as well as of the automobile industry in the country.

Rubber Products Sector Reform in Myanmar

Figure 2-7 illustrates the proposed rubber products sector in Myanmar. Listed below are the proposed policy reform components.

1) Reform of the taxation system, including creation of a cess system
2) Creation of the "Myanma Rubber Replanting Aid Fund" (MARRAF)
3) Creation of the "Myanma Rubber Research Institute"(MARRI)
4) Establishment of rubber smallholders' cooperatives and other groups
5) Reform in the agricultural/rural banking system
6) Reform in the state-owned rubber estates/tire factories

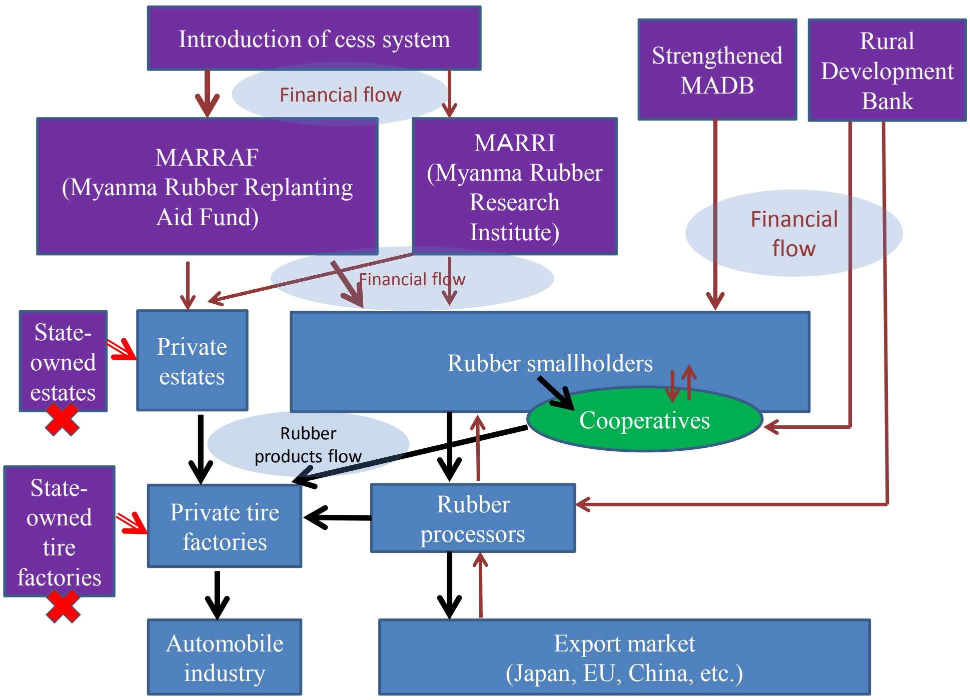


Figure 2-7 Reformed Rubber Products Sector in Myanmar

Source: Prepared by author.

Creation of Cess System

Introduction of a cess system like Thailand's for rubber product exports would be recommended, mainly for assisting in rubber replanting. From a theoretical point of view, export taxes distort the market, lowering the farm gate prices of rubber products and reducing the profit and income for rubber planters. Even if the government reinvests the tax revenue for the planters, “dead loss” would be created. However, there are several rationales in favor of the introduction of a cess system to rubber product exports, as follows.

1) Revenue from cess can be regarded as a kind of forced savings by the government for future replanting of old rubber trees, especially for smallholders who usually cannot afford it. It is usually difficult for smallholders to save for the purpose of future replanting in a planned manner.
2) Damage to the rubber trees and the resulting long-term economic loss is especially large if smallholders start tapping earlier than the optimum timing due to poverty or debt repayment.
3) If the government provides smallholders with funds for replanting old trees it is also easy for the government to convert local cultivars to modern high-yielding ones. If smallholders are provided with sufficient funds they can also fertilize young rubber trees with the optimal doses of chemical fertilizer during the first 7 years.
4) If the government provides funds for the first 7 years, it can easily find out exactly when smallholders start tapping. The government can provide training for tapping methods more effectively. Needless to say, tapping techniques highly affect the long-term productivity of rubber plantations.

Creation of “Myanma Rubber Replanting Aid Fund” (MARRAF)

If most of the revenue from cess would be used for a rubber replanting program, creation of the “Myanma Rubber Replanting Aid Fund” (MRRAF) is recommended for that purpose, just like ORRAF in Thailand. The main task of MARRAF would be to implement and monitor a replanting program while providing subsidies.

Creation of “Myanma Rubber Research Institute” (MARRI)

A research institute specialized in rubber needs to be established for overall technological development of the sector. Or, at least the present Applied Research Center for Perennial Crops (ARCPC) needs to be upgraded and strengthened to a large extent. A part of the cess revenue should be invested in research and development.

Development of high-yielding cultivars suitable to the agro-economic conditions of Myanmar needs to be enhanced and a system for efficiently disseminating such cultivars also needs to be established. At the same time, a proper certification system (for rubber clones) should be created and maintained. Research sections other than the breeding section should also be developed in the research institute.[47] A social science section is also vital for such important tasks as organizing rubber smallholders’ cooperatives and establishing and managing public rubber markets. Needless to say, human resource development is vital for achieving the above-mentioned purposes.

Establishment of Rubber Smallholders’ Cooperatives and Groups

Given the fact that approximately 90% of the rubber planters in Myanmar are smallholders with less than 20 acres (8ha), development of the rubber products sector cannot be achieved without involving the smallholders in the development process.

One of the core programs for that purpose is the replanting program with subsidies (financed by cess revenue) mentioned above. Other core programs might be the establishment of rubber smallholders’ cooperatives and groups. To organize rubber smallholders’ cooperatives and groups is not an easy task, however. The task usually needs substantial time and patience.

Economic incentives for inducing smallholders to join cooperatives/groups are also an important element. In Thailand, as we have already seen, the government actively provided key facilities such as facilities for processing latex to USS, smokehouses, fertilizer mixing machines, etc. An important fact is that not only ORRAF, but also some departments (such as the Department of Cooperatives and the Department of Agricultural Extension) provided such facilities through various programs.

[47] It should be noted here that the RRIT (Rubber Research Institute of Thailand) plays an important role in the issue of export licenses for rubber products.

It should be emphasized here that provision of key facilities for rubber processing will contribute to the upgrading of the quality of rubber products produced by the smallholders. Its impact is expected to be a huge one.

The other important function of the rubber smallholders' cooperatives in Thailand is in savings mobilization and credit provision. It is important to note that savings mobilization is vital for easing the problem of credit constraints in rural Myanmar. Strengthening and streamlining the MADB is indispensable, but it is not a panacea. Funds for delivering loans should basically be mobilized from "below" as savings, and funds from "above" (as exemplified in the policy lending through such financial institutions as MADB) should supplement it, not vice versa.

The policy of tax exemption for deposits in cooperative societies as observed in Thailand is a good policy for enhancing the savings and credit activities of the cooperatives.

Reform in Agricultural/Rural Banking System

Rubber has long been excluded in Myanmar as a target for credit from MADB, probably due to the fact that historically in Myanmar the rubber planters and producers have been seen as industrial producers, not cultivators, as already mentioned.

We would highly recommend that MADB include rubber smallholders as one of the important crop sectors to be financially assisted. In Figure 2-7 we proposed that a Rural Development Bank needs to deliver loans to rubber smallholders' cooperatives and also to private rubber processors. There are several policy options, however, including MADB expanding its credit scheme from the crop sector to include the livestock, fisheries, and agro-industry sectors.

Reforms in State-owned Rubber Estates/Tire Factories

It goes without saying that one of the most serious problems in reforming the state-owned enterprises sector is how to deal with the secured employment of public servants currently working in the highly inefficient and loss-making public enterprises. However, the 27 state-owned rubber estates were finally privatized on the basis of Joint-Venture with private companies and local individuals with effect from August 2013. And the Bilin Tire Factory was leased out to Yangon Tire Co. in November 1st, 2014.

International Network

It is important for Myanmar to be more involved into the international network on rubber for upgrading technology, exchanging information and experts, and so on. Myanmar government should enter as a member in the international/regional rubber organizations, especially in the Association of Natural Rubber Producing Countries (ANRPC).

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3. Rural Financial Sector and Policy

The rural financial sector including agricultural finance is one of the major weaknesses in the development of the agricultural/rural sector in Myanmar. The Myanma Agricultural Development Bank (MADB), first established as the State Agricultural Bank in 1953,[48] is the largest financial institution serving the agricultural and rural sector of Myanmar, with 206 township-level branches nationwide. But before 2008/09 the loan rate per acre of MADB was very small, just enough to purchase a bag (50 kg) of chemical fertilizer. The microfinance program was initiated under the Human Development Initiative Program of the United Nations Development Programme (UNDP) in the three regions of the Central Dry Zone, the Ayeyarwady Delta, and Shan State since the early 1990s, but with a rather limited scale.

The Myanmar government started to emphasize strengthening and expanding microfinance programs for poverty alleviation and livelihood development after the democratization in 2010, with support from major donor agencies. The Livelihoods and Food Security Trust Fund (LIFT) is a multi-donor fund[49] established in 2009 to improve the lives and prospects of poor and vulnerable people in rural Myanmar, particularly through promoting microfinance. MADB also started to very rapidly raise the loan rate in 2009/10, reaching 100,000 kyat per acre (for rice) and 20,000 kyat per acre (for other crops) by 2013/14.

However, it seems that there still remain lots of problems to be tackled in the agricultural/rural finance sector in Myanmar, exemplified by the fact that loans from "exploitative" informal sources still persist to the present. The main purpose of this chapter is first to know the realities of the rural financial sector through detailed case studies in the major agro-ecological zones of Myanmar and secondly, based on information and insights obtained through such intensive field work, to suggest policy implications for the development of the sector.

3-1. Realities of Rural Finance: From Micro Rural Survey

The selected study villages are located in the Central Dry Zone (3-1-1), the Ayeyarwady Delta (3-1-2), Shan State (3-1-3), and Mon State (3-1-4). The next section presents an outline of the survey results in each area.

3-1-1. Rural Finance in the Central Dry Zone: Case Study of a Village in the Mandalay Region

A study village named Chaung Shee was selected from the Chaung Shee village tract, Nyaung Oo Township, Mandalay Region. It is located 29 km southeast of Nyaung Oo Town and 30 km northwest of Kyaukpadaung Town, not along the Nyaung Oo-Kyaukpadaung highway, but several kilometers away from the main road by a dirt road.

As of May 2013 the village had 440 households with a total population of 1,629. The number of farm households was 200 while the other 240 were landless households. Of the 240 landless households approximately 150 households were engaged in toddy palm liquid harvesting and processing (to crude sugar, jaggery) by renting palm trees from the owners (cum-farmers). We selected 156 sample households from a block of the village, covering all the households in the block.

The analysis in Appendix A demonstrates that the economic disparity among the households in the village is quite large, both in terms of asset distribution and per capita income. The per capita income is estimated at around 180,000-190,000 kyat for the landless households as compared to 280,000, 430,000 and 820,000 kyat for the small-, medium- and large-scale farm households, respectively (Table A-3).

Credit and Credit Sources

Table 3-1a is a summary of the borrowing status of the sample households and their sources of

[48] In 1969 it was absorbed as the Department of Agricultural Finance of the People's Bank for the Union of Burma but it became an independent institution as the Myanma Agricultural Bank again in 1975.
[49] The current governmental donors are Australia, Denmark, the European Union, France, Ireland, Italy, the Netherlands, New Zealand, Sweden, Switzerland, the United Kingdom and the United States of America.

borrowing in the village. Almost all the landless households—from 79-87%—took loans while the same figures for the small- and medium-scale farmers were from 50-56%. The large-scale farm households registered the lowest figure of 26%.

It can also be seen from the table that most of the households borrowed from informal sources. However, at the same time, it reveals that the PACT Global Microfinance Funds (PGMF) and the cooperatives started to give loans in recent years, especially for households other than large-scale farm households. Note that the loans from MADB were not popular in the village, mainly due to its location in the Central Dry Zone where rice production was not basically performed.

Table 3-1a Borrowers and Sources of Borrowing

Type of HHs		No. of HHs	Non-borrowers	Borrowers	%	Gross borrowing sources					
						Informal	VCF	PGMF	Formal		
									MADB	Cooperatives	Gov. office
Landless HHs	Non-farm	52	11	41	78.8%	26	3	23		13	
	Palm tenants	37	5	32	86.5%	25	5	17		10	
Farm HHs (acres)	-5	32	14	18	56.3%	12		5	2	7	
	5-10	16	8	8	50.0%	6		1	2	2	
	10-	19	14	5	26.3%	3			1	2	1
	Sub-total	67	36	31	46.3%	21		6	5	11	1
Total		156	52	104	66.7%	72	8	46	5	34	1

Source: Author's survey in June-July 2013.

Table 3-1b shows the combination of borrowing sources. It can be seen that 35 households (33.7%) borrowed from informal sources only, 13 households (12.5%) from the PGMF only, 12 households (11.5%) from informal sources, PGMF and cooperatives, 11 households (10.6%) from informal sources and PGMF, 10 households (9.6%) from cooperatives only, and 7 households (6.7%) from PGMF and cooperatives.

Table 3-1b Combination of Borrowing Sources

Type of HHs		No. of HHs	Borrowers	Combination of lenders													
				IF only	IF +VCF	IF+VCF+PGMF	IF +PGMF	IF+PGMF+Coop	IF +Coop	IF+MADB	IF+MADB+Gov. office	VCF only	VCF +PGMF	PGMF only	PGMF +Coop	Coop only	Coop+MADB
Landless HHs	Non-farm	52	41	11	1		8	3	2			1	1	6	5	3	
	Palm tenants	37	32	12	2	2	3	7						3	2	1	
Farm HHs (acres)	-5	32	18	7				2	2	1				3		2	1
	5-10	16	8	3						2				1		2	
	10-	19	5	2							1					2	
	Sub-total	67	31	12				2	2	3				4		6	1
Total		156	104	35	3	2	11	12	4	3				13	7	10	1

Source: Author's survey in June-July 2013.
Note: IF—informal, VCF—village common funds.

The PACT Global Microfinance Funds

The PGMF came into the village in 2006.[50] They targeted women for its loan program from the beginning. The number of members increased to 21 in 2007, 27 in 2008, 35 in 2009, 39 in 2010, 42 in 2011, 43 in 2012, and 46 in 2013 (Table 3-2a). As Table 3-1a shows, of the 46 members, 23 were from landless non-farm households, 17 from landless palm tenants, 5 from small-scale farm households, and 1 from a medium-scale farm household. Hence it can be said that the PGMF successfully targeted women in the poor households.

[50] Table 3-2 indicates that one household became a member in 2005, but the answer might be a mistake.

Table 3-2a Members and Loan Amount from PGMF														
	No. of members joined	No. of members quitted	No. of members	No. of loans	Loan amount (kyat)									
					20,000	30,000-35,000	40,000	50,000	60,000-70,000	80,000	100,000	120,000-150,000	200,000	300,000
2005	1		1	1	1									
2006	7		8	8	5	3								
2007	13		21	21	11	4	6							
2008	8	2	27	20	3		11	3	3					
2009	9	1	35	33	3	3	6	2	12	6	1			
2010	6	2	39	39		3	1	4	4	15	10	2		
2011	4	1	42	41		2	1	4	3	5	11	12	3	
2012	3	2	43	42				7	1	1	9	10	12	2
2013	3		46	28	1			5	1	1	10	1	5	4
Total	54	8	46	233	24	15	25	25	24	28	41	25	20	6
				100.0%	10.3%	6.4%	10.7%	10.7%	10.3%	12.0%	17.6%	10.7%	8.6%	2.6%

Source: Author's survey in June-July 2013.

The PGMF provided loans for a year and collected repayments once every two weeks, at a 2.5% per month nominal interest rate. If borrowers complete repayments it extended loans again the next year with an increased amount.[51] As Table 3-2a demonstrates, the loan amount increased year by year and reached a maximum 200,000-300,000 kyat after 2011.

Table 3-2b Usage of Loans from PGMF																		
	No. of loans	Loan usage																
		Production purposes				Social purposes												
		Agri.	Live-stock	Palm tree	Busi-ness	Housing	Edu-cation	Health	Consum ption	Repay ment	Product ion+Pro duction	Product ion+Soc ial	Product ion+C	Social+ C	Product ion+R	Social+ R	C+R	Un-known
2005	1				1													
2006	8		2		1				2			1	2					
2007	21		8		4		1		2			1	3	1				1
2008	20		5		5	1	2	1	3			1		2				
2009	33	1	5	1	3		2	1	5		1	2	5	4	1		1	1
2010	39	1	10	1	4	1	2	2	3			4	6	3		1		1
2011	41	1	7	1	5		4	3	6	1		3	5	4	1			
2012	42	1	2	1	3	2	5	3	4	4		4	4	5	1	1	1	1
2013	28	1	3		3	2	3	4	4	1		1	3	2			1	
Total	233	5	42	4	29	6	19	14	29	6	1	17	28	21	3	2	3	4
	100%	2.1%	18.0%	1.7%	12.4%	2.6%	8.2%	6.0%	12.4%	2.6%	0.4%	7.3%	12.0%	9.0%	1.3%	0.9%	1.3%	1.7%

Source: Author's survey in June-July 2013.

Note: Livestock mainly includes pigs, goats and cows.

Table 3-2b shows the actual purposes of loans by the borrowers. Rearing livestock such as pigs, goats and cows was the most popular usage (18.0%), followed by business and consumption (12.4% each), and a combination of some production purposes and consumption (12.0%). The other major usages included a combination of some social purposes and consumption (9.0%), education (8.2%), a combination of some production purposes and some social purposes (7.3%), and health (6.0%). The business activities by the women borrowers in the village included sales businesses (vegetables, palm oil, coconut oil, clothes, and so on), sewing, and basket making.

MADB and Cooperatives

Of the total 67 farm households, only 5 households borrowed from MADB; one large-scale farmer and one small-scale farmer borrowed 200,000 kyat each and two medium-scale farmers and one small-scale farmer borrowed 140,000 kyat each. They borrowed in June 2013 for a period of several months.[52]

The Ministry of Cooperatives started to provide loans in 2012 and of the 156 sample households

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[51] If borrowers do not want a larger loan, it is of course accepted by the PGMF.

[52] In the whole village, a total of 13 and 12 farmers borrowed from MADB in June 2013 and June 2012 respectively. A village informant reported that when there was a village banking system (until 1993) more than 100 farmers in the village used to borrow from MADB.

34 households received a 50,000 kyat loan in 2013 at an interest rate of 2.5% per month.[53] The duration of the loans was one year. The most popular actual usage was consumption (23.5%), followed by education (11.8%), health (8.8%), livestock (mostly pig rearing) (8.8%), and business (8.8%). A combination of repayment and consumption also accounted for 8.8%.

Village Common Funds

It is observed that there were 6 committees in the village: health, education, (drinking) water, electricity, construction, and religious,[54] of which the health, education, and religious committees had common funds.

The common funds for health started in 2010 by mobilizing donations from villagers; 6 core members donated a total of 595,000 kyat[55] and after that, 500 kyat per month had been collected from 72 village households (which could afford to pay). The funds have been utilized for grants when villagers were hospitalized. The number of donators increased to 93 by June 2013 and the outstanding amount reached 697,800 kyat. If the committee permits, villagers can borrow money from the funds for several months at a 2.5% or 5% per month interest rate. However, so far, the amount of borrowing has not been large; only from 5,000-50,000 kyat.

Informal Credit

Informal credit was the largest source of borrowing for the villagers. Table 3-3a shows the interest rate distribution of informal credit. Informal lenders included relatives, friends, other villagers, farmers, employers, palm tree owners, jaggery brokers, moneylenders, and pawn shops, of which the largest was from relatives, followed by jaggery brokers, villagers, and moneylenders. Of the 20 loan cases from jaggery brokers 16 cases were borrowed by landless palm tenants. On the other hand, of the 28 loan cases from informal sources by landless palm tenants 16 cases (57.1%) were from jaggery brokers. This indicates how deeply landless palm tenants depended on credit from jaggery brokers.

Most of the jaggery brokers got repayment in kind (jaggery). Nominally, they did not impose any interest, but it is highly plausible that they purchased jaggery from tenants at lower prices than normal. We tried to estimate the effective interest rates in the in-kind repayment system, but failed due to the complex movement of jaggery prices.

The distribution of interest rates (excluding in-kind repayment cases and a few other unknown cases) was as follows. The most frequent rate (per month) was 5% (28.8%), followed by 0% (20.3%), 7% (16.9%), and 10% (13.6%). Interest rates from relatives were either 0 percent or from 4-7 percent. It was found that moneylenders, pawn shops and employers imposed higher interest rates.

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[53] The name of the cooperative is Chanug Shee Village Cooperative Society, which is organized jointly with a neighboring village. Members need to pay 5,000 kyat when they join the cooperative, which is managed by 5 board members. In total approximately 150 members borrowed 50,000 kyat each in 2013.

[54] Regarding the more general information on village-level committees, see Chapter 4.

[55] The donated amount was 100,000 kyat (1 person), 50,000 kyat (4 persons), 30,000 kyat (4 persons), 20,000 kyat (6 persons), 10,000 kyat (5 persons) and 5,000 kyat (1 person).

Tabe 3-3a Interest Rates Imposed by Informal Lenders

Interest rate (%/month)	No. of trans- actions	%	Lender									
			Relatives	Friends	Villagers	Farmers	Employers	Palm tree owners	Car owners	Jaggery brokers	Money- lenders	Pawn shops
0	12	20.3%	7		2	1		1		1		
2	1	1.7%			1							
4	3	5.1%	1								2	
5	17	28.8%	5	2	6					1	3	
6	4	6.8%	2		1		1					
7	10	16.9%	2		4						4	
8	4	6.8%			2		2					
10	8	13.6%			2		1				4	1
in kind	21				1					18	2	
NA	3				1				1		1	
Total	83		17	2	20	1	4	1	1	20	16	1

Source: Author's survey in June-July 2013.

In terms of loan amounts from informal sources (Table 3-3b), the most frequent amount observed was 100,000-250,000 kyat (41.0%), followed by 250,000-500,000 kyat (22.9%). On the other hand, there were 8 cases (9.6%) of over 1 million kyat. Generally speaking, loan amounts from informal sources were much larger than the loans from the Ministry of Cooperatives or the village common funds. Moreover, in the case of the study village with no rice cultivation, loan amounts from MADB were not so large, usually less than the cases of informal credit.

Table 3-3b Lending Amounts by Informal Lenders

Amount (kyat)	No. of trans- actions	%	Lender									
			Relatives	Friends	Villagers	Farmers	Employers	Palm tree owners	Car owners	Jaggery brokers	Money- lenders	Pawn shops
-50,000	7	8.4%			2				1	1	3	
50,000-100,000	9	10.8%	3		3		1			1	1	
100,000-250,000	34	41.0%	7	1	5	1	2	1		10	6	1
250,000-500,000	19	22.9%	6		3					7	3	
500,000-1,000,000	6	7.2%	1	1	3		1					
1,000,000-2,000,000	7	8.4%			4					1	2	
2,000,000-	1	1.2%									1	
Total	83	100.0%	17	2	20	1	4	1	1	20	16	1

Source: Author's survey in June-July 2013.

Table 3-3c shows the distribution of actual usage of informal credit. It is found that health (31.3%) and consumption (20.5%) were the two major usages, especially among landless households and small-scale farm households. This means that the informal borrowing was mainly "defensive" rather than "progressive," especially for the poorer sections of the village households. Note, however, that the third largest usage was international migration (16.9%).

Table 3-3c Actual Usage of Informal Credit

		No. of informal loans borrowed	Agri.	Live- stock	Palm work	Internati onal mig- ration	House construc tion	Edu- cation	Social cere- mony	Health	Consum ption	Palm work + Consum ption	Health + Consum ption	Edu- cation + Health	Un- known
Landless HHs	Non-farm	28				4	1	3		14	4		2		
	Palm tenants	28			1	2		1	1	6	7	4	4	1	1
Farm HHs (acres)	-5	16	1	1		3				6	4			1	
	5-10	7	1			5					1				
	10-	4		1				1			1		1		
	Sub-total	27	2	2		8		1		6	6		1	1	
Total		83	2	2	1	14	1	5	1	26	17	4	7	2	1
		100.0%	2.4%	2.4%	1.2%	16.9%	1.2%	6.0%	1.2%	31.3%	20.5%	4.8%	8.4%	2.4%	1.2%

Source: Author's survey in June-July 2013.

Note: Child birth and funerals are included in health.

A vital question is why "exploitative" informal credit has not been eliminated even after various formal and semi-formal credit sources have increasingly penetrated rural areas, as Table 3-1b demonstrated. Our intensive interviews with village informants revealed that the answer was quite simple. First, whereas credit from formal and semi-formal sources was difficult to obtain when money was needed and in the amount the borrowers wanted to borrow, credit from informal sources, especially from jaggery brokers and other moneylenders, was much easier in this sense. Second, credit from jaggery brokers and other moneylenders can usually wait for repayment relatively flexibly whereas credit from formal and semi-formal sources cannot do so. In short, the jaggery brokers and other moneylenders are "exploitative" but are at the same time "sympathetic" to the poor borrowers.

Determinants of Borrowing

In order to clarify the determinants of borrowing behavior by source of credit we performed binary probit analyses (Table 3-5). The dependent variable was whether the household took a loan or not (all sources) and whether the household took a loan from a specific lender (MADB, cooperatives, PGMF, all informal sources, relatives/friends, other villagers, moneylenders, and jaggery brokers). On the other hand, the independent variables included: number of household members, size of labor force, age of household head, years of education of household head, female-headed household (dummy), households with chronically ill members (dummy), households with disabled members (dummy), size of owned farmland, number of palm trees rented, amount of gold held, non-farm business income, remittance income, agricultural wage income, and whether the household faced shocks during the 5 years prior to the survey (dummy).

Table 3-4 Determinants of Borrowing by Source

	All sources	MADB	COOP	PGMF	All informal	Relatives/Friends	Villagers	Moneylenders	Jaggery brokers
HH members	0.358***	-0.192	0.143	0.031	0.191*	0.143	0.075	0.111	0.271*
Workforce	-0.124	1.047	0.162	0.057	-0.028	-0.201	-0.065	-0.001	-0.101
Age of HHH	-0.019*	-0.062	0.000	0.010	-0.010	0.004	0.003	-0.012	-0.006
Education of HHH	-0.092**	0.066	-0.109***	-0.019	-0.040	0.104**	-0.058	-0.035	-0.007
Female headed household (dummy)	-0.486	1.202	-0.960**	-0.781**	-0.095	-0.278	-0.340	0.591	-0.062
Chronic ill (dummy)	0.064	1.470	-0.710#	0.054	0.147	0.090	-0.514	0.508	-0.093
Disabled (dummy)	0.636	8.019	0.381	0.339	0.203	-5.582	0.259	-0.023	0.083
Farmland	-0.067#	0.517#	-0.029	-0.301***	-0.046	-0.069	-0.015	0.509	-0.074
Rented palms	0.003	-0.011	-0.002	0.003	0.009*	0.002	-0.005	-0.045	0.027***
Amount of gold	-0.000	-0.000	0.000	0.000	-0.000**	-0.000	-0.000*	-0.003	0.000
Nonfarm business income	-0.000	0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
Remittance	-0.000	0.000	-0.000#	-0.000	-0.000	0.000*	-0.000	-0.000	0.000
Agricultural wage income	0.000	0.000	-0.000**	-0.000	-0.000	-0.000	0.000	-0.000	0.000
Shock (dummy)	-0.261	-0.349	-0.381	-0.399#	0.341#	0.094	-0.316	0.529#	0.956**
Intercept	-1.131	2.744	0.457	0.725	0.100	2.025	0.583	1.069	2.601

Source: Prepared by author.

Note: *** 1% significant, ** 5% significant, * 10% significant, # 15% significant.

The major findings and our interpretations are as follows.

1) Since the MADB loan was very minor in the village, the result was not very meaningful.
2) It seems that loans from cooperatives avoided female-headed households and households depending more on agricultural wage income. On the other hand, the loans were accepted more by households with poorer educational backgrounds.
3) The PGMF successfully targeted landless and small-scale farm households, but at the same time, it seems that they avoided female-headed households.
4) Households with higher educational backgrounds borrowed more from relatives and friends. The positive (and significant) sign of remittance income in the case of borrowing from relatives and friends could be interpreted as those wanting to work abroad (Malaysia) having a tendency to borrow from relatives and friends and making repayment by

remittance.

5) The landless palm tenants (when the number of household members was large in particular), had a tendency to borrow from jaggery brokers, especially when they faced shocks. This finding was consistent with the most frequent reason for borrowing from informal sources being health care, as mentioned above.

Status of Savings

Table 3-4 shows the average amount of savings reported by the surveyed households.[56] It was found that the percentage of annual household income saved was lower in poor households. The form of savings was gold in all household categories by an overwhelming margin, except for the landless palm tenants, who had a tendency to save more in the form of jaggery.

Table 3-5 Status of Savings

		No. of HHs	Average amount per HH						% of annual income
			Cash	Bank saving	MF savings	Gold	Jaggery	Total	
Landless HHs	Non-farm	52	9,615	0	2,340	55,904	0	67,859	9.2
	Palm tenants	37	0	0	3,769	132,338	9,815	145,922	15.2
Farm HHs (acres)	-5	32	169	28,125	781	352,891	2,344	384,310	33.0
	5-10	16	50,000	0	0	797,076	0	847,076	46.0
	10-	19	331,579	28,421	0	1,978,421	0	2,338,421	68.4
	Sub-total	67	106,051	21,493	373	919,936	1,120	1,048,972	46.1
Total		156	48,752	9,231	1,834	445,123	2,809	507,749	26.5

Source: Author's survey in June-July 2013.
Note: MF savings means savings in microfinance institutions.

Summary and Policy Implications

(1) Although microfinance providers such as the PGMF successfully targeted the rural poor and continued to provide loans to them for nearly a decade, informal credit is still the largest source of credit for the poor.

(2) The high dependency of rural households, especially among the poor (landless and small-scale farm households), on “exploitative” informal credit is a reflection of persisting patron-client relations between haves and have-nots in the rural Central Dry Zone.

(3) The major reasons for this lie in that first, whereas formal and semi-formal credit cannot be obtained when necessary and in the amount the borrowers want to borrow, informal credit, especially from jaggery brokers and other moneylenders, is much more flexible in this sense, and second, jaggery brokers and other moneylenders can wait for repayment relatively flexibly whereas formal and semi-formal credit cannot.

(4) Because of the fact that loans from the PGMF have to be repaid regularly without failure, women borrowers invest loans more in productive purposes than using them for emergencies such as health care and consumption needs. In contrast, people depend more on informal credit when they face emergencies.

(5) Hence, the introduction of some new insurance systems in rural areas is much needed for the improvement of rural credit markets and livelihood of the poor.

3-1-2. Rural Finance in the Delta: Case Study of a Village in Ayeyarwady Region

Overview of Financial Conditions

Kanyingu village in Michaungtayar village tract, Kaugyidaung Township consists of 248 households; 109 households (44.0%) are farm households while the rest (56.0%) are non-farm households, the majority of which engage in agricultural wage labor.[57]

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[56] Note that a significant number of households did not answer frankly.
[57] For the details of the occupation, livelihood, etc., please refer to Appendix B.

We first summarize the general features of household financial conditions in the study village.

1) Credit demand is generally very high in the study village. Regardless of the household types, the majority depend on some kind of credit, with percentages ranging from 73.3–93.8% of each group of households (Table 3-6).
2) Credit sources available for the households are the following; informal sources (relatives, friends, employers, money lenders etc.), Myanma Agricultural Development Bank (MADB, for crop loans), PACT Global Microfinance Funds (PGMF) (microfinance started in 2013), village common funds, cooperative, rice specializing companies (RSC), or advance wage payment in the case of agricultural wage labor (the details will be discussed later) (Table 3-7).
3) The majority of borrowing households (67.5%) depend on the multiple sources noted above, signifying that a single source alone cannot meet the existing credit demand.
4) Among all the credit sources, informal sources play a dominant role for all types of households (Table 3-7). More than half of households depend on informal loans from friends, relatives, or money lenders, regardless of household types.
5) Compared to other study villages, the distinct difference can be found in the high dependence on advance wage payment for those engaged in agricultural wage labor (Table 3-7). Not only agricultural labor households but also marginal farm households (land holding less than 5 acres) depend on agricultural advance wages.
6) MADB loans stand as an important source for meeting production costs. For households with land holdings of more than 5 acres, more than 80% of them took the MADB loan, though about half of the marginal farm households with less than 5 acres did not take the loan.
7) RSCs also play a supplementary role in meeting the cost of rice production since about one-fourth of farm households are utilizing their credit (22.2%). The credit is either in the form of cash, in-kind, or both. However, it is not accessible to every farm household as the farmers need to get recommendations from the Village Tract Administrator and the Department of Agriculture. Furthermore, the lending companies also scrutinize the credibility of respective farm households in drawing up contracts.
8) Despite the governmental push in cooperative financing, it is far from active in the study village.
9) There are two types of common funds (health and general) managed by the village. The dependency on these common funds seems to be low (only 6 households in total).
10) If we examine the status of savings (Table 3-8), it is not surprising to find that the level of savings is quite low, especially for agricultural labor households. The dominant form of savings is still in the form of gold. As expected, the level of savings increases with the size of land holdings.

Table 3-6 Debt Conditions of Households

		Number of HHs	Non-borrower		Borrower	
			Number	%	Number	%
Non-Farm Household	Agricultural labor	124	19	15.3	105	84.7
	Casual labor only	84	10	11.9	74	88.1
	Seasonal labor	40	9	22.5	31	77.5
	Self-employed, other wage labor	15	4	26.7	11	73.3
	Subtotal	139	23	16.5	116	83.5
Farm Household	Under 5 acres	49	9	18.4	40	81.6
	5-10 acres	32	2	6.3	30	93.8
	10-15 acres	15	1	6.7	14	93.3
	Over 15 acres	13	1	7.7	12	92.3
	Subtotal	109	13	11.9	96	88.1
Total		248	36	14.5	212	85.5

Source: Authors' survey.

Table 3-7 Gross Borrowing Sources (2012/13)

			Number of households depending on each source							Dependency rate (%)						
		No.	Non-institutional			Institutional				Non-institutional			Institutional			
		HHs	IF	AW	VCF	PGMF	MADB	Coop	RSC	IF	AW	VCF	PGMF	MADB	Coop	RSC
Non-farm household	Agricultural labor	124	67	82	2	44	1	0	0	54.0	66.1	1.6	35.5	0.8	0.0	0.0
	Casual labor only	84	46	61	0	30	0	0	0	54.8	72.6	0.0	35.7	0.0	0.0	0.0
	Seasonal labor	40	21	21	2	14	1	0	0	52.5	52.5	5.0	35.0	2.5	0.0	0.0
	Self-employed, other wage labor	15	9	0	0	4	0	1	0	60.0	0.0	0.0	26.7	0.0	6.7	0.0
	Subtotal	139	76	82	2	48	1	1	0	54.7	59.0	1.4	34.5	0.7	0.7	0.0
Farm household	Under 5 acres	49	32	12	1	9	23	0	4	65.3	24.5	2.0	18.4	46.9	0.0	8.2
	5-10 acres	32	16	3	2	7	26	0	8	50.0	9.4	6.3	21.9	81.3	0.0	25.0
	10-15 acres	15	11	0	1	2	12	0	6	73.3	0.0	6.7	13.3	80.0	0.0	40.0
	Over 15 acres	13	10	0	0	0	11	0	6	76.9	0.0	0.0	0.0	84.6	0.0	46.2
	Subtotal	109	69	15	4	18	72	0	24	63.3	13.8	3.7	16.5	66.1	0.0	22.0
Total		248	145	97	6	66	73	1	24	58.5	39.1	2.4	26.6	29.4	0.4	9.7

Note: IF: Loans from relatives, friends, etc. AW: Advance wage payment,VCF: Village common fund, PGMF: Pact Global Microfinance Funds, MADB: Myanmar Agricultural Development Bank, Coop: Cooperative, RSC: Rice specializing companies

Source: Authors' survey.

Table 3-8 Status of Saving (Kyat)

		No. of households	Cash	Gold
Non-farm household	Agricultural labor	124	565	16,707
	Casual labor only	84	714	19,819
	Seasonal labor	40	250	10,250
	Self-employed, other wage labor	15	600	70,000
	All non-farm household	139	339	23,553
Farm household	Under 5 acres	49	11,020	121,809
	5-10 acres	32	313	164,688
	10-15 acres	15	0	426,667
	Over 15 acres	13	0	682,500
	All farm household	109	5,046	241,368
All household		248	565	117,582

Source: Authors' survey.

Informal Loans

As noted earlier, informal loans are a dominant source of credit for all types of households. Table 3-9 summarizes the usage of informal loans. It is mostly used for consumption and health/medical purposes by agricultural labor households and small-scale farm households (land holding with less than 5 acres). For the medium- and large-scale farmers, the frequency of consumption usage reduces, but some need informal credits for farming. It signifies that the crop loans provided by MADB are either insufficient in terms of amount, or the provision's timing is inappropriate (i.e., it can be too late to cover the cost for transplantation) so that they need to finance the cost with informal loans. The former case can happen since the maximum of the MADB loan is set at 10 acres, so that the farmers with land more than 10 acres need to find additional financing. We can also note that there are two farm households that borrowed money for repayment of MADB loans, suggesting that the income they received from cultivation was insufficient to pay back the loan.

Table 3-9 Usage of Informal Loans

		No. HHs	Usage: Consumption	Health	Petty trading	Farming	Construction of house	Education	Livestock	Repayment of MADB loan	Other	Total
No-Farm household	Agricultural labor	124	40	24	1	1	5	1	1	0	2	75
	Casual labor only	84	28	14	1	1	3	1	1	0	1	50
	Seasonal labor	40	12	10	0	0	2	0	0	0	1	25
	Self-employed, other wage labor	15	4	2	3	0	1	0	0	0	0	10
	Subtotal	139	44	26	4	1	6	1	1	0	2	85
Farm household	Under 5 acres	49	15	9	1	15	2	1	2	0	1	46
	5-10 acres	32	4	5	0	9	0	0	0	1	3	22
	10-15 acres	15	4	1	0	7	1	2	0	1	1	17
	Over 15 acres	13	4	0	0	9	0	0	0	0	0	13
	Subtotal	109	27	15	1	40	3	3	2	2	5	98
Total		248	71	41	5	41	9	4	3	2	7	183

Note 1:Other includes donations, funerals, weddings and travel.

Note 2: The figures are gross numbers. For example, a household may use single loan for consumption and livestock breeding.

Source: Authors' survey.

Table 3-10 indicates the range of interest and the amount of the informal loans. Those loans without an interest rate are mostly provided by relatives or employers (most likely under very close relationships). The amounts in interest-free loans tend to be small, and assumingly they are provided to offer some temporal relief. The majority of the loans carry an interest rate within the range of 5–8% per month or 10% per month. Most of the loans with interest rates less than 5% require collateral, such as gold. Savings in the form of gold is convenient when they need to depend on the informal sources for their credit with lower interest charges. The informal loans require the high level of interest, especially for those in the lower economic class, such as agricultural wage labor households and marginal farm households, as they cannot afford collateral; it certainly adds to the burden of maintaining their livelihood.

Table 3-10 Amounts and Interest Rates of Informal Loans

Amount (Kyat)	No. of cases	Interest rate (% per month): 0%	Collateral	1-4%	Collateral	5-9%	Collateral	10%	Collateral	Over 15%	Collateral	Provision by money lenders
Less than 50,000	32	8		1		7		14	1***	2		1
50,000-100,000	28	3		2	1	7	1	14		2		5
100,000-200,000	30	6		0	1	12	1	10		2		3
200,000-300,000	13	1	1*	1		5		6		0		2
300,000-400,000	23	2	1*	3	2	12	2	6		0		6
400,000-500,000	5	1		2	2	1		1		0		2
500,000-1,000,000	21	0		2	2	16	2**	3		0		4
More than 1,000,000	13	0		4	3	7		2		0		6
Total	165	21	2	15	11	67	6	56	1	6	0	

Note:* collateral was land, ** one collateral was tawlargyi, *** bicycle. Other cases are gold.

Source: Authors' survey.

Advance Wage Payment

The prevalence of advance wage payments to agricultural laborers is the major characteristic of the study village. Specifically, 66.1% of the agricultural labor households use this custom (if we consider the daily wage labor households, it accounts for 72.6%). Farm households with less than 5 acres depend on the advance wages as well.

The transactions of advance wage payments are frequent because of the needs for both employers (farmers) and employees (agricultural laborers). Farmers want to avoid labor shortages during the peak season, such as rice transplanting, harvesting of rice and pulses. On the other hand, agricultural laborers require cash to make ends meet during the lean season. The following overview describes this process in greater detail.

Advance wages are paid anywhere from several days to 2–3 months before the actual working periods. The wage rate paid to those taking advance wages is usually set lower than the actual (expected) wage rate. For example, if the current wage is 1,500 kyat per day, the advance wage rate may be 1,000–1,200 kyat per day. Generally, the rate is decided according to the timing of the payment. The earlier the timing of the payment, the lower is the wage rate. Therefore, it actually involves an interest rate. Table 3-11 estimates the interest of advance wage payments in the study village.

Table 3-11 Interest Rates of Advance Wages

Interest rate (%/month)	Number of transactions
10-20	7
20-30	32
30-40	14
40-50	0
50-60	25
60-70	3
70-100	4
100-150	5
150	4
Total	94

Note: Only for the wages paid on a daily basis.
Two transactions are not calculated due to insufficient data.
Source: Authors' survey.

As we can note from the table, the interest involved in this advance wage payment is distinctively high. It ranges from 10% to even 150% per month (the majority are in the range of 20% and 40%) and they are much higher than the rate for informal loans shown above. This is a reflection that the demand for credit by the agricultural laborers is much higher than the supply as well as the high risk of default by the laborers. Default here means that laborers do not appear and work in the farmer's fields on the promised days. It can always happen that the laborers want to get a higher wage (i.e., current wage) from other farmers. Given the risk involved in providing advance payment, some farmers would limit the number of days they provide payment per laborer. The most common case is that a laborer is given one-third to one-half of the expected working days. For example, rice transplantation normally requires 30 days of operation, i.e., advance payment just for 10 days, as the farmer finds this as the appropriate amount to provide to the laborers given the default risk. In some cases, if a household has several laborers who request the advance wage payment, a farmer may set the upper limit per household (for example, 15 days per household, per operation). Calculating the average rate of the days on advance wage payments, it accounts for about 32% of the total working days for each household.

The wide prevalence of advance wage payments with high interest signifies difficulties of households in financing their basic consumption, either through their own income or the normal informal loans. And this case is not only limited to the agricultural labor households but also includes the marginal farm households.

MADB Loans

In most cases, MADB loans are meant to meet the production cost of paddy (and as we saw, the MADB loans may be insufficient for some farm households) (Table 3-12). However simultaneously, some use this loan for household consumption.

Table 3-12 Usage of MADB Loans

	No. HHs	Usage	
		Farming	Consumption
Under 5 acres	23	23	4
5-10 acres	26	24	3
10-15 acres	12	12	1
Over 15 acres	11	11	1
Total	72	70	9

Note: The figure is the gross number. For example, a household may use the money for consumption and livestock breeding.
Source: Authors' survey.

MADB loan disbursement has been increased since 2009/10, and most recently it jumped to 100,000 kyat per acre (maximum is 10 acres per household). The level of MADB loans had been notorious for its low level of disbursement before 2008/09 since it did not meet the cost of one bag of fertilizer. However, the present level would meet at least half the total cost (see Appendix B, Table B-7). The increase of MADB loans must have been a relief to farmers in need. However, it is now reported that the increase also had an unexpected result. It seems that a certain percentage of farmers did not use the loan for agricultural purpose, but are instead using it for other purposes.[58]

Though MADB loans are important for most farmers, there are some who do not take the loan. The reasons are any of the following: 1) they have sufficient capital to cover the cost, 2) they prefer to borrow from other sources (such as informal sources and RSCs), most likely because of the loan disbursement and cumbersome procedures, 3) they do not cultivate paddy (there are 5 households not cultivating paddy but other crops in groups of land holdings with less than 5 acres), or 4) the household is not registered by the name of the cultivator (such as a farmer cultivating his parents land).

Rice Specializing Companies

There are two companies operating in this area (*S* company and *A* company). *S* company began operating in 2011/12, while *A* company commenced operation in 2012. *S* company mainly provides credit in cash (the rate is 15,000 kyat per acre) and only provides credit in-kind (fertilizer) to some households. On the other hand, *A* company is more geared to provide credit in-kind, i.e., quality seed and chemical fertilizer (only a few households get a cash loan, which is 20,000 kyat per acre). As noted earlier, farmers who would like to contract with these companies need to be recommended by the village tract administrator and the Department of Agriculture. In the study village, 10 households were dealing with *S* company, while the rest (14 households) were making contracts with *A* company. It seems that the village tract administrator tried to avoid the same household to get credit from both companies. One household has loans provided by both companies, but this seems as an exceptional case; this household is renting 4 acres of land from another household and the loan might have been given to the original land holder. The interest rate levied by *A* company was 2.0% per month, but that of *S* company was 2.5%. The interest rate of RSC was supposed to be 2.0% per month according to the government instruction, but *S* company seemed to make changes according to their business condition (As discussed in Section 1-2, the RSCs have been changing its proposed model to fit the actual situation of each company and the area in which they operate). The rate charged by *A* company is set at 2.0% per month, but some farmers claimed that the fertilizer price they offered was actually higher than the market price, so it might include an invisible extra charge to the farmers.

Table 3-13 indicates the credit amount provided by both companies. The per-acre loan amount ranges from 11,000 kyat to 20,000 kyat, thus it is not a huge amount. In this sense, provision of credit by RSCs is a rather minor supplement, but the low interest rate compared to informal loans is welcomed by farmers.

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[58] Since 100,000 kyat per acre is not a negligible amount (if the farmer had 10 acres, the total loan amount would be 1 million kyat), some households purchase durable assets such as a motorbike, if not for the temporal relief for daily expenses. It is reported that about 15,000 households in the Ayeyarwady Region could not repay the loans for 2013, even though the repayment deadline was extended by six months (*Irrawaddy*, 7th November 2014).

Table 3-13 RSC Credit (2012/13)

	Total No. of HHs	No. HHs receiving RSC credit	Average total amount (kyat)	Average amount per acre (kyat)
Under 5 acres	49	5	52,400	16,160
5-10 acres	32	8	135,813	20,555
10-15 acres	15	6	157,000	15,267
Over 15 acres	13	6	239,521	11,692
Total	109	25	149,105	16,280

Note 1: These are the combined figures for A and S companies

Note 2: Since one household took a loan from both companies, the total number of cases is 25.

Note 3: Credit in kind is converted into monetary value.

Note 4: Per acre amount is calculated by the actual operating acreage and not by the contracted acreage, as some farmers only purchase fertilizer.

Source: Authors' survey.

The original idea of the RSC's business model was to make contracts with farmers to provide loans (both in-kind and cash) and buy back paddy at the contracted price or market price (See section 1-2). Farmers can choose to repay the debt in-kind. However, among 24 farm households, there are only 3 farm households that actually paid back/sold their paddy to *A* company (No farm households sold paddy back to *S* company). Most of the farmers sold their paddy either to primary collectors coming to their field or rice millers in the village/town; then they repaid the loan with that cash. Therefore, we can confirm one of the findings from Section 1-2 that some RSCs are merely functioning as credit provision institutions, rather than marketing entities in this regard.

PGMF Loans

PACT Global Microfinance Funds (PGMF) loans have only existed since April 2013 in the study village; they feature an initial loan amount of 80,000 kyat and an interest rate of 1.2% per month.

Table 3-14 Usage of PGMF loans

		No. Household	Livestock	Petty trading	Farming	Consumption	Debt Repayment	Education	House Construction	Other
Non Farm household	Agri labor	124	35	2	1	11	0	0	2	0
	casual labor only	84	24	1	1	8	0	0	1	0
	seasonal labor	40	11	1	0	3	0	0	1	0
	Self-employed, other wage labor	15	0	2	0	1	0	0	0	1
	Subtotal	139	35	4	1	12	0	0	2	1
Farm household	Under 5 acres	49	5	1	3	2	1	1	0	1
	5-10 acres	32	4	0	3	2	0	0	0	0
	10-15 acres	15	2	0	0	0	0	0	0	0
	Over 15 acres	13	0	0	0	0	0	0	0	0
	Subtotal	109	11	1	6	4	1	1	0	1
Total		248	46	5	7	16	1	1	0	2

Note 1: Other includes supporting son, and travelling.

Note 2: The figure is the gross number. For example, a household may use the money for consumption and livestock breeding.

Source: Authors' survey.

Table 3-14 indicates the usage of PGMF loans. The most frequent usage is for livestock breeding, which is expected to supplement their income. It is also used for working capital for petty trading and farming. However, we can note that a certain portion for consumption, which is more evident for an agricultural labor household, is also used. Given the demand for consumption based loans overall, this result may not be surprising.

Summary and Policy Implications

(1) A generally high dependence on informal sources which charge high interest rates, including advance wage payments, signify that there is still a strong need to improve the institutional credit system, both in terms of supply and disbursal arrangements.

(2) Improvement in loan disbursal is especially critical for MADB loans. Recent increases in the amount of MADB loans seem to provide relief to most farm households, but if the timing of disbursement is delayed, some farmers are forced to mobilize working capital from informal sources as before.

(3) The idea of cooperative credit is not yet well understood by the villagers (and this could be true for the administrative side as well). Villagers seemed to regard it simply as an additional government credit disbursement.

(4) The prevalence of advance wage payments signifies the difficulties among agricultural labor households in smoothing out their consumption throughout the year. Given the proximity of the village to towns and main roads, one may assume that there should be good access to off-farm jobs. Why this is not the case for this village needs to be further investigated.

3-1-3. Rural Finance in the Mountainous Area: Case Study of Two Villages in Shan State

Two study villages were selected from Kyauk-me Township, Kyauk-me District, Shan State. One is Nawng Ang village approximately 15 km east of Kyauk-me Town on the Mandalay-Muse highway. The other is Lone Kyein village about 30 km southwest of Kyauk-me Town on the same highway. A household survey was carried out for 69 of the 80 households (86.3%) in Nawng Ang and for 91 of the 98 households (92.9%) in Lone Kyein.[59] We will analyze the rural financial structure of the two villages in this section.

General Debt Situation

Table 3-15a indicates the debt situation in the villages from various sources, by classifying the households according to the size of owned farmland. For reference, the estimated per capita average household income in 2013 is also shown in the table.

It was found that most of the households in the study villages borrowed from one source or another: 73.9% in Nawng Ang and 87.9% in Lone Kyein. The dominant informal lenders were maize brokers, especially in Nawng Ang.[60] Besides informal lenders there were a variety of credit sources, including Myanma Agricultural Development Bank (MADB), cooperatives, PACT Global Microfinance Funds (PGMF), UNDP, and village-level credit unions (locally called "Wong Metta" in the Shan language) operated by a Buddhist CBO (Community-Based Organization). The diversification of credit sources was especially seen in Lone Kyein (Table 3-15b).

It should be noted that almost all the credit from various sources mentioned above were used for crop production in both villages, with Wong Metta being the only exception.[61] The actual situation of each credit source is described below.

[59] See Appendix C for general information on the households.

[60] It seems that the survey failed to capture information on borrowing from informal lenders other than maize brokers, including relatives and friends.

[61] The percentage of using loans for crop production was as follows: 63.5% of loans from MADB (if the combination of crop production and consumption is included, the figure becomes 77.8%; hereafter referred to as combination included), 72.5% of loans from PGMF (combination included 78.4%), 60.0% of loans from cooperatives (combination included 77.5%), 27.3% of loans from UNDP (combination included 72.7%), 30.4% of loans from maize brokers (combination included 51.8%). In the case of loans from Wong Metta, by contrast, consumption was the largest purpose (39.0%), followed by crop production and health (14.6% each), education (9.8%), and house construction (7.3%).

Table 3-15a Number of Households with Debt

Operational farmland (acres)	Total HHs	HHs taking out loans	%	MADB	Cooperatives	PGMF	UNDP	Credit union	Maize brokers	Advance wages	Per capita income (kyat)
	Nawng Ang										
				Number of HHs borrowing from:							
0	3	1	33.3%					1		1	118,971
-4.99	21	12	57.1%	1	1	2	2	4	7	1	384,917
5.00-9.99	25	21	84.0%	5	1	6	5	5	7	2	584,087
10.00-19.99	18	15	83.3%		1	5	4	2	9		740,568
20.00-	2	2	100.0%			1	1		1		1,445,800
Total	69	51	73.9%	6	3	14	12	12	24	4	577,693
	Lone Kyein										
				Number of HHs borrowing from:							
Operational farmland (acres)	Total HHs	HHs taking out loans	%	MADB	Cooperatives	PGMF	UNDP	Credit union	Maize brokers	Advance wages	Per capita income (kyat)
0	9	2	22.2%			1		1	1		1,342,759
-4.99	16	14	87.5%	6	4	5	2	7	5	3	428,485
5.00-9.99	42	40	95.2%	23	20	19	6	10	15		856,910
10.00-19.99	19	19	100.0%	13	12	9	1	7	10		1,192,807
20.00-	5	5	100.0%	4	5	1					2,533,229
Total	91	80	87.9%	46	41	35	9	25	31	3	1,004,440

Source: Survey by a team from the Forestry Research Institute (FRI) in 2014.

Table 3-15b Households with Debt by Number of Sources

Operational farmland (acres)	HHs taking out loans	1 source	2 sources	3 sources	4 sources	5 sources	6 sources
	Nawng Ang						
		Number of sources borrowed from					
0	1		1				
-4.99	12	9	2	1			
5.00-9.99	21	15	4	1			1
10.00-19.99	15	11	4	1			
20.00-	2	1	1				
Total	51	36	12	3			1
	Lone Kyein						
		Number of sources borrowed from					
Operational farmland (acres)	HHs taking out loans	1 source	2 sources	3 sources	4 sources	5 sources	6 sources
0	2	1	1				
-4.99	14	4	6	1	2	1	
5.00-9.99	40	10	13	14	2	1	
10.00-19.99	19	3	6	6	3	1	
20.00-	5	1	3	1			
Total	80	19	29	22	7	3	

Source: Survey by a team from the Forestry Research Institute (FRI) in 2014.

MADB

As Table 3-16 shows, MADB provided loans to 46 of the 82 farm households (56.1%) in Lone Kyein but only 6 of the 66 farm households (9.1%) in Nawng Ang.

The main reason why MADB loans were limited in Nawng Ang was: 1) Taungya fields were located in the protected forest area, 2) Farm households cultivating lowland paddy fields seemed to hesitate to borrow because of the high transaction cost, due to the long distance to Kyauk-me.[62] With regard to the first reason, however, according to a village informant, 20 farmers applied for loans from MADB in 2013 to cultivate maize and another 4 farmers did the same for sugarcane, in the

[62] If many farmers would borrow at once, the transaction cost could have been reduced.

illegally occupied taungya. It was revealed in 2014 that MADB approved the loans to the 4 farmers cultivating sugarcane.

The same kind of "flexibility" in MADB's loan approvals was found in Lone Kyein on a much larger scale as MADB provided loans for the cultivation of tanugya that were not yet registered with the Department of Settlement and Land Records (SLRD) under the Ministry of Agriculture and Irrigation.

Cooperatives

The Ministry of Cooperatives recently started to give loans by organizing cooperative societies in rural areas in Myanmar and the study villages were not an exception, although it was on a very limited scale in Nawng Ang.

Table 3-16 Loans from MADB and Cooperatives

Operational farmland (acres)	Total HHs	HHs borrowing from MADB	Average amount (kyat)	HHs borrowing from coopera-tives	Average amount (kyat)
	Nawng Ang				
0	3				
-4.99	21	1	30,000	1	100,000
5.00-9.99	25	5	312,000	1	300,000
10.00-19.99	18			1	400,000
20.00-	2				
Total	69	6	265,000	3	266,667
	Lone Kyein				
Operational farmland (acres)	Total HHs	HHs borrowing from MADB	Average amount (kyat)	HHs borrowing from coopera-tives	Average amount (kyat)
0	9				
-4.99	16	6	196,667	4	130,000
5.00-9.99	42	23	273,913	20	124,500
10.00-19.99	19	13	305,385	12	102,500
20.00-	5	4	687,500	5	100,000
Total	91	46	308,696	41	115,610

Source: Survey by a team from the Forestry Research Institute (FRI) in 2014.

PGMF

The PGMF started its microfinance activities in the study villages as recently as 2011 or 2012. Although we cannot get detailed information, at least two notable tendencies are observed from Table 3-17. First, it seems that unlike other areas of Myanmar[63], the PGMF did not target landless and small-scale farm households in the study villages. Second, it seems that PGMF imposed a ceiling of 100,000 kyat per member on the loan amount in 2014.

[63] See, for instance, the case of the study villages in the Central Dry Zone and Delta (3-1-1 and 3-1-2).

Table 3-17 Loans from PGMF

Operational farmland (acres)	Total HHs	Members of PGMF	No. of loans				Average amount (kyat)			
			2014	2013	2012	2011	2014	2013	2012	2011
Nawng Ang										
0	3									
-4.99	21	2	1	1			100,000	100,000		
5.00-9.99	25	6	4	3	1		175,000	400,000	400,000	
10.00-19.99	18	5	3	3			100,000	200,000		
20.00-	2	1	1	1			100,000	400,000		
Total	69	14	9	8	1		133,333	287,500	400,000	
Lone Kyein										
Operational farmland (acres)	Total HHs	Members of PGMF	No. of loans 2014	2013	2012	2011	Average amount (kyat) 2014	2013	2012	2011
0	9	1		1				90,000		
-4.99	16	5		5	4	2		200,000	157,500	115,000
5.00-9.99	42	19	1	18	10	2	100,000	292,632	164,444	80,000
10.00-19.99	19	9		9	8	5		377,778	276,250	135,000
20.00-	5	1		1				300,000		
Total	91	35	1	34	22	9	100,000	304,412	205,714	118,333

Source: Survey by a team from the Forestry Research Institute (FRI) in 2014.

UNDP

The United Nations Development Program (UNDP) used to have many development projects under the Human Development Initiative (HDI) before democratization in 2011. One such project was the microfinance program, which was implemented 1) through the PGMF and other NGOs and 2) directly under the Integrated Community Development Project (ICDP).

The ICDP organized Self-Reliance Groups (SRG) in most disadvantageous (and poverty-struck) rural areas and injected a certain amount of seed money, by which the groups started micro-financing.

In 2005 a UNDP rural development project was introduced in Nawng Ang, where various activities were implemented such as the construction of a small bridge, introduction of improved stoves and sanitary toilets, distribution of drinking water tanks, construction of a nursery (kindergarten), a malaria eradication program, introduction of community forestry, and so on. The project also organized 3 SRGs with 5 million kyat of seed money provided to each group. The SRGs started lending money to the members at an interest rate of 2.5-3% per month (for usually 6 months) while mobilizing monthly savings. Each group successfully accumulated funds thereafter, reaching approximately 5 million kyat in 2014.

The same type of UNDP project was introduced to Lone Kyein as well in 2008, but the details are unknown. Table 3-18 is a record of money lending activities in the study villages since 2011.

Table 3-18 Loans from UNDP

Operational farmland (acres)	Total HHs	Member of UNDP project	No. of loans 2014	2013	2012	2011	Average amount (kyat) 2014	2013	2012	2011
Nawng Ang										
0	3									
-4.99	21	2		2	1	1		150,000	200,000	200,000
5.00-9.99	25	5		5	4	2		200,000	225,000	200,000
10.00-19.99	18	4		4	2	1		225,000	200,000	200,000
20.00-	2	1		1	1	1		300,000	100,000	100,000
Total	69	12		12	8	5		208,333	200,000	180,000
Lone Kyein										
0	9									
-4.99	16	2		2				675,000		
5.00-9.99	42	6	1	6	4	3	1,000,000	608,333	300,000	150,000
10.00-19.99	19	1		1	1	1		1,100,000	900,000	850,000
20.00-	5									
Total	91	9	1	9	5	4	1,000,000	527,778	420,000	325,000

Source: Survey by the team of Forestry Research Institute (FRI) in 2014.

Credit Union (Wong Metta)

The village-level credit unions called "Wong Metta"[64] began to be organized in Shan State by a Buddhist CBO (Darma Metta) in 2008.[65] A few years later the Credit Union Foundation Australia (CUFA) started to assist the CBO by providing the salaries of the staff (26 staff members as of November 2014). The total number of credit unions as of November 2014 was 382, of which 375 were located in Shan State.[66] The total number of members reached 127,263, except for 30 credit unions the number of members of which was unknown. The Wong Metta credit unions grew to become number two microfinance organization in Myanmar, next to the PGMF (which had approximately 400,000 members).

The major characteristics of the Wong Metta credit unions are as follows. First, for the most part villagers can freely decide their own rules including amount of monthly savings (usually 1,000-2,000 kyat per month) and lending interest rates (usually 2-4% per month). Second, however, the minimum obligation is to set aside 1.5% of the interest (half of the 3% lending interest,[67] for example) for a social welfare scheme that provides grants to members in case of 1) hospitalization, 2) child delivery, 3) elderly care (more than 70 years old), and 4) funerals.[68]

It was found, however, that loan amounts from the credit unions were usually very small in the study villages, as Table 3-19 demonstrates.[69]

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[64] Literally, in the Shan language, "wong" means circle and "metta" means sympathy.

[65] The head office is located in Lashio.

[66] Two credit unions were located in Kachin State and five in Bago Region, but these credit unions were also organized in villages where Shan ethnic people live.

[67] The remaining 1.5% interest is usually distributed once a year to members as a dividend, although what is to be done with it can also be decided by the villagers themselves.

[68] However, how seriously such a social welfare scheme is actually performed depends on the financial status of each credit union. In the case of a credit union with a relatively good financial status such as the one we visited in November 2013, they give 40,000 kyat grants to members in case of hospitalization, for elderly care, and funerals whereas 80,000 kyat is granted for child delivery.

[69] According to a large-scale farmer of Lone Kyein, however, 4 household members joined 2 credit unions (one in his village and the other in the neighboring village) and in 2014 he obtained a 500,000 loan with a 4% per month interest rate and a 2.5 million kyat loan with a 3% per month interest rate. Note also that a landless household that borrowed 1 million kyat from the credit union in Lone Kyein (Table 3-19) operates a restaurant along the highway. It seems that a few needy members borrow substantial loans.

Table 3-19 Loans from Credit Union (Wong Metta)

Operational farmland (acres)	Nawng Ang							
	Total HHs	HHs borrowed from credit union in 2013 and/or 2014	Year of borrowing			Average loan amount per HH		
			2014	2013	2012	2014	2013	2012
0	3	1		1			50,000	
-4.99	21	4	2	3		200,000	366,667	
5.00-9.99	25	5	2	4	1	200,000	212,500	200,000
10.00-19.99	18	2	2	1	2	185,000	200,000	65,000
20.00-	2							
Total	69	12	6	9	3	128,333	116,667	110,000

Operational farmland (acres)	Lone Kyein							
	Total HHs	HHs borrowed from credit union in 2013 and/or 2014	Year of borrowing			Average loan amount per HH		
			2014	2013	2012	2014	2013	2012
0	9				1			1,000,000
-4.99	16	7	1	7	2	150,000	88,571	110,000
5.00-9.99	42	10		10	1		139,000	40,000
10.00-19.99	19	7		7	1		475,714	100,000
20.00-	5							
Total	91	24	1	24	5	150,000	222,500	272,000

Source: Survey by the team of Forestry Research Institute (FRI) in 2014.

Maize Brokers

Table 3-20 demonstrates the loans from maize brokers. It is apparent that compared to the other lending institutions, the average loan amount is much larger in both of the study villages. As we saw in Table 3-15a, in terms of the number of borrowing households, maize brokers are the largest lender as well. And they usually charge high interest rates: 3-5% per month in Nawng Ang and 4-8% in Lone Kyein.

The important point is that there are only a few maize brokers in the study villages. Particularly in Nawng Ang there is only one maize broker who is unduly rich. Below is general information about the household.

The household had 3 members; husband, wife and 15-year-old son. The parents are ethnic Shan. The husband was born in the village and his wife came from Kyauk-me Town. They had 4 plots of *taungya*, with a total of 15 acres. They cultivate maize with hired labor. They started maize brokerage 10 years ago (in 2003) and collected maize from 3 villages including Nawng Angt and sold it to a trader at Hsipaw at first. They had a tawlargyi for collecting maize. They also started operating a grocery shop in 2008.

They usually distributed seeds and chemical fertilizers to maize farmers and collected repayment after harvest. They provided such in-kind loans to roughly 20 farmers (the nominal interest rate is zero, but they profit by purchasing maize at lower prices than normal). In 2012 they constructed a gorgeous house next to their grocery shop (along the main road) and also purchased a 12-ton truck (Japanese). In the maize harvesting season they frequently transport maize directly to Muse to sell it to Chinese traders.

Note that Table 3-20 shows the case of cash loans from maize brokers. In addition to providing in-kind credit to maize farmers, they extensively give cash loans with high interest rates.

Table 3-20 Loans from Maize Brokers

Operational farmland (acres)	Total HHs	HHs borrowing from maize brokers	Average amount (kyat)	Interest rate per month (%)					
Nawng Ang				0	3	5	6	8	in-kind
0	3								
-4.99	21	7	630,000	1	1	5			
5.00-9.99	25	7	1,028,571		1	6			
10.00-19.99	18	9	733,333		3	5			1
20.00-	2	1	600,000		1				
Total	69	24	783,750	1	6	16			1
Lone Kyein				0	3	5	6	8	in-kind
0	9	1	400,000	1					
-4.99	16	5	575,000		1		5		
5.00-9.99	42	15	487,333			5	9	1	
10.00-19.99	19	10	1,510,000	2		2	3	3	
20.00-	5								
Total	91	31	828,548	3	1	7	17	4	

Source: Survey by a team from the Forestry Research Institute (FRI) in 2014.

Note: A landless household in Lone Kyein village borrowed from his car owner.

Emergencies and Coping Mechanisms

As we did not collect information on any kind of informal credit other than maize brokers, let us look into how people cope with emergencies, including borrowing from relatives and friends.

Table 3-21a shows that 75% and 53% of the households faced at least one emergency during the 5 years prior to the survey in 2014. Of the total 116 cases in the two villages, "sickness/injury" accounted for 42.2%, followed by "other" (15.5%), "crop failure" (12.9%), "funeral" (9.5%), "wedding" and "education" (6.0% each).

Table 3-21a Emergencies and Necessary Money

Operational farmland (acres)	Total HHs	HHs reporting emergencies	%	No. of cases	Necessary amount (kyat)								
Nawng Ang					<100,000	100,000-200,000	200,000-300,000	300,000-500,000	500,000-1,000,000	1,000,000-2,000,000	2,000,000-5,000,000	5,000,000-	Unknown
0	3	3	100.0%	3	2						1		
-4.99	21	16	76.2%	17	3	4	2	2	4	1	1		
5.00-9.99	25	18	72.0%	20	3		6	1	5	2	3		
10.00-19.99	18	14	77.8%	19	1	2	2	2	5	5	2		
20.00-	2	1	50.0%	1						1			
Total	69	52	75.4%	60	9	6	10	5	14	9	7		
Lone Kyein					<100,000	100,000-200,000	200,000-300,000	300,000-500,000	500,000-1,000,000	1,000,000-2,000,000	2,000,000-5,000,000	5,000,000-	Unknown
0	9	2	22.2%	2			1			1			
-4.99	16	8	50.0%	9	2	2		3		2			
5.00-9.99	42	23	54.8%	26	2	3	2	4	8	3	1	1	2
10.00-19.99	19	12	63.2%	18		1		6	5	1	5		
20.00-	5	3	60.0%	3					1	1		1	
Total	91	48	52.7%	58	4	6	3	13	14	8	6	2	2

Source: Survey by a team from the Forestry Research Institute (FRI) in 2014.

In terms of the amount of money needed, the most frequent was 500,000-1,000,000 kyat in both villages, followed by 300,000-500,000 kyat in Lone Kyein and 200,000-300,000 kyat in Nawng Ang. At the same time, the number of cases in which more than 1 million kyat was necessary reached 16 cases in both villages, which accounted for 26.7% in Nawng Ang and 28.6% in Lone Kyein.

Table 3-21b is a summary of how people coped with the emergencies. In Nawng Ang "borrowing from moneylenders" (mainly from maize brokers) was by far the largest (83.3%). In contrast, although "borrowing from moneylenders" was the largest (42.9%) in Lone Kyein, "borrowing from relatives and friends" accounted for 21.4%, followed by "own savings" (16.1%), and "property sales" (8.9%).

Table 3-21b Financing of Emergencies

	Nawng Ang									
	No. of cases	Own savings	Property sales	Donation by villagers	Borrow from VCF	Borrow from relatives/friends	Borrow from PGMF	Borrow from MADB/Coop/UNDP	Borrow from money-lenders	Borrow from RF/ML
<100,000	9					1		1	7	
100,000-200,000	6								6	
200,000-300,000	10				1				8	1
300,000-500,000	5								5	
500,000-1,000,000	14	2				1		1	10	
1,000,000-2,000,000	9					1			8	
2,000,000-5,000,000	7					1			6	
5,000,000-										
Total	60	2			1	4		2	50	1
	Lone Kyein									
	No. of cases	Own savings	Property sales	Donation by villagers	Borrow from VCF	Borrow from relatives/friends	Borrow from PGMF	Borrow from MADB/Coop/UNDP	Borrow from money-lenders	Borrow from RF/ML
<100,000	4	2				1			1	
100,000-200,000	6		1			1	1		3	
200,000-300,000	2				1				2	
300,000-500,000	13	3		1		4			5	
500,000-1,000,000	14	2	1			1		2	8	
1,000,000-2,000,000	7		2		1	3			2	
2,000,000-5,000,000	6	2			1				3	
5,000,000-	2					2				
Unknown	2		1					1		
Total	56	9	5	1	3	12	1	3	24	

Source: Survey by the team of Forestry Research Institute (FRI) in 2014.

Table 3-21c shows the distribution of interest rates when people had to borrow from moneylenders, relatives and friends, and the village common funds in case of emergencies. The notable findings are as follows.

1) In the case of moneylenders in Lone Kyein, interest rates were from 5-8% per month, which was consistent with the informal borrowing mentioned above.
2) In the case of relatives and friends in Lone Kyein, on the other hand, no interest was charged in most cases.
3) In the case of moneylenders in Nawng Ang, it is interesting to note that although most loans had a 5% per month interest rate (72.0%) they charged less interest in some cases, including no interest. It seems that in some emergency cases moneylenders (mostly maize brokers) were obliged to give loans with concessional terms and conditions.

Table 3-21c Interest Rates of Borrowing for Emergencies

	Nawng Ang							
	No.of cases	Interest rate (% per month)						
		0	3	4	5	6	8	in-kind
Relatives/Friends	4	3				1		
Moneylenders	50	5	4	2	36	2		1
RF/ML	1		1					
VCF	1		1					
Total	56	8	6	2	36	3		1
	Lone Kyein							
	No.of cases	Interest rate (% per month)						
		0	3	4	5	6	8	in-kind
Relatives/Friends	12	10			2			
Moneylenders	24				6	16	2	
VCF	3	2	1					
Total	39	12	1		8	16	2	

Source: Survey by a team from the Forestry Research Institute (FRI) in 2014.

Status of Savings

With regard to savings, relatively reliable data was collected in the study villages; 38 households (55.1%) from Nawng Ang and 66 households (72.5%) from Lone Kyein replied to the questions on savings, which is a rare case. It is found that many villagers were involved in multiple regular savings programs (Table 3-22).

1) MADB: 2,000 kyat/month by 8 farmers and 5,000 kyat/month by 11 farmers in Lone Kyein.[70]
2) Cooperatives: 10,000 kyat/year by 19 households in Lone Kyein.[71]
3) PGMF: monthly savings of 500 kyat (1 HH), 600 kyat (1 HH), 1,000 kyat (5 HHs), 3,000 kyat (1 HH), and 8,000 kyat (2 HHs) in Nawng Ang and 500 kyat (2 HHs), 600 kyat (2 HHs), 1,000 kyat (9 HHs), 2,000 kyat (11 HHs), 2,600 kyat (1 HH), 3,000 kyat (2 HHs), and 4,000 kyat (3 HHs) in Lone Kyein.
4) UNDP-Operated Self-Reliance Groups: monthly savings of 2,000 kyat (4 HHs) and 4,000 kyat (2 HHs) in Nawng Ang and 1,000 kyat (1 HH), 2,000 kyat (8 HHs), 2,500 kyat (1 HH), and 3,500 kyat (1 HH) in Lone Kyein.
5) Wong Metta: monthly savings of 1,000 kyat (10 HHs), 2,000 kyat (4 HHs) and 4,000 kyat (1 HH) in Nawng Ang and 500 kyat (1 HH), 1,000 kyat (16 HHs), 2,000 kyat (7 HHs), 3,000 kyat (2 HHs), 4,000 kyat (2 HHs), 6,000 kyat (3 HHs), 10,000 kyat (1 HH), and 12,000 kyat (1 HH) in Lone Kyein.
6) Other: monthly savings of 2,000 kyat (6 HHs) and 4,000 kyat (1 HH) in Nawng Ang in unknown savings organizations and 20,000 kyat (1 HH) in Lone Kyein in a savings organization in Kyauk-me.
7) Cash or gold/jewelry: yearly savings of 50,000 kyat (1 HH) and 100,000 kyat (1 HH) in Nawng Ang and 20,000 kyat (1 HH), 100,000 kyat (3 HHs), 250,000 kyat (1 HH), 400,000 kyat (2 HHs) and 800,000 kyat (1 HH) in Lone Kyein.[72]

[70] One farmer in Nawng Ang regularly deposited 2,000 kyat/month.

[71] In addition, one household from Lone Kyein reported saving 10,000 kyat/year with a savings organization in the sugar mill where they sell sugarcane.

[72] One household reported that they had a 3 million kyat deposit in Kanbowza Bank.

Table 3-22 Status of Regular Savings

Operational farmland (acres)	Total HHs	HHs with regular savings	%	MADB	Coopera-tives	PGMF	UNDP	Credit unions	Cash or Jewelry/ gold	Other	Remarks
Nawng Ang											
				HHs with regular savings							
0	3	1	33.3%					1			
-4.99	21	10	47.6%			3	2	6		1	2 HHs in 2 orgs.
5.00-9.99	25	13	52.0%			4	4	6	2	1	2 HHs in 2 orgs; 1 HH in 3 orgs.
10.00-19.99	18	8	44.4%	1		3		2		4	2 HHs in 2 orgs.
20.00-	2	1	50.0%							1	
Total	69	33	47.8%	1		10	6	15	2	7	
Lone Kyein											
				HHs with regular savings							
Operational farmland (acres)	Total HHs	HHs with regular savings	%	MADB	Coopera-tives	PGMF	UNDP	Credit unions	Cash or Jewelry/ gold	Other	Remarks
0	9	4	44.4%			1		2	2		1 HH in 2 orgs.
-4.99	16	11	68.8%	3	2	5	4	5			2 HHs in 2 orgs; 2 HHs in 3 orgs.
5.00-9.99	42	32	76.2%	11	9	15	7	15	2	1	8 HHs in 2 orgs; 7 HHs in 3 orgs; 2 HHs in 4 orgs.
10.00-19.99	19	17	89.5%	6	8	8		10	3		3 HHs in 2 orgs; 6 HHs in 3 orgs; 1 HH in 4 orgs.
20.00-	5	3	60.0%			1		2	1	1	2 HHs in 2 orgs.
Total	91	67	73.6%	20	19	30	11	34	8	2	

Source: Survey by a team from the Forestry Research Institute (FRI) in 2014.

Summary and Policy Implications

The study villages are located in mountainous area in Shan State where people depend mainly on taungya cultivation. However, the taungya fields gradually turned into permanent upland fields which are cultivated every year. Most of the taungya fields had already become permanent upland fields by the time of our survey in 2013.

Maize (for animal feed) is the most popular crop, followed by sugarcane and paddy. People need a lot of working capital for crop cultivation and they depend on various lending institutions such as MADB, PGMF, UNDP, and Credit Unions called "Wong Metta" mainly for that purpose. However, people also depend on loans from moneylenders, most typically from maize brokers at high interest rates. On the other hand, people sometimes need loans to cope with emergencies such as sickness/injury, funerals, child birth, education, crop failure, etc. Some depend on loans from relatives and friends but others depend on moneylenders, including maize brokers for such emergencies.

It was also found that people are practicing regular (monthly) savings, often in multiple financial institutions. It can be hypothesized that ethnic Shan people are more accustomed to save on a regular basis, which is one of the foundations of active credit union movement in the state. However, when emergencies happen they still have to depend on borrowing from moneylenders. How to interpret their financial behaviors requires further study.

It is recommended that the Myanmar government consider how to strengthen the village-level credit unions ("Wong Metta") for the development of the rural financial sector and eventually for livelihood and welfare development in Shan State.

3-1-4. Rural Finance in the Rubber Production Area: Case Study of Two Villages in Mon State

Two study villages were selected from Mon State; Kamawet Village, located along the Mudon-Thanbyuzayat highway approximately 13 km south of Mudon and Kwan Hla Village, located also along the same highway 30 km south of Mudon and 5 km north of Thanbyuzayat. We sampled 62 households from Kamawet and 53 from Kwan Hla for a household-level survey in November 2014.[73]

The main purpose here is to analyze the rural financial markets in the villages, including savings and credit. We paid attention to both short-term and long-term credits for land acquisition and rubber planting, since rubber smallholders normally have to wait 7 years before they can start tapping.

[73] For an outline of the villages and sampled households, see Appendix D.

Financing of Land Acquisition and Rubber Planting

As mentioned in Appendix D, only 10-15% of the rubber smallholders in the villages inherited land (for rubber plantation) from parents, although the proportion of inheritance in terms of land area was much higher (32%) in Kwan Hla (Table D-4). The overwhelmingly important mode of land acquisition was purchasing in both villages, which means that farmers had to prepare funds not only for rubber planting but also to purchase land. How did they finance it?

An important fact related to this long-term financing issue is a large-scale labor migration to Thailand (or Malaysia) from the study area that started quite a long time ago, especially for Kwan Hla (see Appendix D). The savings accumulated through labor migration in Thailand/Malaysia contributed to the financing of land acquisition and rubber planting in native villages of the migrants.

Tables 3-23 and 3-24 list the households with rubber farms in Kamawet and Kwan Hla respectively that have had or currently have one or more family members participate in international labor migration (including migration by their children's independent households). The labor migrations marked in gray seem to have contributed directly to financing land acquisition, rubber planting, or both. In other words, 7 households of the 34 rubber smallholders (20.6%) in Kamawet and 14 households of the 42 rubber smallholders (33.3%) in Kwan Hla were able to obtain (at least part of) their rubber farms with savings from the labor migration to Thailand/Malaysia.

Let us examine some typical cases below.

KM 41: The household head (45 years old) and his wife (40 years old) have two daughters (19 and 15 years old) and one son (13 years old). They migrated to Thailand in 2000 and worked in the rubber products sector there until 2012. When they decided to come back to Myanmar they constructed a residential house in their native village in 2011 (its value was 17 million kyat in 2014). After returning to Myanmar in 2012, they purchased 30 acres of land with 9 million kyat and immediately planted rubber (BPM 24/RRIM 2000/RRIM 2001). In 2013, for the purpose of rubber farm management and also for consumption they borrowed 5 million kyat from their friend at an interest rate of 4% per month, resulting in them having to pay 200,000 kyat (200 US$) in interest every month. They have no major consumer durables, except a motorbike (purchased in 2011). Neither the household head nor his wife has jobs other than their rubber farming (not tapping yet). The son is still going to school. Hence the eldest daughter migrated to Thailand in 2014 to work as a tapper.

KM 2: The household head (76 years old) and his wife (67 years old) live together with their daughter (35 years old) and her husband (33 years old). The household head's wife is suffering from tuberculosis. They have a 5-acre rubber farm that was reclaimed by the household head in 1990 where he immediately planted rubber (RRIM 600). He also constructed a residential house in 1990 (its present value is 20 million kyat). The son-in-law migrated to Thailand alone in 2003 and worked until 2009, remitting 3 million kyat (3,000 US$) every year. In 2012 they had to spend 3.5 million kyat for the sickness of the households head's wife. In April 2013 they borrowed 2 million kyat from a large-scale rubber smallholder at 4% per month interest. With this additional money, in the same year they purchased 14 acres of land for 6.3 million kyat and immediately planted rubber (BPM 24). The total sales amount of USS (unsmoked sheet) in 2013/14 from the 5 acre-rubber farm was 5,250 lbs. (of which 50% was given as wages to tappers employed from the same village), with an estimated gross value of 3.4 million kyat. They have two motorbikes, a generator, a TV set (with DVD), an electric fan, a mobile phone, and a hand tube-well.

KH 19: The household head (55 years old) and his wife (48 years old) stay with a son (21 years old, now in a monastery), a daughter (23 years old), and a granddaughter (less than a year old). The families of their other two sons have been in Thailand since 2004 and 2006 (still in Thailand when we conducted the survey). The granddaughter living with them is the daughter of one of their two sons in Thailand. The two families in Thailand each remit 2 million kyat every year. The household head inherited 4 acres of paddy field (year unknown), all of which was rented out, and he receives 20 baskets of paddy (420 kg) as rent. Their residential house was constructed in 2005. In 2007 they planted rubber on 5 acres of land (which was purchased in 1989) and purchased an additional 25 acres of land in 2010 with 10 million kyat and immediately planted rubber (BPM 24/PB 260). In 2013 and 2014, they borrowed 3 million kyat from a rubber smallholder at 4% per month interest to manage their rubber farms. In addition, 2 million kyat was necessary in 2010 for their son to become a monk, of which 50% came from their savings, but the other 50% had to be borrowed from a relative albeit without interest.

KH 12: The household head (42 years old) and his wife (40 years old) migrated to Thailand in 1998 and worked until 2007. They have two sons (21 and 17 years old) and two daughters (14 and 6 years old). The two sons are engaged in their family farm, but the two daughters are still students. They purchased 22 acres of land in 1997 but soon after that they migrated to Thailand. They remitted 5 million kyat every year. In 2008 when they inherited 3 acres of rubber farm from their parents, they returned to Myanmar and planted rubber (PB 260) on another 22 acres of land. The eldest son migrated to Thailand for work from 2010-2013. They harvested 1,920 lbs. of USS in 2013/14 (from 3 acres), which is estimated at 1.25 million kyat. They never used hired labor for rubber. For their children's education they borrowed 1 million kyat in 2014 from a rubber broker at 5% per month interest.

As these case studies demonstrate, remittances play a vital role in financing both land acquisition and rubber planting. At the same time, however, it should be noted that borrowing from informal sources at high interest rates is often needed to manage rubber farms, especially during the first 7 years when there is no income from the rubber. At least 200,000-250,000 kyat per acre is needed every year during this period. Moreover, the migration of other household members sometimes becomes necessary to maintain their livelihood.

Table 3-23 Migration to Thailand/Malaysia and Rubber/Paddy Sector Development in Kamawet

HH No.	Rubber area in 2014 (acre)		Smokehouse	Rubber land				Paddy field	Rubber planted area				International migration			Credit-taking for rubber land purchase/planting/RSS processing
	Planted	Tapped														
KM 15	83.6	28.6	2 in 1994	Buy step by step					18 ac in 1997	0.6 ac in 2003	10 ac in 2010	55 ac in 2011/12	Son since 2014			80 M ks in 2014 from villager at 1.5%/M for RSS processing
KM 41	30	0		Buy in 2012 (9 M ks)					30 ac in 2012				HHH and wife from 2000-2012	Daughter since 2014		5 M kyat in 2013 from friend at 4%/M
KM 36	27	0		Buy in 2013 (10.8 M ks)					27 ac in 2013				HHH (died) and wife from 2003-2013			10 M ks in 2013 from friend at 4%/M
KM 18	20	0		Lease in 2006				5.5 ac buy in 2006 (4.4 M ks)	20 ac in 2011				HHH from 2002-2006 in Malaysia			
KM 16	20	10		Inherit					20 ac in 2010				HHH from 1996-1999			
KM 2	19	5		5 ac reclaim in 1990	14 ac buy in 2013 (6.3 M ks)				5 acre in 1990	14 ac in 2013			Son from 2003-2009			2 M ks in 2013 from large rubber farmer at 4%/M
KM 39	5	0		Buy in 2010 (7.5 M ks)				7 ac buy in 2004 (1.68 M ks)	5 ac in 2010				Son family since 1994	Daughter family since 2006	Son family since 2009	
KM 57	10	3		Reclaim in 2005					5 ac in 2005	5 ac in 2006			HHH from 2000-2005			
KM 7	4	4		Reclaim in 1996					4 ac in 1996				Son from 2010-11 in Malaysia			
KM 33	4	0		Buy in 2012 (0.6 M ks)					4 ac in 2012				HHH from 1991-1993			
KM 50	3	1		Reclaim in 1999					3 ac in 1999				Son family since 2013			
KM 11	0	0						2 ac buy in 2010 (1 M ks)					HHH from 2004-2008			

Source: Survey by author in November 2014.

Table 3-24 Migration to Thailand/Malaysia and Rubber/Paddy Sector Development in Kwan Hla

HH No.	Rubber area in 2014 (acre)		Smoke house	Rubber land				Paddy field	Rubber planted area				International migration					Credit-taking for rubber land purchase/planting/RSS processing
	Planted	Tapped																
KH 17	75	50		100 ac reclaim in 2006					50 ac in 2006	50 ac in 2008			HHH and wife from 2000-2005					
KH 20	60	0		10 ac buy in 2008 (4 M ks)	50 ac buy in 2014 (35 M ks)				10 ac in 2008	50 ac in 2014			HHH and wife from 2003-2006					10 M ks in 2013 from villager at 2%/M
KH 14	45	5		5 ac reclaim in 1994	40 ac buy in 2008 (8 M ks)				5 ac in 1994	15 ac in 2008			HHH and wife from 2000-2007					3.5 M ks in 2008 from relative with no interest
KH 42	42.5	0		5 ac inherit in 2004	40 ac buy in 2009 (16 M ks)				2.5 ac in 2004	15 ac in 2010	25 ac in 2012		Son family since 2013					10 M kyat in 2010 from rubber farmer at 4%/M
KH 26	24.5	6.5		6.5 ac inherit in 1994	18 ac buy in 2008			Inherit	5 ac in 1994	1.5 ac in 1996	18 ac in 2009		Daugher family since 2009	Daugher family since 2010				
KH 19	30	0		5 ac buy in 1989 (0.45 M ks)	25 ac buy in 2010 (10 M ks)			Inherit	5 ac in 2007	25 ac in 2010			Son family since 2004	Son family since 2006				
KH 12	25	3		22 ac buy in 1997 (0.66 M ks)	3 ac inherit in 2008				22 ac in 2008				HHH and wife from 1998-2007	Son 2010-2013				
KH 1	24	4		4 ac inherit	20 ac buy in 2010 (4 M ks)				4 ac in 2003	20 ac in 2011			Daughter family					
KH 6	22	7		7 ac inherit	15 ac buy in 2009 (0.75 M ks)			Inherit	6 ac in 1978	1 ac in 2004	15 ac in 2009		HHH from 1984-1987	Son from 2011-2013				
KH 25	21	3		3 ac reclaim in 1994	18 ac buy in 2002 (0.58 M ks)				3 ac in 1995	18 ac in 2006			Daughter from 2009-2011					3 M ks in 2006 from goldsmith at 3% per month
KH 3	20	2		6 ac buy in 1989 (0.04 M ks)	5 ac buy in 2006 (2 M ks)	4 ac buy in 2009 (10 M ks)	5 ac buy in 2011 (24 M ks)		6 ac in 2000				HHH from 1984-1989					
KH 9	18	2		1 ac inherit	1 ac buy in 2000 (1.3 M ks)	10 ac buy in 2010 (6 M ks)	10 ac buy in 2012 (7.5 M ks)		2 ac in 2000	10 ac in 2010			HHH and wife from 1994-2007					
KH 47	13	13		10 ac buy in 1990 (0.02 M ks)	3 ac buy in 2004 (0.7 M ks)			Inherit					Son from 2001-2004					
KH 10	12.3	6		6 ac buy in 1989 (0.05 M ks)	4 ac buy in 2006 (3.6 M ks)	2.3 ac inherited in 2009			6 ac in 1994	4 ac in 2007			HHH from 2003-2006					
KH 24	5	3		6 ac inherit in 2005	3 ac buy in 2010 (0.9 M ks)			Inherit	6 ac in 2006				HHH from 1999-2003					
KH 16	5	2		2 ac inherit in 2004	3 ac buy in 2010 (0.6 M ks)			Inherit	2 ac in 2004	3 ac in 2010			Son family since 2004	Daughter family since 2013	Daughter family since 2013			
KH 8	3	2		Inherit				Inherit	2 ac in 2003	1 ac in 2009			Son-in-law from 1997-2011					
KH 2	3.5	0		Buy in 1991 (0.06 M ks)				Inherit	3.5 ac in 1991	3.5 ac in 1996	3.5 ac in 2008		Son family since 2014					
KH 7	6	0		Inherit in 2006				Inherit	3 ac in 2006	3 ac in 2009			Son family since 2001	Daughter family since 1997	Daughter family since 2012	Son family since 2007	Son family since 2011	
KH 5	8	8		Buy in 2003 (5 M ks)									HHH from 2000-2005					
KH 18	8	0		Buy in 2007 (1.6 M ks)					8 ac in 2007				Son family since 2005	Daughter family since 2005	Son family since 2012			
KH 22	3	3		Buy in 1989 (0.06 M ks)				Inherit	3 ac				Daughter family since 2009					
KH 31	3	1.5		1.5 ac buy in 2008 (1.05 M ks)	1.5 ac buy in 2011 (6 M ks)			5 ac buy in 2010 (0.4 M ks)	1.5 ac in 2008	1.5 ac in 2011			Son family since 2013	Son family since 2013				
KH 52	2.5	2.5		Inherit				4.5 ac buy in 1999 (0.68 M ks)	2.5 ac				Son family since 2004					
KH 50	3.5	0		Buy in 2010 (1.5 M ks)				3 ac buy in 2010 (3 M ks)	3.5 ac in 2010				HHH and wife from 2005-2010					
KH 32	6	3		3 ac buy in 2004 (2.8 M ks)	3 ac buy in 2008 (10 M ks)								HHH from 1996-2010	Wife from 1998-2010				
KH 28	3.3	1.8		1.8 ac buy in 1989 (0.01 M ks)	1.5 ac inherit in 2011			Inherit	1.5 ac in 2011				HHH from 1996-1999					
KH 49	4.5	1.5		1.5 ac inherit in 1994	3 ac inherit in 2011				1.5 ac in 1994				Son family since 2011					
KH 21	4	0		4 ac buy in 2000 (0.1 M ks)					4 ac in 2000				HHH and wife from 1984-1988					
KH 11	2.2	0		Inherit in 2009				Inherit	2.2 ac in 2009				Son family since 2012					
KH 15	2	2		Buy in 1994 (0.01 M ks)					2 ac in 1994				Daughter family since 2001	Son family since 1994	Son family since 1994	Son family since 2004		

Source: Survey by author in November 2014.

Credit Situation

The recent increase and diversification in credit sources in rural Myanmar as observed in the previous sections in the Central Dry Zone, the Delta and Shan State has not yet been felt in the study area in Mon State. The almost sole formal credit source observed in 2014 was still the Myanma Agricultural Development Bank (MADB). However, because of the sharp increase in the MADB loan rate per acre after 2009/10 as mentioned later (see Section 3-2), farmers, especially if they grow rice in lowland paddy fields, can get fairly large loans with concessional terms and conditions.

Table 3-25 shows the borrowing status from MADB in 2014. The proportion of households that obtained MADB loans is not very high (21-32%), mainly due to the small number of farmers engaging in rice production in the study villages. MADB does not, in principle, extend loans to rubber smallholders. Hence, it was found that 20-40% of farmers who obtained MADB loans used the money for rubber farms as well, in addition to rice farming and other purposes.

Table 3-25 Loans from MADB

Farmland ownership (acres)	Kamawet					
	No. of HHs	HHs growing paddy	HHs borrowing from MADB	% of total HHs	Average amount per HH	HHs using MADB loan for rubber
0	17	1	1	5.9%	1,000,000	0
<10	14	4	3	21.4%	1,000,000	1
10-20	21	12	10	47.6%	860,000	1
20<	10	4	6	60.0%	1,000,000	3
Total	62	21	20	32.3%	930,000	5
	Kwan Hla					
Farmland ownership (acres)	No. of HHs	HHs growing paddy	HHs borrowing from MADB	% of total HHs	Average amount per HH	HHs using MADB loan for rubber
0	10	0	0	0%	-	-
<10	23	8	5	21.7%	480,000	1
10-20	7	4	4	57.1%	850,000	0
20<	13	1	2	15.4%	700,000	1
Total	53	13	11	20.8%	654,545	2

Source: Survey by author in November 2014.

The other sources of credit were all informal, including relatives, friends, other villagers, merchants, moneylenders, etc. Table 3-26 demonstrates the general situation of informal credit whereas Table 3-27 shows the reason for borrowing from informal sources. Major findings from the tables are as follows.

First, the proportion of households borrowing from informal sources was very high: 58.1% in Kamawet and 69.8% in Kwan Hla.

Second, the average amount borrowed from informal sources was much larger than the MABD loans. Loans without interest accounted for 28.6% in Kamawet and 28.2% in Kwan Hla. The mode of the interest rate (per month) was 4-5% in Kamawet and 3-3.5% in Kwan Hla.

Third, one of the most notable facts was that the proportion of households borrowing from informal sources was the highest for landless households. Since the landless households were in general the poorest group (see Appendix D) they had to depend on informal loans mainly for consumption purposes (including medical care, funerals and child birth). Worse, they faced the highest interest rates when they had to pay interest.

Fourth, many farm households borrowed from informal sources for rubber purposes, including land purchases, rubber planting, rubber farm operation and management, and rubber processing (Table 3-28). Of the total informal loans obtained by farm households, loans for rubber accounted for 58.6% in Kamawet and 56.3% in Kwan Hla. Furthermore, 66.7% of such informal loans for rubber in Kamawet and 65% in Kwan Hla had interest rates of more than 3% per month.

Table 3-26 Loans from Informal Sources

Farmland ownership (acre)	No. of HHs	HHs borrowed from informal sources	%	Average amount	NA	0	1.5-2	3-3.5	4-5	7-8	10	60
	Kamawet											
					No. of cases by interest rate (% per month)							
0	17	11	64.7%	672,727		3			6	2	1	
<10	14	8	57.1%	1,600,000	1	2	3	3	2			
10-20	21	12	57.1%	2,398,500	1	5		4	3			
20<	10	5	50.0%	20,400,000		2	1	1	2			
Total	62	36	58.1%	4,193,944	2	12	4	8	13	2	1	
	Kwan Hla											
					No. of cases by interest rate (% per month)							
Farmland ownership (acre)	No. of HHs	HHs borrowed from informal sources	%	Average amount	NA	0	1.5-2	3-3.5	4-5	7-8	10	60
0	10	9	90.0%	348,889		5			2		1	1
<10	23	15	65.2%	1,586,667	4	3	3	6	1			
10-20	7	3	42.9%	1,133,333		1		1				
20<	13	10	76.9%	5,620,000		2	1	4	4			
Total	53	37	69.8%	2,338,919	4	11	4	11	7		1	1

Source: Survey by author in November 2014.

Note: One household with more than 20 acres in Kamawet borrowed 80,000,000 kyat for RSS processing. If we exclude this case, the average borrowed amount is 5,500,000 kyat.

Table 3-27 Usage of Informal Loans

Farmland ownership (acres)	Land purchase	Rubber plantation	New rubber	Rubber farm	Rubber processing	Rice farming	Business	Buy truck/tawlargyi	Migration to Thailand	Education	Medical care/Funeral	Child birth	Consumption	House construction	Donation
	Kamawet														
	Usage														
0						1					4	1	2	1	1
<10	1	1		1				1	1	2	2		1		
10-20	2			1	1	3	1	1		1	1		1		
20<	1	1		2	1								2		
Total	4	2		4	2	4	1	2	1	3	7	1	6	1	1
	Kwan Hla														
	Usage														
Farmland ownership (acres)	Land purchase	Rubber plantation	New rubber	Rubber farm	Rubber processing	Rice farming	Business	Buy truck/tawlargyi	Migration to Thailand	Education	Medical care	Child birth	Consumption	House construction	Donation
0									1		3		5		
<10			1	6		2	1		1	1	2		2		1
10-20				2		1									
20<	1	2	3	3						2				1	
Total	1	2	4	11		3	1		2	3	5		7	1	1

Source: Survey by author in November 2014.

Note: 1) Multiple answer.

Table 3-28 Loans for Rubber from Informal Sources

Kamawet												
Farmland ownership (acres)	No. of HHs with rubber farms	HHs borrowing for rubber from informal sources	%	Purpose				Interest rate (% per month)				
				Rubber production	Rubber processing to RSS	Buy land	Rubber planting	NA	0	1.5-2	3-3.5	4
0	0											
<10	11	3	27.3%	3		2		1	1		3	
10-20	14	5	35.7%	3	1	2			1		2	2
20<	9	5	55.6%	3	1	1	1		2	1	1	2
Total	34	13	38.2%	9	2	5	1	1	4	1	6	4
Kwan Hla												
Farmland ownership (acres)	No. of HHs with rubber farms	HHs borrowing from informal sources for rubber	%	Purpose				Interest rate (% per month)				
				Rubber production	Rubber processing to RSS	Buy land	Rubber planting	NA	0	1.5-2	3-3.5	4
0	0											
<10	23	9	39.1%	9			1	4	2	2	2	
10-20	7	3	42.9%	3					1		2	1
20<	13	8	61.5%	4		1	5		1	1	4	4
Total	43	20	46.5%	16		1	6	4	4	3	8	5

Source: Survey by author in November 2014.

Table 3-29 indicates the status of borrowing from rubber brokers. It shows that the proportion of farmers borrowing from rubber brokers was only 23% in Kamawet and 18% in Kwan Hla. It seems that the proportion of rubber smallholders borrowing from rubber brokers would be much larger if rubber prices were higher.

Table 3-29 Rubber Farmers Borrowing from Rubber Brokers

	Kamawet	Kwan Hla
Yes	5	5
No	17	23

Source: Survey by author in November 2014.

Summary and Policy Implications

The study villages are located in the major rubber-producing area in Mon State. Rubber is a special tree crop in the sense that it requires 7 years before it can be harvested (tapping) and it therefore requires a huge monetary investment, which is a burden especially for smallholders.

It was found that the rubber smallholders in the study villages basically obtained such investment funds from international migration, mainly to Thailand. However, at the same time, they depended on credit from informal sources, which often involved high interest rates of 3-4% per month.

It is recommended that MADB provide seasonal loans to rubber smallholders. The other policy recommendations related to the rubber products sector in Myanmar are summarized in Chapter 2, and so are not repeated here.

3-2. Policy Recommendations for Rural Financial Sector Development

The purpose of this research is to get detailed information on rural financial markets at the village level by selecting several villages from diverse agro-ecological zones in Myanmar, and to provide policy recommendations for the development of the rural financial sector in Myanmar based mainly on the findings and insights from the field surveys. The selected study villages are located in the Central Dry Zone (3-1-1), the Delta (3-1-2), Shan State (3-1-3), and Mon State (3-1-4). Table 3-30 summarizes the major sources of borrowing in each village.

Table: Financial Institutions in the Study Villages

		Microfinance Type I			Microfinance Type II			Informal		
									Interlinkage with other	
	MADB	PGMF	Ministry of Coopera-tives	RSC	UNDP Self-Reliance Group	Credit unions (Wong Metta)	Village Common Funds	General	Merchants	Advance wage
Central Dry	small	○	○				○	◎	◎	small
Delta	◎	○	small	○			small	◎	◎	◎
Shan State	△/○	○	△/○		△	○	○	◎	◎	small
Mon State	△						?	◎	◎	?

Source: Prepared by author.

Note: RSC--Rice Specializing Companies.

It was found that except for the case of Mon villages, the sources of credit are diverse, although the diversification started and accelerated only in recent years. Let us submit some policy recommendations, first for the MADB.

MADB

The Myanma Agricultural Development Bank (MADB) is the largest financial institution serving the agriculture and rural sector of Myanmar, with 206 township-level branches nationwide. However, it seems that it has lots of problems to be solved.[74]

First is the lack of diversification of its loan portfolio. Table 3-31 indicates the crop-wise seasonal loans of MADB. It is apparent that 80-90% of crop loans are allocated for rice alone. Moreover, MADB extends seasonal loans to a limited number of crops, such as groundnut, sesame, pulses and beans, cotton, maize, mustard, sugarcane, etc. It never provides loans to the other important crops, including rubber, fruit, vegetables, and so on. It is also notable that the other non-crop sectors in rural areas such as livestock, fisheries, and agro-based industries are excluded from the MADB loans.

On the other hand, MADB does provide term loans (usually for 3 years), but on a very limited scale (Table 3-32). The loan portfolio of MADB should be much more diversified for the purpose of enhancing the development of rural sectors as a whole.[75]

[74] Since the World Bank Group already published a good diagnostic report (The World Bank Group, 2014), here we just summarize the points by showing data and add a few more points.

[75] Needless to say, demarcation of tasks might be necessary between the other banks, such as the Rural Development Bank and the SME Bank.

Table 3-31 Crop-wise Seasonal Loans of MADB

	No. of borrowers (million)	Paddy Acre ('000s)	Paddy Total loan amount (million kyat)	Paddy Loan amount per acre (kyat)	Other Acre ('000s)	Other Total loan amount (million kyat)	Other Loan amount per acre (kyat)	Total Acre ('000s)	Total Total loan amount (million kyat)	Total Loan amount per acre (kyat)	Share of paddy in total loan amount
2009-10											
Monsoon	1.31	7,191	71,913	10,001	1,927	11,515	5,975	9,118	83,428	9,150	
Winter	0.24	360	3,599	10,000	974	5,845	6,000	1,334	9,444	7,079	
Pre-monsoon	0.01	61	612	10,000	0	0		61	612	10,000	
Total	1.56	7,612	76,125	10,001	2,902	17,360	5,983	10,513	93,485	8,892	81.4%
2010-11											
Monsoon	1.37	7,311	146,233	20,001	1,975	19,600	9,924	9,286	165,833	17,858	
Winter	0.34	480	9,590	20,000	1,458	14,585	10,000	1,938	24,175	12,474	
Pre-monsoon	0.006	34	671	20,000	0	0		34	671	20,000	
Total	1.716	7,824	156,494	20,001	3,433	34,184	9,956	11,258	190,679	16,937	82.1%
2011-12											
Monsoon	1.42	7,815	290,377	37,157	2,174	21,736	10,000	9,988	312,113	31,247	
Winter	0.41	501	20,040	40,000	1,946	19,456	10,000	2,447	39,496	16,143	
Pre-monsoon	0.006	28	1,113	40,000	0	0		28	1,113	40,000	
Total	1.836	8,344	311,530	37,337	4,119	41,192	10,000	12,463	352,722	28,302	88.3%
2012-13											
Monsoon	1.59	8,020	403,311	50,286	2,314	23,142	10,000	10,335	426,453	41,265	
Winter	0.66	1,247	99,686	79,923	2,757	27,574	10,000	4,005	127,260	31,778	
Pre-monsoon	0.01	52	4,134	80,000	0	0		52	4,134	80,000	
Total	2.26	9,319	507,130	54,417	5,072	50,716	10,000	14,391	557,847	38,764	90.9%

Source: Prepared by author based on data from MADB.

Note: Other includes groundnut, sesame, pulses and beans, cotton, maize, mustard, etc.

Table 3-32 Medium-term Loans of MADB

		2010-11 No. of T/S	2010-11 No. of clients	2010-11 Disbursed amount (million kyat)	2010-11 Amount per client ('000 kyat)	2011-12 No. of T/S	2011-12 No. of clients	2011-12 Disbursed amount (million kyat)	2011-12 Amount per client ('000 kyat)	2012-13 No. of T/S	2012-13 No. of clients	2012-13 Disbursed amount (million kyat)	2012-13 Amount per client ('000 kyat)
1	Short-term												
	Solar Salt production	1	107	60	561	1	87	50	575	1	87	50	575
	Sugarcane Production	3	1,878	151	81	2	1,304	103	79	29	26,035	9,223	354
	Tea Processing	5	3,573	706	198	5	4,246	800	188	6	4,347	826	190
	Coffee Plantation					1	1	50	50,000	1	1	20	20,000
	Cetronella grass	1	18	2.7	150								
2	Farm machinery	171	4,544	6,977	1,535	158	3,379	4,902	1,451	19	117	87	746
3	Special Project	1	1	1,000	1,000,000	1	1	1200	1,200,000	1	1	3,000	3,000,000
	Total	182	10,121	8,897	879	168	9,018	7,105	788	57	30,588	13,207	432
Share of farm machinery				78.4%				69.0%				0.7%	

Source: Prepared by author based on data from MADB.

Second is the unsustainable funding model—high dependence on subsidized government funding through the state-owned Myanma Economic Bank (MEB). Table 3-33 summarizes the major financial indicators of MADB. It can be seen that the deposit/loan ratio has been chronically below unity and it further deteriorated after 2009/10, which is the year the maximum loan rate per acre started to increase rapidly.[76] MADB started to borrow from MEB at 4% per annum and it provided loans at 8.5% per annum, implying that MADB can automatically accumulate profits, although 75% of which must be transferred to the government under the current system. Most of MADB's profits come at the sacrifice of MEB (because most of MEB's funds come from deposits from the masses at 8% per annum interest rate), which seems to be ultimately paid by the tax payers of Myanmar. Note here also that the sudden decrease of deposits by MADB in 2012/13 was the effect of returning all the deposits to farmers, which was ordered by a Parliament decision. In conclusion, the present funding model of MADB is not sound at all, is not sustainable, and thus should be modified as soon as possible.[77]

[76] The loan rate per acre for paddy has been raised from 8,000 kyat (2008/09) to 10,000 kyat (2009/10), 20,000 kyat (2010/11), 40,000 kyat (2011/12), 50,000 or 80,000 kyat (2012/13), and 100,000 kyat (2013/14). The loan rate for other crops was also rapidly raised during the same period.

[77] Strategies to mobilize more deposits are urgently needed. One is that MADB should have freedom to

Table 3-33 Trends in Major Financial Indicators of MADB											(Million kyat)
			Loan								
FY	Capital	Deposits (A)	Seasonal	Term	Total (B)	% of seasonal loan	Deposits/ Loan ratio (A)/(B)	Income	Net profit	State contribution
2000-2001	1,000	NA	12,124	63	12,187	99.5%	NA	1,289	322	242
2001-2002	1,000	3,730	12,741	277	13,018	97.9%	0.29	1,194	263	196
2002-2003	1,000	4,617	12,015	1,088	13,104	91.7%	0.35	1,159	225	169
2003-2004	1,000	6,271	20,416	1,606	22,022	92.7%	0.28	1,877	300	125
2004-2005	1,000	7,586	27,382	5,712	33,094	82.7%	0.23	3,122	467	350
2005-2006	2,000	11,312	34,390	3,261	37,651	91.3%	0.30	4,560	933	700
2006-2007	2,000	16,902	44,876	7,945	52,821	85.0%	0.32	7,086	400	300
2007-2008	2,000	24,055	59,628	9,057	68,685	86.8%	0.35	10,056	1,211	909
2008-2009	2,000	31,018	68,970	3,010	71,980	95.8%	0.43	10,634	1,053	790
2009-2010	5,000	39,676	93,489	3,780	97,269	96.1%	0.41	12,312	821	639
2010-2011	5,000	57,604	190,660	8,897	199,557	95.5%	0.29	22,960	2,670	2,002
2011-2012	5,000	85,807	312,113	7,105	319,218	97.8%	0.27	33,626	8,485	6,363
2012-2013	5,000	15,192	557,847	13,207	571,053	97.7%	0.03	29,026	9,335	7,001

Source: MADB.

The other critical issues of MADB such as the weak corporate governance, the inadequate regulation and supervision, the need for human resource development, the need for improvement in information technology and operations, etc. are analyzed in the report of the World Bank Group and therefore are not repeated here.

Strategy for Reducing Dependency on Merchant Finance

Many farmers and other rural households depend on credit from merchants, typically observed to be jaggery brokers, maize brokers, and rubber brokers in the study villages in the Central Dry Zone (3-1-1), Shan State (3-1-3) and Mon State (3-1-4), respectively. This is a typical traditional agrarian problem, and is not unique to Myanmar. Their strength lies in that they can easily recover the loans when they purchase agricultural commodities. The other important point is that they can wait for repayment relatively flexibly to accommodate the borrowers. In other words, they are exploitative (because of the high interest rates usually involved) but at the same time sympathetic. The main reason why it is difficult to eliminate them lies in this point.

Historically, the cooperative (or credit union) movements since the late 19th century were initiated for the ultimate purpose of eliminating such merchant finance. It was quite successful in some countries such as Germany and Japan, but not so successful in other countries, including Myanmar (Khin San Yee, 1997; Sean Turnell, 2009).

Looking only at post-independence Myanmar, cooperative societies have not been widely organized until recently, especially in rural areas. The recent development of loan disbursement through cooperatives in rural Myanmar as can observed in the study villages as well, looks not to be from the cooperatives themselves, because the Ministry of Cooperatives suddenly started to “inject” loans from above, instead of mobilizing savings from prospective members for mutual finance. Moreover, it seems that the impact of such cooperative loans is rather limited so far because of the small amounts of the loans.

The so-called microfinance by NGOs was started in parts of the world where the cooperative movement failed, such as in Bangladesh. The PGMF’s operational system basically originated from the Grameen Bank in Bangladesh. Microfinance in Myanmar was initiated by the Human Development Initiative Project of UNDP in the three regions of the Delta, the Central Dry Zone, and Shan State (The Government of the Union of Myanmar and the Japan International Cooperation Agency, 2003a, 2003b; Sean Turnell, 2009). After the democratization of Myanmar in 2010 the PGMF

decide interest rates, especially for deposits. The other key issue is how to overcome the distance problem for many farmers to the MADB branch offices. Reintroduction of the village banking system which had long existed until 1993 can be considered. Establishing a wide network of ATMs in rural areas can also be considered if the budget allows for it.

expanded its microfinance program to a much wider rural area.

It seems that the enthusiastic activities of the Myanmar government after its democratization in promoting and expanding microfinance schemes had a certain positive impact on rural financial markets in Myanmar, especially an observed tendency toward reduced interest rates provided by informal lenders.[78]

However, the Grameen Bank-type microfinance (Microfinance type 1) has several limitations. First, the interest rate tends to be relatively high because of the higher transaction costs, especially the staff cost.[79] Second, it has usually an inflexible repayment system, which causes borrowers try to avoid using the loans for consumption smoothing or coping with emergencies as much as possible.

In fact, as we have already seen through four case studies in various parts of Myanmar, consumption smoothing and coping with emergencies is as vital as livelihood development for the rural poor. In this sense, we need to learn from the experience of Wong Metta in Shan State initiated by a Buddhist CBO which addresses the key issues of consumption smoothing, by introducing a social welfare scheme.

The credit unions are village-level cooperative societies in a real sense, although they are not registered as cooperatives. Unlike Grameen Bank-type microfinance (Microfinance type 1), credit unions (Microfinance type 2) are owned by the villagers and operated by their own savings; hence, people can use the loans more easily (or comfortably) for consumption smoothing. Expansion of the same type of village-level credit unions on a nationwide scale is highly recommended.[80][81] The village-level common funds (Chapter 4), which if managed well have the potential to provide for some specific purposes such as education and medicine, may be worth exploring further to fill the gap in meeting the credit demand of rural people. In particular, it can play the same role as the credit unions to meet the demand for credit for consumption smoothing, in addition to livelihood development.

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[78] The interest rates of informal lenders used to be at least 5% (with collateral) and 10% (without collateral), but it lowered to 3-4% and 7-8% respectively, as shown in our study villages as well (See Okamoto, 2008; Fujita, forthcoming).

[79] In Myanmar the interest rate is regulated to maximum 2.5% per month by the Microfinance Law, and accordingly the microfinance providers set their interest rate at 2.5% per month nominally, but some cases are observed in which they impose the 2.5% interest rate on the entire initial loan amount even after the principal money has been reduced in the course of frequent repayment by borrowers.

[80] It is important for policy-makers to learn from the experiences of credit unions in other countries. See, for example, the credit unions in Northeast Thailand and Laos (Southeast Asian Studies Vol.3 Supplementary Issue on “Savings Groups in Laos from a Comparative Perspective,” issued in March 2015 by the Center for Southeast Asian Studies, Kyoto University).

[81] Credit unions, however, have an apparent limitation. Strengthening rural health care administration should be promoted in Myanmar. Introduction of life and health insurances should also be considered.

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4. Rural Development Policy and Collective Action

For the promotion of rural development, community-based and participatory approaches have been widely emphasized in the past few decades. This trend stemmed from the realization that the top-down approaches taken in rural development schemes had not yielded their expected outcomes. Benefits of participatory approaches are generally found in the facts that 1) the usage of local knowledge would yield more efficient and favorable results; 2) local residents would have more incentives to contribute their effort if they are included in the decision-making process and have ownership of the projects; and 3) as a result, these projects would have a greater chance of being sustainable after completion.

Because of the nature of the political regime during the Burmese socialist period until the recent military regime (1962–2011), almost all policies in Myanmar that are related to rural or agricultural development were conducted in a top-down fashion. At least in the official sphere, very little evidence can be found that the government encouraged rural residents' voluntary collective actions toward rural development during those periods. The only exception may be the introduction of a community forestry program, which aimed to slow down the speed of deforestation by allowing groups of residents to hold the right to use land for community forestry so the forest could be managed in a sustainable manner.

Despite the lack of official initiatives for participatory rural development in Myanmar, it is also true that rural residents there have been more self-reliant than normally perceived. In other words, the rural people of Myanmar are capable of organizing collective actions when the need arises, as we will see in various cases discussed later in this section. Ironically, this capability for self-organization has been more evident in areas where the government is normally expected to play a significant role, such as in public investment in education or medical care. In most of these cases, the collective actions we observed were initiated to meet local needs when rural residents could not wait for or expect government action.

Because the present government is making serious efforts toward rural development and poverty reduction, it is useful to consider how to strategically utilize Myanmar's rural societies' capability for rural development. To ensure the best use of rural societies' capabilities, and while realizing limitations, it is essential for government and development practitioners to fully understand the characteristics of Myanmar's rural social structures.

A new attempt at a rural development program was adopted in the villages near Yangon at the end of 2012. It used Saemaeul Undong (the New Korean village Movement) as a model and was conducted with support and assistance from Korea. Saemaeul Undong was a highly successful case of rural development in Korea in the 1970s that resulted in improved living environments and income enhancements (Kim and Chae, 2014). Thus, a similarly positive impact was expected on Myanmar's rural economy and society. However, Kim and Chae (2014) found that the program yielded poor results in those villages. The reason for the poor outcome in Myanmar seems to be a lack of understanding of village functions and the community's potential for collective action. This case clearly indicates the need to understand the nature of the rural structures properly for participatory rural development to have the expected results. More specifically, we need to identify the proper unit of collective actions and the possible functions they can achieve.

With this understanding, we will review the basic nature of Myanmar's rural societies and functions based on the author's field experiences in various parts of the country. First, we will examine the rural administrative structure. Second, the features of the village's units of collective actions will be discussed. This discussion will be followed by a presentation of case studies involving actual collective actions. The final section presents the summary and policy implications.

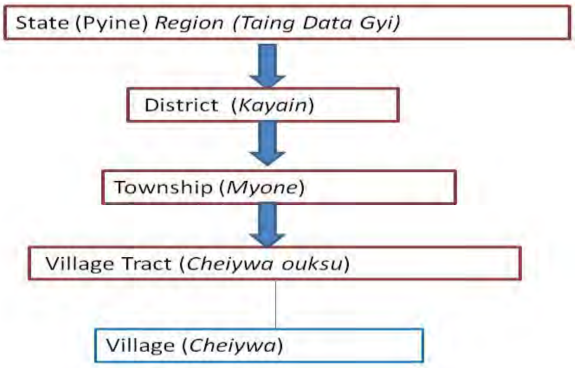
4-1. Rural Administration Structure[82]

The current local administrative structure is shown in Figure 4-1. Currently, the structure

[82] These descriptions are based largely on Okamoto (2014).

includes seven states, seven regions, and a union territory (*Nay pyi taw*). The administrative units within the states and regions are districts (*kayain*), townships (*myone*), and wards or village tracts. Generally, several villages (*cheiywa*) comprise a village tract (*cheiywa ouksu*). The number of villages in a village tract can vary widely depending on the area. For example, in the central dry zone, village tracts have three to five villages on average. On the other hand, in the Shan state, village tracts can contain more than 10 villages. In the southern part of Ayeyarwady and Eastern Shan state, the village tract was likely formed merely for administrative purposes in recent years and its villages are scattered; some village tracts contain 40 villages. The sizes of villages vary according to the area; some are small (17–35 households), while others are larger (150–450 households).

Figure 4- 1 Local Administrative Structure



Source: Okamoto (2014).

(1) The Village Tract

The village tract represents the lowest official administrative unit. In other words, it serves as the channel that connects the village and the township. Under the new Ward and Village Administration Act of 2012 (Act of 2012 hereafter), the head of the village tract is chosen by the residents of village tract during an election. The head is called *ouk kyo hmu* under the new Act of 2012. It seems that in most cases, those who were heads of village tracts before the election were reelected in 2012.

Before the enactment of the 2012 Act, the heads of the village tracts were normally chosen from the headmen of the villages within the same village tract. However, some variations existed in how the village tract head was chosen.[83] In some village tracts, the headman of the *main*[84] village (normally that with the largest population) was automatically selected as the head. In other cases, all the residents of the village tract selected the head. The most frequent pattern was that the township selected the head from a list submitted by the village tract. The last case was intended to allow townships to exercise authority over the village tracts. The appointed person may retain the position long-term if he meets the expectations of the township and maintains his position as the headman of his own village.

These village tract headmen are called to monthly or bi-weekly township meetings, at which government policies and instructions are the major agenda items for discussion. Headmen are expected to deliver instructions to each village in their village tract. Little horizontal linkage exists between the villages, even within the same village tract. This is especially true for village tracts containing a large number of villages.

(2) The Village

Compared to the village tract, the village has more autonomous features and functions. It is

[83] Village tract heads will henceforth be selected through a uniform process under the new law. However, the elections were not held until the time of the survey in December 2012.

[84] In some village tracts, parallel to population increases and decreases in available residential areas, a proportion of villagers will move out of an existing village and form a new village. In this case, the original village would be regarded as the "main" village (*ywa ma*).

evident in the way village headmen (called *yar ein hmu,* or hundred-house heads, at the village tract level under the Act of 2012*)* have been selected. In almost all cases, the village headman is chosen by the consensus of the whole village. Intervention by the township at this level is quite rare. In many cases, one person from each household is called to a meeting and the headman is selected by their vote or a show of hands. In selecting the village headman, personal qualities, such as respectfulness and power to command, are important. In addition, because no official monetary reward is provided for the position, these headmen tend to have a strong enough economic standing to be able to spend unpaid time focusing on village issues on a "voluntary" basis. [85] Because not many people meet these qualifications, a headman tends to retain his position for a considerable time as long as he has no problems such as age, health issues, or lost popularity among the villagers. It is not rare to have a headman in the position for more than five years or to find that the same person is re-elected after a certain interval.[86]

At the village level, other actors support the village headman in village affairs, including the ten-house heads (*se ein hmu*) village elders (*yammi yappa*), and, in some cases, monks. The ten-house head is the leader of a group consisting of approximately ten geographically clustered households. The number of households in a group is not necessarily limited to ten. As the number of household increases, some groups may come to include 20–30 households. In contrast, some village headmen intentionally reduced the size of a household group from ten to eight members because he believed that this would help the system work more efficiently. Generally speaking, the ten-house head is responsible for various issues related to the households in his group. If a dispute between households occurs, the ten-house head tries to settle it. Only when he cannot resolve it is the issue brought to the village headman.

In addition to ten-house heads, some villages appoint hundred-house heads (*yar ein hmu*)[87] who act as coordinators for the ten-house heads. Generally, a village with a large number of households will have hundred-house heads to lessen the burden on the village headmen.

The other influential actors—village elders—are generally senior male villagers who are knowledgeable, have the capacity to exercise certain influence over fellow villagers, and are respected by fellow villagers. Former village headmen often become village elders because of their perceived trustworthiness and their leadership experience. Usually, each village has three to ten village elders who are consulted whenever important village issues arise.

In most cases, the agenda for a village meeting is more flexible than one for a village tract meeting. The issues discussed in village meetings are not limited to administrative issues; rather, they cover a wide range of matters closely linked to the villagers' everyday lives, such as village development and social and religious affairs.

4-2. Unit of Collective Actions: The Village

As is evident from the organizational differences between the village tract and villages described above, the unit of collective activities we have observed in present rural Myanmar is the village in most cases, especially if these activities involve voluntary actions by residents. Villages have proved to be well-suited for collective action because they are equipped with the following four features to mobilize the resources required for collective activities.

(1) Decision-making mechanism

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85 According to the Act 2012, there will be a salary paid to the headman of village tract, together with some budget for village tract administration. However, there is no particular mention of any salary or reward for the village headman.

86 If we look at the frequency of the cases, these exceptions are evident in the ethnic area; some villages choose not to have a fixed chairman. One Pa-O village in the Nyaung Shwe Township and some villages in the Kyaington Township adopted a system in which villagers take turns in the position every month or every six months.

87 It is little confusing that the head of the village is also called *yar ein hmu* at the village tract level. The idea is that the village headman is one of the *yar ein hmu* (if there are more than one) of the specific village.

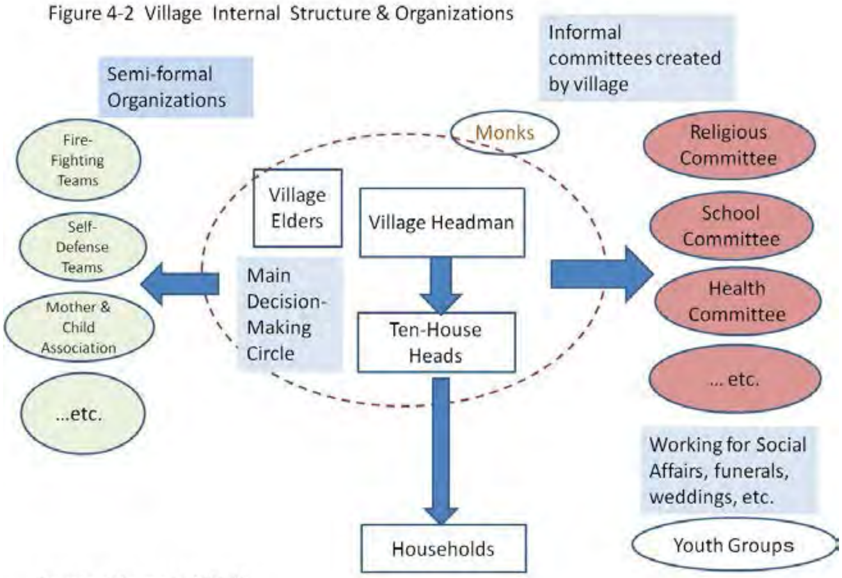
Villages are well equipped to make their own decisions on village affairs, such as village development and social and religious affairs. Village headman, ten-house heads, and village elders play critical roles here. Whenever issues arise, they normally call a village meeting where decisions are made. Fellow villagers, who are generally represented by one member from each household, attend the meeting. If the issues are not critical enough to require an all-village meeting, the village headman and the ten-house heads (along with the hundred-house heads, if applicable) will make the decisions. The ten-house heads will then deliver news about such decisions to the households in their respective groups.

Villages also normally make informal rules of their own. These rules are meant to keep village social life stable and peaceful. Typical examples involve prohibitions on making loud noise after a certain time, prohibitions on drinking or fighting publicly, keeping good control over livestock to prevent damage to others' fields or crops, prohibitions on working during villagers' funerals, and policies for seeking help from the village headman and/or ten-house heads in solving difficult disputes. Some villages write these rules down, but others retain them only orally and affirm them at village meetings.

(2) Creating and maintaining village-based organizations

While village governance lies mainly in the hands of the village headman and ten-house heads, which are supported by the village elders, villages in Myanmar are quite distinct because they have several small groups, or committees that manage specific village activities (Figure 4-2). In some cases, village headman may be part of the committee, but in other cases they will just act as patrons. Thus, there is a division of labor in the village activities.

Figure 4-2 Village Internal Structure & Organizations



Source: Okamoto (2014).

For example, in a village with its own monastery,[88] a religious committee is normally formed.[89] The committee takes responsibility for maintaining the monastery and village pagodas and organizes various religious festivals. The religious committee generally consists of senior residents with detailed knowledge of religious affairs (thus, these committees often include village elders). Some religious committees also manage the village's common funds, as will be described later.

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[88] In some cases, a monastery is supported by multiple villages, especially when the number of households is small. This also holds true for schools. In these cases, committees will consist of members representing all villages involved. However, it seems that this is a sort of transitional process, and villages tend to want their own monasteries or schools.

[89] It is generally called *gobaka apwe*. Translated literally, this means "pagoda trustee group." However, it is not limited to the maintenance of pagodas; thus, I refer to it here as a religious committee.

Another example is educational committees. This committee will be responsible for managing the village's school. If there is not a sufficient number of government-dispatched teachers for the number of students or if teaching at higher grades is not yet officially approved by the government, the village may sometimes make arrangements to hire more teachers locally. The committee collects money from parents or from all the households in the village to pay teachers' salaries. Some villages manage this money in the form of common funds.

For social affairs, such as funerals, the youth group (*kalathar apwe*) in the village plays an important role. Normally, male and female groups are responsible for assisting in villagers' weddings and funerals[90] by preparing meals and attending as guests.

The organizations described above exist in almost all villages. However, these are not the only committees found in rural Myanmar. What should be emphasized here is that villages act quickly to establish *new* committees or groups if a need arises. Consider the case of a village that wants to purchase a large generator to provide electricity to villagers at night, even for a short time. The village would likely to form an electricity committee to formulate and implement a plan to make this happen.

(3) Resource mobilization mechanisms

Once an organization such as a committee is established or when initiatives are set, the village must mobilize its resources to implement the goal. The main actor in this process is the ten-house head. If any village-wide collective actions are being decided under the guidance of the village headman, the ten-house head will pass on the relevant information to the households in his group and monitor their participation and work. In a similar vein, if the village decides to collect money for certain activities, the ten-house head will often take responsibility for collecting it from each household in his group.

In the event that labor needs to be mobilized for village-based activities, villages depend on a custom called *loukar pei*,[91] in which one member from each household is called on to provide free labor. This type of labor mobilization is often used for village road maintenance and to clean the village monastery, ponds, schools, and other structures. Villages may vary in the number of days per year during which such labor will be mobilized, but most average from four to ten days. If the village begins large-scale collective work, such as road construction or school construction, each person may devote a considerable number of hours to working on the project, often reaching up to 20 to 30 days. A household may be exempted from this obligation if the householder who is best able to contribute is out of the village (either for travel or work) or is ill. In some cases, those who cannot participate in these collective projects must hire another laborer to meet their obligations. Some villages may set strict rules so that anyone who fails to participate without a legitimate reason will face a penalty, such as having to transport a bullock cart of sand alone.

Another common type of labor mobilization also exists for village night guards. These guards were formerly quite common in villages in the dry zone region because these villages were typically equipped with village gates as entry points. Such gates are no longer currently in use in most of the villages because security conditions have improved substantially since the 1990s; thus, no night guards are now needed. Nevertheless, the experience also shows that villages have the capacity to mobilize labor in other areas. On the other hand, in the southern part of the delta region, the night guard practice is still observed. Typically, villages in this region are located along a riverbank and do not have gates. Because waterways are the main means of transportation, the night guards are placed at the villages' jetties. One or two households take turns checking on anyone entering the village and watching for the theft of boats.

Because of the general economic level of the villagers, households experience cash collection less frequently than they do labor mobilization. Nonetheless, villages have the capacity to collect cash for various purposes, especially those that satisfy the villagers' common interests. In some cases, the village decides to keep the collected money (together with the donated money) as common funds.

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[90] Some villages may have a special association for supporting funerals (*narye athin*).

[91] This term is also used for forced labor, which was practiced under Myanmar's military regime. The existence of these forced labor practices is one of the main reasons for international criticism of Myanmar, especially by the ILO. However, what is described here is different from those practices. This type of labor mobilization is arranged by the village itself.

Practices for common funds will be described in a later section.

(4) Enforcement

Even if certain consensus-building, decision-making, or resource-mobilization mechanisms are built into the village, these will not be effective unless accompanied by sufficient enforcement power. As previously described, the village headman is generally selected according to his personal qualities, including the power to exercise authority over villagers. Village elders and ten-house heads generally have similar personal qualities as well, although the extent to which they possess them may vary. Thus, the decisions made by these leaders, with the agreement of the villagers, are mostly respected.

As previously noted, villages keep their own informal rules. If these rules are broken, informal punishment is imposed. Some villages use fines for this purpose. However, the penalties are not always monetary. In one village, rule-breakers were compelled to donate six feet of corrugated iron to be used for the roof of a library the village was constructing. A more common form of punishment is additional labor because it can be imposed easily even on the poorest villagers. Labor punishments include repairing the village road, weeding the school and monastery compounds, and cleaning the monastery.

4-3. Examples of Village-based Collective Actions for Rural Development

Let us now turn to some concrete examples of how village-based collective activities for rural development are conducted. Table 4-1 summarizes the collective activities found in the author's survey, covering 58 villages in various parts of the country (Magwe, Mandalay, Ayeyarwady, Sagaing Region , Shan State) conducted between 2010-2014.[92]

Table 4- 1 Collective activities in the surveyed village

	Activities	Magwe & Nyaung Oo	Kalaw & Nyang Shwe	Ayeyarwady	Pin Oo Lwin	Sagaing	Kyaington
	Number of villages	17	10	12	6	6	7
(1)	Hiring/Supporting schoolteachers	10	6	6	1	2	0
(2)	Managing common funds	17	6	8	4	4	5
(3)	Constructing school, clinic, road and pagoda	7	6	2	0	0	1
(4)	Conserving traditional village forest	1	3	0	0	0	3
(5)	Village-wide community forestry scheme	12	9	0	0	0	7
(6)	Organizing electricity supply for entire village	8	2	0	4	0	0
(7)	Managing mechanized wells for water supply	3	0	0	0	1	0

Note 1: # This excludes forestry under the community forestry program introduced by the government.
Note 2:Ayeyarwady includes villages in Labbuta, Bogale, and Pyapon Townships.
Note 3: Only 12 villages introduced community forestry in Magwe and Nyaung Oo.
Source: Author's field survey.

The variety and number of collective activities vary among the regions, but a significant number of the villages engage in voluntary actions on a village level. The following sections provide detailed descriptions of some collective activities.

(1) Maintenance of natural resources

The community forestry scheme was introduced by the government in the mid-1990s. Under this scheme, a forest user group is allowed to utilize the land for 30 years as long as it follows the rules and obligations of the community forestry program. Some villages used this scheme to formalize their forest conservation and use activities. While a village lists specific names of some villagers on the official application, they can be only nominal participants who are included only for the sake of procedure. Some villages hold that the forest should be managed by all villagers and thus may require them to contribute to its management (i.e., fire prevention, replanting). Forest resources are used to meet the public needs of the village, whether in the form of lumber or in the form of cash.

[92] Part of the survey is funded by the Institute of Developing Economies-JETRO, as well as a Grant-in Aid from the Ministry of Education.

One village in the Nyaung Shwe Township initiated community forestry to protect the forest (29 acres) that villagers had utilized for a long time. The motivation behind their application was a fear that the forest would be included in a livestock zone being planned on land adjacent to the forest. After their application was approved, the villagers planted 200 seedlings per person. Once they harvested some branches, they sold them for one million kyat. The village decided to use the income to install water pipes in the village.

Another village in Kyaington applied to establish a community forest to protect the forest (50 acres) the villagers depended on. The forest provided wood for the villagers and was an important water source. However, the villagers were afraid that the forest would be encroached upon by those from other villages. The user group in this case consisted of all the villagers, who took turns monitoring the forest and preventing fires during the dry season. The villagers agreed that everyone would collect a cartload of wood on the same day to use in the next year.

Finally, a village in Magwe successfully nurtured the trees in its community forest plot despite unfavorable condition. They planted eucalyptus, which grew to a good size after 15 years. One villager became the guard for the community forest and obtained the right to harvest plums from the community forest plot as his reward. The village has used logs from the forest several times for public infrastructure needs, such as utility poles, livestock feeding places, and school construction.

(2) Building small-scale infrastructure

Some villages have been successful in mobilizing village resources to develop small-scale infrastructures, such as an electricity supply, a water supply, and connections of roads. A typical means of providing electricity currently practiced in rural Myanmar is to purchase a large-scale generator. One village in Kalaw did this and placed the generator in their monastery. Electricity was provided for three hours every evening between 18:00 and 21:00. The cost of electricity per household was determined by the number of electric appliances (i.e., if the household possessed a TV set, the charge would be 10,000 kyat plus 5,000 kyat for one light bulb). Two households took turns bearing the fuel costs, and each household provided 1,000 kyat per week as a maintenance fee.

Larger-scale programs for providing electricity were found in the village of Kalaw. Exploiting its proximity to town, the villagers decided to negotiate with Myanmar Power Enterprise (MPE) to place a transformer within the village area. When they learned that the total cost would be 100 million kyat, they formed an electricity committee and decided to collect money from each household for three years to meet the cost. The fee each household had to bear ranged from 400,000 kyat to 800,000 kyat, according to each household's income level. After the transformer was in place, the committee began collecting fees according to each household's number of electric appliances. If the committee received a surplus after its fees were paid to the MPE, the rest was kept in a fund to repair the transformer in the future.

One village in Magwe utilized a very old mechanized well provided by the government in the 1960s for its water supply. Initially, the water committee in the village sold tickets to villagers based on the amount of water they needed, but this did not work out well. Thus, in 2009, the village decided to auction off the lease for the well at a cost of 250,000 kyat for three years. The lessee could collect the fee from the buyer at the price decided on by the village, which was based on the current price of diesel fuel. In 2011, donations to dig another well were requested. The village needed to prepare for an engine, a dynamo, and a water tank. Thus, all the households paid 25,000 kyat, 10,000 kyat, or 5,000 kyat according to their economic status, which was determined by the number of bullocks and the size of their land holdings. The village planned to hold another auction to determine the new lessee for the old and new wells.

One village in Ayeyarwady decided to pave the road that ran through the village. A local NGO (non-governmental organization) provided the materials to pave 30,000 feet of the road. The rest (20,000 feet) was paved using money and labor from the villagers and cost around 2.5 million kyat.

Another village in Aungban launched construction of a road connecting the village to the main road. The Aungban Town Development Committee first initiated the road construction, but construction stopped when the road was halfway to completion. Therefore, the village decided to complete it using labor from its residents; each household was expected to contribute five days of labor to the project.

(3) Building schools, supporting teachers

Public educational services should be the responsibility of the public sector; however, this is not always the case. Mainly because of government budget shortfalls, the number of local schools and teachers (even for primary education) has been inadequate in many parts of the country. In those areas, some villages take the initiative to construct their own schools and hire teachers and in some cases receive some external assistance.

One village in Nyaung Shwe built a primary school in 2008. About half of the cost was provided by the government, and the rest was provided by the village. The village collected sums ranging from 10,000 to 50,000 kyat several times from each household to meet the cost. The amount of money collected was, once again, based on the economic status of each household.

One village in Kalaw established a primary school in 2005 with the support of a local NGO. Because this school was not yet approved by the government, the village hired two teachers. All the households were expected to provide 15,000 kyat per year and some rice as a salary for the teachers. In cases in which not all households were expected to contribute, the parents of students contributed to the salaries of teachers hired by their village.

(4) Managing common funds

Some villages keep common funds for various objectives, such as religious affairs, education, health, or general development (Table 4-2). These common funds can come from villagers' money or from outside donations. Some of these funds are lent out to villagers with interest so the fund will grow with time if managed properly. These funds are exclusively managed within the village, which means that the only people who can borrow from the fund are villagers, over whom the village has both enforcement power and sufficient information on creditworthiness. The reason for this is quite simple: reducing the transaction costs of managing the fund.

Table 4-2 Common Fund Cases and the Share of Internally Mobilized Funds (%)

Type of Fund	Magwe& Nyaung Oo		Kalaw & Nyang Shwe		Ayeyarwady		Pin Oo Lwin		Chaung Oo		Kyaington	
Number of Villages	17		10		12		6		6		7	
	Total Cases	%	Total Cases	%	Total Cases	%	Total Cases	%	Total Cases	%	Total Cases	%
Religion	10	90.0	2	100.0	2	0.0	1	100.0	2	100.0	2	100
Education	10	70.0	4	25.0	3	33.3	1	100.0	-	-	-	-
Health	10	60.0	-	-	4	25.0	1	0	-	-	-	-
General	3	33.3	2	50.0	2	0.0	1	100	-	-	3	100
Other	4	75.0	3	100.0	-	-	3	66.7	2	100.0	-	-

Note 1: Number of cases are on gross basis. A village can have several common funds.
Note 2: "Other" includes the fund for youth group, management of mechanized well, and support for elders.
Note 3: - indicates no cases reported.
Note 4: Ayeyarwady includes villages in Labbuta, Bogale, and Pyapon Townships.
Source: Author's field survey.

Education fund

One village in Nyaung Shwe has supplemented government-hired teachers' salaries, which are generally kept low, by keeping a common fund. The idea of keeping the fund originally came from a teacher who used to work for the school. Seed money for this fund came from cash provided by the UNDP (United Nations Development Program) in 2000 to purchase boats for students commuting to school and from money provided by other international NGOs. The total amount was initially 600 thousand kyat. The village's education committee, which consisted of nine members, began lending amounts ranging from 50,000 to 100,000 kyat per person to students' parents at the rate of 5% per month. In 2010, the fund reached 2.2 million kyat. The fund not only supplemented the teachers' salaries but also was able to provide free school supplies to students.

Another village in Pin Oo Lwin began a common fund for education in 2009. The seed money was collected whenever a land transaction took place within the village. Because these were donations and not obligatory payments, each household (buyer and seller) provided the amount they could afford. In 2009, the total amount reached 200,000 kyat. The money was then lent out to about 10 villagers at the rate of 3% per month. Those who borrowed money had to repay it within three months. The fund was utilized to provide assistance to students in the form of school supplies or cash. If the amount of funds became low, the committee asked the villagers for additional donations.

Health Funds

One village in Pyapone started a common fund for health in 2010. The seed money consisted of villagers' donations and funds from the WHO. They formed 73 three-member groups and lent 30,000 kyat per group at a rate of 5% per month. Each group was expected to repay the amount in six months. Villagers could borrow money (5,000 kyat to 30,000 kyat) without interest if they get sick; they were expected to repay it within a month.

Funds for the Elderly

To support its elders, a village in Nyaung Oo Township began a common fund with donations from villagers. The money is lent out to villagers at an interest rate of 3% per month. Every year, the villagers hold a ceremony to pay respect to the village elders (the village has approximately 54). During this ceremony, the villagers conduct a lottery, and they provide a sort of pension (40,000 kyat per month) to those who win. One year, 11 elders were eligible for this pension. This village categorized all the households into one to six groups according to economic status, and only elders belonging to the three lowest income groups of households were eligible for this pension.

Religious Funds

In Myanmar, robes and other necessary goods are donated to the village monks during an annual event (*kathein*). One village in Nyaung Shwe began a common fund to support this cause in 2007 by first collecting donations from the villagers. The responsible committee then decided to lend any unused monies to villagers at a monthly interest rate of 5%. In 2011, the loan amount was 30,000 kyat per household, and, in principle, all households in the village were expected to borrow. If some households were unwilling to borrow the money for any reason, such as a fear of failing to repay the money, the ten-house heads were responsible for borrowing the money on their behalf. This meant that a ten-house head might have to borrow up to 300,000 kyat if his group consisted of ten households.

General Funds

All the funds previously described were formed for specific objectives, such as education, health, or religion. In fact, a majority of the funds in rural Myanmar are one of these types. However, some funds are kept for more general purposes.

A village in Kyaington initiated a general common fund upon establishing the village. They began the fund using villagers' donations (100,000 kyat). It has now reached 1 million kyat. Unlike the previous examples, the village does not increase the fund by lending the money out with interest. The fund is utilized for religious activities, funerals, weddings, and village development (roads, churches, and school maintenance). When the village needs funds for educational and health purposes, the village provides 50,000 kyat to 100,000 kyat without interest.

Another exceptional but interesting case is found in Magwe. The village began a government-led community forestry program in 1996. As part of the scheme, it received 100 bags of fertilizer for planting seedlings. Because the weather was favorable that year and the villagers believed that the planting would go well without fertilizer, they sold the fertilizer and received 100,000 kyat. They used it as seed money for a common fund and began lending out sums at the rate of 5% per month: 20,000 kyat was lent in the first round and 10,000 kyat was lent in the next round. The borrowers had to make repayments every four months. When the total amount reached its peak of 2.4 million kyat, the village used the money for village development activities, including repairs to a mechanized well and the school's roof. Usage of the fund was mainly determined by the village headman, one-hundred house heads, and village elders; the way in which the funds were used was reported later at the village meeting. However, as the scale of the fund grew, the village headman proposed the formation of a

Village Development Leading Committee to manage the fund. Its main purpose was to ensure that the usage of the money remained transparent to villagers. The committee consisted of 11 members selected from each road of the village. The village headman took responsibility for the bookkeeping. The fund was used to repair school buildings in 2008 and 2013.

As previously described, funds can be mobilized in a wide variety of ways and can have varying objectives and management. These variations are determined by the needs and resource mobilization capability of each village. One general tendency found in the surveyed areas was that the resource mobilization capability seemed stronger in the central dry zone (Magwe and Nyaung Oo) and hilly areas (Kalaw, Nyaung Shwe and Kyaington) than in other areas. This tendency is mainly rooted in the histories of the villages, the extent of their experience with resource mobilization activities, and the perceived value of the benefits of such community activities. If the residents of a village do not perceive any benefit, the related activities will fail or become unsustainable.

Conclusions and Policy Implications

The following are conclusions and recommendations to promote rural development through community participation:

1) For community-based development projects, the basic unit most capable of mobilizing resources (monetary and human capital) is the village, not the village tract.

2) A well-functioning village should be equipped with the following mechanisms and capable of the following functions: i) a decision-making mechanism; ii) the creation and maintenance of village-based organizations; iii) resource mobilization mechanisms; and iv) enforcement mechanisms.

3) Village-based collective actions can be most successful when they meet the public needs of the village's residents, such as education, health, religion, and infrastructure.

4) Rural development projects can be very effective if they are designed to draw from the full potential of the village's resources. If any village is not fully aware of its potential itself, inputs from outsiders (including the information of the successful cases in other areas/villages) may help them to nurture their capacity to mobilize resources for their development efforts.

5) If a certain project needs capital that cannot be raised within the village, matching funds from donors or the government can be useful. Even in government-led programs, some internal mobilization could be effective for raising a sense of ownership among the village residents.

6) Even given the same structure, different villages will have different resource mobilization capacities and organizing capabilities depending on their location, their experience with collective actions, and the goals of their collective actions. Therefore, policy makers and project organizers should be aware of such possible differences and try to carefully identify what is suitable for specific areas and villages.

7) As previously noted, a village has capability to form committees of various kinds for specific objectives when there is need. However, with the increase in projects in rural areas in the past three years in Myanmar and in response to these projects' demand, some villages may now have more committees than they can actually manage. Some balance should be maintained in forming committees and actual projects.

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5. Community Forestry and Shifting Cultivation Stabilization Policy

The Ministry of Agriculture and Irrigation (hereinafter MOAI) and the Ministry of Environmental Conservation and Forestry (hereinafter MOECAF), Myanmar made an agreement with the Japan International Cooperation Agency (hereinafter JICA), Japan to conduct policy research including a field survey in order to propose policy recommendations as part of the two-year action plan of the joint research by the Agriculture and Rural Development Working Group, which is one of the working groups of the Program for Myanmar Economic Development by JICA (FY 2012-2014).

Of the formally accepted research topics, we conducted policy research related to the following two topics.

(i) Research on the land use system: This topic was expected to consist of (a) land classification and utilization as it relates to the Vacant, Fallow, and Virgin Lands Management Law enacted in 2012 as well as the handling of farmland in Permanent Forest Estates (PFE), and (b) forest and land policy in the face of climate change (mitigation/adaptation).

(ii) Research on border area development: Land classification and utilization policy including the issue of shifting cultivation was considered to be one of the most important topics to be dealt with in order to establish an appropriate development strategy for border areas in Myanmar to harmonize economic, social and environmental benefits.

In the process of discussions with relevant staff members of MOECAF, we decided to focus on the following two research topics in accordance with the policy needs of the Myanmar government.

- Focal topic 1: Stabilization of ***taungya*** or upland farming system to support sustainable rural development to improve the standard of living, social justice, and environmental conservation.
- Focal topic 2: Activation of **Community Forestry** to contribute to sustainable rural development.

These two focal topics should be considered in connection with a **climate change policy** (mitigation and adaptation) that is reasonable under the formally accepted research topics "(i) research on land use systems" and "(ii) research on border area development." In the Central Dry Zone Area we focus on focal topic 2, while in border areas, specifically the north part of Shan State, we study both focal topics 1 and 2.

5-1. Understanding the Status Quo

5-1-1. Forest and Land Use Policy

We collected information on national forest-related policies at the Forestry Department, the Forest Research Institute, and the Forestry University by holding discussions with relevant staff members and obtaining documents on policy implementation in the fields at relevant offices and villages in Mahlaing Township, Meikhtila District, Mandalay Division and Yasagyo Township, Pakokku Distict, Magway Division through interviews and field observation. Current situations are summarized below.

Land use policy

The Land Use Scrutinizing Committee on Land Use and Land Allocation that was organized in 2013 made the recommendations shown below as a result of the survey to grasp the present situation of actual land use such as the area occupied by people in permanent forest estates (hereinafter PFE).

- Village land, paddy field ("*le*" in Burmese), and religious/communal land are to be released from PFEs and legalized as registered land.
- Farmland ("*ya*" in the central area and "*taungya*" in the border area) and home gardens ("*uyin*") are to be legalized by issuing a certificate of Community Forestry, by which people will be able to obtain permission to utilize the land for 30 years.
- Perennial cropland is to be legalized by permitting long-term leases in PFEs.

Most of the issues caused by illegal land use (730,000 ha) in PFEs would be settled if the recommendations were followed. The area of shifting cultivation (*shwetpyaung taungya*) in border areas, however, is not included in the committee's data, while the total area of shifting cultivation (estimated area: 2,430,000 ha) is more than three times as large as the illegally used land mentioned above. In order to tackle the issue of shifting cultivation, the Forest Department (hereinafter FD) started to develop models, especially demonstration plots of agroforestry-type community forests, to stabilize shifting cultivation in 64 forest-districts in the nation.

The FD of MOECAF has the authority to manage forest vegetation even in the land category of Vacant, Fallow, and Virgin Lands that were formerly categorized as unclassed forest by the FD, while the Settlement and Land Records Department (hereinafter SLRD) of MOAI has full authority over the land. Given this situation, the FD might lose their authority if the forests on the land were to be lost or changed into land for other uses. It is very important to conserve the forests outside PFEs for the people of Myanmar to maintain and upgrade the environmental and ecological conditions by maintaining the authority of the FD over the vacant, fallow, and virgin lands as a guard watching over environmental issues.

Both of our focal topics mentioned above are relevant to the current policy agenda in Myanmar. Fujita (2012) summarized the main issues of agricultural development in Myanmar into three: (1) sustainable management of forests, (2) ecologically sound agricultural development, and (3) appropriate development of cultivable wastelands. Focal topic 1, a strategy based on the reality of *taungya* (upland farms) including both recurrent (shifting) and sedentary (permanent) types, is related to issue (2). Focal topic 2, the contribution of Community Forestry, is connected to issue (1) in cases where the land category is PFE and with issue (3) in cases where the land category is vacant, fallow, and virgin lands.

Policy for Community Forestry

According to the Forestry Sector Master Plan, the target area of authorized Community Forestry (hereinafter CF), i.e., 30-year land leases to Forest User Groups (hereinafter USGs), was around 918,700 ha (2,270,000 acres) during the 32 years from 2000 to 2031. The cumulative CF area in 2013, however, was only 4.6% of the target area or 42,148 ha (104,148 acres) managed by 715 USGs.

Most national land is under the authority of the General Administration Department (GAD) but is managed by the SLRD and FD. When people wanted to get a certificate for CF for land controlled by the SLRD (that is, Vacant, Fallow, and Virgin Lands), they had to apply to both offices, the SLRD first and then the FD after getting permission from the SLRD. It took time and was complicated, which caused their reluctance in pursuing the process.

To increase efficiency, the first roundtable meeting to coordinate relevant organizations was held in August 2012. As a result of the meeting, relevant stakeholders agreed to establish the CF National Working Group (CFNWG) in 2013, of which the director general of the FD was assigned as the chairperson. The third roundtable meeting held in March 2013 summarized nine issues to be tackled: (1) the difficulty of obtaining certificates for land under governmental jurisdiction, (2) lack of funds, (3) incompleteness of Community Forest Instruction (CFI) such as ambiguous definitions of community, agroforestry, and usufruct, (4) limited capacity of the FD and NGOs, (5) lack of coordination between the FD and other relevant organizations, and insufficient cooperation between the FD and NGOs, as well as among NGOs, (6) the absence of persons and departments/sections in charge of CF in the FD, (7) poverty in the community, (8) insufficient legal support to protect CF from outsiders, (9) lack of vesting rights in the people to select tree species such as rubber.

Based on such understanding, the FD is pursuing the process of revising CFI as well as considering amendment of forest law to add CF-related articles. The Forest Research Institute (hereinafter FRI) has been proactively carrying out a field survey for the purpose of developing CF policy in cooperation with RECOFTC.[93]

It is obvious that CF policy is now at a turning point and stands to be mainstreamed into Myanmar forest policy. Our policy recommendation is expected to contribute to the process.

Policy for REDD+ mechanism

The planning and statistics division of the FD has been devising measures to deal with the REDD+ issues. International donors supported the activities: (1) UN-REDD supported the draft of a four-year roadmap, (2) KOICA cooperated in regional workshops and training as well as conducting a pilot project in the Bago region, (3) ITTO will provide three years of assistance for capacity building, (4) Asian Aerial Survey, sponsored by the Forestry Agency of Japan has been supporting training and technical transfer at Taunggyi.

As a result of discussions with relevant FD staff members[94], the important issues for the government to introduce the REDD+ mechanism are summarized below:

(1) Lack of human resources and technology for monitoring, reporting and verification (MRV),
(2) Weakness in terms of social safeguards, especially the difficulties in ensuring the people's participation due to poverty and ignorance, and the existence of troublesome land holding issues,
(3) Difficulties in clarifying the benefit sharing.

Our policy recommendation will be expected to give direction to tackle these issues.

5-1-2. Significance of Forest Resources and CF in Central Dry Zone Area

Reserved forests (national property) in the Central Dry Zone Area[95], which are located near the villages, have been a source of essential resources, such as firewood, for the local people to maintain their livelihoods. Woods on farmlands (*ya*) (private property) as well as the vacant, fallow, and virgin land (village common property) also have important roles as they provide firewood and timber for housing. The growing scarcity of land has caused quarrels over land use legitimacy. Acquiring certificates of CF would be an incentive to use land legitimately.

There are two types of CF: agroforestry in a reserved forest, and natural forest management on vacant, fallow, and virgin land. In cases of agroforestry CF in a reserved forest, the land was occupied by individuals before introducing CF and agroforestry practices for CF are done individually. Then USGs divided the land into individual plots for CF management based on private economic incentives. The trees on CF lands have been depleted as a result of harvesting trees as timber for housing and firewood for daily life and grazing goats by other villagers freely in the CF lands. It was worthwhile, however, for the landless peasants who became a member of the USG to get the farmland legally.

In cases of natural forest management CF on vacant, fallow, and virgin lands, the USG tried collective management for timber and firewood collection to benefit the entire USG. However, they were planning to change their strategy because of difficulties in collective action by allocating the land into individual plots to introduce individual management.

The ratio of households of landless laborers to whole rural households in Myanmar is 30% (Fujita, 2012). Ideally, it was expected that most of the landless people would join a USG to participate in the CF activities. In reality, however, there are obstacles for the poor, including the landless, to take part in CF because they were so preoccupied with living from hand to mouth in their daily lives. It could be

[93] The Center for People and Forests, located in Bangkok.
[94] The situation may have changed after the interview was conducted in August 2013.
[95] This session is based on the field survey conducted in August 2013 at the two villages Ngatabon Myauk village, Nasengo village tract, Mahlaing Township, Meiktila District, Mandalay Region and Kanthit village, Kanthit village tract, Yasagyo Township, Pakokku District, Magway Region.

said that CF would make only a limited contribution to improvement of the livelihood of the rural poor.

5-1-3. Changes in Upland Farming System and Trial of CF in Northern Shan State

Though changes in cropping systems are diverse in mountainous mainland Southeast Asia, including Shan State in Myanmar, three sets of changes can be identified (Perkasem et al, 2009). These are (1) land use intensification, or the move towards shorter rotation cycles for shifting cultivation and conversion to permanent cultivation, (2) commercialization, or conversion from production for subsistence towards more commercial production, and (3) opium eradication, or the special case of opium replacement. These changes, especially the land use intensification and commercialization, were confirmed by our observation in northern Shan State[96].

Land use and farming system

The Shan in the northern part of Shan State cultivated upland rice for self-consumption in upland fields (or *taungya* in Burmese, Lin Hike in the Shan language). This cultivation system could be called a "recurrent type of swidden agriculture" in academic terminology. Former swiddens, or the lands after harvesting crops, were categorized into young bush fallow (or Laung Noon) with many weeds and matured forest fallow (or Laung Kyae) with few weeds. They do not cut the young bush fallow (Laung Noon), but cut the matured forest fallow (Laung Kyae) to make swiddens again, followed by a series of manual operations such as burning, hoeing, sowing, weeding, and harvesting. A customary land tenure system was not clearly delineated.

The Shan introduced cash crops such as sugar cane and local varieties of maize in the early 1980's (about 30 years ago), and adopted plowing with water buffalo almost simultaneously (about 20-40 years ago) in the upland farming system (or *taungya* system). Far behind the liberalization of agricultural crop sales in 1987, which caused a rise in prices and motivated people to increase the production of farm products, the people started to cultivate hybrid varieties of maize (namely CP888) in upland fields (or *taungya*) in the mid-1990s. Land scarcity due to population increase raised people's sense of ownership toward *taungya*. Thus the land ownership of *taungya* in the village was clearly defined to avoid conflict among the people by way of adjustments that were mediated by the village head. The process of conversion to permanent cultivation had been moving ahead. Current main crops in *taungya* are hybrid varieties of maize, sugar cane, and upland rice.

People in Nawng Ang village, where they have *taungya* in a reserved forest, have matured forest fallow (or Laung Kyae) even now; people in Pin Paw and Lone Kyein villages, where their *taungya* are located in vacant, fallow, and virgin land, do not have them anymore. There were three villages, however, in which the people have young bush fallow (or Laung Noon).

The people in Nawng Ang and Pin Paw villages produce hybrid varieties of maize by cutting young bush fallow (Laung Noon) that is regenerated for two to three years after a harvest. Their farming operations consist of cutting young bush, burning, plowing with water buffalo, sowing seeds, spreading chemical fertilizer, weeding by using herbicide, harvesting, drying, and threshing. On the other hand, people in Lone Kyein established a standard crop rotation system, in which they cultivate rice in the first year, hybrid varieties of maize in the second year, and sugar cane in the third year. After this initial rotation, they cultivate rice in years in which the soil condition is good and cultivate sugar cane and hybrid species of maize alternately in years with poor soil. Thus the conversion to permanent cultivation, without cutting fallow and burning, has mostly been completed.

The land categories in the villages after reflecting current land use mentioned above are shown below:

[96] This session is based on the field survey conducted in November-December 2013 at the three villages Nawng Ang village in Chaung Chauk village tract, Pin Paw village in Pin Paw village tract, and Lone Kyein village in Pin Paw village tract, all of which are located in Kyauk-me Township, Kyauk-me District, Shan State.

(1) residential sites (Lin Wunt), (2) paddy fields (Lin Nar): no paddy fields in Pin Paw village, (3) upland farms (Lin Hike) or taungya including fallow land (Lin Laung), (4) cemeteries (Lin Bar Hayok), (5) village spiritual land (Lin Saung Muan), (6) water spiritual land (Lin Saung Num): Pin Paw village has such land, (7) monastery land (Lin Kyaung), (8) closed primary forest (Htann Lone): far from the residential site in Nawng Ang village, has never been any in Pin Paw village, disappeared 15 years ago in Lone Kyein village, (9) open primary forest (Htann Kyae): many in Pin Paw village, disappeared 15 years ago in Lone Kyein village, (10) rocky mountain (Haphar): only in Pin Paw village, covered with primary forests, but not suitable for farming due to a steep slope and rocky condition.

Questionnaire survey conducted by FRI in March 2014 revealed that Average area of operational farmland per household in Nawng Ang is 7.3 acres out of which paddy fields (Lin Nar) is only 0.7 acres: in Lone Kyein is 8.1 acres including 0.4 aces of paddy fields. It shows that most of the farmlands for both villages are taungya (Lin Hike).

Table 5-1 shows the situation of taungya (Lin Hike) in both villages. On average, a household has 6.6 acres of taungya in Nawng Ang and 7.6 acreas in Lone Kyein, while a household in both villages has almost the same number of plots or 1.6-1.7 plots of taungya. In Nawung Ang, 114 plots out of 120, or 95% of their taungya plots have been using continuously for more than 12 years: 140 out of 147, or 95% of the taungya plots have been using continuously for more than 13 years in Lone Kyein. It means that "recurrent type of swidden agriculture" has almost declined for more than 10 years.

The table also shows that 32 plots out of 120, or 27% of taungya plots are located in Reserved Forest in Nawng Ang: conversely 89% of taungya plots are located in Vacant, Fallow, and Virgin Lands in Lone Kyein.

Table 5-1 Taungya (Lin Hike) in two villages

Village	Classes by operational farmland area (acres)	The number of HH	Total number of plot	Average number of plot per HH (acres)	Average area per HH (acres)	Present situation				Average duration of continu ous use per HH (years)	Legal category of the land		
						under cultiv ation	young fallow	old fallow	un-clear		Reserv ed Forest	Vacant, Fallow, and Virgin lands	un-clear
Nawn g Ang	0	3	0	0.0	0.0	-	-	-	-	-	-	-	-
	-4.9	21	25	1.2	2.4	25	0	0	0	15.7	5	20	0
	5.0-9.9	25	52	2.1	6.5	48	3	1	0	12.2	21	30	1
	10.0-19.9	18	36	2.0	10.8	35	0	0	1	13.4	3	33	0
	20-	2	7	3.5	22.5	6	0	0	1	19.5	3	4	0
	Whole	69	120	1.7	6.6	114	3	1	2	-	32	87	1
Lone Kyein	0	9	0	0.0	0.0	-	-	-	-	-	-	-	-
	-4.9	16	16	1.0	2.1	15	1	0	0	13.3	3	13	0
	5.0-9.9	42	69	1.6	6.0	67	2	0	0	13.4	11	58	0
	10.0-19.9	19	44	2.3	12.7	40	1	3	0	23.1	3.5*	40.5*	0
	20-	5	18	3.6	32.4	18	0	0	0	25	0	18	0
	Whole	91	147	1.6	7.6	140	4	3	0	-	17.5	130.5	0

Source: Survey by FRI in 2014

Note: *Part of the toungya is designeted as Reserved Forest: the other part as Vacant, Fallow, and Virgin lands

Legalization of upland fields and trial of CF to stabilize upland farming

Parts of the upland fields (*taungya*) in Pin Paw Village where they are located in the vacant, fallow, and virgin land had already been registered to SLRD; all of the upland fields near the residential site as well as along the road in Lone Kyein village had been registered. The villagers planted trees, provided by the FD, on the land of springs where they believe the spirit of water dwells in Pin Paw village, and have conserved it to present. There is no serious problem in terms of environmental conservation.

The FD has no special activities in Nawng Ang village, where most of their upland fields (*taungya*) are located in reserved forests. In 1988, ten households in Lone Kyein village started to cultivate rice, sugar cane, and local varieties of maize every year on the upland fields (*taungya*) in the reserved forest. They introduced hybrid varieties of maize (CP888) in 1998-2003 to cultivate it as a main crop every year. The FD began the introduction of a demonstration forest in June 2013 in the upland fields (*taungya*) and asked ten households to organize a USG of CF. The main points of the activities are summarized below:

- USG intercropped hybrid varieties of maize with planted trees at an interval of 30 x 30 feet (40 trees per acre).
- USG would prune the trees every two to three years to reduce the shade.
- Members of the USG have ownership of the trees they plant.
- The FD provided seedlings of timber trees and fruit trees. *Gmelina arborea* to improve soil condition and *Cassia siamea* (Mezali) having multi-functions such as firewood and eye lotion are planted in the upland farm, and fruit trees such as mango, jackfruit, avocado, etc. are planted around the upland farm.

The demonstration forest gives the USG members the right to use the upland fields for 30 years, because it is based on the Community Forest Instruction (CFI). They also do not have to be concerned about the reduction of maize production, because they have the right to prune and cut trees planted in the fields. USG members, however, filed a complaint to the government of Shan State about the launch of a demonstration forest by the FD without sufficient consultation with them. This shows us a typical conflict, based on a lot of evidence indicated by a tremendous amount of literature, between the people and forestry administration in the tropics.

Well-balanced rural development

It is important to seek sustainable development that maintains the balance among economic benefits to increase income, environmental conservation, and social justice and fairness. The expansion of a rural finance system in the region seems essential to maintaining the balance among these three aspects for sustainable development.

Myanmar Agricultural Development Bank (hereinafter MADB), PGMF, the Ministry of Cooperatives, and UNDP are expanding their activities in the country. The activities of a credit union named "Wong Metta" are remarkable in Shan State. The CBO Darma Metta currently has 382 credit unions consisting of more than 120,000 members in the country. The fundamental principles of the Wong Metta credit union are shown below:

- Monthly interest: The union fixes the interest rate to 4% at most in the first and second year, reducing it to 3%, 2.5% and 2%, etc. after the third year depending on the condition of each union.
- Deposits: Members come together at the monastery or meeting place in the village to deposit the same amount of money, which depends on their economic condition, throughout the year, ranging from 500 to 20,000 kyat. Members have passbooks to record deposits, debts, and repayments.
- Community Fund: Each credit union settles accounts at the end of the year and fixes the interest. Half of the total received in interest is shared among the members. The other half is contributed to the Community Fund to grant subsidies for funerals, child birth, elderly care, and emergencies such as illnesses, debt repayment, education for children, etc.

In order to seek a better method of rural development, it would be beneficial for us to examine the impacts of these rural finance systems on the people's livelihoods and forest governance, and the differences between members and nonmembers.

5-2. Discussions and Policy Recommendations

It seems to be the right moment for our policy recommendations to make a substantial contribution to the improvement of Myanmar forest policy, because the FD has started preparing to revise Community

Forest Instruction (CFI) and the Forest Law that CF-related clauses would be incorporated into.

5-2-1. Establishing Integrated CF Policy

Within MOECAF, forest-related activities to support the livelihoods of rural people are carried out not only by the FD, but also separately by the Dry Zone Greening Department (DZGD). In order to improve the effectiveness and efficiency of such forms of support, the government should integrate all of the policy measures to support the rural livelihood under the unified umbrella of CF.

MOECAF should try to introduce various activities, even beyond the forestry sector, such as grazing goat and cattle, provision of fertilizer and agricultural machines, and support for microcredit with effective cooperation by the Ministry of Livestock and Fishery, the Ministry of Agriculture and Irrigation, and the Ministry of Cooperatives.

In order to execute the integrated CF policy through coordination within MOECAF and with other ministries, the government should establish a new division under the FD.

5-2-2. Diversifying Main Actors of CF in the Central Dry Zone Area to Ensure Flexibility

According to Okamoto (2012), a survey in 19 villages in Magway Township in Magway Division and Kalaw and Nyaungshwe Townships in Shan State revealed that all the village households were involved in the CF activities even though some of the village households formed a USG to get a CF certificate. This means that the most reliable unit of organization for CF is the village or the lowest administrative body. This might be true in the case of UNDP projects where CF plots were handed over to the villages after planting by the USG.

Our field observation in Meikhtila District, Mandalay Division and Pakokku District, Magway Division, however, did not find such examples, but found that the members of USGs preferred individual management of CF plots. Thus, the appropriate understanding is that there are variations in terms of main actors and units of organization, depending on the locality and conditions. Furthermore, the relationship between the village and USG is a delicate issue, based on the opinion that it is not desirable for only some of the villagers or the USG members to benefit because the vacant, fallow, and virgin lands, in which the CF land is included, should contribute to all villagers, and based on the fact that there are villagers who are not USG members insisting that they have a right to use the CF land based on the logic that any villager can make free use of the village land including CF land.

While CFI specifies that USGs are the main actor for CF, actually there are three CF management types by three main actors in the field: individual management of allotted land by the household, collective management by the USG, and communal management by the village. It is recommended to legalize these three main actors by making a definite statement in the instruction or law.

Takahashi (2012) argues that the difficulties in coordinating interests in order to build a consensus are because of the wide disparity between rich and poor that evolved from the class society in rural area in Myanmar. Given such a situation, it might work well for the village to entrust somebody with the management of village property such as paddy fields, from which the revenue would be redistributed by the village, to reduce transaction costs. In rural areas, special purpose groups or organizations are easily formed due to the reaction of a certain catalyst to accumulative bilateral human relations, for example, associations for community service such as funerals and weddings, pagoda management committees, peace-keeping organizations for the prevention of fire and cattle stealing, associations for the management of drinking water such as management of a water pump donated by an international organization, etc. These groups and organizations, however, lack stability and continuity, as the members resign whenever they feel they have cause to do so. Compared to Japan, the human relationships and personal commitment to groups in Myanmar might be regarded as easily formed and easily broken (Takahashi, 2012). Takahashi (2012) argues that a village in Myanmar might be characterized as “a community for living without cooperation in production,” though there are variations depending on the locality. Based on such understanding, it is important to entrust somebody with the management of the commons to avoid failure of the community and inefficiency, and to guarantee their independence and freedom to quit whenever they want to reduce mental pressure.

In accordance with the characteristics of a "community for living without cooperation in production," we can easily understand the reason for their actions when they quit CF activities that are not generating income, steal trees planted by USG members, and shift from collective management to individual management by partitioning the CF land into individual plots. Even though there is no example for the time being, it is worthwhile to consider introducing the option of a "contract manager" as one of the main actors to be entrusted with managing CF. The contract manager could then be one of the options for the management of plantation forests and conservation activities of natural forests such as watershed management.

In the case of fuelwood forest management (reforestation and harvest) on vacant, fallow, and virgin lands, co-management by villagers implementing management activities in the field and a Village Tract, FD, and DZGD who supervises their activities can be recommended. Another type of co-management in which villagers implement the activities and the FD township office continuously provides seedlings for firewood as long as the forests are managed in sustainable way can also be suggested.

It is indispensable for timber companies to collaborate with the local people to get forest certification for timber sale, when the company would like to manage a teak plantation forest (Maung, 2013). Establishment of a firewood forest as a buffer zone between agricultural land and a teak plantation forest is one possible measure.

Feasible options of main actors for management are summarized in Table 5-2. It is desirable for the local people to select the appropriate option in accordance with their circumstances.

Table 5-2 Options of main actors for the management of CF in the Central Dry Zone Area

<table>
<tr><th>Main actors (actual)</th><th>Management types (theoretical)</th><th>Notes</th></tr>
<tr><td>Group of villagers</td><td>Collective management by the villagers' group</td><td>USG get the certificate of CF and manage the CF collectively.</td></tr>
<tr><td>Individual person</td><td>Individual management</td><td>USG divides the CF lands into the members after getting the certificate of CF or before issue the certificate. Tree management on private-owned land is also feasible.</td></tr>
<tr><td>Village</td><td>Communal management by village</td><td>All of the households become members of USG to get the rights and benefit of CF management.</td></tr>
<tr><td>Contract manager/ caretaker</td><td>Management by contract manager/ caretaker</td><td>After getting the certificate of CF, USG entrust somebody to manage the CF.</td></tr>
<tr><td>Villagers (or village) and Village Tract</td><td>Co-management with village tract</td><td rowspan="3">USG (or village) and Village Tract/ FD township office/ DZGD township office/ timber company share the rights and duties for managing CF.</td></tr>
<tr><td>Villagers (or village) and township offices of FD and DZGD</td><td>Co-management with central government</td></tr>
<tr><td>Villagers (or village) and timber company</td><td>Co-management with timber company</td></tr>
</table>

5-2-3. Illustrating CF Management Models in the Central Dry Zone Area

The people in rural Myanmar have a great deal of experience in the formation of organizations (Okamoto, 2012). Most of them, however, can be considered experience in "community for living" and not "community for production" (Takahashi, 2012), though there are local variations, as mentioned above. This is one of the reasons why USGs are easy to form, but do not easily remain active. It is important to notice that it might be useless to try strengthening villager's awareness of collective action. It is promising, however, to provide clear benefits as incentives for them to participate in the activities of CF.

Concrete benefits of CF for the people in the Central Dry Zone Area are: (1) legalization of land use for 30 years by getting the rights formally recognized, (2) timber production for house construction, agricultural tools, etc., (3) fuelwood production including charcoal making, (4) cultivation of agricultural crops, (5) grazing of goats and cattle, (6) collection of non-timber forest products (hereinafter NTFP) such as fodder, (7) securing water for daily life, etc. If they participate in the REDD+ mechanism in the near future, they would also be able to get carbon credit or cash. In return, the people are requested to practice sustainable forest management (SFM) or conserve forest ecosystems where they are permitted to collect NTFP.

The forest management models for obtaining the above-mentioned benefits are shown in Table 5-3. Applicability of these management models depends on the legal category of CF land, which affects the main actors of CF management. The management model should be revised in accordance with the specific situation of each field.

Table 5-3 Management Model for CF in the Central Dry Zone Area

Model	Benefits	Main actors	Land categories
1: Natural forest management	timber/fuelwood	individuals/FD	reserved forest
		individuals	vacant, fallow, and virgin lands
2: Watershed natural forest management	water for daily life	contract manager / USG / village	degraded reserved forest
3: Plantation forest management	timber/fuelwood/NTFP	contract manager / USG / village	vacant, fallow, and virgin lands
4: Agroforestry	agricultural crops / livelihood / timber / NTFP	individuals	degraded reserved forest
		individuals	degraded vacant, fallow and virgin lands
5: Fuelwood forest management	fuelwood	timber company	degraded reserved forest
		village tract	degraded vacant, fallow and virgin lands
6: Tree conservation	timber/fuelwood	individuals/FD	private farmland

Source: Prepared by authors.

5-2-4. CF for Stabilization of Upland Farming System in Border Area

According to the recommendation by the Land Use Scrutinizing Committee on Land Use and Land Allocation in 2012, the FD plans to introduce CF activities to all upland fields (Lin Hike, or taungya) in the reserved forests. We have to consider the feasibility of the plan.

Introducing CF in permanent and semi-permanent upland fields

First of all, it is indispensable for the FD to spend enough time building a consensus among the people before starting any activities. When people file a complaint to the state government, the state government tends to take action from the standpoint of the people, not of the FD. Thus we recommend that the FD give up asking the villagers to plant trees on their farms and to limit the activities to planting trees and fruit trees around the farms to form hedgerows, for example.

On the other hand, when the FD intends to introduce intercropping in the upland farm, it has to establish an appropriate management system in cooperation with the people, in which trees for timber and fuelwood and fruit trees can be regenerated sustainably without reducing agricultural crop production. The following points should be considered for introducing CF into farms land.

- The intercropping type of CF on farms, the hedgerow type of CF around farms as well as the block type of CF on farms (if farmers have 7 acres, they plant trees in 2 acres) could be applicable to permanent and semi-permanent upland fields (taungya).
- The purpose of cultivating crops by the local people in permanent or semi-permanent fields is to get cash income for their food security. Therefore, the aim of community forestry in their farmlands should be prioritized on providing alternative cash income.
- For sustainable production and utilization of fuelwood, conserving degraded natural forests around and near the farmland and establishing fuelwood plantations should be considered.
- The government should provide support through marketing so the people can get extra income from alternative crops.
- Training shall be provided to voluntary leaders or voluntary youth from the village to be involved as local extension staff in the process of CF development in the farmland.

Introducing CF in shifting upland fields

Compared with permanent and semi-permanent upland fields, the introduction of CF to shifting upland fields is not easy because shifting cultivation is ingrained in their culture and has been established for a long time. A shifting type of upland field, especially the recurrent type of upland field, can be regarded as a component of forest ecosystems, because the secondary forest is regenerated on the same upland field.

Data on such shifting types of upland farming (shwetpyaung taungya / shifting cultivation) were not included in the recommendation by the Land Use Scrutinizing Committee on Land Use and Land Allocation. This means that the government does not have a comprehensive policy and plan to stabilize shifting cultivation. The FD just started to develop models of CF such as demonstration plots in accordance with the conditions of 64 forest districts all over the country.

Here we propose the following principles to find a compromise between the people and FD, all of which should be confirmed with free, prior and informed consent.

- The people shall not open/cut primary forest any more.
- The people shall keep their system in which they shift their upland fields with a certain fallow period.
- The people shall get short-term, medium-term, and long-term income by planting trees such as Mezali (*Cassia siamea*) for firewood, and *Sterculia spp.* for resin in five to seven years, and fruit trees around the upland fields.
- The people shall select one of the two options to make use of the fallows. The options are: (1) let the field regenerate naturally after harvesting crops, (2) plant trees and NTFP to get income from the fallows that will be cut again for the next cropping.
- The people shall make fire-belts to keep fires from spreading to surrounding forest when they cut and burn the bush/forest fallow again.

5-2-5. Selected Issues Related to CF as a Climate Change Policy

Reducing Burden on the Local People

According to the experience of REDD+ projects conducted around the world, the strategies for institutional design of projects in which use of the forest by the local people is restricted are categorized into four components (Scheyvens and Sagara, 2013): (a) introduction of the payment of ecosystem services (PES), (b) increase of the productivity of agricultural land, (c) creation of alternative income sources including agroforestry, (d) reduction of the need for firewood and establishment of firewood forests.

The creation of alternative sources of income (c) and the reduction of the need for firewood (d) have already been practiced in Myanmar as components of CF activities. These strategies can be adopted as "safeguard" activities. Even though increasing land productivity (b) is outside the jurisdiction of the FD, it is expected to coordinate with other relevant ministries under the integrated CF policy. The introduction of PES (a) with a broader perspective rather than focusing on only carbon is very important for the government just after the reconstruction of its forest and environmental administration in the form of MOECAF.

Elaborating on CF as an Adaptation Policy

CF can strengthen the resilience of the state to climate change by way of diversification of livelihood in rural areas, raising the level of food security, reinforcement of social capital and knowledge, alleviation of the risk of disaster, and adjustment of the micro-climate. CF can be regarded not only as mitigation, but also as adaptation to climate change (Center for People and Forests, 2011).

In order to consider CF as an adaptation policy, CF should be clearly stated as one of the important adaptation policies in an amendment to the forest law of Myanmar. The legal barrier that hampers access to the market and prohibits selling timber and NTFP should be taken away by introducing a forest certification system to ensure the legitimacy by selling certified products.

Making Good Use of Principles, Criteria, and Indicators of Existing Certification Schemes

Various kinds of certification schemes for forest and carbon including the Forest Stewardship Council (FSC) were managed voluntarily (JCPC, 2013). Eduard et al. (2011) made a comparative analysis of indicators among ten major schemes in terms of substantial benefits (poverty alleviation, sustainable forest management, biodiversity conservation, appropriation of GHG emission and sequestration) and the procedure of MRV (measurement, reporting, and verification), and found out that there is no scheme that applies all of these indicators comprehensively. The analysis implies that making use of more than two schemes is recommended to ensure essential conditions (or GHG appropriation and MRV) and to promote social and environmental safeguards such as poverty alleviation.

For example, Climate, Community, and Biodiversity Standards (CCBC) does not issue carbon credits because it cannot appropriate the reduction of GHG emission, though it applies the criteria and indicators for poverty alleviation and biodiversity conservation to evaluate land-based mitigation projects. On the other hand, the method of appropriating GHG absorption by Verified Carbon Standard (VCS) is approved by category: Afforestation, Reforestation and Revegetation (ARR), Improved Forest Management (IFM), Reduced Emission from Deforestation and Degradation (REDD), Wetland Restoration and Conservation (WRC). Then VCS issues the carbon credit to promote project-based carbon sequestration. If a project applies both CCBC and VCS, the project can be certified comprehensively in terms of substantial benefit and MRV.

In order to adjust CF in Myanmar to the REDD+ mechanism under UNFCCC and other schemes such as the Bilateral Offset Credit Mechanism (BOCM) and Joint Crediting Mechanism (JCM) promoted by the government of Japan, some of the practicable principles, criteria, and indicators applied by existing certification schemes should be incorporated into CFI, which should be discussed by experts.

Considering How to Distribute Profits among Stakeholders

We can refer to Indonesia's policy in terms of distribution of the profits from REDD+ activities. The Indonesian Minister of Forestry issued two important decrees to prepare for the implementation of REDD+ activities. Minister's decree No. 30 in 2009 declared that REDD would be implemented for all forest categories including production forests, protection forests, and conservation forests, and that REDD would be implemented for every type of forest ecosystem including natural forests and plantation forests. Minister's decree No. 36 in 2009 determined that the carbon-sink and absorption project would last 25 years. It seems that the government appoints activities based on formal rights and concessions, indicated in Appendix III of Minister's Decree No.36, 2009 (Table 5-3), as REDD+ activities.

Table 5-4 also shows the distribution of profits among stakeholders to show which activity benefits whom. The government benefits by receiving 50% of the profits from the management of forests for specific purposes such as research and education, and the management of protection forests. Project initiators and sponsors benefit by receiving 60% of the profits from forest management for timber utilization based on concessions in natural forests, plantation forests, and restored ecosystems, and they receive 50% of profits from activities in the capacity of Forest Management Units. Local people benefit the most because they receive 70% of profits from managing individual forests (*Hutan Rakyat*) on privately owned land and managing customary forests (*Hutan Adat*) on national land, while 50% of profits goes to villager groups managing plantation forests (*Hutan Tanaman Rakyat*) and community forests (*Hutan Kemasyarakatan*) on national forestland, and 50% to village organizations managing village forests (*Hutan Desa*).

For Myanmar, our recommendation is to consider distributing the profit among the local community, project initiator/sponsor, and the governments in accordance with the main actors (Table 5-2) and management models (Table 5-3).

Table 5-4 Distribution of Profits among Stakeholders (Indonesia) Unit: %

Rights/concession	Governments **	Local community	Project initiator/ sponsor
Forests for specific purposes & utilization / Protected forests	50	20	30
Timber utilization of natural forests / plantation forests / ecosystem restoration	20	20	60
Timber utilization of plantation forests (by people's groups)	20	50	30
Individual forests (on private land) *	10	70	20
Community forests (by people's groups)	20	50	30
Customary forests (by indigenous communities)	10	70	20
Village forests (by village organizations)	20	50	30
Forest Management Unit	30	20	50

Source: Appendix III of Minister's Decree No.36, 2009.
Notes: * All rights/concessions other than this one are issued on national forestland.
** Distribution within government entities: State (40%), Province (20%), District (40%)

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Appendix A: Survey Report of the Study Village in the Central Dry Zone

Outline of the Village

The study village named Chaung Shee belongs to Chaung Shee village tract, Nyaung Oo Township, Mandalay Region.[97] It is located 29 km southeast of Nyang Oo Town and 30 km northwest of Kyaukpadaung Town. The village is not located along the Nyang Oo-Kyaukpadaung highway, but is several kilometers away from it by a dirt road.

As of May 2013 the village had 440 households with a total population of 1,629 (male—742, female—887). The number of farm households was about 200 and the other 240 were landless households. Of the 240 landless households, however, approximately 150 households were engaged in toddy palm liquid harvesting and processing (processing to crude sugar and jaggery) by renting palm trees from owners (cum-famers). The total farmland was estimated to be about 1,000 acres, the majority of which was upland fields (*ya*), and the major crops grown there included groundnut, sesame, pigeon pea, and green gram. However, increased production of fruit (such as mango and plum), vegetables, flowers and betel leaf was observed in recent years in land classified as gardens (*uyin*). The livestock sector was not so important in the village, except for cattle, goat and chicken rearing. Cattle were used extensively for the purpose of agriculture and transportation. Power tillers were still not widely used in the village.

Impressive development in the non-farm sector was observed in recent years. This included non-farm sector development in and around the village, out-migration to towns and cities in Myanmar, and out-migration to overseas, especially Malaysia. Migration to Malaysia increased after 2003. As of June 2013 a total of 67 persons including 4 females were working in Malaysia.

In the village, there was a middle school (up to 8th grade) and a government clinic. There was also a woman working as a mid-wife. Electricity was not yet supplied to the village but there were 10 big and 30 small generators operated by diesel oil.

Classification of Households and Population Characteristics

For the purpose of an in-depth study, we have conducted a household survey in the village. We sampled a total of 156 households from a block of the village, covering all the households in it.

Table A-1 shows how the surveyed households were classified by the size of their land holdings (total of *ya* and *uyin*) and in the case of landless households by their main occupations. Farm households accounted for only 43% and the rest were landless households. Of the total 89 landless households 37 households (42%) rented palm trees and produced jaggery.

The total farmland owned by the farm households was 73 acres, of which upland fields accounted for 67 acres and gardens 7 acres. Of the 67 farm households, small-scale farmers with less than 5 acres of land accounted for 48%, whereas medium-scale farmers (with 5-10 acres) accounted for 24% and large-scale farmers (with more than 10 acres) 28%. There were two farm households that had more than 20 acres and the largest size was 25 acres.

The total number of palm trees owned by the 156 households were 7,083, of which 948 trees (13.4%) were unharvested, 460 trees (6.5%) were self-harvested, and the other 5,675 trees (80.1%) were rented out to other households. Two landless households owned palm trees—300 and 130, which were all rented out. Of the 67 farm households 42 households (67.7%) owned palm trees, with an average of 158 trees per household.

On the other hand, 42 households (including 5 farm households) rented a total of 1,997 palm trees, with an average of 47.5 trees per household. The maximum number of rented trees was 100 (2 households) and the minimum was 10. The most frequent number of trees was 40 (7 households), followed by 60, 50, and 30 (6 households each).

Table A-2 summarizes the population characteristics of the sample households. The overall average number of household members was 4.27 (male—2.01, female—2.26), of which the size of the

[97] The study village was selected in May 2013. The other villages we visited for the selection included Zee Oo village (in Mye Tin Duin village tract), Myoe Tin Twin village (in Mye Tin Duin village tract), Pyin Taw village (in Tu Yun Taing village tract, Nat Pu Lin village (in Nat Pu Lin village tract), and Anouk Ohn village (Chaung Shee village tract).

labor force was 2.73 (male—1.33, female—1.40). A notable fact was that both the size of the household and the labor force were much larger among the landless palm tenants, but smaller in the case of landless non-farm households. It seems that the landless households with larger labor forces had a tendency to choose palm tenancy, which is labor intensive in nature.

Table A-1 Classification of Households

Type of households		No. of HHs	%	Average owned farmland (acres)			Average number of palm trees				
				Upland	Garden	Total	Owned	Un-harvested	Harvested: Self	Harvested: Rented-out	Rented-in
Landless HHs	Non-farm	52	33.3%	0	0	0	8.3	0	0	8.3	0
	Palm tenants	37	23.7%	0	0	0	0	0	0	0	47.9
Farm HHs (acres)	<5	32	20.5%	2.0	0.2	2.2	26.7	5.9	1.3	19.5	6.1
	5-10	16	10.3%	6.5	0	6.5	135.9	32.5	0	103.4	1.9
	> 10	19	12.2%	12.6	0.8	13.4	190.8	12.6	22.1	156.1	0
	Sub-total	67	42.9%	6.1	0.3	6.4	99.3	14.2	6.9	78.3	3.4
Total		156	100.0%	2.6	0.1	2.8	45.4	6.1	3.0	36.4	12.8

Source: Author's survey in June-July 2013.

Table A-2 Population Characteristics

Type of Households		No. of HHs	No. of HH members			No. of laborforce					
			Male	Female	Total	Male	Female	Total	Living separetely	Migration to Malaysia	% of living separately
Landless HHs	Non-farm	52	1.79	2.10	3.89	1.10	1.35	2.45	0.73	0.17	23.3%
									(29.8%)		
	Palm tennats	37	2.24	2.76	5.00	1.54	1.65	3.19	0.61	0.08	13.1%
									(19.1%)		
Farm HHs (acres)	<5	32	1.97	2.16	4.13	1.31	1.41	2.72	0.44	0.19	43.2%
									(16.2%)		
	5-10	16	2.19	2.00	4.19	1.50	1.19	2.69	0.44	0.25	56.8%
									(16.4%)		
	> 10	19	2.05	2.11	4.16	1.42	1.21	2.63	0.26	0.16	61.5%
									(9.9%)		
	Sub-total	67	2.05	2.11	4.15	1.39	1.30	2.69	0.39	0.20	50.3%
									(14.5%)		
Total		156	2.01	2.26	4.27	1.33	1.40	2.73	0.56	0.16	28.8%
									(20.5%)		

Source: Author's survey in June-July 2013.

An important point in Table A-2 is that more than 20% of the labor force was living separately, implying that many people were working outside the village, either within Myanmar or abroad (Malaysia). The proportion of out-migrants was the highest among landless non-farm households, followed by landless palm tenants, and farm households with less than 10 acres of land. On the other hand, if we look at the proportion of workers in Malaysia of the total out-migrants, the highest figures were recorded by farm households with more than 10 acres (61.5%) and 5-10 acres (56.8%). In other words, the wealthier households were observed to be able to afford better working opportunities outside the village.

Household Income

Table A-3 shows estimated household income. Since a detailed production cost survey was not carried out due to various constraints, income from crop production was estimated by multiplying the gross income (<crop production including home consumption> x <market price>) by 60% regardless of the kind of crop.

Income from jaggery was estimated as follows, based on information from a knowledgeable informant.

1) In the case of owners who rented out palm trees, the amount of jaggery received as rent was evaluated at 350 kyat/viss.
2) In the case of tenants who rented palm trees, the net amount of jaggery after deducting

one-fourth for rent was evaluated at 350 kyat/viss, on the assumption that the cost was 10% of the gross production value. Note here that the production of jaggery per 50 trees was estimated under the following assumption: 12.5 viss/day of jaggery was harvested for two and a half months from January-March while 25 viss/day was harvested for two months from April-June, and 8.5 viss/day was harvested for the two months of July and August.

3) In the case of self-harvesting farmers, the amount of jaggery produced was evaluated at 350 kyat/viss, on the assumption that the cost was 20% of the gross production value for large-scale farmers (with more than 10 acres) and 10% for small- and medium-scale farmers with less than 10 acres.[98]

Note also that income from the livestock sector was not included. Furthermore, it seems that income from jaggery brokerage was highly underestimated.

Table A-3 Estimates of Household Income

Type of Household		No. of HHs	Average income per HH (kyat)								
			Crop	Palm work/rent	Agri. wages	Other wages	Non-farm self-employment	Remittance and others	Pension	Total	Per capita income
Landless HHs	Non-farm	52	0	20,933	104,308	197,500	147,232	246,346	19,362	735,681	184,144
				(2.8%)	(14.2%)	(26.8%)	(20.0%)	(33.5%)	(2.6%)	(100%)	(100)
	Palm tenants	37	0	652,844	115,438	67,959	30,068	91,892	0	958,201	191,640
				(68.1%)	(12.0%)	(7.1%)	(3.1%)	(9.6%)		(100%)	(104)
Farm HHs (acre)	<5	32	303,430	127,465	67,806	97,500	133,484	434,194	0	1,163,879	281,811
			(26.1%)	(11.0%)	(5.8%)	(8.4%)	(11.5%)	(37.3%)		(100%)	(153)
	5-10	16	801,581	142,219	12,656	288,375	10,625	556,250	30,000	1,841,706	432,388
			(43.5%)	(7.7%)	(0.7%)	(15.7%)	(0.6%)	(30.2%)	(1.6%)	(100%)	(235)
	> 10	19	1,764,396	160,024	9,237	434,526	706,316	346,316	0	3,420,815	822,311
			(51.6%)	(4.7%)	(0.3%)	(12.7%)	(20.6%)	(10.1%)		(100%)	(447)
	Sub-total	67	836,695	140,221	38,027	238,657	266,589	438,421	7,164	1,965,775	471,954
			(42.6%)	(7.1%)	(1.9%)	(12.1%)	(13.6%)	(22.3%)	(0.4%)	(100%)	(256)
Total		156	359,350	222,042	78,481	184,452	170,706	292,206	9,531	1,316,768	306,144
			(27.2%)	(16.9%)	(6.0%)	(14.0%)	(13.0%)	(22.2%)	(0.7%)	(100%)	(166)

Source: Author's survey in June-July 2013.
Note: Crop income is estimated on the assumption that net income is 60% of gross income.
With regard to income estimates from palm trees, see the text.

As Table A-3 demonstrates, on the whole, 27% of income came from crop farming, 17% from jaggery making (from palm trees), and 6% from agricultural wages. The other 50% came from non-agricultural sectors, including 22% from remittance. It was also found that non-farm self-employment was as important as non-agricultural wages in the village.

Looking at the income earning structure by the classification of households, income from crop farming was the largest for the farm households with more than 5 acres of land, showing between 44-52%. On the other hand, remittance income was the largest for the landless non-farm households and the small-scale farm households (with less than 5 acres), whereas income from (rented) palm trees was the largest for the landless palm tenants.

The lowest level per capita annual income was in landless households at 180,000-190,000 kyat on average. By contrast, it was 2.6 times higher for the whole farm households, with the highest of 4.5 times in the case of large-scale farm households. It could be said that the income disparity among the village households was quite large.

Asset Holding

[98] The expenditure for harvesting (and processing jaggary) 50 palm trees (with annual production of 3,885 viss of jaggary) was estimated as follows: 1) cost for pots—500 pots/year x 100 kyat/pot= 50,000 kyat/year, 2) cost for pans—5 pans/2 years x 8,000 kyat/pan= 20,000 kyat/year, 3) cost for jute rope—500 pieces/year x 50 kyat/piece= 2,500 kyat/year, 4) cost for fuel—20 kyat/viss x 3,885 viss/year= 77,700 kyat/year. Hence if hired labor cost was assumed to be zero, the total cost was estimated to be 150,000 kyat. On the other hand, the total gross income was estimated to be 1,360,000 kyat. We incorporated hired labor costs (with an assumption of 10% of gross production value) in the case of large-scale farmers.

Table A-4 shows the average number of livestock per household. The number of bullocks and goats was relatively large among the farm households. But generally speaking, the livestock sector in the village was underdeveloped, though a slightly larger number of chicken was observed among the landless households. Goats were reared by a small number of households with 27 kept by a small-scale farmer, and 20 and 15 goats kept by two large-scale farmers. Bullock carts were also owned mainly by the farm households.

Table A-4 Livestock Held

Type of Households		No. of HHs	Average number of livestock: Bullock	Cow	Calf	Piglet	Goat	Chicken	Bullock cart
Landless HHs	Non-farm	52	0	0.06	0.04	0.10	0.02	1.90	0
	Palm tenants	37	0.05	0.05	0	0.11	0.30	2.73	0
Farm HHs (acre)	<5	32	0.72	0.38	0.06	0.09	1.06	0.91	0.34
	5-10	16	1.13	0	0	0	0	0	0.69
	> 10	19	1.53	0.42	0.16	0	1.84	0.32	1.16
	Sub-total	67	1.05	0.30	0.07	0.04	1.03	0.53	0.66
Total		156	0.46	0.16	0.05	0.08	0.52	1.51	0.28

Source: Author's survey in June-July 2013.

Table A-5 demonstrates the structure of residential houses and the diffusion of major consumer durables. It is apparent that the house conditions of landless households were much worse than farm households, especially large-scale farm households. In general, on the other hand, consumer durables had not diffused much in the village. Only the large-scale farm households had on average 0.79 motorbikes, 0.47 TV sets (with a video deck), 0.21 electric fans, 0.63 mobile phones, 0.32 generators and, 0.26 solar panels.

Table A-5 House Conditions and Major Consumer Durables

Type of Households		No. of HHs	Residential house, % of HHs: With tin roof	With brick wall	With brick/concrete	Average number per HH: Bicycle	Motorbike	Radio-cassette	TV/Video deck	Fan	Mobile phone	Generator	Solar
Landless HHs	Non-farm	52	36.5	5.8	11.5	0.08	0.12	0.35	0.13	0	0	0.02	0.06
	Palm tenants	37	24.3	10.8	8.1	0.16	0.11	0.46	0.03	0	0.05	0	0
Farm HHs (acre)	<5	32	78.1	25.0	25.0	0.22	0.31	0.53	0.19	0	0.06	0.03	0.06
	5-10	16	93.8	50.0	43.8	0.13	0.56	0.69	0.25	0	0.06	0	0.19
	> 10	19	94.7	57.9	73.7	0.37	0.79	0.79	0.47	0.21	0.63	0.32	0.26
	Sub-total	67	86.6	40.3	43.3	0.24	0.51	0.64	0.28	0.06	0.22	0.11	0.15
Total		156	55.1	21.8	24.4	0.17	0.28	0.50	0.17	0.03	0.11	0.05	0.08

Source: Author's survey in June-July 2013.

Appendix B: Survey Report of the Study Village in Delta

Village Selection

The primary purpose of this research is to get an in-depth knowledge on agricultural production, land distribution, living standards in the Delta area, and to provide policy recommendations with a special emphasis on the credit market situation.

The selected village, Kanyingu village, is located in Michaungtayar village tract, Kaungyidaung Township, Ayeyarwady Region. Kaungyidaung Township is adjacent to Pathein Township, about 30 km from the Pathein town. The Yangon-Pathein road passes the middle of the township, thus the access to Yangon and Pathein is rather easy. There are 73 village tracts in the Kaungyidaung Township.

To select the representative village in the region, we requested the Department of Agriculture, Pathein to nominate villages that have the following features (1) cropping pattern is monsoon paddy-pulses, or monsoon paddy-summer paddy, (2) the rice specialization company has been carrying out contract cropping, (3) a microfinance program is introduced. After visiting 6 village tracts in the township, we have selected Michaungtayar village tract, which well suits the above criteria.

Michaungtayar village tract consists of 8 villages, 716 total households, and a population of 3,273 in 2013. Among the 8 villages, Kanyingu village was selected as the study village to capture economic conditions among a variety of rural households in a single village. This village has a sufficient number of farm as well as non-farm households. As indicated in Table B-1, Kanyingu village consists of Karen ethnicity.

After compiling the complete lists of households of Kanyingu village, we found that there are 248 households in total, which is different from the figures in Table B-1. The following discussions will proceed with these 248 households. The survey was conducted in July 2013 for all the households, followed by two supplementary surveys administered in January and September 2014. The survey in January 2014 collected more detailed information on advance wage transactions by agricultural wage laborers. The September 2014 survey collected the cost of production data from some of farm households.

Table B-1 List of the villages in the Michaungtayar village tract (2013)

	Village name	Total Households	Farm Households	Ethnicity
1	Michaungtayar	109	20	Karen (Buddhist)
2	Kanyingu	209	150	Karen (Buddhist)
3	Bategyi	75	25	Karen (Buddhist)
4	Angugyi	17	10	Karen (Buddhist)
5	Ywatikon	10	34	Karen (Buddhist)
6	Konzigon	50	58	Bamar , Karen (Buddhist)
7	Kyikankyun	120	20	Bamar
8	Konzu	58	11	Bamar , Karen (Buddhist)
	Total	716	388	

Source: Michaungtayar Village Tract, administrative office.

Classification of Households and Population Characteristics

Table B-2 shows the type of households found in the Kanyingu village. Less than half of the households (44%) are farm households (defined as those households engaged in agricultural production, either on their own land or leased land). The rest are non-farm households (56%). Among non-farm households, the dominant class is the agricultural labor household (accounting for 89% of non-farm households). We categorized the agricultural labor household as seasonal if the main source of income is seasonal labor rather than casual labor. Overall, there are approximately 50 people in the Michaungtayar village tract who go abroad for work, whereas in Kanyingu village the frequency is rather low. Only two households (a farm household with less than 5 acres and an agricultural daily labor wage household) have a family member working in Thailand.

Table B-2 Types of Households

Type of household		No. HHs
Non- farm household	Agricultural labor	**124**
	Casual labor only	84
	Seasonal labor	40
	Self-employed, other wage labor	**15**
	Subtotal	**139**
Farm household	Less than 5 acres	49
	5-10 acres	32
	10-15 acres	15
	More than 15 acres	13
	Subtotal	**109**
Total		**248**

Source: Authors ' survey.

Population Characteristics

Table B-3 shows the population characteristics of the village. The average household size is 4.5 persons. No clear difference in family size is observed according to the household type. Non-agricultural labor households and farm households with land holdings less than 5 acres have fewer family members, suggesting that relatively younger generations belong to this category. The work participation rate is generally higher for farm households, especially those who have less than 10 acres.

Table B- 3 Population Characteristics

Type of household		No. HHs	No. of HH Members			Size of labor force					
			Total	Male	Female	Total	%	Male	%	Female	%
Non-farm household	Agricultural labor	124	4.60	2.23	2.37	2.44	53.04	1.31	58.70	1.13	46.31
	Casual labor only	84	4.54	2.14	2.39	2.51	55.29	1.25	58.33	1.26	50.28
	Seasonal labor	40	4.83	2.50	2.33	2.35	48.65	1.48	59.00	0.88	37.23
	Self-employed, other wage labor	15	3.20	1.53	1.67	1.27	39.69	0.80	52.17	0.47	36.75
	Subtotal	139	4.47	2.18	2.29	2.33	52.13	1.27	58.09	1.06	45.70
Farm household	Less than 5 acres	49	3.90	1.98	1.92	2.43	62.31	1.47	74.23	0.96	39.47
	5 -10 acres	32	5.22	2.69	2.53	3.34	63.98	2.00	74.42	1.34	40.23
	10 - 15 acres	15	5.00	2.27	2.73	2.73	54.60	1.47	64.71	1.27	46.40
	More than 15 acres	13	4.69	1.85	2.85	2.69	57.36	1.23	66.67	1.46	54.33
	Subtotal	109	4.53	2.21	2.32	2.77	61.15	1.60	72.20	1.17	42.39
Total		248	4.50	2.19	2.31	2.52	56.00	1.41	64.34	1.11	44.16

Source: Authors' survey.

Table B-4 shows age group-wise education. There is a critical difference between the 40+ age group and the rest. Specifically, the percentage of those without education or only monastery education is much higher for this older age group. Furthermore, the female group within the 40+ category seems to be the least educated group. For the younger generations, the educational level seems to be improving and those who complete middle school education account about 50% of the age group for both male and female.

Table B-4 Level of Education

Age group	Years of Education (Male)							Year of Education (Female)						
	None	Monerstry	Less than 4	5-7	8-10	Over 11	Total	None	Monerstry	Less than 4	5-7	8-10	Over 11	Total
15-19	3	0	16	29	2	4	54	2	0	15	27	4	4	52
20-29	5	0	26	52	2	0	85	6	0	33	42	2	6	89
30-39	6	3	29	35	8	3	84	7	0	38	36	2	1	84
Over 40	18	35	26	47	9	2	137	46	18	49	31	2	4	150
Total	32	38	97	163	21	9	360	61	18	135	136	10	15	375

Source: Authors' survey.

Land Holding

Table B- 5 summarizes the farmland operation and ownership.

Table B-5 Land Distribution

Area	No	Operating land (ac)			Owned land (ac)	
		Total	Le	Uing	Le	Uing
Under 5 acres	49	2.5	2.4	0.1	2.3	0.1
5-10 acres	32	6.5	6.4	0.0	5.1	0.0
10-15 acres	15	10.8	10.8	0.0	10.8	0.0
Over 15 acres	13	19.5	19.5	0.0	19.5	0.0
All farm household	109	6.8	6.8	0.1	6.6	0.1

Source: Authors' survey.

It is found that the marginal farm households (land holdings with less than 5 acres) account for nearly half of the farm households (45.0%). If we include those with less than 10 acres, it accounts for 74% of total farm households. Generally it is regarded that 10–12 acres is the size of land holding that can support one family in the Delta (*Dadun Htun*) (Takahashi 1992). Thus, the size of land holdings found in this village may suggest that land fragmentation is rapidly evolving.

Table B-6 endorses this trend. This table indicates that inheritance is the major mode of obtaining land (76.1%). Custom rules of inheritance in Myanmar dictate dividing land between children (if not equally in the rigorous sense), thus it generally leads to fragmentation of land holdings. In addition, land purchases have been increasing since 2000; 21 land purchase cases out of 28[99] (91.3%) occurred after 2000.

Table B-6 Land Acquisition

Operating size	No. of households	Inheritance	Purchase	Inhertance & Purchase	Parent's land	Other
Less than 5 acres	49	37	11	0	1	
5-10 acres	32	24	6	1	1	
10-15 acres	15	10	2	3	0	
Over 15 acres	13	6	4	2	0	1
All farm household	109	77	23	6	2	1

Source: Authors' survey.

Features of Income Sources

The three major cropping patterns of the farm households are monsoon paddy—black gram, monsoon paddy—black gram and/or summer paddy, and single cropping of late monsoon paddy. Paddy and black gram are the major cash crops. A few households cultivate groundnut for home consumption in the summer season.

Table B-7 indicates the cost of production of major crops and its income for 2013. The figures

99 The year of purchase is unknown for one household, so the total number of cases is 28.

are obtained from the survey conducted in September 2014.

Table B-7 Cost of Production of Major Crops (2013)

	Monsoon paddy	Summer paddy	Black gram
No. of farm household	16	4	16
Sown acre	8.3	3.3	4.7
Average yeild (basket per acre)	55.5	82.5	6.8
Price (kyat per basket)	4,700	4,500	21,340
Gross revenue (kyat per acre)	260,833	371,250	146,097
Current input cost	42,959	139,513	31,443
Seed	12,203	13,250	25,777
Chemical fertilizer	28,532	73,302	1,726
Pesticide	415	7,969	3,065
Diesel	1,809	44,992	875
Labour cost	82,354	31,833	45,831
Hired labor	71,446	20,333	31,283
Family	10,907	11,500	14,548
Capital cost	69,004	42,186	26,751
Machine	18,467	32,333	13,654
Bullocks	14,327	1,750	13,041
Interst payment	36,210	8,103	56
Total cost of production (kyat per acre)	194,317	213,532	104,025
Operator's surplus (kyat per acre)	66,515	157,718	42,072
Income (kyat per acre)	77,423	169,218	56,620
Share of cost of production (%)			
Current input cost	22.1	65.3	30.2
Seed	6.3	6.2	24.8
Chemical fertilizer	14.7	34.3	1.7
Pesticide	0.2	3.7	2.9
Diesel	0.9	21.1	0.8
Labour cost	42.4	14.9	44.1
Hired Labor	36.8	9.5	30.1
Family	5.6	5.4	14.0
Capital cost	35.5	19.8	25.7
Machine	9.5	15.1	13.1
Bullocks	7.4	0.8	12.5
Interst payment	18.6	3.8	0.1

Source: Survey done by Yezin Agricultural University and DOA.
Price for black gram is taken from E-Trade, Pulses market information (Bi-weekly report) April 2014

It is noted that crop income from monsoon paddy is much lower than that of summer paddy. Since the levels of production cost between the two crops do not differ much (it is even a bit higher for summer paddy), the difference comes from the very low yield for monsoon paddy. As shown in Table B-8, the level of the yield found in this village is quite low compared to the national average.

We can also confirm the difference in the cost structure of production between the two crops. Monsoon paddy is a labor intensive crop (labor cost accounts for 42.9%), while the summer paddy is a capital intensive crop (current input cost accounts for 65.3%). If the labor wage increased further, profitability of monsoon paddy cultivation would be affected most.

Income from black gram cultivation is also quite low. Export oriented pulses and beans have been the major source of cash income for farmers since the 1990s. However, it is no longer the case for this village, at least during the survey year, for two reasons. One is the low level of the yield, again compared to the national average (Table B-8). Another reason is the low price level. The prices of export of pulses have been dramatically fluctuating. For the 2013 crop, the price of black gram was 60.8 % of the highest price in 2010 (Table B-9). In the lowest year (2012), it reached as low as 54.3%. The main reason for the wide fluctuation is the high dependency on the Indian market for export destination. In other words, demand conditions in India directly affect the price of black gram in

Myanmar.[100]

Table B-8 Comparison of Average Crop Yeild (Basket per acre)

	Study village (2012/13)	National average (2010/11)
Monsoon paddy	56.1	
Late monsoon paddy	47.3	79
Summer paddy	87.0	
Black gram	8.3	19
Ground nut	17.4	50

Source: Authors' survey , CSO *Statistical Year book 2011*

Table B-9 Changes in Price of Black Gram

Year	Kyat per basket	Change from previous year (%)
2005	11,660	
2006	22,480	92.8
2007	22,420	-0.3
2008	17,700	-21.1
2009	21,840	23.4
2010	28,060	28.5
2011	19,500	-30.5
2012	15,240	-21.8
2013	17,060	11.9
2014	21,340	25.1

Source: MOAI, *Domestic and International Price of Agricultural Produce*
For 2014,it is the price taken in March 2014. Taken from E-trade, *Pulses Market Information April, 2014* .

Features of Income Level and the Sources

Table B-10 shows the average figures for income sources. Following is the explanation on the income estimation.

1) Farm income is estimated based on the cost structure estimated in Table B-7. Since the wage rate of 2012 is 75% of the 2013 figures, the wage cost is calculated as 75% of the 2013 figures. Other figures are assumed to be the same between the two years.
2) For non-farm households the type of household depends on the agricultural wage labor, as we noted earlier. One type is that household member(s) engage in seasonal labor. Seasonal laborers are generally healthy male laborers who can work throughout the monsoon or throughout the year (in this case it is called permanent laborer) and can manage to handle bullocks for ploughing or capable of handling a power tiller. The wage is paid in cash (35,000–50,000 kyat per month) or cash plus paddy and they are normally provided meals by the employers. The wage rate is decided depending on the capability of each laborer. Other family members may engage in daily labor or other non-farm employment.
3) The other type is those whose family members only engage in daily wage labor, such as transplanting of paddy, harvesting, and/or threshing of paddy and black gram. The wage rate was 1,500 kyat per day for the 2012 season and if the labor supply is tight it could reach 2,000–2,500 kyat per day depending on the operation.[101] As we discussed in Section 3-2-2, there are large number of laborers who take advance wage, 2–3 months before the actual operation, to meet their daily expenses. The typical advance wage rate for 2012 was 1,000 kyat per day.

[100] Among the export oriented pulses, green gram experiences less price fluctuation, since the export market is relatively diversified compared to black gram.
[101] The average wage rage increased to 2,000 kyat per day in 2013 and 2,500 kyat per day in 2014 (source: YAU survey).

Table B-10 Sources of Income (kyat)

		No. HHs	Non-farm income per HH							Farm income	Total	Per capita income (US $)
			Daily labor	Seasonal labor	Other wages	Non-farm self-employed	Remmitance	Pension	Total			
Non-farm household	Agricultural labor	124	258,701	205,619	43,061	51,746	47,131	0	606,258	0	606,258	134
	Casual labor only	84	299,090	0	42,994	69,549	47,805	0	459,438	0	459,438	106
	Seasonal labor	40	175,903	627,138	43,200	15,250	45,750	0	907,240	0	907,240	192
	Self-employed, other wage labor	15	0	0	69,231	355,346	103,077	18,462	546,115	0	546,115	169
	All Non-Farm Household	139	233,789	185,819	45,581	80,981	52,519	1,778	600,467	0	600,467	135
Farm household	Under 5 acres	49	132,390	17,224	63,531	31,633	53,469	0	298,247	209,004	507,251	141
	5-10acre	32	103,766	88,672	0	32,766	42,813	0	268,016	655,037	923,053	190
	10-15 acres	15	53,533	0	86,400	0	48,000	0	187,933	1,341,165	1,529,098	331
	Over 15 acres	13	4,269	0	0	50,385	0	0	54,654	1,427,615	1,482,269	364
	All farm household	109	97,854	33,775	40,450	29,849	43,211	0	245,139	550,728	795,867	186
All household		248	170,273	115,996	42,591	57,202	47,581	968	434,609	281,770	716,379	159

Note 1: Excludes 4 households who receive salary/ support in kind.

Note 2 : Per capita income (in US $) is calcurated at the rate of 1 US $ =1000 kyat.

Source: Authors' survey.

The following features can be noted from this table.

First, the per capita income level of farm households under 5 acres is not very different from that of agricultural labor households. Ownership of land does not necessarily guarantee that the income would be higher than those without land holdings. Even for those households with 5–10 acres of land, the per capita income is almost the same as that of the seasonal labor households. This suggests that the low level of yield together with increasing costs of cultivation has been affecting the profitability of agricultural production among the smaller scale farm households.

Secondly, for the non-farm households, the dominant source of income is agricultural wage labor. There are quite limited options for other non-farm income earning opportunities. With the low level of farm income for the farm households with less than 10 acres, they need to depend on both agricultural daily wage labor and other wage labor for their livelihood.[102]

Thirdly, remittance income is also important regardless of household types. However, in the case of this village, these are mostly remittances from domestic migration. In total, 43 people are working outside the village. Two people are working in Thailand, but the rest are working in other parts of the country. Yangon has the largest number of migrants, but others are scattered in Myaungmya, Pathein, Kangyidaung (town), Hpaan, Lashi, Dawei, and Myeik.

Table B-11 shows the characteristics of those who are migrating. As expected, young males represent the majority (33 male workers, 10 females). Reflecting educational level, the type of work they engage in is unskilled labor.

Table B-11 Charatristics of Migrating People

	Male			Female		
	Number	Average age	Average education	Number	Average age	Average education
Factory worker	17	23.0	4.9	2	20.0	4.5
Casual labor	5	30.2	4.6	1	17.0	5.0
Shop/restaurant worker	8	16.3	4.0	2	25.5	4.0
Maid	0	-	-	5	18.2	4.2
Engineer	1	34.0	14.0	0	-	-
International migration (Thailand)	2	30.0	5.0	0	-	-

Source: Authors' survey.

[102] It can be noted that the daily wage labor income is also high in the category of 10–15 acres farm households. There are two households out of 15 which had family members working as daily wage labor as well. One household with six family members have been working not only in their own field (10 acres) but also in others field. This is reflected in the calculation of the average income from daily labor.

Distribution of Non-land Assets

Table B-12, indicates the difference in house structure and ownership of non-land assets. In general, the households in the study village have a very limited number of non-land assets, reflecting their severe economic conditions. Simultaneously, we can note a clear disparity between the farm and agricultural labor households: the latter has only limited assets than the former. Same disparity among the two groups is also found in the status of livestock holdings (Table B-13).

Table B-12 Ownership of non-land assets

		No. HHs	House structure(%) Tin roof	Wood wall	Wood floor	Consumer durables (Average number per household) Motorcycle	Bicycle	TV/Video deck	Radio-casset	Mobile phone	Sewing machine	Genrator	Solar	Fan
Non- farm household	Agricultual Labor	124	6.45	4.84	33.87	0.00	0.27	0.02	0.22	0.00	0.01	0.00	0.00	0.00
	Casual labor only	84	8.33	7.14	39.29	0.00	0.31	0.04	0.25	0.00	0.01	0.00	0.00	0.00
	Seasonal labor	40	2.50	0.00	22.50	0.00	0.20	0.00	0.15	0.00	0.00	0.00	0.00	0.00
	Self-employed, other wage labor	15	46.67	13.33	80.00	0.07	0.47	0.20	0.47	0.13	0.07	0.07	0.07	0.00
	All non-farm househ	139	10.79	5.76	38.85	0.01	0.29	0.04	0.24	0.01	0.01	0.01	0.01	0.00
Farm household	Under 5 acres	49	30.61	14.29	71.43	0.16	0.57	0.31	0.45	0.06	0.00	0.04	0.00	0.00
	5-10 acres	32	46.88	31.25	93.75	0.16	0.91	0.45	0.56	0.00	0.13	0.06	0.00	0.03
	10-15 acres	15	73.33	60.00	93.33	0.20	1.13	0.53	0.47	0.20	0.20	0.07	0.00	0.07
	Over 15 acres	13	92.31	61.54	92.31	0.54	1.00	0.54	0.23	0.08	0.25	0.08	0.08	0.00
	All farm household	109	48.62	31.19	83.49	0.21	0.80	0.41	0.46	0.06	0.09	0.06	0.01	0.02
All household		248	27.42	16.94	58.47	0.34	0.20	0.05	0.03	0.01	0.01	0.04	0.01	0.10

Source: Authors' survey.

Table B-13 Livstock Holding

			Bullock	Cow	Calf	Goat	Mother Pig	Piglet	Chicken	Duck
Non-farm household	Agricultural Labor	124	8	19	10	0	43	77	492	136
	Casual labor only	84	8	11	8	0	28	52	357	81
	Seasonal labor	40	0	8	2	0	15	25	135	55
	Self-employed, other wage labor	15	0	0	0	0	1	9	77	7
	Subtotal	139	8	19	10	0	44	86	569	143
Farm household	Under 5 acres	49	45	45	20	0	56	77	638	168
	5-10 acres	32	18	12	2	0	10	6	47	29
	10-15 acres	15	42	14	3	0	11	5	194	72
	Over 15 acres	13	49	6	2	0	16	7	189	29
	Subtotal	109	154	77	27	0	93	95	1068	298
Total		248	162	96	37	0	137	181	1637	441

Source: Authors' survey.

Agricultural mechanization is still at the initial stage in the study village. Only large farm households have certain machineries. For example, more than 80% of large scale farmers (over 15 acres) hold power tillers, but other groups still depend on bullocks for cultivation (Table B-14).

Table B-14 Ownership of Farm Machineries and Implements

		No. HHs	Number of farm machineries and implements Power tiller	Thresher	Pump	Sprayer	Tawlagyi	Bullock Cart
Non-farm household	Agricultural labor	124	0	0	0	1	0	1
	Casual labor only	84	0	0	0	1	0	1
	Seasonal labor	40	0	0	0	0	0	0
	Self-employed, other wage labor	15	0	0	0	0	0	1
	Subtotal	139	0	0	0	1	0	2
Farm household	Under 5 acres	49	0	0	2	7	0	7
	5-10 acres	32	3	0	0	2	0	4
	10-15 acres	15	2	0	3	6	1	5
	Over 15 acres	13	7	1	5	7	3	8
	Subtotal	109	12	1	10	22	4	24
Total		248	12	1	10	23	4	26

Source: Authors' survey.

Appendix C: Survey Report of the Study Villages in the Mountainous Area

Village Selection

The main purpose of this research is to get in-depth knowledge on land classification and the land use system in mountainous border areas. The issues of community forest and shifting cultivation stabilization were also addressed there.

The two villages selected for the study are located in Kyauk-me Township, Kyauk-me District, Shan State. One is Nawng Ang village approximately 15 km east of Kyauk-me Town on the Mandalay-Muse highway. The other is Lone Kyein village about 30 km southwest of Kyauk-me Town on the same highway.[103] The majority are ethnic Shan. The people's major livelihood activities include maize and sugarcane cultivation in upland fields (taungya), rice cultivation in lowland paddy fields, wage labor, and various non-farm activities, although there were no non-farm activities in Nawng Ang village.

Almost all the taungya in Nawng Ang are located in the protected forest, managed by the Department of Forestry (FD). For many years now the villagers have been encroaching on protected forest, but the FD had no programs for eliminating such illegal encroachment. On the other hand, most of the taungya in Lone Kyein are located in vacant, fallow, and virgin lands, with an exception of 10 households (of the total 98 households) that have taungya in the protected forest. In 2013, the FD introduced a program of demonstration forestry plots to their taungya fields.

Historical Background

Nawng Ang village was established sometime in the mid-1970s with the immigration of 22-25 households from the original old village located not far from the present location. However, before that, these households were already cultivating lowland paddy fields surrounding the present village by commuting from the old village. They started encroaching on the protected forest surrounding the village and converting it to taungya fields. In December 2013 when we conducted survey, there were 80 households, of which 30 households had lowland paddy fields (with a total of 50 acres). On the other hand, almost all the households had taungya fields.

The Lone Kyein village was established in the early 1940s just before the Japanese army invaded Burma (Myanmar). In December 2013, there were 98 households, of which only 7 households had lowland paddy fields (1-2 acres each). Almost all the households had taungya fields.

Our survey in December 2013 and November 2014 revealed the historical background, which was almost the same for the two study villages.

(1) Originally, villagers produced upland rice in taungya fields under a communal (village-level) land ownership and management system.
(2) At the beginning of the 1980s they introduced cash crops such as sugarcane and (indigenous) maize in taungya fields. Plowing taungya by using buffalo started sometime in the same period (20-40 years ago from 2013).
(3) In 1987 when liberalization of agricultural marketing was announced by the government in power at the time, the land value climbed. Villagers tried to strengthen private ownership rights in taungya fields. When conflicts happened among the villagers, the village head tried to solve them.
(4) Since the mid-1990s when hybrid maize seeds (CP888) became available, villagers began hybrid maize cultivation in taungya fields. According to the survey, CP888 was introduced in 1996 in Lone Kyein and in 1999 in Nawng Ang. This was the start of the first boom in maize prices (which continued until around 2001). Since then, taungya fields became virtually permanent upland fields with no fallow period.
(5) Cultivation of sugarcane as a cash crop accelerated after the mid-1990s. Villagers (mainly in Lone Kyein) transported sugarcane to Mandalay for sale, but after 2007 when a sugar mill was constructed in a nearby town, they started to sell their product to the factory.
(6) Lowland paddy fields have been reclaimed by individual households, with their private land ownership from the beginning. In 2006, hybrid rice cultivation (with Chinese varieties) started in

[103] Nawng Ang village belongs to Chaung Chauk village tract while Lone Kyein village belongs to Pin Paw village tract, both of which are located in Kyauk-me Township.

Lone Kyein, followed by Nawng Ang after 2012.
(7) The second boom in maize prices started around 2010 and continued for a few years.

Classification of Households

Table C-1 shows the status of farmland ownership and cultivation for the surveyed households. We collected information from 69 of the 80 households (86.3%) in Nawng Ang and 91 of the 98 households (92.9%) in Lone Kyein.

Table C-1 Land Ownership and Cultivation

	Nawng Ang						Lone Kyein					
	Taungya		Lowland		Total		Taungya		Lowland		Total	
Total farmland size (acres)	HHs owned	HHs cultivating land	HHs owned	HHs cultivating land	HHs owned	HHs cultivating land	HHs owned	HHs cultivating land	HHs owned	HHs cultivating land	HHs owned	HHs cultivating land
0	4	4	45	43	3	3	11	9	74	74	11	9
-1.99	3	3	8	9	3	3	3	3	7	7	3	3
2.00-2.99	7	7	8	9	6	6	4	4	5	5	4	4
3.00-4.99	12	12	6	6	12	12	8	12	4	4	8	9
5.00-9.99	24	24	2	2	25	18	41	41	1	1	41	42
10.00-19.99	18	18	0	0	18	25	19	17	0	0	19	19
20.00-29.99	0	1	0	0	1	1	2	3	0	0	2	2
30.00-	1	0	0	0	1	1	3	2	0	0	3	3
Total	69	69	69	69	69	69	91	91	91	91	91	91

Source: Survey by a team form the Forestry Research Institute (FRI) in 2014.

Of the 69 households surveyed in Nawng Ang village, 24 households (34.8%) owned lowland paddy fields and 65 households (94.2%) owned taungya fields. Of the 91 households surveyed in Lone Kyein village, 17 households (18.7%) owned lowland paddy fields and 80 households (87.9%) owned taungya fields. It was observed that the tenancy market for lowland paddy fields was relatively developed in both villages. As a result, farm households (defined as households operating either lowland paddy fields, taungya, or both) accounted for 95.7% in Nawng Ang and 90.1% in Lone Kyein.

After examining the other economic indicators (mentioned later), we classified the households into 6 classes based on the size of operational farmland (taungya plus lowland paddy fields) as indicated in Table C-2. Compared to the plain areas in "Burma proper," the size of farmlands may not be a good criterion for classifying households, but still we were convinced it is useful, at least as an initial approach.

Table C-2 Classification of Households

Operational farmland (taungya+lowland) (acres)	Nawng Ang		Lone Kyein	
0	3	4.3%	9	9.9%
-4.99	21	30.4%	16	17.6%
5.00-9.99	25	36.2%	42	46.2%
10.00-19.99	18	26.1%	19	20.9%
20.00-	2	2.9%	5	5.5%
Total	69	100.0%	91	100.0%

Source: Survey by FRI in 2014.

Population Characteristics

Table C-3 demonstrates the population characteristics of the villages. The average household size is 4.58 persons in Nawng Ang and 4.42 persons in Lone Kyein. The upper class households (with more farmland) have a tendency to have more members, especially in Lone Kyein. The labor force participation rate is significantly higher in Nawng Ang (74.7%) than in Lone Kyein (66.4%). This difference mainly comes from the difference in female members: 76.5% in Nawng Ang compared to 62.0% in Lone Kyein.

Table C-3 Population Characteristics

Operational farmland (acres)	No. of HHs	Nawng Ang								
		Average HH member			Average size of labor force					
		Male	Female	Total	Male	%	Female	%	Total	%
0	3	2.67	1.67	4.34	1.33	49.8%	1.00	59.9%	2.33	53.7%
-4.99	21	2.14	2.19	4.33	1.62	75.7%	1.62	74.0%	3.24	74.8%
5.00-9.99	25	2.60	2.00	4.60	2.00	76.9%	1.64	82.0%	3.64	79.1%
10.00-19.99	18	2.44	2.39	4.83	1.72	70.5%	1.83	76.6%	3.55	73.5%
20.00-	2	2.50	2.50	5.00	1.50	60.0%	1.50	60.0%	3.00	60.0%
Total	69	2.42	2.16	4.58	1.77	73.1%	1.65	76.5%	3.42	74.7%
Operational farmland (acres)	No. of HHs	Lone Kyein								
		Average HH member			Average size of labor force					
		Male	Female	Total	Male	%	Female	%	Total	%
0	9	1.67	2.22	3.89	1.33	80.0%	0.78	35.0%	2.11	54.3%
-4.99	16	1.88	2.44	4.32	1.25	66.5%	1.44	59.0%	2.69	62.3%
5.00-9.99	42	2.24	2.05	4.29	1.50	67.0%	1.38	67.3%	2.88	67.1%
10.00-19.99	19	2.58	2.37	4.95	1.84	71.3%	1.68	70.9%	3.52	71.1%
20.00-	5	2.20	2.60	4.80	2.20	100.0%	1.20	46.2%	3.40	70.8%
Total	91	2.19	2.23	4.42	1.55	70.8%	1.38	62.0%	2.93	66.4%

Source: Survey by FRI in 2014.

Table C-4 shows the education level by age group. It is observed that a large gap in education levels exists between the two villages. Whereas Lone Kyein villagers started to go to primary school by the 1970s (around 40 years ago), child education lagged behind in Nawng Ang. It seems that the higher labor force participation rate in Nawng Ang is associated with the lower education level. As seen in the age group of 15-19, however, it is also found that Nawng Ang villagers started to emphasize education after 2000 (only 10-15 years ago). Despite this new movement, however, the education sector is still generally poor in the villages, including Lone Kyein.

Table C-4 Level of Education

Age group	Nawng Ang													
	Years of education (Male)							Years of education (Female)						
	0	1-2	3-4	5-8	9-11	12-	Total	0	1-2	3-4	5-8	9-11	12-	Total
15-19	6	4	7	11	0	0	28	4	2	4	6	1	0	17
20-29	9	1	4	8	3	1	26	14	1	12	4	0	0	31
30-39	12	2	8	0	0	0	22	14	2	5	3	1	0	25
40-	36	9	8	0	0	0	53	33	9	8	2	0	0	52
Total	63	16	27	19	3	1	129	65	14	29	15	2	0	125
Age group	Lone Kyein													
	Years of education (Male)							Years of education (Female)						
	0	1-2	3-4	5-8	9-11	12-	Total	0	1-2	3-4	5-8	9-11	12-	Total
15-19	0	0	10	4	2	0	16	0	1	7	4	6	1	19
20-29	2	1	19	7	0	3	32	2	4	20	4	4	3	37
30-39	3	5	20	3	2	0	33	5	9	20	3	2	0	39
40-	24	6	25	5	2	0	62	15	8	30	2	0	1	56
Total	29	12	74	19	6	3	143	22	22	77	13	12	5	151

Source: Survey by FRI in 2014.

Agriculture

Table C-5 is a summary of farmland ownership and cultivation. Lowland paddy fields accounted for a small share while taungya is the major farmland in both villages. Maize is the main crop in taungya fields with 5-6 acres per household on average, followed by sugarcane, especially in Lone Kyein.

Table C-6 shows per acre yields and sales prices for the main crops in the year 2013. It was found that Lone Kyein achieved much higher productivity in sugarcane production, but for paddy and maize the yield level was almost the same in the two villages. The gross production value per acre was estimated at 350,000-450,000 kyat for paddy and maize, compared to slightly more than 1 million kyat for sugarcane in Lone Kyein.

Table C-5 Crop Production

Operational farmland (acres)	No. of HHs	Owned farmland (acres)		Cultivated land (acres)			
Nawng Ang							
		Taungya	Lowland	Maize	Sugarcane	Upland paddy	Lowland paddy
0	3	0	0	0	0	0	0
-4.99	21	2.4	0.3	2.3	0.1	0	0.4
5.00-9.99	25	6.4	0.8	6.3	0.1	0	0.6
10.00-19.99	18	10.8	1.1	9.4	0.9	0.2	1.1
20.00-	2	22.5	3.8	19.5	0	0	3.5
Total	69	6.5	0.8	6.0	0.3	0.1	0.7
Lone Kyein							
		Taungya	Lowland	Maize	Sugarcane	Upland paddy	Lowland paddy
0	9	0	0	0	0	0	0
-4.99	16	2.3	0.1	2.5	0.1	0	0
5.00-9.99	42	6.0	0.3	4.6	1.4	0.1	0.2
10.00-19.99	19	12.7	0.6	7.3	2.8	0.8	0.6
20.00-	5	32.4	2.6	21.4	8.2	0	2.0
Total	91	7.6	0.4	5.3	1.7	0.2	0.3

Source: Survey by FRI in 2014.

Table C-6 Yield per Acre and Sales Prices of Major Crops

Yield (per acre)	Nawng Ang: No. of samples	Yield: Average	Yield: Minimum	Yield: Maximum	Sales price (kyat per unit)	Lone Kyein: No. of samples	Yield: Average	Yield: Minimum	Yield: Maximum	Sales price (kyat per unit)
Paddy (basket)	18	39.3	16	110	7,000-10,000	22	36.4	10	88	NA
Maize (basket)	65	19.9	6	40	20,000-25,000	82	21.5	8	55	18,000-25,000
Sugarcane (kg)	6	7,563	533	33,000	40	41	26,167	8,000	120,000	40-42

Source: Survey by FRI in 2014.

Livestock rearing was not popular, probably for religious reasons (Table C-7). The number of bullock and buffalo was decreasing and they were rapidly replaced by power tillers/tractors (for plowing) and tawlargyi (for transportation).

Table C-7 Livestock Held

Operational farmland (acres)	No. of HHs	Average number of livestock per HH							
Nawng Ang									
		Bullock	Calf	Buffalo	Baby buffalo	Mother pig	Piglet	Goat	Chicken
0	3	0	0	0	0	0	0	0	0
-4.99	21	0	0	0	0	0	0	0	4.4
5.00-9.99	25	0	0	0.3	0	0	0.1	0	1.8
10.00-19.99	18	0	0	0.5	0.1	0	0	0	4.7
20.00-	2	0	0	0	0	0	2.0	0	1.5
Total	69	0	0	0.3	0.0	0	0.1	0	3.3
Lone Kyein									
		Bullock	Calf	Buffalo	Baby buffalo	Mother pig	Piglet	Goat	Chicken
0	9	0	0	0	0	0	0	0	0
-4.99	16	0.1	0.3	0.1	0.1	0.3	0.4	0.1	0.2
5.00-9.99	42	0.3	0.1	0.1	0.1	0.1	1.5	0.1	2.0
10.00-19.99	19	0.5	0.1	0.5	0.3	0.2	0.5	0	2.3
20.00-	5	0.2	1.2	0	0	0	0	0	0
Total	91	0.3	0.2	0.2	0.1	0.1	0.9	0.1	1.4

Source: Survey by FRI in 2014.

Non-farm Job Opportunities and International Migration

The non-farm sector was generally underdeveloped, in spite of the relative development in Lone Kyein. As demonstrated in Table C-8, the major occupations of villagers were agriculture and a combination of agriculture and wage labor in both villages. The major non-farm activities included shop/restaurant management, driving cars, mechanic work, tailoring, and trading. International migration was observed only in Nawng Ang, mainly to China and Thailand.

Table C-8 Occupational Structure

Operational farmland (acres)	No. of HHs	Nawng Ang																
		Male (persons)								Female (persons)								
		Agri	Agri+ Labor	Agri+ Non-farm	Agri+ Non-farm+ Labor	Labor	Non-farm	Internationl migration	Total	Agri	Agri+ Labor	Agri+ Non-farm	Agri+ Non-farm+ Labor	Labor	Non-farm	Non-farm+ Labor	Internationl migration	Total
0	3	1	2	0	0	1	0	0	4	0	2	0	0	1	0	0	0	3
-4.99	21	17	12	1	0	0	1	3	34	18	9	1	0	1	3	0	2	34
5.00-9.99	25	22	24	2	0	1	0	1	50	17	19	1	0	3	0	0	1	41
10.00-19.99	18	18	8	2	0	2	0	1	31	17	8	0	0	2	2	0	4	33
20.00-	2	1	2	0	0	0	0	0	3	1	2	0	0	0	0	0	0	3
Total	69	59	48	5	0	4	1	5	122	53	40	2	0	7	5	0	7	114
		48.4%	39.3%	4.1%	0.0%	3.3%	0.8%	4.1%	100.0%	46.5%	35.1%	1.8%	0.0%	6.1%	4.4%	0.0%	6.1%	100.0%
Operational farmland (acres)	No. of HHs	Lone Kyein																
		Male (persons)								Female (persons)								
		Agri	Agri+ Labor	Agri+ Non-farm	Agri+ Non-farm+ Labor	Labor	Non-farm	Internationl migration	Total	Agri	Agri+ Labor	Agri+ Non-farm	Agri+ Non-farm+ Labor	Labor	Non-farm	Non-farm+ Labor	Internationl migration	Total
0	9	0	0	0	0	8	4	0	12	1	0	0	0	4	2	0	0	7
-4.99	16	4	13	1	0	2	0	0	20	4	17	0	1	1	0	0	0	23
5.00-9.99	42	26	26	3	2	3	2	0	62	28	17	3	2	1	3	2	0	56
10.00-19.99	19	26	9	0	0	0	1	0	36	11	15	1	0	0	4	0	0	31
20.00-	5	9	2	0	0	0	0	0	11	5	0	0	0	0	1	0	0	6
Total	91	65	50	4	2	13	7	0	141	49	49	4	3	6	10	2	0	123
		46.1%	35.5%	2.8%	1.4%	9.2%	5.0%	0.0%	100.0%	39.8%	39.8%	3.3%	2.4%	4.9%	8.1%	1.6%	0.0%	100.0%

Source: Survey by FRI in 2014.

Table C-9 shows the income estimates of the surveyed households. The major findings can be summarized as follows.

1) Income from crop production was the main source of income in both villages, especially in Nawng Ang (75.7%). Income from the non-farm sector accounted for 26.6% in Lone Kyein whereas it was only 9.4% in Nawng Ang.
2) In Nawng Ang the per capita income was very low, and highly unequally distributed among the households. The high income disparity was mainly attributed to the unequal distribution of crop income. Remittance income reduced the disparity, but its effect was found to be very weak.
3) In Lone Kyein as well, income from crop production was highly unequally distributed, but it was offset by the different direction of non-farm income distribution, to some extent.

Distribution of Non-land Assets

Table C-5 shows the status of major non-land assets held. Motorcycles were widely diffused in both villages but mobile phones were not yet as popular in Nawng Ang as they were in Lone Kyein.

Table C-9 Income Estimates

Operational farmland (acres)	Nawng Ang										
	No. of HHs	No. of HHs with income				Average income/total HHs					Per capita income
		Crop	Agricultural labor	Non-farm	Remittance	Crop	Agricultural labor	Non-farm	Remittance	Total	
0	3	0	3	2	0	0	384,167	132,167	0	516,334	118,971
-4.99	21	21	16	5	6	847,000	220,643	327,619	271,429	1,666,691	384,917
5.00-9.99	25	25	20	13	5	2,190,000	220,800	156,000	120,000	2,686,800	584,087
10.00-19.99	18	18	12	6	5	2,870,000	227,556	318,278	161,111	3,576,945	740,568
20.00-	2	2	2	1	0	7,019,000	110,000	100,000	0	7,229,000	1,445,800
Total	69	66	53	27	16	2,003,406	226,406	247,906	168,116	2,645,834	577,693
						75.7%	8.6%	9.4%	6.4%	100.0%	
Operational farmland (acres)	Lone Kyein										
	No. of HHs	No. of HHs with income				Average income/total HHs					Per capita income
		Crop	Agricultural labor	Non-farm	Remittance	Crop	Agricultural labor	Non-farm	Remittance	Total	
0	9	0	0	5	1	0	0	5,176,667	46,667	5,223,334	1,342,759
-4.99	16	16	15	9	0	934,000	377,994	539,063	0	1,851,057	428,485
5.00-9.99	42	42	33	21	1	2,474,000	300,071	894,929	7,143	3,676,143	856,910
10.00-19.99	19	19	11	7	0	5,006,000	172,605	725,789	0	5,904,394	1,192,807
20.00-	5	5	1	1	0	11,675,000	292,500	192,000	0	12,159,500	2,533,229
Total	91	82	60	43	2	2,992,758	257,065	1,181,890	7,912	4,439,625	1,004,440
						67.4%	5.8%	26.6%	0.2%	100.0%	

Source: Survey by FRI in 2014.

Note: Crop income was estimated by multiplying 0.6 (sugarcane in Lone Kyein), 0.7 (maize, paddy and sugarcane in Nawng Ang), and 0.8 (other crops) to gross values of production.

Table C-10 Ownership of Major Non-land Assets

Operational farmland (acres)	Nawng Ang									
	No. of HHs	Present value of house ('000 kyat)	Average number per HH							
			Car	Tawlagyi	Tractor/ Power tiller	Motor-cycle	Generator	Solar	Mobile phone	TV
0	3	1,383	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.33
-4.99	21	2,171	0.00	0.10	0.05	0.52	0.14	0.43	0.10	0.48
5.00-9.99	25	4,100	0.04	0.12	0.04	0.80	0.08	0.56	0.24	0.68
10.00-19.99	18	1,571	0.11	0.44	0.28	1.22	0.17	0.33	0.44	1.00
20.00-	2	12,000	0.00	0.00	0.50	1.50	0.50	0.00	1.00	1.00
Total	69	2,964	0.04	0.19	0.12	0.81	0.13	0.43	0.26	0.70
Operational farmland (acres)	Lone Kyein									
	No. of HHs	Present value of house ('000 kyat)	Average number per HH							
			Car	Tawlagyi	Tractor/ Power tiller	Motor-cycle	Generator	Solar	Mobile phone	TV
0	9	4,661	0.00	0.11	0.00	0.78	0.22	0.33	1.00	0.44
-4.99	16	1,191	0.00	0.25	0.00	0.94	0.00	0.69	0.38	0.56
5.00-9.99	42	3,083	0.07	0.45	0.24	0.95	0.02	0.71	0.93	0.69
10.00-19.99	19	4,580	0.16	0.58	0.32	1.47	0.26	0.68	1.47	0.89
20.00-	5	11,800	0.00	0.60	0.80	2.00	0.60	0.40	1.60	0.80
Total	91	3,698	0.07	0.42	0.22	1.10	0.12	0.65	0.99	0.69

Source: Survey by FRI in 2014.

Appendix D: Survey Report of the Study Villages in the Rubber Producing Area

Village Selection

Two study villages were selected from Mon State for in-depth study on rubber production, processing, and marketing, and related rural finance issues in Myanmar. One village, called Kamawet, is located approximately 13 km south of Mudon along the highway to Thanbyuzayat and the other village, called Kwan Hla, is located approximately 30 km south of Mudon along the same highway, only about 5 km north of Thanbyuzayat.

Kamawet is a village tract with roughly 4,000 households and it comprises 5 villages and 1 small urban area. Of the 5 villages we selected a village called Sein Taung (with about 700 households) and sampled 62 households for a questionnaire survey. On the other hand, Kwan Hla is a village tract with approximately 1,000 households and it comprises a single village. We sampled 53 households for our survey. The sampling of households in both villages was not random, nevertheless, we tried to include as many different types of households as possible, including not only rubber smallholders but also rubber brokers and landless labor households.

Types of Households and Classifications

There are mainly two types of farmland in the study villages: lowland paddy field (*le*) and rubber-planted land. As Table D-1 shows, the surveyed households are first categorized into farm and non-farm households. Then the farm households are further categorized depending upon the crops they produce, mainly rice and rubber. In Kamawet, the number of farm households engaging in rice production is 21 (45.7%) whereas that number is 13 (29.5%) in Kwan Hla. On the other hand, the number of farm households engaging in rubber plantation is 34 (73.9%) in Kamawet and 42 (95.5%) in Kwan Hla. Note, however, that of the total farm households engaging in rubber plantation, only 64.7% and 66.7% of households in each village conducted tapping at the time of the survey.

After examining various other economic indicators, we decided to adopt the total farmland ownership size (lowland paddy field plus rubber-planted land) as the criterion for classifying the households. Hence all the households are classified into four: landless, farm households with less than 10 acres of land, farm households with 10-20 acres, and farm households with more than 20 acres. Note here that a landless household in Kamawet rented 10 acres of lowland paddy field and a landless household in Kwan Hla rented 2 acres of young (untapped) rubber plantation just for intercropping long beans.

Table D-1 Types of Households and Classifications

Farmland ownership (acres)	No. of HHs	Type							Rubber (acres)			Paddy (acres)	
Kamawet													
		Rubber+Paddy	(untapped)+Paddy	Rubber	Paddy	Rubber (untapped)	Long bean	Non-farm	Owned area	Planted area	Tapped area	Owned area	Culti-vated area
0	17				1			16	0	0	0	0	10.0
<10	14	1		8	3	2			4.1	4.1	3.2	6.4	7.6
10-20	21	2	3	6	7	3			11.2	11.2	6.0	10.3	10.3
20<	10	1	2	4	1	2			32.1	32.1	12.5	15.7	23.4
Total	62	4	5	18	12	7	0	16	14.4	14.4	6.3	10.8	12.2
Kwan Hla													
Farmland ownership (acres)	No. of HHs	Rubber+Paddy	(untapped)+Paddy	Rubber	Paddy	Rubber (untapped)	Long bean	Non-farm	Owned area	Planted area	Tapped area	Owned area	Culti-vated area
0	10						1	9	0	(2.0)	0	0	0
<10	23	5	2	9	1	6			4.2	4.2	2.9	4.1	3.5
10-20	7	3	1	3					8.9	8.9	5.0	7.3	7.6
20<	13	1		7		5			34.2	33.9	11.2	5.3	4.0
Total	53	9	3	19	1	11	1	9	14.0	13.7	5.9	5.2	4.9

Source: Survey by author in November 2014.

Rubber trees can normally be tapped after 7 years. Many young rubber trees were observed that had not started to be tapped yet; of the average 14.4 acres of rubber planted area per household in Kamawet only 6.3 acres (43.8%) were tapped. The same figure in Kwan Hla was 5.9 acres (43.1%) of the total 13.7 acres.

Table D-2 shows the population characteristics of the villages. Nuclear families are dominant in both villages with the average size of a household being slightly more than 5 members. It was observed that landless households tend to have fewer members. With regard to the labor force, it was found that approximately two-thirds of male members are part of the labor force whereas 46-51% of the female members of a household are part of the labor force.

Table D-2 Population Characteristics

Farmland ownership (acres)	Kamawet									
	No. of HHs	Average number of HH member			Average size of labor force					
		Male	Female	Total	Male	Ratio	Female	Ratio	Total	Ratio
0	17	2.41	2.24	4.65	1.35	56.0%	1.12	50.0%	2.47	53.1%
<10	14	2.71	2.29	5.00	1.79	66.1%	0.79	34.5%	2.58	51.6%
10-20	21	2.62	2.33	4.95	2.05	78.2%	1.48	63.5%	3.53	71.3%
20<	10	3.00	3.50	6.50	2.00	66.7%	1.80	51.4%	3.80	58.5%
Total	62	2.64	2.49	5.13	1.79	67.7%	1.28	51.4%	3.07	59.8%
Farmland ownership (acre)	Kwan Hla									
	No. of HHs	Average number of HH member			Average size of labor force					
		Male	Female	Total	Male	Ratio	Female	Ratio	Total	Ratio
0	10	1.60	2.30	3.90	0.70	43.8%	1.10	47.8%	1.80	46.2%
<10	23	2.61	2.74	5.35	1.74	66.7%	1.26	46.0%	3.00	56.1%
10-20	7	2.00	2.29	4.29	1.71	85.5%	0.86	37.6%	2.57	59.9%
20<	13	3.15	2.54	5.69	2.23	70.8%	1.23	48.4%	3.46	60.8%
Total	53	2.47	2.55	5.02	1.66	67.2%	1.17	45.9%	2.83	56.4%

Source: Survey by author in November 2014.

Agricultural Production

Table D-3 summarizes the performance of rice and rubber production in the villages for the year prior to our survey in November 2014. The average yield of paddy per acre was 44.6 baskets[104] and 31.2 baskets in Kamawet and Kwan Hla respectively. The most widely adopted variety was Kaung Kyi which was used in 23 of the 35 cases (65.7%). Other varieties included Baykyar (a kind of Paw San Hmwe), Thaung Pyan (local), Shwe Hmwe, Shwe Ta Sutt (or Shwe Ta Sa), and Yadanar Aung. The fertilizer input level per acre was generally not so high at an average 0.57 bags[105] and 0.49 bags of urea and 0.19 bags and 0.27 bags of TSP in Kamawet and Kwan Hla respectively. The farm gate price of paddy was 5,000 kyat/basket for Kuang Kyi, Shwe Hmwe and Shwe Sutt/Sa, 6,000-7,000 kyat/basket for Thaung Pyan and 8,000 kyat/basket for Baykyar.

The average yield of rubber per acre in terms of USS (unsmoked sheets) in 2013 was 710 lbs. (796 kg/ha) in Kamawet and 649 lbs. (728 kg/ha) in Kwan Hla. Most of the rubber smallholders sold their USS to village collectors. The minimum price of USS (per lb.) was 500 kyat and the maximum was 800 kyat in Kamawet while the minimum was 600 kyat and the maximum was 1,000 kyat in Kwan Hla. It seems that the higher price enjoyed by the Kwan Hla smallholders was associated with the higher quality of USS they produced. As mentioned later, many villagers in Kwan Hla have experience working in Thailand as tappers and so are more skillful in rubber processing.

[104] The basket is a unit of capacity in Myanmar. In the case of paddy, one basket is equivalent to 20.9 kg, so a yield of 45 baskets per acre equals 2.32 tons per hectare.

[105] One bag contains 50 kg of fertilizer.

Table D-3 Crop Production

Farmland ownership (acres)	Kamawet Rice production No. of HHs	Total area (acres)	Average area (acres)	Production (bsk)	Yield (bsk/acre)	Rubber production No. of HHs	Total tapped area (acres)	Average tapped area (acres)	USS production (lbs.)	Yield (lbs./acre)
0	1	10.0	10.0	500	50.0	0	0	0	0	0
<10	4	30.5	7.6	1,125	36.9	9	30.0	3.3	18,100	603
10-20	12	123.0	10.3	4,900	39.8	8	49.5	6.2	38,235	772
20<	4	93.5	23.4	4,935	52.8	5	62.6	12.5	44,620	713
Total	21	257.0	12.2	11,460	44.6	22	142.1	6.5	100,955	710

Farmland ownership (acres)	Kwan Hla Rice production No. of HHs	Total area (acres)	Average area (acres)	Production (bsk)	Yield (bsk/acre)	Rubber production No. of HHs	Total tapped area (acres)	Average tapped area (acres)	USS production (lbs.)	Yield (lbs./acre)
<10	7	24.5	3.5	680	27.8	15	41.0	2.7	19,048	465
10-20	4	30.5	7.6	1,020	33.4	6	30.0	5.0	18,990	633
20<	1	4.0	4.0	140	35.0	9	98.5	10.9	71,960	731
Total	12	59.0	4.9	1,840	31.2	30	169.5	5.6	109,998	649

Source: Survey by author in November 2014.

Rubber Farm Management Practices

Table D-4 shows how the surveyed rubber smallholders obtained land for rubber plantations. It is apparent from the table that purchasing is by far the dominant means of acquisition, followed by inheritance and reclamation, though in terms of area reclamation exceeds inheritance in Kwan Hla.

As was already shown in Section 2-1 of Chapter 2, the planted area of rubber in Myanmar showed a high growth rate after the mid-1990s, even in Mon State which had a long history in rubber plantation. The fact that only a small proportion (10-15%) of rubber smallholders acquired land by inheritance indicates how rapidly lands classified as vacant, fallow, and virgin lands have been reclaimed (and sold) for rubber plantations in the study area.

Table D-4 Means of Land Acquisition for Rubber Plantations

	Kamawet No. of cases	%	Area (acres)	%	Kwan Hla No. of cases	%	Area (acres)	%	Total No. of cases	%	Area (acres)	%
Inheritance	6	13.6%	46.0	10.1%	24	31.6%	69.5	10.9%	30	25.0%	115.5	10.6%
Reclamation	4	9.1%	22.0	4.8%	4	5.3%	112.0	17.6%	8	6.7%	134.0	12.3%
Purchase	34	77.3%	388.05	85.1%	48	63.2%	455.96	71.5%	82	68.3%	844.0	77.2%
Total	44	100.0%	456.05	100.0%	76	100.0%	637.46	100.0%	120	100.0%	1093.5	100.0%

Source: Survey by author in November 2014.

Table D-5 demonstrates the per-year area of rubber planted by the surveyed smallholders. It was found that most of the rubber trees in the villages were planted (either newly planted or replanted) after the mid-1990s, particularly after the mid-2000s. A notable fact is that many smallholders planted rubber from 2010-2012, when the rubber price surged to high levels. It indicates how Myanmar rubber smallholders quickly respond to price incentives.

Table D-5 Rubber Planted Year and Area

	Kamawet		Kwan Hla		Total			Kamawet		Kwan Hla		Total	
	No. of cases	Area (acres)	No. of cases	Area (acres)	No. of cases	Area (acres)		No. of cases	Area (acres)	No. of cases	Area (acres)	No. of cases	Area (acres)
1978			1	6	1	6	1997	1	18			1	18
1979							1998						
1980			1	2.5	1	2.5	1999	1	3			1	3
1981							2000	2	16	5	15.7	7	31.7
1982							2001	2	7	1	2	3	9
1983	1	5			1	5	2002						
1984							2003	1	0.6	3	10	4	10.6
1985							2004			4	7.5	4	7.5
1986							2005	2	10	1	3	3	13
1987							2006	1	5	6	109	7	114
1988							2007	1	5	5	24	6	29
1989			1	2	1	2	2008	1	10	7	108	8	118
1990	2	9			2	9	2009	3	31.5	7	37.2	10	68.7
1991	2	9	1	3.5	3	12.5	2010	3	35	6	60.5	9	95.5
1992	1	3			1	3	2011	8	145.8	5	28.3	13	174.1
1993							2012	4	66	4	39	8	105
1994	2	24	5	19.5	7	43.5	2013	3	43	2	12.5	5	55.5
1995	1	4	1	3	2	7	2014			2	52	2	52
1996	2	14	2	5	4	19	Total	44	463.9	70	550.2	114	1014.1

Source: Survey by author in November 2014.

Table D-6 shows the clones when they planted rubber. It is evident that since the mid-2000s almost all the smallholders started to adopt high-yielding cultivars developed in Malaysia or Indonesia such as RRIM 600, RRIM 2000 series, BPM 24, and PB 260. It should be noted here that the reason why the average yield of rubber was not so high (as shown in Table D-3) despite such widespread adoption of high-yielding cultivars is, of course due to the fact that in 2014 when we conducted the survey many smallholders were still harvesting from older rubber trees planted at earlier periods with local cultivars. In fact, the share of local clones in the total harvested area was still 54-65%.[106]

Table D-7 shows how the surveyed smallholders performed rubber tapping. As it demonstrates, smallholders that tapped by family labor alone were 59% and 77% in Kamawet and Kwan Hla respectively. It seems that the low and declining rubber prices led to such labor hiring (or lack thereof) behavior.

Finally, it is important to note that with regard to the acid the surveyed smallholders used when they processed latex into USS, all replied that they were using sulfuric acid instead of formic acid, which results in lower quality USS simply because sulfuric acid is cheaper.

[106] Moreover, the low and declining rubber prices induced less chemical fertilizer input, which also resulted in the lower yield. In fact, the surveyed smallholders reported that they applied only 0.23-0.27 bags/acre (urea plus compound fertilizer) in Kamawet while the same figure was 0.27-0.35 bags/acre in Kwan Hla on average. Note that smallholders who applied TSP or MOP were very few.

Table D-6 Rubber Colnes		
	No. of cases	Clone
1978	1	LV
1980	1	LV
1983	1	PBIG
1989	1	LV
1990	2	LV, RRIM 600
1991	3	LV(2), RRIM 600
1992	1	LV
1994	7	LV(6), PBIG
1995	2	LV
1996	4	LV(3), GT+Poly
1997	1	LV
1999	1	LV
2000	7	LV(4), BPM 24(3)
2001	3	LV(2), Poly clone
2003	4	LV(2), BPM 24, PB 260
2004	4	LV, BPM 24(3)
2005	3	LV, BPM 24, PB 260
2006	7	BPM 24, BPM 24/PB 260, PB 260, PB 260/RRII 600, RRIM 600/PB 260, RRIM 600(2)
2007	6	BPM 24(3), PB 260, PB 235, Poly clone
2008	8	BPM 24(3), RRIM 600, PB 260, RRIM 600/PB 260
2009	10	BPM 24(3), BPM 24/PB 260, PB 260(2), RRIM 2000series(3), RRIM 2001
2010	9	BPM 24(2), BPM 24/PB 260, BPM 24/RRIM 2001, RRIM 2006, RRIM 2000series, RRIM 2001(2), RRIM 2002
2011	13	LV, BPM 24, PB 260(2), RRIM 600, RRIM 2001, RRIM 2024, RRIM 2000series(3), RRIM 2001, RRIM 2023, RRIM 2025
2012	8	BPM 24(2), BPM 24/PB 260, BPM 24/RRIM 2000/RRIM 2001, RRIM 2003, RRIM 2000series(2), RRIM 2001
2013	5	BPM 24(2), RRIM 2000series, RRIM 2001(2)
2014	2	BPM 24, RRIM 2001

Source: Survey by author in November 2014.

Note: RRIM series were developmed by the Rubber Research Institute of Malaysia.

BPM 24 was developed by the Balai Penelitian Perkebunan Medan, Indonesia.

PB 235 and PB 260 were developed by Prang Besar Estate, Malaysia.

Table D-7 Mode of Tapping		
	Kamawet	Kwan Hla
Family labor	13	23
Hired labor	9	7
Mode of payment		
Share	4	1
	(2: 50%; 2: 40%)	(40%)
Other	5	6
Total	22	30

Source: Survey by author in November 2014.

Occupational Structure

Table D-8 demonstrates the occupational structure in the villages, indicating males and females separately. The major findings can be summarized as follows.

First, the non-farm sectors are relatively underdeveloped in both villages. Females, however, are more engaged in business or government/private office work (mostly school teachers) than males. The most typical businesses include grocery shop keeping and sewing. A household in Kamawet is engaged in making tapping knives. A closer look at the table reveals that the landless households can largely be classified into either labor households (such as tapping labor) or business households.

Second, the fact that some people are working abroad—mainly in Thailand and Malaysia—is notable. Many of them are working in the southern part of Thailand tapping rubber trees and other related work on rubber plantations (mostly with smallholders). The percentage of such cross-border labor migrants is 9-10% for males and 5-7% for females, not very impressive numbers. However, if we look at the actual situation closely, it becomes clear that far more people are in fact working abroad. The major reason that our data failed to capture the reality lies in the fact that many independent households (couples often with their children) stay in Thailand. People who have migrated as a household are easy to miss in an ordinary household survey.

Table D-8 Occupational Structure

Farmland ownership (acres)	No. of HHs	Male: Agri	Male: Agri+Tapping/Labor	Male: Agri+Busi/Others	Male: Tapping/Labor	Male: Tapping+Busi	Male: Busi	Male: Public servant/Company	Male: International Migration	Male: Total	Female: Agri	Female: Agri+Busi/Others	Female: Tapping/Labor	Female: Busi	Female: Public servant/Company	Female: International Migration	Female: Others	Female: Total
Kamawet																		
0	17	2	1		11		4		5	23			5	7	1	1	5	19
<10	14	14	5	3	1			1	1	25	11							11
10-20	21	23	3	5	8		1		3	43	18		1	5	2	1	4	31
20<	10	13	3	2			1		1	20	10		1	2	2	2	1	18
Total	62	52	12	10	20		6	1	10	111	39		7	14	5	4	10	79
		46.8%	10.8%	9.0%	18.0%		5.4%	0.9%	9.0%	100.0%	49.4%		8.9%	17.7%	6.3%	5.1%	12.7%	100.0%
Kwan Hla																		
0	10		1		3		1		2	7			7	2		2		11
<10	23	27	2	1	4		1		5	40	15		8	3		2	1	29
10-20	7	9				1	1	1		12	4				2			6
20<	13	21		2	3		1		2	29	12	1	1		2			16
Total	53	57	3	3	10	1	4	1	9	88	31	1	16	5	4	4	1	62
		64.8%	3.4%	3.4%	11.4%	1.1%	4.5%	1.1%	10.2%	100.0%	50.0%	1.6%	25.8%	8.1%	6.5%	6.5%	1.6%	100.0%

Source: Survey by author in November 2014.

Table D-9 lists such cases in Kwan Hla (of the 53 sample households). Note that information on migrated households was obtained by accident. Either the children stayed with their grandfather/grandmother or enumerators mistakenly included the migrated household members in their parents' households.

On the other hand, Table D-10 demonstrates the cases of migration to Thailand in the past in Kwan Hla village. It can be seen that people started to migrate to Thailand in the mid-1980s, with the earliest case being in 1970. However, it is apparent that the major flow of migration started in the mid-1990s.

Interestingly, three persons proudly reported to us that when they returned from Thailand after working for several years they brought back substantial amounts of gold; 2.5 kg, 4 kg and 10 kg. Other people also reported that they brought back substantial amounts of cash. The reason is rather simple. In Thailand, rubber tapping workers were (and still are) usually paid by a certain predetermined share of the total harvest, regardless of the rubber prices. Hence, when rubber prices remained high rubber tappers received much higher wages than they could normally get.

Table D-9 Independent Overseas Migrant Households in Kwan Hla Village							
HH No.	Age of HH Head	Migrant HH 1	Migrant HH 2	Migrant HH 3	Migrant HH 4	Migrant HH 5	Migrant HH 6
2	56	Son (19)					
		Since 2014					
7	65	Son (42)	Son (36)	Daughter (34)	Daughter (30)	Son (27)	Son (25)
		Since 1994	Since 2001	Since 1997	Since 2012	Since 2007	Since 2011
11	56	Son (27)					
		Since 2012					
15	66	Daughter (35)	Son (32)	Son (30)	Son (26)		
		Since 2001	Since 1994	Since 1994	Since 2004		
16	66	Son (30)	Daughter (25)	Daughter (23)			
		Since 2004	Since 2013	Since 2013			
18	60	Son (35)	Daughter (27)	Son (22)			
		Since 2009	Since 2005	Since 2012			
19	55	Son (31)	Son (29)				
		Since 2004	Since 2006				
22	52	Daughter (21)					
		Since 2009					
26	56	Daughter (28)	Daughter (26)				
		Since 2009	Since 2010				
31	45	Son (27)	Son (22)				
		Since 2013	Since 2013				
38	70 (F)	Daughter (50)	Daughter (46)				
		Since 2009	Since 2009				
42	44	Son (26)					
		Since 2013					
49	53	Son (29)					
		Since 2011					
52	68	Son (35)					
		Since 2004					

Source: Survey by author in November 2014.
Note: The figures in parentheses show age.

Table D-10 List of Overseas Migrants in the Past in Kwan Hla Village					
HH No.	Overseas Migrant 1	Overseas Migrant 2	HH No.	Overseas Migrant 1	Overseas Migrant 2
3	HHH (64)		21	HHH (65), Wife (65)	
	1984-1989			1984-1988	
5	HHH (42)		24	HHH (50)	
	2000-2005			1999-2003	
6	HHH (57)	Son (25)	25	Daughter (32)	
	1984-1987	2011-2013		2009-2011	
8	Son-in-law (36)		28	HHH (58)	
	1997-2011			1996-1999	
9	HHH (46), Wife (47)		31	HHH (45)	
	1994-2007			1995-2001	
10	HHH (51)		32	HHH (43)	Wife (40)
	2003-2006			1996-2010	1998-2010
12	HHH (42), Wife (40)	Son (21)	35	HHH (60)	
	1998-2007	2010-2013		1970-1990	
14	HHH (46), Wife (45)		47	Son (34)	
	2000-2007			2001-2004	
17	HHH (41), Wife (40)		50	HHH (44), Wife (39)	
	2000-2005			2005-2010	
20	HHH (54), Wife (38)				
	2003-2006				

Source: Survey by author in November 2014.

Impact of Migration to Thailand/Malaysia

To sum up, at least Kwan Hla village has continued to supply a fairly large number of migrants to Thailand since a relatively long time ago. Such a large-scale and long-during migration brought about a substantial monetary benefit to the village in general, and funds for investing in the rubber products sector of the village in particular (see Section 3-1-4 of Chapter 3).

The benefits of migrating to Thailand, however, were not monetary benefits alone. Through working on rubber plantations in Thailand, the migrants mastered technical skills and knowledge regarding rubber production and processing. One of the most important techniques the migrants obtained is rubber tapping skills. We already pointed out that the average rubber prices enjoyed by Kwan Hla villagers were higher than Kamawet villagers. This is mainly because of the fact that Kwan Hla villagers have been much more deeply involved in migration to Thailand.

Economic Disparity among Households

Table D-10 shows the diffusion of major consumer durables in the villages. Here we can discuss economic disparity among households at least to some extent. In both villages it is apparent that the landless households lagged behind in almost all the major consumer durables owned. They are the poorest group. On the other hand, the difference between farm households with less than 10 acres and those with 10-20 acres seems to be very small in general whereas there is a clear gap observed between the two farm households group and large-scale farm households with more than 20 acres.[107]

Table D-11 Major Consumer Durables

Farmland ownership (acres)	No. of HHs	Car/Truck	Motorbike		Bicycle		TV	Fan		Mobile phone		Gov. electri-city	Gene-rator
Kamawet													
		%	%	No.	%	No.	%	%	No.	%	No.	%	%
0	17	0	47.1	1.00	58.8	1.70	52.9	17.6	1.00	35.3	1.00	64.7	11.8
<10	14	7.1	85.7	1.17	85.7	1.75	85.7	50.0	1.00	57.1	1.13	64.3	35.7
10-20	21	5.0	85.0	1.24	70.0	1.64	70.0	30.0	1.50	55.0	1.36	81.0	40.0
20<	10	0	100	1.60	80.0	2.00	90.0	50.0	1.20	80.0	2.13	70.0	70.0
Total	62	3.3	77.2	1.22	72.1	1.74	72.1	34.3	1.20	54.1	1.33	71.0	36.1
Kwan Hla													
Farmland ownership (acres)	No. of HHs	Car/Truck	Motorbike		Bicycle		TV	Fan		Mobile phone		Gov. electri-city	Gene-rator
		%	%	No.	%	No.	%	%	No.	%	No.	%	%
0	10	0	30.0	1.00	30.0	1.00	40.0	0	0	30.0	1.00	20.0	10.0
<10	23	0	95.7	1.64	47.8	1.82	100	47.8	1.00	73.9	1.29	91.3	30.4
10-20	7	0	100	1.86	42.9	2.00	100	14.3	1.00	71.4	1.80	85.7	57.1
20<	13	7.7	100	2.08	69.2	1.89	100	69.2	1.89	100	1.77	92.3	53.8
Total	53	1.9	84.9	1.66	49.0	1.71	88.7	39.6	1.03	71.7	1.42	77.4	35.8

Source: Survey by author in November 2014.

[107] More analyses, especially based on income estimates, are necessary to discuss the economic disparity among the households in rubber-producing rural areas.