Study on Industrial Policy Dialogue in the Federal Democratic Republic of Ethiopia

Final Report

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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

NATIONAL GRADUATE INSTITUTE FOR POLICY STUDIES (GRIPS)

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List of Abbreviations

5S	Seiri, Seiton, Seisou, Seiketsu, Shitsuke (Sort, Straighten, Shine, Systematize, Standardize/Self-discipline)
AD	Authoritarian Developmentalism
ADLI	Agricultural Development Led Industrialization
APEC	Asia Pacific Economic Cooperation
BMEI	Basic Metal and Engineering Industry
BOB	Bureau of the Budget (Thailand)
BOF	Basic Oxygen Furnace
BPR	Business Process Re-engineering
CAD	Computer Aided Design
CAE	Computer Aided Engineering
CAM	Computer Aided Manufacturing
CEO	Chief Executive Officer
CNC	Computer Numerical Control
CSO	Civil Society Organization
CWG	Cluster Working Group
DBE	Development Bank of Ethiopia
DD	Democratic Developmentalism
DFID	Department for International Development
DIE	Deutsches Institut für Entwicklungspolitik (German Development Institute)
DLP	Developmental Leadership Program
DRI	Direct Reduced Iron
EABMEI	Ethiopian Association of Basic Metals and Engineering Industry
EAF	Electric Arc Furnace
ECBP	Engineering Capacity Building Program
EDRI	Ethiopian Development Research Institute
EEI	Electrical and Electronics Institute (Thailand)
EEPCO	Ethiopian Electric Power Corporation
EFY	Ethiopian Fiscal Year
EKI	Ethiopian Kaizen Institute
EPA	Economic Planning Agency
EPB	Economic Planning Board (Korea)
EPRDF	Ethiopian People's Revolutionary Democratic Front
EPU	Economic Planning Unit (Malaysia)
EPZ	Export Processing Zone
ESC	Economic Strategies Committee
ESD	Eastern Seaboard Development (Thailand)
ESDC	Eastern Seaboard Development Committee (Thailand)
ETB	Ethiopian Birr (Currency)
EXIM	Export/Import

F/S	Feasibility Study
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FDRE	Federal Democratic Republic of Ethiopia
FILP	Fiscal Investment Loan Program
FPO	Fiscal Policy Office (Thailand)
FTI	Federal of Thai Industries
G20	Group of Twenty
GDC	German Development Cooperation
GDF	GRIPS Development Forum
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GRIPS	National Graduate Institute for Policy Studies
GTP	Growth and Transformation Plan
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HBM	Hollow Block Making Machine
HCI	Heavy and Chemical Industry
HLF	High Level Forum
ICC	Industrial Coordination Council
ICT	Information and Communication Technology
ICU	Implementaion and Coordination Unit （Malaysia)
IDA	International Development Association
IDE	Institute of Development Economies
IDS	Industrial Development Strategy
IFCT	Industrial Finance Corporation of Thailand
IMP	Industrial Master Plan (Malaysia)
IPD	Initiative for Policy Dialogue
IPIC	Industrial Policy and Incentive Committee (Malaysia)
IRP	Industrial Restructuring Plan
ISIC	International Standard Industrial Classification
ISO	International Organization for Standardization
JBIC	Japan Bank for International Cooperation
JDB	Japan Development Bank
JETRO	Japan External Trade Organization
JICA	Japan International Cooperation Agency
JPPCC	National Joint Public and Private Consultative Committee (Thailand)
KDI	Korean Development Institute
KEDI	Korean Education Development Institute
KfW	Kreditanstalt für Wiederaufbau (Reconstruction Credit Institute)
KIHS	Korean Institute for Human Settlement
KREI	Korean Rural Economics Institute
KU	Kaizen Unit

LDP	Liberal Democratic Party
LLPTI	Leather and Leather Product Technology Institute
LME	Large and Medium Enterprise
M/Ps	Master Plans
MBC	Malaysian Business Council
MCI	Ministry of Commerce and Industry
MDGs	Millennium Development Goals
METI	Ministry of Economy, Trade and Industry
MIDI	Metal Industry Development Institute
MIER	Malaysia Institute of Economic Research
MITI	Ministry of International Trade and Industry
MNC	Multinational Corporation
MOARD	Ministry of Agriculture and Rural Development (Ethiopia)
MOE	Ministry of Education (Ethiopia)
MOF	Ministry of Finance
MOFED	Ministry of Finance and Economic Development (Ethiopia)
MOI	Ministry of Industry (Ethiopia)（Thailand)
MOM	Ministry of Manpower (Singapore)
MOST	Ministry of Science and Technology
MOT	Ministry of Trade
MOTI	Ministry of Trade and Industry (Ethiopia)
MOUDC	Ministry of Urban Development and Construction (Ethiopia)
MPDC	Metal Products Development Center
MSCI	Management Systems Certification Institute (Thailand)
MSE	Micro and Small Enterprise
MTI	Ministry of Trade and Industry (Singapore)
MW	Megawatt
NAC	National Action Council (Malaysia)
NDPC	National Development Planning Committee (Malaysia)
NEP	New Economic Policy (Malaysia)
NESDB	National Economic and Social Development Board (Thailand)
NFI	National Food Institute (Thailand)
NGO	Non Governmental Organization
NPC	National Planning Council (Malaysia)
NPCEC	National Productivity and Continuing Education Council
NPO	Nonprofit Organization
ODA	Official Development Assistance
OESD	Office of the Eastern Seaboard Development Committee (Thailand)
OJT	On the Job Training
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PBS	Protection of Basic Service
PCFV	Presidential Council for Future and Vision (Korea)

PDMO	Public Debt Management Office (Thailand)
PPD	Public-Private Dialogue
PPP	Public-Private Partnership
PSD	Private Sector Development (Ethiopia)
QA	Quality Assurance
QC	Quality Control
QCC	QC Circle
R&D	Research and Development
RM	Ringgit Malaysia (Currency)
SDPRP	Sustainable Development and Poverty Reduction Program
SEAISI	South East Asian Iron and Steel Institute
SEZ	Special Economic Zone
SME	Small and Medium Enterprise
SME Corp.	SME Corporation Malaysia
SMIDEC	Small and Medium Industries Development Corporation (Malaysia)
SOE	State-Owned Enterprise
STITF	Strategic Thrust and Initiative Task Force (Malaysia)
SWOT	Strengths, Weaknesses, Opportunities, Threats
TAI	Thailand Automotive Institute (Thailand)
TAIA	Thai Automotive Industry Association
TAPMA	Thai Auto-Parts Manufacturers Association
TDRI	Thailand Development and Research Institute
TICA	Thailand International Development Cooperation Agency
TICAD IV	Forth Tokyo International Conference on African Development
TiO_2	Titanium Oxides
TISI	Thai Industrial Standard Institute
TPLF	Tigray People's Liberation Front
TVET	Technical and Vocational Education and Training
UN	United Nations
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
USSR	Union of Soviet Socialist Republics
V_2O_5	Vanadium Pentoxide
VDF	Vietnam Development Forum
VM	Vice Minister
WCPCE	Working Committee for Productivity and Continuing Education
WTO	World Trade Organization
WW2	Second World War

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Foreword

This volume contains papers and reports prepared by the GRIPS Development Forum (GDF) and the Japan International Cooperation Agency (JICA) for the Ethiopia-Japan industrial policy dialogue held quarterly in Addis Ababa in eight sessions from June 2009 to May 2011. The topics were selected, step by step through mutual consultation, to fill the urgent policy needs of the Ethiopian government in preparing the new five-year development plan, which was subsequently titled the Growth and Transformation Plan (GTP) 2010/11-2014/15, and related policies. The papers and subsequent discussions were candid and sincere, pragmatic and action-oriented, and based on Ethiopian reality as well as surveys of best policy practices in East Asia. As Ethiopian policy interest and situation evolved rapidly even during the two years of our policy dialogue, some issues we debated initially became no longer so topical as time progressed. Nevertheless, the ten chapters contained here provide concrete examples of how Japanese experts and officials conduct intellectual exchange with policy makers in developing countries. We believe that many of the issues raised here are also relevant to policy makers in other countries. The principal authors of this volume included Kenichi Ohno (GDF), Izumi Ohno (GDF) and Toru Homma (JICA) in cooperation with other members of JICA (Go Shimada, Yukako Mizunuma, Keiji Ishigame, and Yoshiaki Noguchi) and GDF (Sayoko Uesu, Yuki Miyazaki, Azko Hayashida, and Mieko Iizuka). We would like to thank all leaders, officials, researchers and business people in Ethiopia, Japan and other countries in Africa and East Asia who offered valuable information and views for our industrial policy dialogue.

Chapter 1
Introduction

The GRIPS Development Forum (GDF) is a policy research unit of the National Graduate Institute for Policy Studies (GRIPS) in Tokyo. Established in 2002, GDF works closely with frontline policy makers in Japan, Southeast Asia, and Africa to improve the design and implementation of concrete development policies. The main areas of its policy research and involvement include Japan's development cooperation strategy, Vietnam's industrialization, best policy practices of East Asian high-performing economies, and African development. Transferability of East Asian experience to Africa and other developing regions is a particularly important research agenda for GDF. Apart from conducting policy studies and supporting policy actions, GDF also serves as a hub of intellectual networks of domestic and foreign policy makers, development partners, research institutes, private organizations, and Nonprofit Organizations (NPOs).

The Japan International Cooperation Agency (JICA), established in 1974, is the integrated agency for the implementation of Japan's official development assistance (ODA). After the merger in 2008 with the overseas economic cooperation section of the Japan Bank for International Cooperation (JBIC), JICA has become the "one stop shop" of Japan's ODA providing technical assistance, concessionary loans and grant aid as well as dispatching Japanese young and senior volunteers to developing countries. While Asia has historically been the primary regional focus of Japan's international cooperation, the scope of JICA's activities also covers global issues, shared growth, poverty reduction, governance and human security. Africa is an important region for Japan's international cooperation, and the sharing of East Asian development knowledge and experience with today's developing countries is also important for Japan.

In July 2008, GDF and JICA were invited by Prime Minister Meles Zenawi to initiate a two-track cooperation project consisting of policy dialogue and concrete industrial support for Ethiopia (kaizen project). After a preparation period, a two-year project between Ethiopia and Japan was conducted from June 2009 to May 2011 with JICA support. The project was also part of the development cooperation package for Africa to which Japan committed in the Yokohama Declaration and the Yokohama Action Plan at the Fourth Tokyo International Conference on African Development (TICAD IV) in May 2008. The two components of bilateral cooperation—policy dialogue and the kaizen project—were interlinked and implemented in regular and close consultation. GDF was mainly responsible for conducting industrial policy dialogue.[1] This report contains materials prepared by GDF and JICA for Ethiopian leaders and policy makers in the two years of industrial policy dialogue,

[1] Policy dialogue is one of the key tools used widely in Japanese development cooperation as explained below. Although it can cover any topics related to development, our policy dialogue with Ethiopia focused mainly on industrial issues. The prime minister initially asked JICA to conduct the kaizen project and GDF to engage in policy dialogue. In reality, the two components were intertwined and implemented jointly by JICA and GDF.

from June 2009 to May 2011, in eight sessions.

1-1. Learning East Asian lessons

Learning lessons from East Asia does not mean copying policies adopted somewhere in East Asia randomly without critical examination of feasibility and desirability of applying them to an African country. The postal saving system of Japan, the New Village Movement of South Korea, the National small and medium enterprise (SME) Development Council of Malaysia, or any other specific policy of East Asia, can hardly be introduced directly to any of the developing countries of today, be it in Africa or elsewhere, because internal and external situations are different from one country to another as well as from one age to another. Moreover, industrial strategies in East Asia have also been diverse. Singapore's state-led approach to human capital development had little similarity with Hong Kong's laissez-faire approach to commerce and finance. Malaysia's well-structured policy coordination does not resemble Thailand's more flexible industrial promotion. In fact, East Asia is a region where a variety of approaches to development have been tried. For this reason, there is no single East Asian model to be emulated at the level of concrete policies.

If there is a lesson Africa can learn from East Asia, it should be how policy is formulated and executed, not what particular countries in East Asia did at certain moments of their history. The lesson is about *mindset* and *methodology* that can instruct an African country to produce a policy package with appropriate contents and sequencing for that country, and ensure its implementation. For collecting specimens of concrete policy models, the search should cover the entire globe and not just East Asia. But once collected, East Asian experiences may illustrate how these models should be selected, combined, modified, and implemented under strong country ownership.

Opening its ports to the mighty West in 1859, Japan was the first country in East Asia to modernize and industrialize its economy to compete on a par with the Western powers. Its colonial policies in the pre-Second World War (WW2) period and its trade, investment and aid policies in the post-WW2 period significantly influenced the development paths and strategies of the rest of East Asia. While Japan's current approach to development assistance shares many commonalities with the Western approach, it also exhibits distinct features derived from Japan's own past as a latecomer country. The following four related aspects of Japan's approach are particularly noteworthy.

(i) *Target orientation*—industrial policy has a layered structure in which visions, roadmaps, and action plans define relation between objectives and means. Policies are formulated backwards from future goals to the present with long-term goals, intermediate points, and current tools arranged consistently to show the trajectory from here to the destination. Concrete targets, such as construction of a trunk road from point A to point B or promotion of a certain

industry within 10 years, are preferred over general improvements in governance or private sector capability.

(ii) *Field orientation*—Japanese development officials are more concerned with concrete facts and actions at production sites than with crafting policy frameworks or writing reports in the capital city. *Gemba* (pronounced gain-bah) is the Japanese term for a place of actual operation such as the factory floor or the crop field. The most important work for Japanese experts is visiting or staying at the *gemba* for diagnostics and advice. They are usually obsessed with location, physical dimensions and technology of the project. Problem-solving starts and ends at the *gemba* and not at conferences or donor forums.

(iii) *Joint work*—development occurs when a developing country learns how to make and execute policies effectively. Policy learning for government and technology absorption for local enterprises are essential. Japanese experts work side-by-side with developing country counterparts at the *gemba* so that local officials, engineers, workers and farmers can learn skills and knowledge through on-the-job training (OJT). Patience is required when the mindset and capacity of the counterparts are weak, but such patience is considered necessary and inevitable. Japan does not wish to set up a parallel mechanism for implementing aid projects offering high salaries; it instead wants to utilize and strengthen the local mechanism even if it is initially slow and inefficient.

(iv) *Dynamic capacity development*—Japanese cooperation is based on the premise that developing countries will not stay underdeveloped forever. Through policy learning and accumulation of experience, they are expected to take off economically and eventually graduate from aid. Assistance is given for a time to accelerate the day of graduation and not as permanent charity for the poor (Ohno and Ohno, 2008). Many East Asian countries, such as Korea, China, Malaysia, and Thailand, that received large amounts of Japanese ODA previously, are now Japan's industrial partners as well as competitors. Aid is not meaningful unless the recipient is determined to graduate from it. Political will, national pride, and upward mobility are required for this.

In sum, the Japanese approach emphasizes hands-on effort on the ground rather than the creation of general principles and frameworks. It also stresses policy learning through joint work. These features are expected to enhance policy ownership and capability of aid-receiving countries toward graduation. It is important to note that this "ingredients" approach should be regarded as complementary to the "framework" approach of the Western donors.[2] Although the two approaches are often contrasted as

[2] Yanagihara (1998) distinguishes the "framework" approach of the West and the "ingredients" approach of the East in development assistance. See Ohno and Ohno (1998) for a collection of papers by Japanese officials and economists on the

alternatives and the Eastern way is sometimes supported to discredit the Western way, it is evident that both general frameworks and concrete ingredients are necessary for successful development. In countries where too many frameworks have been imposed, injection of concrete actions at the *gemba* can help regain balance between theory and practice.

1-2. Entry points for Japan's industrial cooperation in Africa

Unlike in East Asia where Japanese trade, investment and aid are dominant, Japan is a small donor and a small investor in Africa. In many African countries, Japan ranks below tenth in the disbursement of ODA and Japanese manufacturing foreign direct investment (FDI) is miniscule or even nonexistent. Meanwhile, recent years have seen rising interest in East Asian experiences among African countries as well as a resurgence of growth agenda in the donor community. Moreover, the rise of emerging donors and investors such as China, India, Turkey, Korea, Saudi Arabia, South Africa, Brazil, and so on, which do not follow the Western standards of international cooperation is rapidly changing the developmental landscape of Africa. How can Japan, a non-Western industrial country and a long-term provider of industrial support in East Asia, contribute to African development?

In 2008, GDF organized a series of informal meetings in Tokyo among Japanese officials, experts, businesses and NPOs interested in African development as well as experts from Africa. Based on the views expressed in these meetings, GDF proposed four entry points for Japan's growth support in Africa (GDF, 2008).

(i) *Standard policy tools*—if an African country already possesses reasonable development visions and strategies, Japan should offer industrial support measures from its usual toolbox to align with and realize these visions and strategies. They include, for example, technical education and training of various types and duration, *shindan* (SME diagnostics and advice), *kaizen* (quality and productivity improvement at factories), and the drafting of plans based on industrial expertise and firm surveys. Table 1-1 lists standard measures for enhancing industrial human resource and enterprise capability regularly seen in East Asia. Some of the measures are globally common while others may not be well known in Africa. Some measures exist worldwide but may be implemented differently between East and West.

Japanese and East Asian approaches to development.

Table 1-1. Policy Menu for Enhancing Industrial Human Resource and Enterprise Capability

Objective	Policy measure
(1) Legal and policy framework	Provision of necessary laws and regulations
	Designation or creation of lead ministry/agency for priority policy
	Inter-ministerial coordination mechanism
	Effective public-private partnership (PPP)
	Policy structure consisting of vision, roadmap and action plan
	Monitoring and evaluation mechanism
	National standards for quality, safety, skills, environment, etc.
	Framework for technology transfer and intellectual property rights
	Industrial statistics and database
	Strategic mobilization of international cooperation
(2) Industrial human resource (education and training)	Technology and engineering universities and institutes
	Polytechnics and industrial colleges
	Technical support in specialized skills for engineers
	Technical and vocational training for new and/or current workers
	Subsidies and incentives for worker training
	Skill certification, competition, and awards
(3) Enterprise capability (management and technology)	Introduction of kaizen or productivity tools (5S, QC circles, elimination of muri and muda, suggestion box, just-in-time system, etc.)
	Benchmarking, business process re-engineering, and other management tools
	Management or technical advisory service (by visiting consultants, short-term)
	Enterprise diagnostic and advisory system (institutionalized shindan or technical extension services)
	Short-term courses and tours for enterpreneurs and managers
	Quality standards and certification, testing services and centers
	Awards and recognition for business excellence, productivity, competitiveness
	Subsidies & incentives for upgrading management, technology, marketing, ITC…
(4) Finance	Development financial institutions
	Subsidized commercial bank loans for targeted firms (two-step loans)
	Special loans and grants for priority products and activities
	Credit guarantee system
	Equipment leasing
	Enterprise credit information system
	Linking loans with enterprise diagnostic and advisory system (see (3) above)
(5) FDI attraction	Clear announcement of preferred investors, sectors, regions, etc.
	Effective investor information package and website
	Investment promotion seminars, missions and offices abroad
	Provision of high-quality infrastructure services (power, transport, land, water, waste water and solid waste treatment, etc)
	One-stop investor support service (both before and after investment)
	Development and management of industrial estates including EPZs, SEZs and special zones for priority sectors, high-tech firms, etc.
	Rental factories for local and/or foreign SMEs
	Support for labor recruitment, matching, houseing, commuting, healthcare, etc.
	Negotiation and provision of special incentives for attracting targeted anchor firms
(6) Marketing and business linkage	Support for domestic and export market development
	Trade fairs and reverse trade fairs
	Enterprise database (SMEs, supporting industries, sectoral)
	Incentives and subsidies for FDI-local firm linkage and technology transfer
	Official promotion/intermediation of subcontracting
	Establishment and strengthening of industry/business associations and local firm networks
(7) Innovation	Business start-up support
	Support for R&D, branding, patenting
	Business incubation centers
	Venture capital market
	Innovation clusters among industry, research institutes and government
	Incentives/subsidies for designated activities and products

Note: These are a subset of industrial support measures aimed at enhancing human and enterprise capabilities. Measures concerning infrastructure, logistics and distribution, social and environmental issues, and regional development are not included.

(ii) *Policy dialogue*—if development visions and strategies need strengthening, or if the host country wishes to study the East Asian way seriously, Japan can engage in bilateral policy dialogue to inform East Asian development experiences, evaluate existing policies and organizations of the country, and assist in the drafting of key policy documents. Policy dialogue must be flexible and order-made to reflect the capability and needs of the developing country in question. It should not impose Japan's methods but study policies and experiences of other high-performing economies as well. Japan has conducted policy dialogue with a number of countries in Asia as well as with a few developing countries in other regions (Table 1-2). Ideally, policy dialogue should be linked with concrete cooperation projects of Japan or other developing partners.

Table 1-2. Japan: Policy Dialogue with Developing Countries (Selected List)

Country	Period	Head/key players	Purpose and content
Argentina	1985-1987 1994-1996 (follow up)	Saburo Okita (former foreign minister) etc, JICA	Comperehesive study on agriculture and livestock farming, industry, transport and export promotion
Thailand	1999	Shiro Mizutani (former MITI official), JICA	Study on the master plan for SME promotion policy
Vietnam	1995-2001	Shigeru Ishikawa (professor) etc, JICA	Large-scale joint study on macroeconomy, industry, agriculture, enterprise reform, crisis management, etc.
Indonesia	2000	Shujiro Urata (professor), JICA	Policy recommendation for SME promotion
Myanmar	1999-2002	Konosuke Odaka (professor) etc, JICA	Study on agriculture, rural development, industry, trade, finance, ITC, etc.
Mongolia	1998-2001	Hiroshi Ueno and Hideo Hashimoto (ex-World Bank economist and professor), JICA	Study on the support for economic transition and development
Indonesia	2002-2004	Takashi Shiraishi and Shinji Asanuma (professors) & 6 professors, JICA	Policy support for macroeconomic management, financial sector reform, SME promotion, private investment promotion, democratization, decentralization and human resource development
Laos	2000-2005	Yonosuke Hara (professor) etc, JICA	Study on macroeconomy, finance, state enterprise, FDI and poverty reduction, etc.
Vietnam	2003-current	Japanese embassy, JICA, JETRO, JBIC	Bilateral joint initiative to improve business environment and strengthen competitiveness through 2-year monitoring cycle of action plans
Ethiopia	2009-2011	GRIPS Development Forum (Kenichi Ohno, Izumi Ohno), Japanese embassy, JICA	Kaizen, basic metals and engineering, productivity movement, policy procedure and organization, etc.

Source: author's research.

Abbreviations: MITI (Ministry of International Trade and Industry), SME (small and medium enterprises), JICA (Japan International Cooperation Agency), JETRO (Japan External Trade Organization), JBIC (Japan Bank for International Cooperation), GRIPS (National Graduate Institute for Policy Studies).

Note: This table lists policy dialogues that are large-scale or worthy of special attention. Besides these, Japan offers policy advice through dispatching advisors to heads of state or ministers, expert dispatches, drafting reports on development strategy, training courses and site visits, conferences and seminars, etc. in various scale and duration.

(iii) *Regional development with core infrastructure*—Japan can build core infrastructure such as power, a transport corridor, or a deep seaport, and use it to develop the surrounding area—which may be a region within a country or an area spanning more than one country. Projects such as SME promotion, skills training, industrial parks, efficient logistics, border crossing, and regional planning should be combined with core infrastructure for comprehensive regional development. The Greater Mekong Sub-region development in Indochina, the Eastern Seaboard development (ESD) of Thailand, the Brantas River Basin development of Indonesia, and the Eastern Region development of El Salvador are examples of comprehensive regional development in which Japan played a major role. In Africa, where Japan's presence is relatively small, this strategy must be realized jointly with technical and financial assistance of other development partners as well as through public-private partnership.

(iv) *Enabling environment for Japanese investors*—for Japanese manufacturing companies, Africa is unfamiliar land with high risks. To encourage their investment, the Japanese government should work with Japanese companies considering concrete projects in Africa, evaluate and support investment plans, and remove barriers to entry—be it the lack of transport access, unstable power supply, low skills of workers, or unattractive design of the product. While such assistance serves the commercial interest of Japanese enterprises most directly, it will also have positive spillover effects on local investors and investors from other countries creating a win-win-win situation so long as the principles of open access and non-exclusivity are maintained.

1-3. GRIPS-JICA industrial policy dialogue with Ethiopia

Industrial policy dialogue between Ethiopia and Japan is an attempt to put these entry points into practice. It also aims to transfer the methodology of industrial policy formulation, with the distinct features cited above, from East Asia to Africa in general and to Ethiopia in particular.

In the TICAD IV hosted by the Government of Japan in Yokohama in May 2008, JICA and JBIC co-organized a symposium on Economic Development in Africa and the Asian Growth Experience. It was chaired by JICA President Sadako Ogata and joined by the distinguished panelists consisting of Ethiopian Prime Minister Meles Zenawi, Tanzanian President Jakaya Mrisho Kikwete, former Mozambican President Joaquim Alberto Chissano, and President of the African Development Bank Donald Kaberuka. As Mr. Meles later recounted, his participation in this symposium in Yokohama convinced him that the time had come for Ethiopia to directly approach Japan for absorbing East Asian development lessons through intellectual exchange.

In the mean time, GDF visited several African countries—the so-called "donors' darling"

countries—and conducted mini policy discussions with governments in search of a suitable candidate for bilateral policy dialogue. In July 2008, GDF researchers and JICA officials attended the African Task Force meeting of the Initiative for Policy Dialogue (IPD), organized by Professor Joseph Stiglitz of Columbia University and supported by JICA, in Addis Ababa. Prime Minister Meles participated in most sessions of this two-day conference. GDF presented a paper on East Asian industrialization featuring Dynamic Capacity Development (Ohno and Ohno, 2008) and offered a book to the prime minister which contained a chapter on JICA's kaizen project in Tunisia (GRIPS Development Forum, 2008). In the following week, the prime minister requested Mr. Kinichi Komano, the Japanese Ambassador to Ethiopia, to initiate bilateral cooperation with two components: a kaizen project modeled after Tunisia by JICA and policy dialogue with GDF.

Policy dialogue coupled with a concrete industrial project on the African continent was new to Japan. To respond to the prime minister's request with proper staffing, budgeting, and cooperation schemes, preparatory meetings were held in Tokyo and Addis Ababa between GDF and JICA. The industrial policy dialogue team, consisting of GDF researchers and JICA officials and experts, was organized. This team visited Ethiopia about four times a year to conduct policy discussions, seminars, networking and site visits. The Japanese Embassy and JICA in Ethiopia coordinated closely with GDF and JICA Headquarters to propel this project. Progress of policy dialogue and individual projects was reported and possible next steps were deliberated regularly between Tokyo and Addis Ababa. Mr. Abdirashid Dulane, the Ethiopian Ambassador to Japan, also exchanged notes with the industrial policy dialogue team.

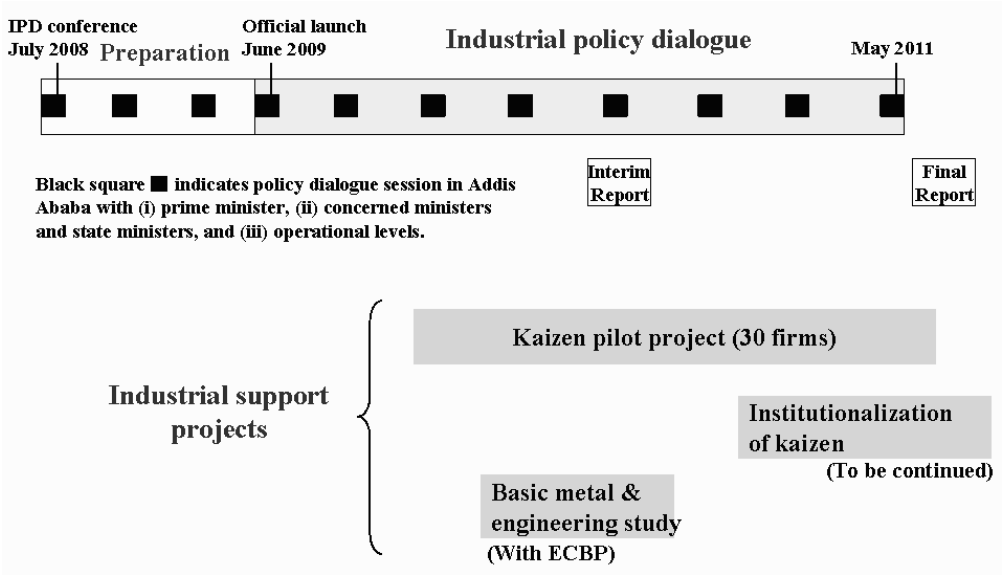


Figure 1-1. GRIPS-JICA Industrial Policy Dialogue and Industrial Support Projects

Industrial policy dialogue was conducted at three levels: (i) prime minister, (ii) concerned ministers and state ministers, and (iii) heads of directorates and institutes and other officials and advisors in charge of project formulation and implementation on the ground. Prime Minister Meles was so generous as to spare his precious time with us each time, sometimes over two hours, to clarify his policy intentions and set the direction for future bilateral cooperation.[3] These meetings were supplemented by an exchange of letters with the prime minister on such issues as Democratic Developmentalism (DD), Agricultural Development Led Industrialization (ADLI) and strategies for the commercialization of agriculture (chapter 6).

At the level of ministers and state ministers, our key counterparts were Mr. Newai Gebre-ab, the Senior Economic Advisor to the Prime Minister, and Mr. Tadesse Haile, the State Minister of Industry, who co-chaired the quarterly High Level Forum (HLF) meetings together with Ambassador Komano. After the splitting of the Ministry of Trade and Industry (MOTI) into the Ministry of Industry (MOI) and the Ministry of Trade (MOT) in October 2010, HLF meetings were basically co-chaired by Mr. Newai, new Industry Minister Mekonnen Manyazewal, and new Japanese Ambassador Hiroyuki Kishino. HLF meetings discussed industrial policy issues that were of interest to Ethiopian authorities including the concept and practice of kaizen, basic metal and engineering industries, industrial strategy in the next five-year development plan, methods of drafting industrial master plans and action plans, national productivity movements in East Asia and Africa, international best practices in industrial policy procedure and organization, and so on (Table 1-3). These topics were decided interactively and sequentially to follow the shifting policy interests of the Ethiopian government. Ministers and state ministers from other related ministries such as the Ministry of Finance and Economic Development (MOFED), the Ministry of Agriculture and Rural Development (MOARD), the Ministry of Education (MOE), and the Ministry of Urban Development and Construction (MOUDC) were regularly invited to the HLF meeting or visited individually by the Japanese policy dialogue team in case they were not able to attend the HLF meeting.

[3] The Japanese delegation met with the prime minister for substantive discussion in July, October, and December 2008; June, September, and November 2009; March and October 2010; and January and May 2011. Average length of meetings was from one-and-half to two hours. Long letters from the prime minister were received in June and July 2009.

Table 1-3. Issues Discussed at High Level Forums

	Presentations by Japanese side	Presentations by Ethiopian side
1st HLF (Jun. 2009)	(1) "JICA's plan to policy dialogue and development study" (Masafumi Kuroki) (2) "ADLI and future directions for industrial development" (Kenichi Ohno)	(1) "Evaluation of current PASDEP focusing on industrial development and related sectors" (HE Tadesse Haile)
2nd HLF (Sep. 2009)	(1) "Cross-cutting issues on industrialization and policy menu under the age of globalization: examples from East Asia" (Kenichi Ohno) (2) "Organizational arrangements for industrial policy formulation and implementation: examples from East Asia" (Izumi Ohno) (3) "Planning and decision-making process for SME policies in Japan" (Go Shimada)	(1) "Comments and feedback by the Policy Dialogue Steering Committee on the presentations by GRIPS and JICA" (HE Tadesse Haile)
3rd HLF (Nov. 2009)	(1) "Designing industrial master plans: international comparison of content and structure" (Kenichi Ohno) (2) "Industrial policy direction of Ethiopia: suggestions for PASDEP II and the next five years" (Izumi Ohno)	(1) "Concept for the industrial chapter of PASDEP II and the formulation plan" (HE Tadesse Haile)
4th HLF (Mar. 2010)	(1) "Basic metals and engineering industries: international comparison of policy framework and Ethiopia's approach" (Toru Homma)	(1) "Draft plan of industry sector for PASDEP II" (HE Tadesse Haile) (2) "Overview, contents of PASDEP II draft of chemical subsector" (Shimelis Wolde)
5th HLF (Jul. 2010)	(1) "Result of basic metal and engineering industries firm-level study – parts conducted by MPDC and JICA" (Toru Homma)	(1) "Report of kaizen training for capacity building of Kaizen Unit and pilot project companies in Osaka, Japan" (Tola Beyene) (2) "Report of kaizen training for capacity building of Kaizen Unit and pilot project companies in Chubu, Japan" (Bekele Mekuria) (3) "Current status of kaizen project and institutionalization of kaizen" (Getahun Tadesse)
6th HLF (Oct. 2009)	(1) "Singapore's experience with productivity development: internalization, scaling-up, and international cooperation" (Izumi Ohno)	(1) "Contents of industry sector in Growth and Transformation Plan" (HE Tadesse Haile) (2) "Singapore's productivity movement and lessons learned" (Daniel Kitaw)
7th HLF (Jan. 2011)	(1) "The making of high priority development strategies: international comparison of policy procedure and organization" (Kenichi Ohno)	(1) "Organizational structure of Ministry of Industry and linkage with other ministries" (Ahmed Nuru)
8th HLF (May 2011)	(1) "Ethiopia's industrialization drive under the Growth and Transformation Plan" (Kenichi Ohno) (2) "Achievements in the Quality and Productivity Improvement (Kaizen) Project" (Go Shimada) (3) "Overview of national movement for quality and productivity improvement: experiences of selected countries in Asia and Africa" (Izumi Ohno) (4) "Taiwan: policy drive for innovation" (Kenichi Ohno)	(1) "MSE development strategy of Ethiopia" (Gabremeskel Challa) (2) "Kaizen dissemination plan and institutionalization plan" (Getahun Tadesse) (3) "Botswana's productivity movement and its Implication to Ethiopia" (Daniel Kitaw)

At the operational level, GDF and JICA held numerous meetings with the officials of the MOTI (later, the MOI), MOARD, MOFED, MOE, and MOUDC. They also worked with the Ethiopian Development Research Institute (EDRI) to organize HLF meetings and exchange researchers. In addition, the Japanese team traveled outside Addis Ababa to visit regional governments, tanneries, shoe and garment factories, metal engineering firms, food processors, agricultural cooperatives, flower farms, coffee growers, tourist establishments, and Japanese cooperation project sites.

The bilateral policy dialogue proceeded in close coordination with Japan's support for kaizen in Ethiopia, which were the two components requested by Prime Minister Meles. From October 2009 to June 2011, the kaizen pilot project, following the standard format of Japanese kaizen assistance, selected and improved 30 local pilot firms by mobilizing Japanese industrial experts working together with young Ethiopian industrial officials. The project produced six "high" achievers and four "good" achievers among 28 companies that completed kaizen consultations, a result quite satisfactory by international standards. It also produced six "level 3" kaizen consultants who could provide consultancy services on kaizen and three "level 2" assistant kaizen consultants who could guide kaizen activities. In addition, a kaizen manual, kaizen videos, and the dissemination plan for kaizen were prepared. Nevertheless, the kaizen pilot project was only the first step in Ethiopia's national movement for quality and productivity improvement, and JICA will continue to support the subsequent phase of the kaizen project. The policy dialogue team closely monitored the kaizen project and organized supportive activities. It hosted open seminars on the concept and adaptability of kaizen, produced a booklet to introduce kaizen (see next paragraph) and initiated policy discussions and internal meetings to narrow the perception gap between the Ethiopian and Japanese side for smooth progress of the kaizen project.

Quick response to information requests was also an important work of the industrial policy dialogue team. At the request of the prime minister, GDF compiled information packages on Japanese technical education, rural life improvement movements in East Asia, global information on basic metal and engineering industries, international comparison of industrial policy formulation methods, and technology absorption of Japan and Korea through foreign-aided industrial projects. *Introducing Kaizen to Africa*, a booklet explaining the concept of kaizen as well as how it took root in Japan and how it was applied to the developing world with Japanese assistance, was produced as an introductory reference for those unfamiliar with the concept (GRIPS Development Forum, 2009). A handbook of national quality and productivity movements in East Asia and Africa is currently under preparation. National movement for mindset change is our provisional answer to the prime minister's inquiry as to how East Asian governments steered a private sector away from rent seeking and property speculation and toward value creation and competitiveness.

Networking was another important activity for the policy dialogue. Apart from interactions with the

Ethiopian leaders and officials mentioned above, meetings were organized with a group of donors supporting Ethiopia's private sector development. GDF and JICA also met with individual donors and programs such as GTZ (now GIZ), World Bank, the Engineering Capacity Building Program (ECBP, a large-scale program run jointly by Ethiopia and Germany), DFID, USAID, UNIDO, UNDP, FAO, China, India, Korea, and the Sasakawa Africa Association. GDF and JICA contacted Japanese firms interested in investing in Ethiopia; held seminars and explored the possibility of research cooperation with Addis Ababa University and the Ethiopian Economic Policy Research Institute; visited Civil Service College and Ethiopian Management Institute; and participated in industrial policy conferences organized by the German Development Institute (DIE) in Bonn and by the African Union in Addis Ababa.

1-4. Features of Ethiopian industrial strategy

Ethiopia is unique among Sub-Saharan African countries in its bold and determined approach to economic development.[4] Led by a strong and intelligent leader, the country has established a proactive and evolving development orientation expressed in the concepts of DD and ADLI. Ethiopia's ownership of development policy is strong. It rejects neo-liberal advice for small government and instead opts for private sector-driven growth guided by a strong state. The government is regarded as the principal development agent for replacing rent seeking with value creation, commercializing smallholder agriculture, and promoting agricultural growth that provides conditions for the initial stage of industrialization. Internal value creation is to be realized through acquiring skills and upgrading technology embodied in human capital rather than from extractive resources or capital and aid inflows. This approach has similarities with East Asia's Authoritarian Developmentalism (AD) in the past but there are also differences. In the first few sessions of the bilateral policy dialogue, Ethiopian development philosophy was clarified with the prime minister which provided the background for subsequent policy advice and concrete industrial support. The tentative result of this exchange is contained in chapter 5 of this report.

Another remarkable feature of Ethiopian industrial policy is aggressive policy learning and dynamic linkage between policy learning and expansion of policy scope. It was only several years ago, in the early 2000s, that Ethiopia settled its urgent problems related to national security, such as famine relief and conflict with its neighbor, and began to seriously tackle the issue of long-term economic development. At the outset, Ethiopian policy capability was low and the main policy measures employed for this purpose were a package of generous incentives for a small number of export industries such as leather, garment, agro processing and flowers, and monitoring of progress by the monthly Export Steering Committee chaired by the prime minister. Over time, policy experience was

[4] More discussion on Ethiopian policy orientation is given in chapter 4.

gradually accumulated through self effort and donor support. Tools such as benchmarking, business process re-engineering (BPR), institutional twinning and, most recently, kaizen were added to the industrial policy toolkit. Sectoral master plans were drafted, specialized institutes for priority sectors were set up, and mechanisms such as agricultural extension services, technical and vocational education and training (TVET) system, and public-private dialogue were established nationwide. Scaling up of a small pilot project to different sectors and regions has become a routine procedure. By now, the Ethiopian authorities feel sufficiently confident to take the next step forward in industrial policy formulation. In the Growth and Transformation Plan (GTP) 2010/11-2014/15, the Ethiopian government is expanding policy support from export sectors to import substitution sectors such as chemicals and basic metal and engineering. It is also launching new initiatives such as the institutionalization of kaizen, the revamping of micro and small enterprise policy, and creation of new industrial zones.

1-5. Impacts of industrial policy dialogue

The two-year bilateral industrial policy dialogue has produced a number of results for both Ethiopia and Japan in the formulation of development and international cooperation policies. They can be summarized as follows.

First, the policy dialogue accelerated Ethiopia's policy learning. Regular visits, intensive meetings and provision of specific information allowed the Ethiopian authorities to select topics and raise questions according to changing policy needs and interests. Ethiopia previously learned the development experiences of Korea and Taiwan through literature and dispatching of several young officials to the Korean Development Institute (KDI) in the late 1990s. However, the Ethiopia-Japan policy dialogue provided far more direct and interactive access to Japanese thinking and East Asian development experiences. Moreover, Ethiopia's inclination for aggressive policy learning was highly consistent with the features of Japan's development support explained above, especially the principle of Dynamic Capacity Development. Issues taken up in the last two years were broad and many. Our discussions started with the clarification of Ethiopia's guiding principles of DD and ADLI. The bilateral policy dialogue then turned to practical advice for expanding Ethiopia's policy space while avoiding known pitfalls, how to design national movements for mindset change, development plans, sectoral and sub-sectoral master plans and action plans, and so on. Although the results of our bilateral discussions are not clearly visible in the GTP (see chapter 3), it is hoped that policy learning in the last few years will produce tangible changes in the years to come.

Second, weaknesses in policy procedure and organization have been identified and communicated to the Ethiopian authorities. This is one of the areas in which significant improvement is desirable in the coming years. Discussions on a number of sectors and issues such as kaizen, TVET, micro and small

enterprises (MSEs), and basic metal and engineering have revealed common methodological problems which prevented effective policy making in Ethiopia (chapters 3, 4 and 7). They included preference of speed over quality in industrial policy formulation, the lack of sufficient consensus building on key policy directions among stakeholders inside and outside government, and the lack of a high-level policy coordination mechanism across ministries and agencies. These problems were detected against the best policy practices of East Asian high-performing economies. An alternative policy arrangement to overcome them, consisting of the three-layer structure of a national council, a planning commission and a policy think tank, was suggested. It is hoped that serious reform in central policy coordination will be undertaken during the GTP period so that the next five-year plan will be produced by a more advanced policy mechanism.

Third, policy dialogue was made effective by its close linkage with JICA's industrial projects (kaizen pilot project, technical assistance for establishing the Ethiopian Kaizen Institute and kaizen institutionalization, and a basic metal and engineering sector survey). Feedback between policy dialogue and concrete industrial projects is a feature not always visible even in Japan's economic cooperation in East Asia. In Ethiopia, the prime minister's initial request for two-track cooperation ensured that the two components would proceed interactively. This arrangement turned out to be highly productive as policy advice could be directly implemented, at least partially, through concrete projects while the latter could be supported by open seminars, policy discussions and institutional adjustments initiated by the policy dialogue. As Ethiopia regards kaizen as the core instrument for national movement for quality and productivity improvement, it is particularly important that problems encountered in kaizen projects be immediately reported and solved by high-level policy makers.

Fourth, the three-level policy dialogue, consisting of the prime minister, ministers and state ministers, and operational people and conducted in the sprit of mutual respect and full candor, provided excellent channels for Japan to know Ethiopia's most pressing policy needs and target its resources toward them. In particular, regular access to the prime minister and long and substantive exchange with him enabled Japan to identify the most desired contribution to Ethiopia based on its comparative advantage. Similarly for Ethiopia, policy dialogue at all levels enabled the government to relay its policy intention precisely and raise issues flexibly to Japan (and East Asia). This is important because Ethiopia is a country of strong policy ownership with a clear developmental orientation. Pin-point matching of needs and offers has made Ethiopia-Japan intellectual cooperation highly effective and purged all seeds of distrust and misunderstanding. Though all donors are required to align with the national development plan, just reading the GTP will not allow such fine-tuning of development assistance to country needs.

In the eighth—and last—session of industrial policy dialogue in May 2011, the prime minister and the

industry minister strongly requested the continuation of policy dialogue with Japan in one form or another. In response to these requests, the Japanese government, JICA and GDF are currently exploring the modality of extension of bilateral policy dialogue. As to Japan's support for kaizen, it will continue into the second phase as was previously agreed regardless of the future modality of policy dialogue.

1-6. Guide to chapters

The rest of this report is organized as follows.

Chapter 2 gives an outline of JICA's kaizen project as it was implemented, in parallel with the industrial policy dialogue, from October 2009 to May 2011.

Chapters 3 and 4 are materials prepared for the most recent policy dialogue sessions in January and May 2011. Together they provide a good summary of our policy conclusions and recommendations. Chapter 3 contains assessments of the GTP in light of the previous sessions of bilateral policy dialogue. Chapter 4 discusses problems in policy procedure and organization which were identified as one of the root causes of general policy weaknesses in Ethiopia.

Chapters 5 to 9 are papers submitted to the earlier sessions of policy dialogue before the content of the new five-year plan was known. Chapter 5 gives our interpretation of DD and ADLI, which are the two highest governing concepts of Ethiopian development. This chapter was drafted for clarifying the basic policy stance of the Ethiopian government at the beginning of the two-year policy dialogue. Chapters 6 and 7 argue cross-cutting issues and organizational arrangements that should be minded in expanding policy scope and instruments as the government's intention to do so in the next five-year plan was known at the time of writing. Chapter 8 includes policy advice in drafting the industrial section of the next five-year plan by the MOTI. Chapter 9, prepared at the request of the Ethiopian government, analyzes how industrial master plans in high-performing economies are structured.

Chapter 10 presents the international comparison of policy framework on the Basic Metal and Engineering Industries (BMEIs) and the highlights of the Firm-level Study on the BMEIs requested by the Ethiopian government and conducted jointly by JICA and the ECBP. The chapter reports only the results produced by JICA along with the review of international experiences and the Ethiopian policy framework for these industries.

The ordering of chapters in this report does not follow time sequence. The outline of JICA's kaizen project (chapter 2) and the two most recent papers for policy dialogue (chapters 3 and 4) are placed ahead of others because they contain latest information on Ethiopia's development orientation,

especially the GTP and kaizen, and are most relevant to the readers with time constraints. As Ethiopia's policies evolve rapidly, any discussion not reflecting the GTP may fail to give a full picture of where the country is headed. The remaining chapters, however, are also useful as they offer concrete advice on how to improve industrial policy measures, documents and organizations applicable not only to Ethiopia but also to other developing countries provided that appropriate modifications are made. All papers were written for immediate use at policy dialogue sessions or reporting progress to governments and not for academic publication.

Throughout this volume, the reader will notice that the main methodology of persuasion used in the bilateral policy dialogue was international comparison of best policy practices, gathered mostly from East Asian high-performing economies, so that Ethiopia was provided with solid reference materials with which to build its own policies. The ultimate purpose of studying a large number of international best policy practices is not to copy them randomly and blindly to a different soil but to strengthen Ethiopia's general capability to compose a policy package most suitable for its local context based on the principles of selectivity, modification, and combination.

Chapter 2
Achievements in the Quality and Productivity Improvement (KAIZEN) Project

Based on the request of Prime Minister Meles, the Japan International Cooperation Agency (JICA) and the Ministry of Industry (MOI) jointly started technical cooperation for development planning, the Study on Quality and Productivity Improvement (KAIZEN), hereinafter referred to as "the KAIZEN Project." The KAIZEN Project was implemented in close coordination with the industrial policy dialogue. The progress and achievements of the Project regularly were reported in the High Level Forums and dialogues with the Prime Minister and concerned ministers. These interactions contributed to the provision of productive policy advice as explained in chapter 1.

This chapter outlines the KAIZEN Project activities and its achievements. It also explains some recommendations for dissemination of KAIZEN in Ethiopia. Main contents of the chapter were reported directly to the Prime Minister in May 2011 during the final visit to Ethiopia for the policy dialogue. The Prime Minister requested JICA to continuously assist the dissemination of KAIZEN to private enterprises including both large and medium enterprises (LMEs) and micro and small enterprises (MSEs).

2-1. Profile of the KAIZEN Project

2-1-1. Objectives of the KAIZEN Project

The KAIZEN Project was implemented by MOI with the assistance of JICA in accordance with the Scope of Work signed by both parties on June 4, 2009. The Project focused on the KAIZEN practice, which had been proved as an effective approach to quality and productivity improvement, not only in Japan but also in many other countries. The KAIZEN Project has the following three objectives:

(i) *Pilot Project Performance*—to formulate a manual to be used for conducting KAIZEN activities in Ethiopia, which is prepared based on the results from verification study through the implementation of pilot activities for selected twenty eight companies;
(ii) *Human Resources Development*—to transfer relevant skills and techniques to the staff members of KAIZEN Unit (KU) of MOI; and
(iii) *National Plan Formulation*—to make a plan to disseminate KAIZEN activities for manufacturing companies in Ethiopia.

The KU is an organization established by MOI for the purpose of implementing the KAIZEN Project.

It is a temporary unit within MOI. Ten personals were assigned as KU members from the following five organizations of MOI: Metal Industry Development Institute; Textile Industry Development Institute; Leather Industry Development Institute; Agro-processing Department; Chemical Industry Development Directorate; and Privatization & Public Enterprises Supervising Agency. KU members were to acquire KAIZEN-related knowledge and skills through on-the-job training as well as through other training opportunities available in the KAIZEN Project activities. It was also expected that the KU members become the core group in a future permanent institution, Ethiopian KAIZEN Institute (EKI), to lead KAIZEN dissemination in Ethiopia.

2-1-2. Implementation and timeframe of the KAIZEN Project

The experiences show that it is possible to apply KAIZEN in countries with different socio-cultural contexts but that application must be conducted under proper leadership and with adjustments that reflect the uniqueness of the targeted society (GRIPS Development Forum, 2009). Therefore, the KAIZEN Project aimed at evaluating the effectiveness of KAIZEN in Ethiopian enterprises, based on the results of the pilot project. The Project has supported the development and establishment of basic methodology of the KAIZEN activities in Ethiopia, tailored to the local context, as well as its nationwide dissemination. The Project has also supported the development and creation of the manual, to transfer relevant skills and techniques to the KU members, and the accumulation of findings that will be essential in the formulation of the National Plan.

Table 2-1. Timeframe of the KAIZEN Project

Phase	Project Activities
Phase 1 October 2009 - January 2010	- Situation analyses of the Ethiopian industrial sector - Preparation of the pilot project (selection of the pilot companies, developing methodological framework for the pilot project, etc.)
Phase 2 January 2010 - December 2010	- Planning of the implementation of the pilot project - Implementation and evaluation of the pilot project with the selected pilot companies - Creation and finalization of the manual based on the evaluation of the pilot project
Phase 3 January 2011 - May 2011	- Drafting of the national plan for enhancing the KAIZEN activities in Ethiopia - Seminars for demonstrating the pilot project outputs and methods for a wide dissemination of KAIZEN across the country - Final capacity development activities for KU members to ensure the transfer of skills and techniques that has taken place throughout the KAIZEN Project period.

Source: JICA (2011)

The KAIZEN Project was conducted from October 2009 to May 2011. The Project activities are divided into three phases (Table 2-1).

2-2. Achievements of the KAIZEN Project

2-2-1. Positive results

The pilot project brought various positive results to pilot companies qualitatively and quantitatively (Table 2-2). Qualitative improvements were widely observed. KAIZEN has two key features: "*incremental and continuous improvement"* and "*involvement of the entire workforce"* in that process (GRIPS Development Forum 2009, p.2). These characteristics reflected well on the positive qualitative results. KAIZEN toolkit such as 5S, Suggestion System and Quality Control Circle (QCC) caused safe and clean environment and facilitated employee participation.

Table 2-2. Positive Results Observed in Some Pilot Companies

Qualitative results
(i) Clean working environment created (ii) Teamwork and motivation of workers developed (iii) Health and occupational safety of workers improved (iv) Lower level workers accustomed to suggesting improvement ideas to management decisions – Increased Employee Participation (v) Knowledge obtained on how to meet quick delivery and to reduce costs
Quantitative results
【Monetary impact】 (i) By Reducing costs (a) ETB10,000 per month and (b) ETB78,000 per annum (ii) By generating additional income of ETB1.2 million per year (iii) By just decreasing down time ETB204,000 per day (iv) By rectifying raw materials defect used for manufacturing ETB2.4 million (v) By identifying, repairing and reusing of usable machines & equipment worth of ETB3.25 million 【Non-Monetary impact】 (vi) Increasing labor productivity, by reducing time loss for searching tools on average 50% (vii) Reduction of floor space around 50% (viii) Defect ratio improvement in the range of 50 to 70% (ix) Lead time improved in the range of 16 to 90% (x) Labor saved from 15 to 90%

Source: JICA (2011)
Note: 1ETB (Ethiopian Birr) = USD16.65

Quantitative results are divided into monetary impact and non-monetary impact. The monetary impact is ETB500,000 per company on average, although it ranges from ETB10,000 to ETB3,259,000, depending on the size of company and its sector characteristics. The average of ETB500,000 is a large amount of money for an Ethiopian company, which is typically staffed with 10 to 50 employees.

2-2-2. Highlights of the results of the pilot project

The KAIZEN Guidance Company Assessment was conducted to make assessment of the companies' potential future development of their KAIZEN practice, or their potential to eventually become "KAIZEN model companies". Here, "KAIZEN model companies" mean those which continuously practice KAIZEN and as the result, realize achievements that significantly excel other companies in terms of quality / productivity improvement. The grading is given in five levels (Table 2-3).[1]

Table 2-3. Grade Point Distribution

Grade	Possibility to be a KAIZEN model company	Number of the companies
5	High	6
4	Good	4
3	Some	8
2	Low	6
1	No	4
Total		28

Source: JICA (2011)

Six companies are rated grade 5 and four companies are rated grade 4. These ten companies have high or good possibility to become KAIZEN model companies. These ten companies are expected to continue KAIZEN practices and to accumulate tangible improvements in quality and productivity.

The key success factors identified with respect to companies graded at 5 and 4 are: (i) management's positive attitude towards KAIZEN including management's strong commitment; and (ii) good management-employee relationship where trust and empowerment is ingrained in the management practice, including management's willingness to communicate with employees and train them. Another important factor for success is the absence of disruptive management conditions, such as shortage of operating capital or difficulty in procurement of materials, which would cause suspension of ordinary company operation.

[11] The possibility to be a KAIZEN model company is graded according to various criteria, for example, model workplace activities (5S, standard operation sheets, layout study), human resource activities (employee training of basic KAIZEN knowledge, workload reduction), organization management (QCC activities, wide dissemination of KAIZEN), management's leadership (commitment of top management, management-employee relations) and development of KAIZEN activities.

By contrast, six companies are rated grade 2 and three companies are rated grade 1. The factors behind them are: (i) lack of management commitment to KAIZEN as revealed by personnel changes that neglect the KAIZEN efforts or by management priority on production volume and inattention to quality; and (ii) management problems that jeopardize the company's operation as a viable going-concern. Many of the companies in this grading group lack the basic management capabilities in the area of business planning, cost accounting and operation data, and trust and empowerment.

2-2-3. Assessment of capacity development for KU members

The KAIZEN Project assisted rapid capacity development for KU members. Table 2-4 shows assessment result of capacity development of KU members. It includes five levels of KAIZEN professionals from Level I (Junior KAIZEN Consultant) up to Level V (Lead KAIZEN Consultant). It was a fair observation that the KU members had been at a level below Level I at the very beginning of the pilot project. It is fair to note, by the end of pilot project, that they have reached at least Level II (Assistant KAIZEN Consultant) while a few members have reached Level III (KAIZEN Consultant). After the implementation of the special guidance program done independently by the KU members in March–April 2011, about two-thirds of the KU members were graded at Level III. The Level III KAIZEN Consultant is required to be competent in preparing case materials for training exercises and to have industrial / business management knowledge. The KU members, who are capable of playing significant roles in the KAIZEN guidance sessions, are now solidly on track to develop themselves towards further higher levels of KAIZEN consultants.

Table 2-4. Assessment of Capacity Development of KU Members

Level	Competence	Assignment	Before project	After project
0	No experience of KAIZEN		9	
I	Competent to conduct KAIZEN activities for yourself	Junior KAIZEN Consultant		
II	Competent to guide KAIZEN activities	Assistant KAIZEN Consultant		3
III	Competent to provide consultancy services on KAIZEN	KAIZEN Consultant		6
IV	Competent to provide consultancy services on KAIZEN	Senior KAIZEN Consultant		
V	Competent to provide consultancy services on KAIZEN	Lead KAIZEN Consultant		

Source: JICA (2011)

Four types of capacity development activities were undertaken. They are: in-house training; on-the-job training; self-learning; and training program in Japan. Each activity significantly interacts with one another to achieve capacity development effectively. For example, in-house training and on-the-job training are inseparable. The efficacy of in-house training will be recognized only when the contents of in-house training are relevant to and can be utilized for company diagnosis and guidance (on-the-job training). Thus, in-house training empowers the KU members to prepare for the next training. In other words, in-house training and on-the-job training are intertwined, creating synergistic effects.

2-3. Recommendations for dissemination of KAIZEN

As discussed in this chapter, the KAIZEN Project produced various outputs. The government of Ethiopia plans to establish the EKI which promotes and disseminates KAIZEN all over the country. The EKI will employ new Ethiopian consultants and conduct consultations with both LMEs and MSEs. JICA plans to start a new project to enhance the EKI's capacity for nationwide dissemination of KAIZEN, based on the request by Ethiopian government.

In the final section, some critical issues and recommendations for dissemination of KAIZEN are discussed in line with lessons learnt from the KAIZEN Project.

2-3-1. Further capacity development of KU members

The decisive factor for the success of the KAIZEN Project was the strong leadership provided by the capable KU leader together with the excellent team of the nine KU members. All KU members are now capable of developing themselves further as KAIZEN consultants. The KU members who have acquired knowledge and skills of KAIZEN are expected to be the core members of the EKI and continue their activities in order to become the trainers in the training of KAIZEN teachers. In order to enhance the excellence of the KU members as KAIZEN consultants, they should have continuous exposure to actual workplace experiences. It is critically important that KU secures ways in which the KU members expose themselves to actual workplace situations as much as possible in order to experience KAIZEN activities in solving actual problems in the workplaces. Therefore, KU (or future EKI) should organize itself to enable the KU members to accumulate workplace experiences, and at the same time should develop new tools and methods that are needed in the workplaces they help.

2-3-2. Future expansion of KAIZEN guidance methodology

The KAIZEN guidance methodology established in the pilot project focuses on "workplace KAIZEN" because it is the basis and the common ground of all KAIZEN activities. The pilot project was able to

formulate a standardized, common methodology of KAIZEN guidance by focusing on "workplace KAIZEN."

In the future KAIZEN dissemination in Ethiopia, the present KAIZEN guidance method should be expanded in two ways. One is expansion in the entry paths to KAIZEN activities for wider scope of industry sectors by way of customization for MSEs and possibly for areas of unique types of production. For example, the KAIZEN manual and the audio-visual materials prepared by the Project should be developed for all Ethiopian industries to introduce KAIZEN.

The other is enhancement in providing support for management capabilities in association with the advancement of KAIZEN activities, which are the fundamental enablers on recurrent KAIZEN agenda: business planning, cost accounting and operation data, and trust and empowerment. Thus, a management framework of KAIZEN guidance should be developed to support companies with their capabilities in the fundamental enablers.

2-3-3. Dissemination of KAIZEN activities

Mind-set is key factors for dissemination of KAIZEN activities. The KAIZEN Project focused on workplace KAIZEN. It is in part an answer to improving employee motivation. However, challenges will lie ahead in more basic parts of mind-set and attitude that are deeply rooted in the societal norms or culture. They may include teamwork spirit that promotes collaboration in creating rules, respecting and observing the rules and improving the rules. These issues related to mind-set and attitude may be pursued in the context of KAIZEN promotion framework, in collaboration with relevant organizations and KAIZEN national movement.

Chapter 3
Ethiopia's Industrialization Drive under the Growth and Transformation Plan*

The policy landscape of Ethiopia is entering a new phase. Based on its developmental experience and policy learning in the last several years, which are themselves remarkable and worth careful study and documentation, the Ethiopian government has launched a new five-year plan, the Growth and Transformation Plan (GTP) 2010/11-2014/15, a lucid and bold document approved by the parliament in November 2010. As the highest national policy framework, the GTP will govern Ethiopia's developmental policies, budgets and government organizations, as well as actions of development partners and foreign investors, in the coming five years. Unlike similar plan documents in many other developing countries where much is said but little is implemented, the Ethiopian GTP is unlikely to remain merely on paper. The top leader's resolve and the government's readiness to carry out this plan and take the country to the next level of development are clearly visible. It is highly probable that the performance of every ministry, agency or institution in Ethiopia will be judged by its contribution to the realization of the GTP.

This paper discusses and evaluates the design of the GTP as it prepares to be implemented in the first half of 2011. While the GTP covers a broad ground from agriculture and rural development to social issues and governance, our main focus is on its industrial sector targets and measures from the perspective of international comparison of policy formulation methods. The National Graduate Institute for Policy Studies (GRIPS) and the Japan International Cooperation Agency (JICA) have conducted quarterly industrial policy dialogue with the Ethiopian government since June 2009 with eight official sessions in total. In the process, a large number of policy practices, gathered mostly from East Asia's high performing economies, were reported and compared. We will study the features of the GTP, including its strengths and remaining concerns, mainly against the East Asian standards in industrial policy making.[1]

* This chapter is prepared for the Eighth High Level Forum of the Ethiopia-Japan Industrial Policy Dialogue held in Addis Ababa on May 17, 2011. More discussion of the materials covered in section 3-1 (Ethiopia's past policy orientation and experience) is found in chapter 5 below.

[1] The main comparator countries are Singapore, Taiwan, Korea, Malaysia and Thailand. The GDF and the Vietnam Development Forum (VDF) (a Vietnam-Japan joint research project supported by the GDF) organized policy study missions to these countries, as well as to Botswana, Burkina Faso, Tanzania and Uganda, in 2009-2011 to gather materials and extract lessons for Ethiopia. Moreover, policy experiences of Japan, China, India, Philippines, Vietnam, Mozambique, Zambia and others are used as additional references.

3-1. Background

3-1-1. Brief history

Recognizing that predatory states and rent seeking culture have been the major obstacles to African development, the Ethiopian government is determined to build a developmental state—a state that promotes skills, technology and productive investment for all citizens, farmers and firms rather than patronage and personal gains for a few—and has taken a number of steps for its realization ever since the present government assumed power in 1991. The first several years in the 1990s under the interim government were spent in solidifying the new regime based on a multi-party political system and ethnicity-based federalism, re-establishing a market-oriented economic mechanism and global linkage, and drafting a new constitution. During this early period, the concept of Agricultural Development Led Industrialization (ADLI) was introduced as the key policy thrust for national development in the first half of the 1990s. After overcoming a series of difficulties arising from internal politics, external conflicts, droughts and famines, Ethiopia by the early 2000s became ready to earnestly undertake economic development strategies guided by ADLI principles. The two national development plans of *The Sustainable Development and Poverty Reduction Program* (SDPRP) 2002/03-2004/05 and *A Plan for Accelerated and Sustained Development to End Poverty* (PASDEP) 2005/06-2009/10 were drafted and executed.

From around 2003 to present, Ethiopia's overall growth performance has been good. Real GDP growth has been 11% per annum on average, and poverty incidents declined visibly.[2] In policy making, the government has learned and adopted various industrial policy methods and tools—such as the monthly Export Steering Committee (copied from the previous Korean model), benchmarking, business process re-engineering (BPR), scaling up of pilot projects and, most recently, *kaizen* (factory improvement) from Japan—through self-study as well as cooperation with development partners. Also in the mid 2000s, the political concept of Democratic Developmentalism (DD) was formulated to pursue democratic and market-oriented development under strong state guidance and globalization pressure.

The GTP is the successor to these evolving concepts, documents and plans. It incorporates the ideas of ADLI and DD, which themselves have evolved over time, and the positive and negative experiences of past development plans while adding new issues and sectors to work with. Setting ambitious targets and calling for nationwide mobilization, the GTP takes up the challenge of bringing national development to a higher and more difficult stage. The vision and basic policy orientation for the next five years are already set. The remaining task for the GTP is designing details and implementation.

[2] Poverty headcount below the national poverty line is on a long-term declining trend from 45.5% in 1995 to 44.2% in 1999, 38.9% in 2004, and 29.2% in 2010.

3-1-2. Ethiopian policy orientation

By going through cumulative policy learning in the last two decades, as described above, Ethiopia has established a distinct policy style which is unique among African countries (but perhaps not so unique among East Asian economies). The four salient features of Ethiopian development policy can be summarized as follows.

First, there is a very strong policy ownership. Despite the fact that Ethiopia is a poor country heavily dependent on official development assistance (ODA) and having only a small traditional export base,[3] the Ethiopian government has a clear development strategy which is home-made. Unlike many other "donors' darling" countries, Ethiopia does not allow bilateral donors or international organizations to impose "international best practices" from the West or speak in one voice to recommend political or economic reforms. The World Trade Organization (WTO) accession is being sought, but only on the condition that its membership would leave sufficient policy scope for Ethiopia to catch up rapidly as a latecomer country. ODA and FDI are welcomed only when they align closely with the national development plan. Donors and investors interested in industrial or infrastructure projects are requested to transfer technology, provide training, and procure as many local inputs as possible. Division of labor among donors is assigned by the Ethiopian government, not by donors themselves. From the East Asian perspective, these strong attitudes toward development and international cooperation are highly desirable for a latecomer country without which industrial catch-up can hardly be initiated. However, strong policy ownership is necessary but not sufficient for robust development. It will not produce results unless the national development plan, with which every developmental action is asked to align, is of good quality—and this is the issue that we are about to address. It may be added that Ethiopia's strong policy ownership depends heavily on the governing style and intellectual ability of its top leader, Prime Minister Meles Zenawi. Maintaining strong policy ownership into the future will require institutionalization of good policy practices which make them less dependent on the quality of a top leader.

Second, a strong state guides the private sector. While the Industrial Development Strategy (IDS) of 2002 clearly states that it is private firms, not state-owned enterprises, that must be the engine of production and investment, it also contends that state must use its authority to guide private firms away from rent seeking and toward investment, technology and global competition. The Ethiopian government does not believe that free market, left to its own, will spontaneously raise productivity or learn technology. It believes that state must guide and supervise the market and that, if the state's capability is initially weak, it must be enhanced to fulfill this role. According to this view, the state

[3] In 2009, Ethiopia's receipt of ODA (net disbursement) was equivalent to 12.4% of GDP and 60.9% of gross capital formation (World Bank Development Indicators). Merchandise export, dominated by food (75%) and agricultural raw materials (14%), was only USD1.5 billion or 5% of GDP in 2008 (national data).

should not form an unconditional alliance with "capitalists" who may or may not behave productively. The Ethiopian government wants to maintain arms' length relations with both local and foreign enterprises by preparing both carrots and sticks for different behaviors. The bent for strong state also explains why Ethiopia shuns Washington Consensus policy advice and shows great interest in East Asian development experience.

Third, internalization of skills and technology is top priority. This is of course highly welcome and appropriate for a country determined to catch up economically from a very low level. Ethiopian leaders admit that natural resource-based growth is unsustainable and that human skills and technology to upgrade agriculture and industry must be the central concern. The requirement of training, technology transfer and maximum local procurement to foreign contractors of industrial and infrastructure projects is similarly motivated. Keen interest in building engineering universities in large number, expansion of the technical and vocational education and training (TVET) system, and institutionalization of kaizen is also a manifestation of the same orientation. This policy focus seems to come partly from the proactive attitude of the current administration and partly from the fact that Ethiopia is poorly endowed with natural resources relative to its large population. However, the strong desire to enhance industrial human resource is not evident in the industrial section of the GTP (section 3-2-2).

Fourth, policy scope expands as policy learning proceeds. Several years ago when Ethiopia began to seriously implement the ADLI strategy under SDPRP 2002/03-2004/05 and subsequently under PASDEP 2005/06-2009/10, the government had little practical knowledge or experience of industrial policy and had to start with a simple strategy of giving generous incentives and disproportionate policy attention to a few selected export-oriented sectors including leather and leather products, textile and garment, and agro products (floriculture was later added as the private sector discovered its potential). Donor support in the industrial sector was also directed toward these sectors. At the same time, Ethiopia learned East Asian policy methods by studying literature, sending young officials to Korea and conducting policy dialogue with Japan, among other means. By the time the current five-year plan was drafted, in 2009 and 2010, the government felt that it had learned enough in the process of executing SDPRP and PASDEP and that it was ready to move on to the next phase of industrial policy making. New policy elements were recently added such as the promotion of import-substituting industries in addition to export-oriented ones, institutionalization of kaizen as a productivity tool in addition to benchmarking, proposed enhancement of micro and small enterprise (MSE) policy, expansion of the TVET system, creation of new industrial zones, and general speeding up of industrialization.

3-2. Features of the GTP

3-2-1. General features

The Ministry of Finance and Economic Development (MOFED) has the overall responsibility for preparing, implementing and monitoring the GTP as with the previous two national development plans. The official drafting process took about 15 months and was managed by the Macro Economic Team of MOFED in the following sequence:

Sep.-Oct. 2009	Generic Guideline was circulated to federal implementing agencies
Nov.-Dec. 2009	Briefings on Generic Guideline to senor officials and directors
Feb.-May 2010	Preliminary draft plans of key sectors were submitted to MOFED
Jun. 2010	The consolidated draft was reviewed by the Macro Economic Team
Jul. 2010	The first draft was prepared; English version also prepared
Aug.-Sep. 2010	Nationwide consultation forums were organized
Oct. 2010	Consistency check and incorporation of comments and feedbacks
Nov. 2010	Cabinet review and approval by the House of People's Representatives

Although the fundamental policy orientation remained constant during the drafting process, the final version of the GTP is significantly different from the first draft as many additions, changes and editing were made throughout the document including in the industry section.[4] It is not evident to the present author how much of these revisions were initiated by MOFED and how much was due to top leaders, line ministries or nationwide consultations. The first paragraphs of the GTP states that its drafting "has benefited from the many consultative meetings held at the Federal, Regional and local levels with government bodies, private sector organizations, higher education institutions, professional, women's and youth associations, religious and civil society organizations, opposition political parties and development partners" (English p.1). While such consultative processes are now common among developing countries, the one adopted in Ethiopia for drafting the GTP appears to have been highly systematic even by the standards of today's national plan making (however, see section 3-4 below for the lack of stakeholder involvement).

[4] In the industry section (section 5.2 of GTP), two "strategic directions" (industrial zones and public enterprise policy), which were previously only mentioned in the text, were upgraded to supplement the original two strategic directions (MSE development and medium and large industry development). "Major targets" for these strategic directions were given more numerical details, and "implementation strategies" were rewritten. Moreover, industry and trade were separated into two sections reflecting the splitting the Ministry of Trade and Industry into the Ministry of Industry and the Ministry of Trade in October 2010. Also see section 3-2-2 below.

The system of overall visions, objectives and strategic pillars in the GTP is summarized in Table 3-1.

Table 3-1. GTP's Visions, Objectives and Strategic Pillars

Ethiopia's vision to guide GTP	"To become a country where democratic rule, good-governance and social justice reign, upon the involvement and free will of its peoples, and once extricating itself from poverty to reach the level of a middle-income economy as of 2020-2023."
Vision on economic sector	"Building an economy which has a modern and productive agricultural sector with enhanced technology and an industrial sector that plays a leading role in the economy, sustaining economic development and securing social justice and increasing per capita income of the citizens so as to reach the level of those in middle-income countries."
Objectives	1. Maintain at least 11% growth and attain MDGs 2. Education and health services for achieving social sector MDGs. 3. Nation building through a stable democratic and developmental state 4. Stable macroeconomic framework
Strategic pillars	1. Rapid and equitable economic growth 2. Maintaining agriculture as major source of economic growth 3. Creating conditions for the industry to play key role in the economy 4. Infrastructure development 5. Social development 6. Capacity building and good governance 7. Gender and youth

Source: Summarized from chapter 2 of the GTP.

The GTP has the following document structure (numbers in parentheses indicate the number of pages in the English edition):[5]

Volume I – Main Text
- Foreword, introduction, plan preparation and approval process (4)
- Ch.1 Achievements and challenges under PASDEP (17)
- Ch.2 Basis, objectives and strategic pillars (7)
- Ch.3 Macroeconomic framework (10)
- Ch.4 Financing (7)
- Ch.5 Economic sectors development plan (41)
- Ch.6 Social sector development plan (10)
- Ch.7 Capacity building and good governance (14)
- Ch.8 Cross-cutting sectors (gender, youth, labor, culture, environment, etc. 12)
- Ch.9 Opportunities, risks and challenges in implementation (2)
- Ch.10 Monitoring and evaluation (4)

[5] A MOFED high official confirmed that the Amharic original and the English translation of the GTP had identical content with no added or hidden sentence or section from the one to the other. The GTP's basic structure inherits that of PASDEP but some differences can also be detected: (i) the GTP is more compact (Main Text of 127 pages against PASDEP's 225 pages, in English); (ii) sectoral chapters and sections have been reordered and rearranged; and (iii) numerical targets are set more systematically for all selected sectors.

Volume II – Policy Matrix
Text (3)
Policy matrix (35)

The GTP's objectives and strategic pillars in chapter 2 are expanded with more concrete contents in chapters 5-8 of Main Text (volume I) and Policy Matrix (volume II). Chapters 5-8 are the core part of the GTP that lists strategic direction, objectives, major targets (with numerical tables), and implementation strategies for each chosen sector. Policy Matrix additionally gives each sector's annual targets, implementing agency, and means of verification in a large table format.

While economic sectors, social sectors, governance and cross-cutting issues are all targeted, it can be surmised from space distribution that economic sectors development is given a prominent role in eradicating poverty and reaching middle income. Economic sectors in chapter 5 further divide into agriculture and rural development (11.5 pages), industry (6.5 pages), trade (1.5 pages), mining (3.5 pages) and infrastructure (17.5 pages). While volume is only a partial indicator of importance, it is suggestive of what issues are given high policy attention. It can be concluded that the Ethiopian government aims to generate concrete sources of growth in the agriculture and industrial sectors under state guidance rather than confining itself to general provision of primary education, health care and good business environment, and letting the market do the rest.

In comparison with other five-year plans in the developing world, Ethiopia's GTP has the following characteristics. First, the whole document is relatively lean and concise,[6] and various parts hang together reasonably well under a clear policy direction (however, this does not mean that individual numbers are convincing or mutually consistent). As noted above, the visions, objectives and strategic pillars are given contents in the core sectoral chapters. Second, despite compactness, the GTP manages to set annual numerical targets for each chosen sector. It can be said that the GTP is a consolidated document combining visions, sectoral and sub-sectoral strategies and concrete action plans in one. This is good from the viewpoint of unambiguous allocation of tasks and effective monitoring, but it can also be a problem since all policy actions are pre-set at the beginning of the five-year cycle without much room for additional stakeholder consultation, revision or rolling adjustments. Third, many of the GTP's targets are highly ambitious. This can be said for both overall growth targets and specific sector and sub-sector targets. These issues will be discussed further in section 3-3-2 below.

In chapter 9 of the GTP, risks associated with the implementation of the GTP are described as follows.

> The main foreseeable challenges in the implementation of the GTP include low implementation capacity, low national saving rate that is unable to support the investment needs of the economy,

[6] Word limits were imposed in drafting the GTP whose English translation has 127 pages. In comparison, Malaysia's Third Industrial Master Plan 2006-2020 has 766 English pages.

> and the unpredictability of external financing. In addition, it is anticipated that global market price fluctuations could provide some challenges to effective implementation of the plan. (English p.123)

Regarding the shortage of funding, it is further stated that the problem will be dealt with by improvement of the tax system and expansion of the tax base, encouragement of domestic savings, enhancement of external finance opportunities and contribution of local and international non governmental organizations (NGOs) and civil society organizations (CSOs). Foreign earnings will be increased by both expanding export capacity and substituting imports. To address implementation capacity challenges, the civil service reform program will be strengthened at all levels.[7]

These proposed risk management strategies are reasonable but may not be sufficient. Additionally, we would like to point to three more issues—target rigidity, limited policy capability and the lack of dynamic response from the private sector—as potential risks in implementing the GTP. These will be the main topics in the remainder of this chapter (sections 3-3 to 3-5).

3-2-2. The industry section

Industrial performance was less than expected in the PASDEP period. From 2005/06 to 2009/10, real GDP grew an impressive 11.0% per annum on average against the base case target of 7.0% and the high case target of 10.0%. This was the result of a mixture of overachievement of agriculture (8.4% against base case target of 6.0% and high case target of 6.4%) and services (14.6% against base case target of 7.0% and high case target of 10.0%) and underachievement of industry (10.0% against base case target of 11.0% and high case target of 18.0%).

Slower-than-expected industrial growth was disappointing to the Ethiopian government which hoped to attain faster industrialization with concentrated policy effort on a few selected export-oriented sub-sectors such as leather and leather products, textile and garment, and agro-processing. The share of industry in GDP remained a relatively stable 13% rather than rising to 16.5% as targeted. The exports of the above-mentioned three sub-sectors did grow, but were still small at USD115 million (only 3.8% of total export) as of 2009/10. In light of these results, the cost effectiveness of incentives and subsidies poured into these sub-sectors in the forms of cheap land, allocation of bank loans and foreign exchange, concentrated policy attention and ODA support, and so on, needs to be re-examined.

The industry section of the GTP (section 5.2 of GTP) has a relatively simple structure with MSE development and promotion of eight medium and large industries as two pillars. The opening sentence

[7] In the PASDEP, the shortage of domestic savings and the problem of implementation capacity were not mentioned as risks (except for the low capacity of the domestic construction industry). Instead, external uncertainties such as foreign financing, commodity prices and geopolitical factors were highlighted.

of the section says that "favorable conditions will be created for industry to play a key role in the economy" (English p.56). After affirming ADLI and the (revised) policy principles of the 2002 Industrial Development Strategy,[8] the following four Strategic Directions are presented:

a) Micro and small enterprises (MSEs) development
   This is expected to create jobs in urban areas and increase rural-urban and urban-to-urban functional and economic linkages.
b) Medium and large industries development, which includes
   1. Textile and garment
   2. Leather and leather products
   3. Sugar and sugar related industries
   4. Cement
   5. Metal and engineering
   6. Chemical
   7. Pharmaceutical
   8. Agro-processing
c) Industrial zones development (for medium and large manufacturing industries)
d) Public enterprises management and privatization

The first two can be construed as "main sub-sectors" while the latter two were upgraded from text discussion in passing to Strategic Directions in the drafting process. Inclusion of import substituting industries (4, 5, 6 and 7) in addition to the export-oriented industries targeted by the PASDEP is particularly noteworthy.[9] Then seven Objectives are stated which are:

1. Creation of a broad-based spring-board for competitive domestic industrial and private sector development
2. Employment opportunities and poverty reduction
3. Support sustainable development of agriculture
4. Full utilization of industrial capacity
5. Use of domestic raw materials and labor (for medium and large industries)
6. Create a strong foundation for the sector to start playing a leading position in the national economy, employment generation, and foreign exchange earnings and savings
7. Local production of equipments, machinery and spare parts

In the Major Targets sub-section, numerical targets of designated sub-sectors are presented, which are further elaborated in Volume II (Policy Matrix) with annual targets, implementing agency and means of verification. The appendix to this paper replicates the entire industry sector targets in the Policy Matrix while Table 3-2 below gives selected highlights. It must be admitted that many of the sub-sectoral targets are quite ambitious. We will contemplate on this issue in the next section.

[8] Policy support will be focused on industries that are labor intensive, have broad linkages with the rest of the economy, use agricultural products as inputs, are export-oriented and import substituting, and contribute to rapid technological transfer.
[9] Among the import substituting industries, the cement industry was already featured in the PASDEP.

Table 3-2. Selected GTP Targets for the Industrial Sector

Sub-sector	Unit	Base year 2009/10	Target for 2014/15	Multiples
Textile	Export earning in $ million	21.8	1,000	45.9 times
Leather	Export earning in $ million	75.73	496.9	6.6 times
Sugar	Production in million tons	0.314	2.25	7.2 times
Cement	Production in million tons	2.7	27	10 times
Steel & engineering	Gross value-added in million birr	6	101.4	16.9 times
Fertilizer (urea)	Production in million tons	-	300	-
Pharmaceutical	Domestic market share	15%	50%	-
Agro-processing	Export earning in $ million	35.2	300	8.5 times
Industry zones	Number of factories in zones	-	164	-
Public enterprises	Gross value-added in million birr	2.26	5.32	2.4 times
MSEs - job creation	Number of jobs	-	2,970,000	-
MSEs - training of trainers	Number of trainees	-	10,000	-
MSEs - training of operators	Number of trainees	-	3,000	-
MSEs - manufacturing land	Hectare	-	15,000	-
MSEs - shades	Number	-	21,591	-
MSEs - buildings	Number	-	819	-

Source: Excerpted from Policy Matrix of the GTP. Industrial zone and MSE targets are cumulative results for five years.

3-2-3. Industrial policy dialogue and the GTP

How does the industry section of the GTP look in light of ideas and proposals discussed in the Ethiopia-Japan industrial policy dialogue in 2009-2011? We feel that not so many of our discussions are reflected in the text of the GTP, at least not directly and explicitly, and it is hoped that they will be more fully taken into account in other documents and in the implementation stage.

Among the many issues raised in our policy dialogue sessions, perhaps the most important is emphasis on quality rather than quantity or speed in industrial policy making. We have argued that care and reservation must be exercised in setting numerical targets and that main focus should shift from tons and percents to indicators of skills, technology and other capabilities (chapter 8). It was also noted that, in the policy formulation process of Ethiopia, consensus building on key directions and deep participation of stakeholders were weak in comparison with the best policy practices in East Asia (chapter 4). The GRIPS and JICA team frequently expressed concern over the speed of drafting key

documents such as kaizen institutionalization and MSE development which seemed too fast for ensuring feasibility and willing participation of major stakeholders inside and outside government. However, the approved text of the GTP is heavy with numerical targets while competitiveness and productivity are mentioned only in passing without specific targets.

This is odd in light of the fact that high-level policy makers in Ethiopia always stress the critical importance of agricultural and industrial skills, engineering education, technology transfer, TVET system and other measures related to industrial human capital. In our policy dialogue sessions, the prime minister frequently expressed his keen interest in technology transfer and innovative attitude as well as learning concrete lessons in this regard from East Asia. The gap between this obsession with industrial human capital and the absence of clear statement or targeting of skills, technology and knowledge in the GTP is puzzling and must be explained.

Another related puzzle is the fact that the term *kaizen* (factory improvement method developed in Japan) is entirely missing from the text of the GTP, together with other productivity and efficiency tools such as benchmarking, twinning and BPR. Meanwhile, upgrading of the TVET system and creation of new industrial zones are not only mentioned but even featured extensively. It is difficult to comprehend the logic of highlighting some of the industrial policy tools and ignoring others when all are essential for realizing the industrial goals of the GTP. The lack of mention of kaizen is especially hard to understand. Unlike benchmarking, twinning and BPR which are already known and widely practiced, kaizen is a newly introduced productivity tool that must be learned, scaled up and institutionalized with great effort in the GTP period as a national movement to transform the popular mindset (section 3-5). Without knowing whether and how kaizen fits into the GTP framework, it is difficult for Japan to prioritize kaizen support in its development cooperation with Ethiopia.[10]

The Japanese team in the bilateral policy dialogue also conducted a needs survey on the basic metal and engineering sector at the request of the Ethiopian government.[11] The survey was conducted under a strong time constraint to offer advice to the implementation of the Basic Metal and Engineering Development Plan in the GTP period. This survey produced several recommendations including the proper sequencing of development from downstream to upstream, re-examination of feasibility of

[10] GRIPS and JICA consider kaizen institutionalization as the key entry point for launching a national productivity movement in Ethiopia. In our policy dialogue, policy makers and experts have variously suggested how kaizen should be compared with other productivity and efficiency tools. One idea is that BPR and benchmarking create one-time jump while kaizen is constant improvement in small steps. Another thinks that benchmarking sets targets and kaizen offers a way to achieve them. Yet another suggestion is that kaizen is much broader than other tools as it encompasses philosophy, culture and mindset change. However, many people in Ethiopia are still confused about the relationship and compatibility between kaizen and other tools. We strongly recommend that a definitive official view on the precise role of kaizen in the GTP be announced as soon as possible.

[11] Mr. Toru Homma, a JICA industrial expert, led a survey on steel industry and metal engineering industry serving the power and construction sectors in the first half of 2010, while the Engineering Capacity Building Program (ECBP) in parallel undertook a similar survey on the metal engineering industry serving the sugar and cement sectors.

Bikilal ore, identification of locally substitutable metal products in the power sector, and capacity building using kaizen. It also raised questions concerning the methodology of steel demand projection and setting targets for local procurement of metal inputs in individual sectors. However, these recommendations and questions are not reflected in the basic metal and engineering sector targets of the GTP.

3-3. Numerical targets

3-3-1. Macroeconomic targets

Use of numerical targets is normal in national development plans. In the macroeconomic area, they are indispensable for charting the general direction of the national economy and ensuring consistency among sectoral and financing figures. However, the number and scope of numerical targets must be selected judiciously and the levels at which they are set must be arrived at in a rational way that allows analysis and assessment.

In the GTP, the target for real GDP growth for 2010/11-2014/15 is set at 11.2% per annum in the base case scenario and 14.9% per annum in the high case scenario. The main difference between the two scenarios is whether agriculture will rise strongly as technology and practices of model farmers are scaled up to all other farmers (high case) or the scaling up will remain partial (base case). Either way, these are ambitious targets. If these are attained, Ethiopia will be among top growth performers in the world for a decade surpassing most East Asian economies including China. We do not question ambitious growth targets as such numbers in national development plans are an expression of political will and national aspiration. Ethiopian policy makers feel that the high growth achieved in the PASDEP period of 2005/06-2009/10 should define the minimum growth rate in the future. The GTP states that

> During the [PASDEP] period the economy grew on average at 11% per annum. Assuming that the current economic growth trend is maintained for the next five year period, it is feasible that, in addition to achieving its Millennium Development Goal (MDG) targets by 2015, Ethiopia will achieve its longer term vision of being a middle income country by 2020-2023. (English p.1)

However, it must be emphasized that an appropriate analytical framework is needed to explain growth scenarios for logical clarity and operational flexibility because simple extrapolation is not convincing; and falling short of the growth target should not lead to undesirable policy reactions that may increase economic distortion and imbalance.

In the Third High Level Forum of our industrial policy dialogue in November 2009, the Japanese side argued that trends and fluctuations of growth performance depended on three factors: private

dynamism, policy quality and uncontrollable shocks (chapter 8). While growth was higher in the first half of the PASDEP period than the second half, it was not clear whether this slowdown was caused mainly by exogenous shocks which turned from positive to negative (such as global recession and worsening of weather conditions) or by deterioration of policy quality or private effort (or both). Ethiopia does not have an effective analytical framework to identify the main cause(s) of the growth slowdown or address the problem with appropriate policy response. For the same reason, the alternative growth scenarios (base case and high case) in the GTP period cannot be evaluated objectively unless underlying conditions such as assumed trends in labor force, capital stock and productivity and different assumptions about exogenous variables are explicitly stated. For this, Ethiopia needs a macroeconomic framework—whether based on growth accounting, a full-scale econometric model or others—that can explain the relationship between assumptions and outcomes.[12]

Unlike performance in social service delivery such as education or healthcare in which key determinants are policy action and public sector spending, performance in productive sectors such as agriculture and industry does not follow a linear relation between policy inputs and outcome. Production, investment and exports depend not only on policy and public expenditure but also on private effort on quality, design, distribution, marketing, and branding along the value chain against rival firms and countries as well as global business cycles, price fluctuations and weather (in the case of agriculture). Growth performance in agriculture and industry must therefore be interpreted differently from those in social sectors.

Without clear understanding of the causes of growth performance, the government runs the risk of resorting to undesirable policy reaction when actual numbers fall short of targets. If the reason for the shortfall is inappropriate policy design or implementation, policy review is in order. If the policy is adequate by international standards but business response is weak, a long-term policy drive for changing the mindset and behavior of the private sector may have to be launched (section 3-5). But if the growth is lower than expected due to causes beyond the reach of the government or an unreasonably high growth target, the proper response is to lower the target and modify the macroeconomic policy stance accordingly. If additional incentives, subsidies and public spending are instead mobilized to try to attain an unreachable goal, the country is likely to suffer a serious macroeconomic imbalance. Flexibility and adjustments are needed to guard policy implementers against being trapped in pre-set targets.

[12] For example, in the high case scenario, the assumed gross domestic capital formation of 22.0% of GDP (English p.32) seems too low against the growth target of 14.9%. This implies an incremental capital-output ratio (ICOR) of only 1.48 (=22.0/14.9). To support high growth with such a low investment rate, investment efficiency must be extremely high.

3-3-2. Sub-sectoral targets

The GTP is a comprehensive development plan with details. It incorporates visions, strategies and action plans (annual targets for sectors and sub-sectors) in one document. In many countries these policy components are prepared in separate documents and in sequence.

For example, the Policy Matrix of the GTP specifies sub-sector annual targets for output, exports, capacity utilization and newly hired workers for textile, leather and sugar industries from 2010/11 to 2014/15 (see also Table 3-2 above and Appendix).[13] As noted earlier, many of these targets look ambitious. According to MOI and MOFED officials, these numbers were proposed in a bottom-up fashion from MOI directorates in charge of these sub-sectors to MOI leaders. They are based on the analysis of existing industry capacity and future projects in the pipeline. The Macro Economic Team of MOFED did not revise these numbers except for those related to the power and infrastructure sectors.

The merit of specifying sub-sector targets in detail for five years in advance is clarity in division of labor. The existence of the Plan Matrix makes it easy to identify responsible ministries and directorates for all targets, allocate concrete tasks to them for each year, and monitor the progress.

On the other hand, the demerits of such detailed planning without sufficient market consultation are inflexibility and the lack of stakeholder cooperation. Sub-sector targets set by the government which are too many, too high or too rigid may bind policy implementation as circumstances change or if stakeholders (especially domestic and foreign enterprises) feel uncomfortable with the targets. If targets are unmet, worry and blame will torment the ministry or directorate in charge. The government may be able to achieve numerical targets in a certain sub-sector by forcing or subsidizing production and investment but it may miss the more important objective of fostering productivity and competitiveness.

The three points raised over numerical targets in the Third High Level Forum in November 2009 are still valid: (i) it must be asked whether the targeted number properly belongs to the domain of government or it should be better left to the market in the context of a specific sector in Ethiopia; (ii) qualitative goals such as skills and technology transfer must be translated into proxy variables that are both meaningful and quantifiable; and (iii) goals and timetables must be set both ambitiously and realistically in the sense that serious joint effort by government and the private sector should be able to attain them (chapter 8).

[13] The problem of pre-specifying too many details over products, markets and investments was also visible in *A Strategic Action Plan for the Development of Ethiopian Leather and Leather Products Industry*, two volumes (UNIDO and MOTI, 2005).

In plan documents, macroeconomic targets are indispensable and key sectoral targets (such as growth rates and GDP shares of industry, agriculture, services, etc.) are also important but they must heed the precautions mentioned above. At the sub-sectoral level, it is better to let the ministries and directorates in charge decide targets and policy measures in close consultation with businesses and allowing the possibility of annual adjustments rather than stipulating them in advance in the five year plan. Sub-sector targets must be indicative, not state orders that must be attained by any means. As income and industrial capability rise, nations usually graduate from fixed-period planning which takes up enormous time and energy of government officials and adopt flexible policy making with movable targets and measures. In the East Asian region, Japan, Korea, Taiwan and Singapore no longer produce five-year plans. As policy capability is gradually built up and the private sector becomes more dynamic, Ethiopia should also move toward less pre-set sub-sector targets and more flexibility and adjustments in sub-sector policy formulation.

3-4. Policy capability

3-4-1. Missing ingredients

This and the next section reiterate the topics already taken up as main issues in the Seventh High Level Forum in January 2011 (chapter 4). Ethiopia's industrial policy formulation is still on a learning curve and it has a long way to go before catching up with the best policy practices of the world. Besides concrete policy measures, the areas in which the Ethiopian government must continue to learn include policy procedure (how industrial policy is made), policy organization (what organizational arrangement can produce most effective policies) and national movement (how to ignite a change in popular mindset toward productivity and competitiveness). The first two are dealt with in this section while the last will be discussed in the following section. The lack of sufficient policy capability on the part of the Ethiopian government can be a serious impediment in the implementation of the GTP. To put it more positively, clear recognition of this problem and strong resolve to overcome it in proper steps will provide Ethiopia with an excellent opportunity for policy learning which is the key to national development based on knowledge, skills and technology.

We have argued in chapter 4 that policy making procedure must contain five ingredients: vision, consensus building, stakeholder involvement, lead ministry or agency, and drafting. Policy formulation must begin with the vision advanced by the top leader with his or her deep conviction. To concretize this vision, an official mechanism with clear authority and mandate must be designated to manage policy and a secretariat function must also be set up. This mechanism must spend sufficient time in building consensus on key policy directions, issues and measures among concerned ministries and non-government stakeholders (especially businesses). Necessary surveys and studies should be

commissioned to competent experts or research institutes. When this process is completed and basic agreement is reached, a policy document should be drafted and comments should be received for revision and finalization. This, in a nutshell, is the standard procedure for making industrial policies in high-performing economies (Figure 4-1 in chapter 4). To realize this procedure, Korea has presidential committees, Taiwan and Thailand use research institutes as facilitators, and Singapore and Malaysia mobilize a three-layer official mechanism of committees and working groups. Although each country has different ways and styles, they all fulfill five ingredients mentioned above. They naturally create a sense of shared ownership and responsibility among all stakeholders inside and outside government which makes it easy to implement the policy once it is agreed.

The problem with Ethiopia is that some of these necessary ingredients are missing. The vision is provided by the top leader and the drafting process—whether internally drafted or outsourced to domestic or foreign consultants—does exist, but the intermediate process of building consensus on main policy features by mobilizing all stakeholders remains weak. As a result, the policy content depends critically on the scope of knowledge and experience of a few persons who happen to be assigned to the task rather than reflecting the broad and diverse views of a large number of stakeholders. Moreover, policy capacity of a lead ministry or agency generally needs further strengthening.

3-4-2. Three issues

To be more specific, three problems have been identified in the preparation process toward the GTP and its related documents.

First, speed is emphasized over quality. In Ethiopia, many policies are formulated in great haste at the cost of quality and implementability. While we recognize the strong political urge to move fast that permeates every chapter of the GTP, the fact is that Ethiopia drafts policies much faster than East Asian high-performing economies with far more policy experience. The latter typically spend one year to update an existing policy and two to three years to draft a new one.[14] As a new learner of industrial policy methodology, it would not be improper for Ethiopia to spend at least a few solid years to study best practices, devise local adaptation and create an appropriate policy mechanism before it adopts an important industrial policy package such as kaizen, MSEs and industrial clusters. Hurried policies are less likely to be effective, supported or implementable. In the end they will take more time to produce results than policies that are formulated through proper steps as discussed above.

[14] Taiwan spent three years to draft a new industrial statute of 2010 that would govern the economy's industrial strategy for decades to come. Similarly, Malaysia took nearly three years to produce the Third Industrial Master Plan 2006-2020. When Singapore launched its national productivity movement with Japanese assistance in the 1980s, the first few years were spent on understanding the basic concept and narrowing the perception gap between the teacher (Japan) and the student (Singapore).

Second, Ethiopia needs a simple and organized mechanism in the central government to coordinate, monitor and adjust high priority policies. In the last several years, the country has created central committees and teams more or less randomly to deal with the expanding policy scope. Starting with the monthly Export Steering Committee, which has so far worked well, the government has added two committees on infrastructure and a working team on import substitution policy. For the enhancement of the TVET system under the MSE strategy and the new task of kaizen institutionalization, inter-ministerial coordination is expected to take place in the Board of Directors established individually for these policies. Admittedly, these are ad hoc creation of coordination mechanisms whose complexity will accumulate as policy scope further expands.

Instead of endlessly adding committees, boards and teams, the GRIPS Development Forum (GDF) proposes a central coordination mechanism comprising of (i) the National Competitiveness Council chaired by the prime minister and attended by ministers, business leaders and experts that meets every month and has several working groups under it to study specific issues or sectors; (ii) a permanent planning commission that specializes in making and executing development plans which also serves as the secretariat to the above council; and (iii) a policy think tank that supports these two bodies with action-oriented surveys, studies, seminars and other intellectual inputs (also see Figure 4-12 in chapter 4). Precise names of the council and the commission are immaterial. Through this mechanism, only the most important issues should be deliberated and decided before the prime minister while other issues should be handled at the lower levels.[15]

Third, proper steps should be taken to institutionalize kaizen. Introduction of kaizen to Ethiopia is in a very early stage with the first kaizen pilot project of 28 local companies successfully completed, kaizen manuals and videos produced, and dissemination plan formulated. These initial results must be scaled up functionally, sectorally and geographically to the national level. The institutionalization of kaizen is important for Ethiopia because it will be the country's core activity in a national movement for mindset change toward efficiency and productivity. Kaizen should not end with a few projects assisted by Japan but should become a locally-owned decade-long movement encompassing all farmers, workers, engineers and managers to change the way Ethiopians think, live and work. Our policy dialogue has shown that, for such a broad national movement to produce great results, certain prerequisites are ensured including leadership, core organization, supporting institutions, massive campaign, training programs and materials, and fostering private sector capacity (see section 3-5 below; also see Handbook (JICA and GRIPS, 2011)). Formulation and execution of this movement

[15] It is reported that the government is studying the possibility of installing a new central coordination mechanism consisting of a full-fledged planning entity and an enhanced think tank ((ii) and (iii) above). As for the National Competitiveness Council ((i) above), the current Export Steering Committee could be expanded to take up its functions. If this idea is concretized with proper design, it will contribute greatly to the improvement of policy coordination in Ethiopia.

will be a major challenge for the Ethiopian government, for which good preparation and proper steps will become all the more important. In the last two years Ethiopia and Japan have worked together to solve initial perception gaps and administrative delays which are common in introducing kaizen to a new country. In the years ahead, more policy learning and local adjustments will be needed for the scaling up of kaizen.

3-5. Private dynamism and mindset change

3-5-1. The problem of weak private sector response

Will the Ethiopian private sector respond strongly to the industrial policy measures of the GTP? Can local enterprises match the strong political will and ambitious growth targets advanced by the Ethiopian government? Industrialization requires a combination of good policy and strong private dynamism. Apart from improving the quality of industrial policy of the government, latecomer countries often face the problem of a weak private sector characterized by short-terminism, job hopping, foreign product worship, real estate speculation, dependency on subsidies and protection, and unwillingness to explore new products, technology and markets. There may be less-than-expected industrial performance due to the lack of Schumpeterian animal spirit.

This concern comes not from theoretical reflection but from the observation of many countries, in East Asia and elsewhere, that show divergent growth records despite similar policy frameworks and external environments. The difference between Korea and Taiwan on the one hand, which are already in the high income group, and Malaysia and Thailand on the other, which remain in the middle income range though all the four economies started industrialization with public support in the 1960s, cannot be explained solely by policy measures adopted by them which have large overlaps. The fact that Hyundai Motor, a Korean auto maker, absorbed the technology of Mitsubishi Motors rapidly in the 1970s to become a global competitor by 1986 while Proton, a Malaysian auto maker established in 1983, and its suppliers, continue to be local players and receive Japanese technical assistance for improving competitiveness even today points to the innate difference in the national capacity to master foreign technology. Similarly, any Japanese factory manager who has worked in both Taiwan and Thailand can tell that there is a fundamental difference in the discipline and innovativeness of engineers and workers between these two economies. The hypothesis that all nations are equal in their work attitude and productivity aptitude given the same management is not borne out by facts.

In our meetings with Prime Minister Meles, he frequently raised questions regarding the lack of private sector dynamism. One of his questions was why the Ethiopians with large sums of money invested in urban properties instead of building factories. On another occasion he asked how East Asian governments steered the private sector away from speculation and rent seeking and into

manufacturing and technology. He also wished to receive literature explaining concretely how Meiji Japan and post-WW2 Korea absorbed technology so quickly from foreign-assisted industrial projects.

Our answer on how to wake up a sleepy private sector is the initiation of a national movement for mindset change. National movement is not just a collection of projects. It is a comprehensive program of aspiration, philosophy, mass campaign, factory projects, training, awards and institution-building that lasts for at least a decade until it becomes self-sustaining and an integral part of popular mindset. It usually aims at quality, productivity and life improvement by instilling the spirit of activism and cooperation. In many instances the movement is started as top-down imposition of actions that must be executed at the grassroots level which, if it is to succeed, yields visible benefits that ignite voluntary implementation and willing expansion. Successful examples from East Asia include Japan's Rural Life Improvement Movement (1948-) and factory *kaizen* movement (1950s-), Singapore's Productivity Movement (1960s-) and Korea's Saemaul (new village) Movement (1970s-). Some movements initiated decades ago are still practiced and have evolved into advanced forms.

However, organizing a national movement requires high policy capability due to its complexity and duration. The Quality Control (QC) Circle Movement of Burkina Faso since 1989 and the Productivity Movement of Botswana since 1991 have produced some results but did not transform the national business landscape as dramatically as in the East Asian economies cited above. Ethiopia has chosen kaizen and its institutionalization as the core instrument of its national movement for mindset change. The first JICA-assisted pilot project of 28 manufacturing companies was completed by June 2011 with satisfactory results, but the country has a long way to go before a kaizen-based national movement is firmly established. For continued success and expansion, systematic policy learning from international best practices as well as failures is crucial.

3-5-2. Lessons from international comparison

As a preliminary effort to collect international experiences in national movements, the GDF organized policy study missions to several countries in East Asia and Africa from 2009 to 2011.[16] From these studies, common success factors and country-specific factors that influence the effectiveness of national movement have been distilled.

The six success factors are shown in Table 3-3 with the examples of Japan, Singapore, Burkina Faso and Botswana. They are:

(i) *Leadership*—strong personal commitment of the top leader is a must for initiating and sustaining a national movement.

[16] See footnote 1 of this chapter.

(ii) *Core organization*—there must be a central organization with full authority and responsibility to draft strategies, set standards for consultation and training, design and implement projects, coordinate players, secure funding, receive international cooperation, etc. related to quality and productivity movement.
(iii) *Supporting institutions*—there must also be a large number of supporting institutions for awareness creation, certification, consultation, training, publication, award giving, etc. at central and local levels.
(iv) *Massive campaign*—nationwide campaigns for raising awareness must be staged through multiple channels.
(v) *Training programs and materials*—authorized and standardized courses and textbooks must be available for training movement leaders and instructors as well as a large number of entrepreneurs, engineers, workers, farmers, etc. in different sectors and regions.
(vi) *Fostering private-sector capability*—promotion of private-sector service providers (consultants and trainers), their associations and related non-government supporting institutions is important for long-term sustainability of the movement as main activities will eventually have to be carried out by the private sector when the government exits from service delivery.

Table 3-3. Success Factors of National Movements

	Japan	Singapore	Burkina Faso	Botswana
Leadership	○	○	△	△
Core organization(s)	○ (private)	○ (public)	△/× (public→private)	△ (public)
Supporting institutions (central and local levels)	○	○	△ (fragmented)	△
Massive campaign	○ (national movement)	○ (national movement)	△ (partial)	△
Training programs and materials	○	○	△ (not updated)	△
Fostering private sector capability	○	○	×	×

Note: Assessment by the GRIPS Development Forum: ○ good, △ moderate, × poor.

While the productivity movements of Japan and Singapore score high on all these criteria, the movements in Burkina Faso and Botswana show many problems which explains why they have remained partial and less effective. Ethiopia needs to study all these aspects of national movements if its kaizen institutionalization is to make a strong impact on national productivity.

The design of a national quality and productivity movement must also reflect country contexts as identical movement may produce different outcomes depending on initial conditions (Table 3-4). Generally speaking, if the private-sector motive for launching national movement is more pressing the easier it is to carry it out. Furthermore, in countries where the private sector is relatively well-developed, business response to government-initiated movement is expected naturally to be

stronger and more extensive than in countries where the private sector is small and weak. This suggests that national movements are more difficult to start and sustain precisely in those countries where such movements are acutely needed because initial capacity and incentives for productivity improvement are low. Put differently, latecomer countries with limited industrialization must make far greater policy effort than more advanced countries to launch a national movement because the hurdle they must clear is higher. This is the challenge that Ethiopia faces in designing the strategy for institutionalizing kaizen for the next five years and beyond. Intensive policy learning must fill the gap between what is required and what the country already possesses in terms of industrial policy capability.

Table 3-4. National Movements: Country-specific Factors

	Japan	Singapore	Burkina Faso	Botswana
Drivers of productivity movement	**Strong** ▪ Domestic ▪ Need for export drive as resource-poor country	**Strong** ▪ Domestic and external ▪ Perceived poor work ethics ▪ Need for FDI attraction as resource-poor country	**Moderate** ▪ Domestic and external ▪ Enhance supply-side response during structural adjustment program	**Moderate** ▪ Domestic ▪ Perceived poor work ethics ▪ Need for economic diversification as resource-rich country
Degree of private sector dynamism	**Strong** ▪ Private sector-led national movement	**Moderate** ▪ Government-led national movement	**Weak** ▪ Government-initiated movement	**Weak** ▪ Government-initiated movement
External support	US & Europe	Japan	WB/Japan	Singapore

Note: Assessment by the GRIPS Development Forum:

Appendix: Policy Matrix for Trade and Industry Development

Links to MDGs	Objective	Output	Indicator	Base year (2009/10)	Annual Targets 2010/11	2011/12	2012/13	2013/14	2014/15	Implementing Agency	Means of Verification
	Textile industry										
Goal 1	Increase the production and market earnings of the textile sector	Increased in production and productivity of the textile sector	Gross value product of the textile industry (in million US$)	470	865	1,074	1,435	1,942	2,545	Ministry of Industry	Ministry of Industry annual report
			Foreign currency earning (in million USD)	21.8	100	200	450	700	1,000		
			Industries' capacity utilization (%)	40	60	65	75	80	90		
			Number of new workers employed in the sub sector		6,211	7,366	4,776	10,071	11,576		
	Leather Industry										
Goal1	Increase the production and market earnings of the leather industry sector	Increased in production and productivity of the leather sector	processed hides and skin (million care)		-	5.9	12	18	24.28	Ministry of Industry	Ministry of Industry annual report
			Capacity utilization of industries (%)	10	13	16	21	25	30		
			Foreign currency gained from sector's export trade	75.73	190.5	296.2	352	416.8	496.9		
	Sugar industry										
Goal1	Increase the supply of sugar, increase the sugar bi-products and support the power generation provide to key economic activities and increase the share of the product in the export market	The contribution of the sugar industry for increased sugar production and bi-products, and employment opportunities	sugar product (in million tone)	0.314	0.38	0.737	0.978	1.335	2.25	Ministry of Industry	Ministry of Industry annual report
			Ethanol product (thousands M^3)		20.5	42.5	69.8	99.4	304		
			Electric power generated (Thousands MWH)			187.2	339.5	514.2	607		
			Additional sugar cane development (in thousands hectare)		50	50	50	50			
		Increased in production and hard currency generated from sugar export	Sugar products supplied for export market (in thousand tone)			76.29	218	460.7	1246.3		
			foreign currency gained from sugar export (in million USD)			40.6	115.8	244.5	661.7		
			Number of workers employed (in thousands)		24336	22680	21475	18899	112610		
	Cement industry										
	Improve the capacity of cement production and increase the cement product for domestic and foreign market supply	increased in capacity of cement production and per-capita cement product	Cement product (in million tone)	2.7	9.34	13.6	13.6	17	27		
			Per-capita cement consumption (in kg)	35	116	165	162	197	300		
	Steel and Engineering industry										
Goal1	Increase per capita steel products and substitute imported goods	Increased in the volume, productivity and quality of products of the sub-sector	Gross Value Addition of the sub sector (in billion birr)	6	20	26	33.8	50.7	101.4	Ministry of Industry	Ministry of Industry annual report
			Per capital steel consumption (in kg)	12	14.23	17.78	22.23	27.75	34.72		
		Increased in capacity utilization of steel and engineering industries	Growth in capacity utilization (%_)	-	75	80	85	90	95		
	Support other industries by supplying spare parts through improving design and manufacturing capacities of the steel and engineering industry	Increased in the capacity of the engineering sub-sector to produce spare parts for other industries.	Domestically produced spare part coverage (%)								
			Spare part supply to leather industries (%)		30	45	65	90	90		
			Spare part supply for textile industries (%)		15	20	30	35	35		
			Spare part supply for sugar industries (%)		40	50	60	85	85		
			Spare part supply for cement industries (%)		40	50	60	85	85		
			Spare part supply for agro- industries (%)		40	50	60	75	75		
			Spare part supply for construction industries (%)		95	95	95	95	95		
			Spare part supply for vehicles (%)		35	45	60	85	85		

Links to MDGs	Objective	Output	Indicator	Base year (2009/10)	Annual Targets 2010/11	2011/12	2012/13	2013/14	2014/15	Implementing Agency	Means of Verification
	Chemical industry										
Goal1	**Fertilizer industry development**									Ministry of Industry	Ministry of Industry annual report
	Increase chemical fertilizer supply by producing from domestic raw materials inputs	Increased in supply of urea fertilizer with domestic product	Domestically produced urea fertilizer (in thousands tone)						300		
	Caustic soda and soda ash industry development										
	Generate and save foreign currency through establishing chemical industries by giving focus to those industries support the agriculture sector and other industries and with plan to export their industrial products by using domestic raw materials input	Increased in supply of the country's caustic soda and soda ash	The factory construction progress which can produce 50,000 tone caustic soda in a year (%)		10	25	50	85	100		
			The factory construction progress which can produce 35,000 tone soda ash in a year (%)		10	25	50	85	100		
	Soap and detergent industry development										
	Enhance the capacity of soap and detergent industries to substitute imported goods	Increased in factories to produce and supply detergents for domestic market	Number of factories established to produce soap and detergent products up to 166,000 tone			2		3			
		Improved in capacity utilization of sub-sector's industry	Growth in capacity utilization (%_)	32	50	75	80	85	90		
	Paper and paper products industry development										
	Enhance the capacity of paper and pulp industries to substitute imported goods	Increased in supply of domestically produced paper and pulp products	Paper factories established which have the capacity to produce 82,000 tone individually				2	2	1		
			Factories established for short pulp fiber and have the capacity to produce 78,670 tone individually				1	1	1		
			Fiber pulp factories established that have the capacity to produce 79,000 tone					1			
		Improved in capacity utilization of the existing paper factories	Growth in capacity utilization (%)	61	67	73	82	90	98		
	Plastic Industry										
	Enhance the capacity of industries to substitute imported goods	Demands covered with domestically produced plastic products	Construction performance of the factory that cover 30%demand and produce 37,000 tone plastic products				25	50	100		
	Rubber tree industry										
	Enhance the capacity to substitute imported natural rubber by domestically produced products	Increased in supply of natural rubber raw material	Land cultivated with commercial rubber tree (in hectare)		1672	1904	2137	1370	3000		
			Annual supply of natural rubber input (in tone)		200	821	2052	4048	10000		
			construction Performance of a processing factory that produce 6700 tone rubber annually		50	100					

Links to MDGs	Objective	Output	Indicator	Base year (2009/10)	Annual Targets 2010/11	2011/12	2012/13	2013/14	2014/15	Implementing Agency	Means of Verification
	Pharmaceutical industry										
Goal1	Enhance the capacity of existing and newly established pharmaceutical industries to substitute imported drugs pharmaceutical materials and generate foreign currency earning by exporting the pharmaceutical products	Improved in capacity utilization of pharmaceutical industries	Growth in capacity utilization (%)	30	50	75	100			Ministry of Industry	Ministry of Industry annual report
		Improved in the market share of domestically produced pharmaceutical products	Domestically produced market share of pharmaceutical and medical product (in %)	15	20	25	30	40	50		
		increased in foreign market earning through pharmaceutical product export	Income gained from pharmaceutical export trade (in million USD)	1	2	4	7	12	20		
	Agro-processing industry										
Goal1	Improve production and capacity utilization of the sub-sector and supply the products for domestic and foreign markets	Improved in food and beverage industries capacity utilization	Growth in capacity utilization (%_)	60	65	70	75	80	90		
		Growth in foreign currency earning from export of agro-processing products	Income gained from sub sector's export trade(in million US$)	35.2	82	144	150	197	300		
	Industry zone development										
Goal1	Establish Industrial zones and increase employment opportunities and expand foreign trade	Established industrial zones and factories built	Factories established in industry zones		24	22	35	53	30		
	Managment and privatization of public enterprises										
Goal1	Increase competitiveness of pubic enterprises, increase foreign market earnings generated by public enterprises and enhance corporate management of the enterprises	Improved in operation management of public enterprises	Growth in value addition by public enterprises (in billion birr)	2.26	3.39	3.97	4.56	4.88	5.32	Ministry of Industry	Ministry of Industry annual report
			Growth in production capacity of public enterprises (in %)	83	94	98	100				
			Growth in profit of public enterprises (in billion birr)	2	3.31	4.06	4.47	5.15	5.25		
			Growth in foreign market earnings from the public enterprises products (in USD)	0.05	63.7	76.2	88.6	122.9	140		
	Micro and small scale enterprises										
Goal1	Give particular attention for Micro and Small Scale Enterprises to increase employment opportunities and increase their role to reduce poverty and bring economic development	Job opportunity created for unemployed citizens	Number of citizens employed in thousands	474.4	410	554	617	679	740	Ministry of Industry	Ministry of Industry annual report
		Training of trainers conducted	Number of trainees		1500	1700	2000	2200	2600		
		Trainings conducted to operators	Number of trainees		450	500	650	675	725		
		Land serviced and shades built for operators	Supply of manufacturing land in hectare	1153	2136	2532	3048	3444	3840		
			Number of shades constructed	1591	3712	4076	4649	4818	4336		
			Number of buildings constructed	20	150	157	164	171	177		

Source: Policy Matrix (volume II) of the Growth and Transformation Plan 2010/11-2014/15.

Chapter 4
Policy Procedure and Organization for Executing High Priority Industrial Strategies*

Success in industrial policy formulation depends not only on the proper choice of policy measures but also, more fundamentally, on policy procedure and organization from which good policies are produced and executed. This chapter will look at institutional aspects of policy making which is an essential background for effective policy learning. The purpose of studying various international best practices in policy procedure and organization is basically the same as studying alternative policy measures. Rich foreign examples are to be regarded as building blocks from which a policy package most suitable for the country in question should be created through the principles of selectivity, modification, combination, and improvement. As always, haphazard adoption of foreign models without systematic survey of Ethiopian local contexts should be avoided.

4-1. Leadership

Our discussion starts with national leaders. High-quality leadership is the most vital ingredient of national development, a fact that can hardly be overemphasized. A good leader is crucial because he or she is the primary source of national development that can create all other conditions of industrialization if they are initially missing. Major reforms are not possible by bottom-up processes alone unless the top leader takes up the main responsibility. This principle applies generally to all organizations including a nation, local governments, political parties, private firms, universities, research institutions, and nonprofit organizations (NPOs).

There are two aspects of national leadership worthy of attention. The first is the quality of the leader or the leading group, and the second is the dynamics of coalition formation among contesting leaders and leading groups.

A national leader must be equipped with strong will and passion as well as genuine belief in productivity and excellence for the country instead of being interested in personal influence or wealth accumulation. He or she must have sufficient political savvy and networks, personal integrity and discipline, intellectual ability, and pragmatism. A top leader must be personally committed to a nation's priority policies and use his or her full power and authority to push them to completion. I expect that the reader will find these obvious but convincing. National leadership comes in different

* This chapter, prepared for the Seventh High Level Forum of Ethiopia-Japan Industrial Policy Dialogue in Addis Ababa on January 20, 2011, is based on the draft chapter 4 of Kenich Ohno's forthcoming book, *Learning to Industrialize: From Given Growth to Policy-aided Value Creation* (tentative title, 2011), with adaptation to the Ethiopian context.

forms including personal leadership of a charismatic figure, organizational leadership among multiple ministries and agencies, and inherited leadership by one political party with changing heads. In either case, success depends on the existence of an outstanding human personality who can effectively lead the government, ministry, agency, or party as the case may be.

One evident problem with installing a good national leader is that no one can consistently select such a leader in the complex political process of any country whether it is democracy or otherwise. Who will be the next prime minister or president and how effective that person will be as a national leader is highly uncertain even among candidates, let alone for individual citizens, officials, or business persons. Yet there are indirect ways to influence the quality of national leaders in the long run. These include leadership and elite education, comparative studies in development politics, systematic and concrete analysis of effective policy making (to which this chapter hopes to contribute), regional contagion of good leadership through imitation and competition, and publishing biographies of admirable national leaders. Humans are driven by both reason and emotion. While social sciences should do much to reveal the anatomy of strong and wise leadership, intimate knowledge of what excellent leaders in different countries and periods did, presented vividly and concretely, is certain to raise the consciousness of what needs to be done among voters and political candidates.

The second issue that needs to be examined is formal and informal coalition forming among leaders and leading groups, which is a crucial political process that drives development in any political regimes, and especially under democracy. Coalitions here are not confined to the alliance of political parties to form a government but covers broader cooperation among individuals or organizations involving bureaucrats, businesses, labor, military, regional and ethnic groups, academics, professionals, local residents, consumers, and so on. In most cases—this includes even so-called dictatorship and one-party dominance—a single political entity is unable to pursue its aim unless it forms a coalition with other persons or organizations through negotiation, compromise, and sharing of benefits. The importance of politics in development has been recognized in general but the systematic analysis of how this “black box” works and how its operational implications can be used in policy formulation remain rudimentary.

One of the attempts in this unexploited area is the Developmental Leadership Program (DLP) organized by Adrian Leftwich of the University of York and Chris Wheeler of AusAid (Leftwich, 2009, 2011). DLP aims to collect and analyze concrete cases of developmental coalition dynamics from all over the world to extract policy implications and concrete operational guidelines for development partners and civil society organizations. It stands on the premise that the good governance approach by the World Bank has failed to produce any significant results and a different approach to developing country politics is required. For bilateral and multilateral aid organizations, “working politically” in developing countries should not mean conspiring a regime change or imposing a Western model in

total disregard of local context. Since any aid action will influence power relation and coalition formation among political, official and civil organizations in the host country, aid providers must fully understand their influence and work consciously but subtly and quietly to become enabling agents for desired change with deep local knowledge and judicious choice of entry points and counterparts. In the first phase of DLP, the importance of context specificity, brokering and convening functions of donors, and the role of secondary and tertiary education, among others, were highlighted from the case studies of Botswana, China, Egypt, India, Indonesia, Jordan, Mauritius, South Africa, Uganda, Yemen, Zimbabwe and others.[1]

Additionally, interaction between agential and structural factors (relative weight between producing high-quality leaders and institutionalization of good policies) must be borne in mind. An outstanding leader may rise to propel the nation toward development for a while but he or she will not stay forever. If progress depends solely on effective personal leadership, the whole thing may collapse when a next leader of average quality or less arrives. In the worst case, the next head of the state may revoke whatever the previous one did for political revenge or self-expression. In order to reduce this risk, good policies started by an excellent leader must be institutionalized. That is to say, staffing, budgeting, policy procedures, and policy organizations must be cemented as much as possible by laws, decrees, and agreed practices among multiple stakeholders. On the part of an incumbent national leader, it is necessary to delegate sufficient authority to various people and organizations as well as work early on the succession problem. Oftentimes, this turns out to be difficult for an "excellent" leader because of his or her self-confidence and desire for continued monopoly of power often outweigh the need for institutionalization of good policy practices.

4-2. National movement for mindset change

Some policies require a fundamental change in popular mindset before sustained results are obtained. Good policy alone may not induce dynamic growth if the public is generally content with passivity, short-terminism, and foreign product worship (see Malaysia's limited success with Bumiputra policy in chapter 3). If mindset change is not forthcoming spontaneously from the private sector, the state may have to force it from the top until it becomes part of national culture. While permanent state guidance detached from market force or popular sentiment is inconsistent with the long-term development of a market economy, temporary use of such an approach is not only permissible but even highly recommendable in an early stage of economic take-off. Such top-down persuasion has produced significant lasting performance in some countries as well as failure in others—as seen in collective farming and state-owned factories under socialism which relied on central orders without appropriate incentive mechanisms for managers, workers and farmers to work better and harder.

[1] From East Asia, Banno and Ohno (2010) contributed a detailed analysis of coalition formation and re-formation among political leaders in Meiji Japan, which we called the flexible structure of politics, for the period of 1858-1881.

National movement is a double-edged sword. If it is to be adopted, systematic policy learning is essential to avoid mistakes.

National movement usually aims at elevation of productivity and competitiveness by instilling the spirit of activism and cooperation into the public. Successful examples from East Asia include Japan's Rural Life Improvement Movement (1948-) and factory *kaizen* (improvement) movement (1950s-), Singapore's Productivity Movement (1960s-), and Korea's Saemaul (new village) Movement (1970s-). These movements usually evolve from pilot projects to full-scale mobilization, institutionalization, broadening and shifting of scope, and end with sharing lessons with other countries. Some movements initiated decades ago are still practiced and disseminated in advanced forms. For this reason, the end point of a successful national movement is more difficult to identify than the starting point.

Mindset change requires a national movement and not just collection of individual projects. Policy will bear no fruit if its spirit and goals are shared only within a narrow circle of political leaders, state officials, and experts and specialists. To be successful, a comprehensive and self-sustaining system of philosophy, principles, implementing mechanisms, and resources backed by state's will and popular passion are required. In Singapore's productivity movement, even taxi drivers were made fully aware of importance of improving productivity—and that is really the way it should be.

As an example, we take up South Korea's Saemaul Movement which was launched in 1970 as a response to an emerging gap between rapid urban industrialization and persistent rural poverty and backwardness. It was driven by President Park Chung-hee's personal interest in rural development through mass campaigns. Its objectives included not just improvement of rural life and income but, more fundamentally, achievement of these through a value shift of farmers from passivity to activism. In September 1971, President Park defined the movement as "a fundamental concept of national development, one in which economic development and spiritual enlightenment go together hand-in-hand" (Park, 1979, pp.83-84). The three slogans of *diligence*, *self-help*, and *cooperation* were hammered into all rural residents.

The Saemaul Movement, as a goal-oriented top-down rural development program, started with an experimental free distribution of 335 bags (13.4 tons) of cement to every village of the country from October 1970 to June 1971 with the condition that they should be used only for communal projects. President Park ordered that government funds be directed toward those who demonstrated the right spirit. By 1973, all villages were ranked into three categories: 18,415 basic villages, 13,943 self-helping villages, and 2,307 self-sufficient villages. Assistance was continued to be given mainly to the last two categories while "lazy" villages and villagers were repudiated or removed from further assistance (Kim, 2004, pp.134-35).

The Saemaul Movement was most vigorously pursued in the 1970s and in several stages. After experimentation with free cement distribution in 1970-71, the years 1972-73 were spent on institutionalization and full-scale implementation supported by a hierarchical administration, guidelines which included standardized procedure for project selection and evaluation, and training programs. The period from 1974 focused on self-development, enrichment, and broadening of the movement including the introduction of Urban Saemaul Movement.

The Saemaul Movement was guided by the Central Consultative Council chaired by the Minister of Home Affairs. Under the Council, there were five administrative layers consisting of central government, provinces, counties, townships, and villages. Through this vertical mechanism the central government provided in-kind and financial aid and technical advice on management, farming technology, and project preparation and execution to worthy villages. At the bottom the Village Development Committee in each village, chaired by a Saemaul leader and with 15 elected villagers as members, proposed communal projects which were to be approved by the general assembly of the village as well as at the township level.

For education and training, the Saemaul Leaders Training Institute was opened in 1972 providing one- to two-week intensive courses to village leaders. Eventually 85 such institutes were established across the country with the Institute in Suwon assuming the model role. In 1974 the scope of trainee was expanded to include those in managerial positions in all sectors such as cabinet ministers, religious leaders, university presidents, and media executives. Its standardized curriculum covered Saemaul philosophy, national security and economy, project planning, case studies, field tours, and group discussion. All trainees stayed on the premise and slept in the dormitory during the course, which numbered 822,900 in the first ten years of 1972-1981. In addition, short-term training without lodging was offered extensively.

Some criticize the Saemaul Movement as President Park's political device to fortify his dictatorial rule under the so-called Yushin Reform and inculcate the entire population in support of it. Others argue that the movement benefited wealthy farmers more than poor ones (Han, 1987, p.48). There was protestation against homogeneous Saemaul leader training which emphasized military-like discipline and morning jogging over specialized knowledge (Kim, 2004, p.136). These are probably all valid criticisms, but the Saemaul Movement should also be judged by the enormous progress that South Korean villages made in income and living standards, along with urban residents, in sharp contrast to the dismal state of North Korea which also adopted similar top-down popular movements under Kim Il-sung. As average income per capita grew 1.7 times from 1971 to 1981 in South Korea, the per capita income ratio between the richest urban area and the poorest province remained almost unchanged at

2.01-2.05 and subsequently declined to 1.75 by 1991.[2] Farmers were not left behind in Korea's economic miracle. Spectacular economic performance may not completely justify forced national movement, but to a large degree it does.

From Korea's Saemaul Movement and experiences for productivity improvement in other countries, the following factors can be distilled for successful execution of a national movement for mindset change.

First, the movement must be launched and sustained by strong personal interest and commitment of the top leader. Second, the movement must start with top-down instruction for grassroots participation. This may sound contradictory, but contradiction will evaporate if the movement "catches" and begins to attract genuine interest of private participants because they see the benefits of the movement instead of their reluctant obedience. While elements of coercion cannot be eliminated entirely in national movement, it should be regarded as success if intended economic performance is attained even with a certain amount of compulsion. Third, performance-based rewards should be given to villages, firms or workers that produce good results according to transparent criteria. Highly visible incentive and recognition mechanisms should also be installed at the national and local levels. Fourth, supporting institutions must be created. This includes establishment of a national council or committee presided by the top leader; a central ministry or agency as the lead organization and the secretariat to the national council or committee; regional, district, and community level offices; and staffing and budgetary arrangements. Fifth, authorized and well-designed training programs must be created to educate government officials in charge as well as private leaders and participants of the movement in the frontline of implementation. Sixth, the movement must continue for a sufficiently long time, typically over a decade or more, with evolving emphasis. A project lasting only for a few years will not be enough.

4-3. Policy procedure

In policy formulation, the procedure by which policy is made is often more important than the final document which is drafted and approved. While all policy documents must be revised and updated as time passes, the process that does the revision can remain and continue to be fortified as experiences accumulate. This process should not be improvised for each occasion or left to a small group of drafters which happen to be assigned to the task. The process must be owned and institutionalized by the policy makers even though background studies and drafting can be outsourced after basic goals

[2] Due to data problems, Korea's provincial incomes prior to 1985 are difficult to estimate consistently. The gap data cited in the text is calculated by Huh (1995). Some of the income gap indicators using provincial data and reported by Huh, which support regional income conversion, are as follows: max/min ratio, 2.0471 (1971), 2.0143 (1981), 1.7531 (1991); coefficient of variation weighted by economic size, 0.2873 (1971), 0.1643 (1981), 0.1572 (1991); Gini coefficient, 0.1597 (1971), 0.0846 (1981), 0.0644 (1991).

and directions are laid out.

Policy formulation must begin with the vision produced by the top leader that guides the national development strategy. This vision, which must come from the deep personal conviction of the top leader, needs to be communicated to the people and eventually win their approval through election or other means. It is also the vision by which his or her government is judged. The existence of a seriously committed policy vision is the prerequisite for making any high priority strategy without which policy tends to be *ad hoc*, reactive, and scattered.

When the leader's vision is provided, the two crucial procedural requirements are *inter-ministerial coordination* and *stakeholder involvement*.

Any industrial policy in developing countries—whether it is small and medium enterprise (SME) promotion, industrial human resource, quality and productivity movement, or industrial cluster development—normally covers multi-sectoral issues managed by more than one ministry or agency. Thus intra-government coordination becomes imperative if the policy is to be effectively designed and implemented. A lead ministry or agency must be designated and given a clear mandate to formulate the policy. While the ministry in charge of industry usually takes main responsibility, other ministries in charge of finance, official development assistance (ODA) and foreign direct investment (FDI), education and training, science and technology, transportation, infrastructure, agriculture, urban development, and so on, must also be made to cooperate. Since one ministry or agency is unable to direct or overrule other ministries and agencies, there should be a higher mechanism that supervises the whole process, gives full authority to the lead ministry or agency, and provides a forum in which multi-sectoral issues are deliberated and solved. Concrete organizational arrangements that ensure this will be the topic of the next section.

Besides cooperation among ministries and agencies, policy making must receive active participation of non-government players. For the purpose of industrial policy formulation, by far the most important players are domestic and foreign enterprises that carry out investment and production as well as their business associations. Without their willing participation, any industrial policy is doomed to fail. Since not all enterprises share the same business interests or sectoral goals, a mechanism must also be in place to coordinate various voices among them. In addition, domestic and foreign academics, industrial experts, and consultants should be mobilized for conducting necessary surveys, analysis, and international comparison, as well as drafting and commenting on policy documents as needed. Depending on the issue at hand, local residents, user firms, consumers, NPOs, and other stakeholders may also be involved.

It should be stressed that mobilization of non-government stakeholders must be substantial with

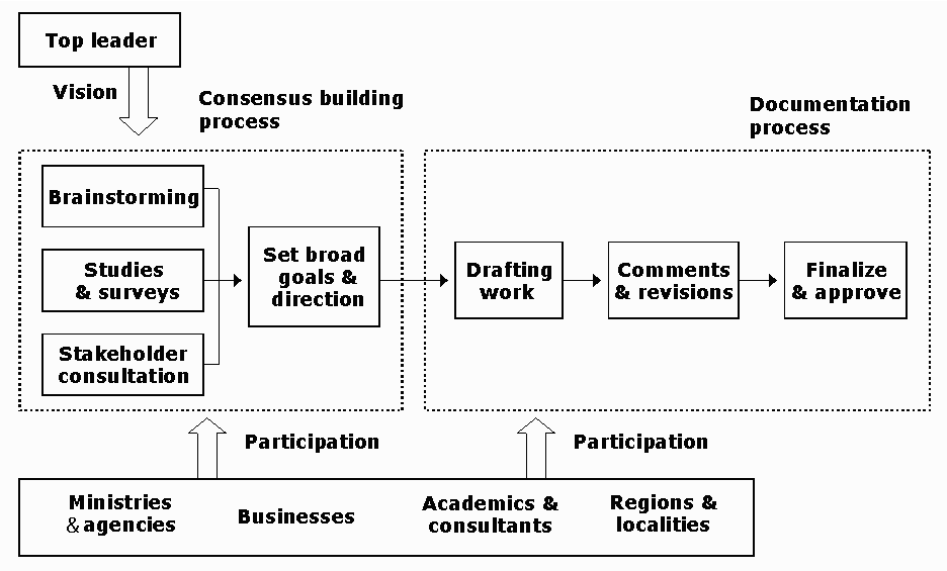
sufficient time and opportunities provided for contact and input. Nominal participation, such as hearings in which official views are unilaterally communicated or a large-scale symposium where little time is allocated for interaction with the floor, does not contribute much to the betterment of policy formulation. Public-Private Dialogue (PPD) will become an important policy mechanism only when it goes beyond setting a formal framework and begins to incorporate private opinions seriously and effectively into policies.

Many governments in East Asia succeeded in institutionalizing government-business interactions for information sharing and policy coordination (Weiss, 1998; Weiss and Hobson, 1995; Kondo, 2005). Large flows of high-quality information between the two parties contributed to building mutual confidence, credible commitments, and predictability between the public and private sectors. The nature and intensity of government-business coordination have evolved over time as the private sector has improved its capability and graduated from direct public intervention.

Through strong inter-ministerial coordination and stakeholder involvement, all major parties inside and outside the government participate in policy formulation leading to a growing sense of shared ownership and responsibility as well as willingness to cooperate in implementation. This fact is far more important than producing documents which may be comprehensive and theoretically advanced but are not supported by concerned organizations. In the early stage of policy learning, agreed policy may be relatively simple with only a small number of specified actions. Even in that case, if the drafting process reflects existing policy capability and local context, the resulting policy will be unique, ambitious, and at the same time feasible for the country in question. Indeed, this is the very process in which policy making is learned. If the process is outsourced in its entirety to a group of domestic or foreign consultants, little learning will take place within the government.

This also has an implication for appropriate speed with which policy should be drafted. Some governments set unreasonably short deadlines for policy documents. This compels the ministry in charge to contract out the drafting work to experts and consultants, which militates against the policy learning described above. While the situation varies across countries, if proper internal and external consultation is conducted, a realistic amount of time needed to revise an existing policy is about one year, and creating a new policy may take two to three years. This includes time lost due to administrative delays and political cycles which are often inevitable in policy formulation. Quality, not speed, should be the main objective of policy making. Quality here means that, based on sufficient information and analysis, all key aspects of the policy have been agreed among major stakeholders through discussion and compromise so that the policy, once adopted, will be strongly supported and willingly implemented. Figure 4-1 illustrates the standard policy making procedure observed generally in East Asian high-performing economies. Five elements are important here: top leader’s vision, consensus building, stakeholder participation, documentation, and the designation of a lead ministry or

agency with clear mandate and responsibility.



Note: the entire process is coordinated by a lead ministry or agency.

Figure 4-1. Standard Policy Making Procedure

An example is given from Thailand. The Thai automotive industry boasts the largest production volume in Southeast Asia and has expanded strongly despite two serious regional and global economic crises in 1997-98 and 2008-09. Its policy making is competently coordinated by the Thailand Automotive Institute (TAI), one of the ten sector-specific non-profit organizations established by the Thai government which are required to be financially autonomous from the government budget (see section 4-4-(iv)). The structure of the Thai automotive policy is given succinctly in the Executive Summary of the Automotive Master Plan 2007-2011 which emanates from Vision 2011[3] and branches out to four objectives, five strategies, and 12 action plans. The most important part of the Master Plan is the exposition of the 12 action plans.

Drafting of the Thai automotive master plan takes about a year which is a genuinely joint process between private firms and the Ministry of Industry. Close-knit networking among all stakeholders is ensured by TAI. The drafting process begins with the "CEO Forum," an informal discussion forum among foreign and domestic firms, government officials, and academics, that agrees on basic directions and identifies key areas (in the current automotive policy, they are human resource, productivity, marketing, engineering, and investment and linkage). Production and export targets are proposed collectively by the industry, not the government. After a broad consensus is formed, the Automotive Master Plan Steering Committee will commission studies on the identified key areas to

[3] Vision 2011 states that "Thailand is the automotive production base in Asia which creates more value added to the country with strong automotive parts industry." This vision remained unchanged from the previous Master Plan 2002-2006.

"focus groups." Finally, the master plan is drafted by TAI staff after all major aspects of policy revisions have been agreed among stakeholders and necessary studies have been conducted. TAI serves as a secretariat throughout the entire process and provides administrative and logistic support. Mr. Vallop Tiasiri, President of TAI, meets foreign and local producers at least twice a month formally and meets them more often informally.

From the perspective of effective policy making, common mistakes include: (i) the lack of a clear vision of the leader; (ii) policy drafting by a few dedicated officials without building consensus or facilitating interaction among all stakeholders; (iii) outsourcing of the entire policy drafting to outsiders (local or foreign experts) with the role of policy makers limited to making comments and revisions; (iv) bottom-up collection of subdocuments drafted by various ministries which ends up in unconnected chapters with too many priorities for implementation. These negative practices must be avoided as a first step toward policy learning.

4-4. Policy organization

What organizational arrangements are necessary to realize inter-ministerial coordination and stakeholder involvement discussed above? International comparison of policy making points to different policy organizations that can equally attain good policy results. The choice should fundamentally depend on the unique characteristics and existing policy capability of the country in question. Below, five alternative policy organizations for conducting high priority development policies are explained with examples. Again, the intention here is to provide raw materials from which policy organization for each country can be constructed under the principles of selectivity, modification, combination, and improvement.

It should be noted that these organizational arrangements are not mutually exclusive. There are countries that adopt more than one arrangement to execute different national strategies. It is also important to recognize that high-performing economies in East Asia did not possess strong institutional bases at the beginning of their rapid growth. Policy procedure and organization were strengthened during, and not before, their high growth periods. State-building is a dynamic process in which the government has to build up industrial policy capability through concrete hands-on efforts and trial-and-error in the actual process of industrialization.

4-4-(i). A technocrat team supporting the top leader

One of the key ingredients of the "East Asian Miracle" was strong alliance between the top leader and the technocrat team (Campos and Root, 1996; Ohno and Shimamura, 2007). Many countries in East Asia established a semi-permanent technocrat group that directly supported the prime minister or the

president in executing his priority national programs. Examples include Korea's Economic Planning Board (EPB), Malaysia's Economic Planning Unit (EPU), Taiwan's Kuomintang elites, Indonesia's Berkeley Mafia, and Thailand's National Economic and Social Development Board (NESDB).[4] Among these, Malaysia's EPU and Thailand's NESDB still exist while others have been disbanded as income and private sector dynamism rose and new policy organization replaced the old.

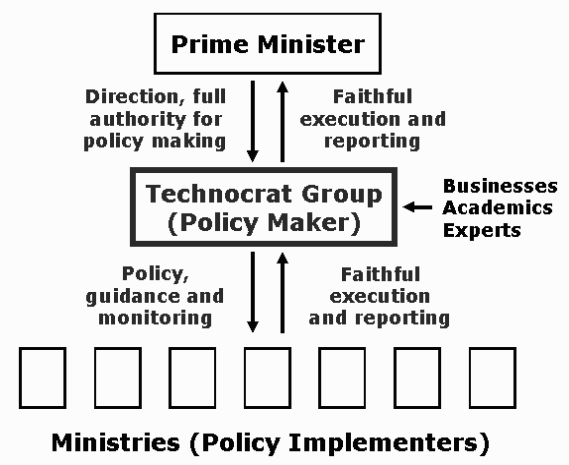


Figure 4-2. Technocrat Team Supporting Top Leader

These technocrat groups were created by convening well-educated and/or highly experienced officials, scholars, and business leaders to act as a policy-making brain of the country. Many of them had high degrees from foreign universities or had been summoned from prominent positions in foreign countries. These elites had full trust of the top leader while ministries were placed under them as implementing agencies. Their authority and directives constituted central coordination mechanisms for formulating, implementing, and monitoring development policies (Kondo, 2005).

This policy organization model works best under a strong and wise leader who exercises power for a relatively long time. Korea's EPB and Malaysia's EPU were the supporting arms of their charismatic leaders, namely, President Park Chung-hee (in power 1961–79) and Prime Minister Mahathir bin Mohamad (in power 1981–2003).

[4] In Latin America, policy support in Chile was provided by Chicago Boys, or Chilean economists trained at the University of Chicago under Milton Friedman and Arnold Harberger, to the military junta to carry out free-market reforms starting in 1973.

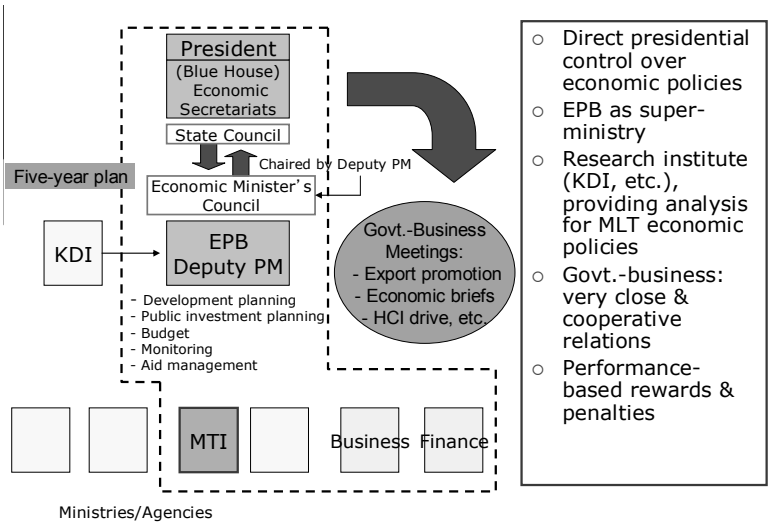


Figure 4-3. South Korea 1960s-70s: Economic Planning Board

4-4-(ii). A national council or committee

A national council of committee—the precise name does not matter—is a less permanent policy making arrangement that can replicate strong coordinating functions of the technocrat team in the previous model. This approach may be adopted by a strong, long-serving leader but it can also work effectively in a country where no such charismatic leader exists or where the head of the state must change every few to several years. In this model, the task of policy formulation is taken up by a national council or committee presided by the top leader himself, a near-top leader such as vice president or deputy prime minister, or someone trusted and appointed by the top leader. Its members are selected from a broad base including businesses, scholars, ministers and retired officials, civil society leaders, media, and so on. The council or committee is supported by a secretariat staffed by seconded officials from related ministries which does administrative and logistic works. The council also has working groups (or task forces) under it that prepare studies, reports, and draft chapters in specialized fields. Unlike technocrat teams, these councils or committees are normally organized around a specific issue and are terminated when the policy objective is achieved or there is a change of government.

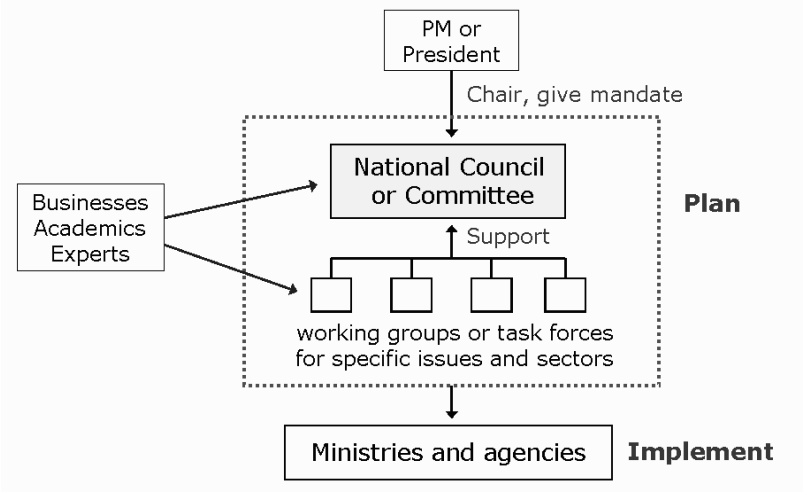


Figure 4-4. National Council or Committee

In this model, concerned ministries and agencies can participate in the policy process in three ways: (i) through the minister's membership in the national council or committee; (ii) as official experts in working groups or task forces; and (iii) as implementing bodies. Compared with the technocrat model explained above, this configuration may be more acceptable for ministries and agencies wanting to participate in policy formulation extensively rather than receiving top-down instructions from the elite group and being confined to policy implementation.

The national council and committee approach is used widely with different variations. Three examples are given below from Singapore, Malaysia and Korea. This approach is adopted to carry out a small number—usually up to several—of top priority programs in each country.[5]

In Singapore, productivity has long been a top national agenda. In recent years productivity began to receive renewed attention in the context of lagging productivity of aged or foreign migrant workers, the rise of China and India, and the aftermath of global economic crisis. To propose basic policy directions, the Economic Strategies Committee (ESC) chaired by the finance minister published a report in January 2010. It recommended a drastic shift from factor-driven to productivity-driven growth and set an annual productivity growth target of 2-3% and an average GDP growth target of 3-5% in the next ten years. The main thrust of the ESC Report was endorsed by the Prime Minister and reflected in the fiscal year 2010 budget.

[5] Following the Korean model of the 1960s and 70s, Ethiopia has established a monthly Export Steering Committee presided by the prime minister and attended by relevant ministers and officials. The Committee seems to work well in monitoring export performance and solving problems that may arise. However, the Ethiopian Committee is narrower in operational scope than the original Korean model or other approaches explained in this section as it is not accompanied by designation of the lead ministry and agencies, the secretariat, and working groups or task forces that perform various functions. Moreover, it remains an implementing body rather than a policy making body.

One of the key recommendations of the ESC Report was establishment of the National Productivity and Continuing Education Council (NPCEC). NPCEC was formed in April 2010 as a policy making body for realizing a productivity-led economy. It is chaired by the Deputy Prime Minister with its members coming from government, business community, and labor unions. The Ministry of Trade and Industry (MTI) and the Ministry of Manpower (MOM) jointly act as the secretariat. Under NPCEC, two layers of organizations are created: (i) the Working Committee for Productivity and Continuing Education (WCPCE) led by the Permanent Secretaries of MTI and MOM; and (ii) sectoral working groups and horizontal thematic working groups. Three financial mechanisms fund incentives and subsidies to firms and individuals based on their action and performance.

NPCEC has selected 12 priority sectors that have large contribution to employment and GDP and high potential for productivity gain. Each sector group is required to draw up a productivity roadmap for the next ten years. They are reviewed by WCPCE and submitted to NPCEC for approval. A ministry or an agency is assigned to oversee each priority sector. In addition, horizontal working groups work on cross-cutting issues such as low-wage workers, research and benchmarking, and infocomm (ITC) and logistics. In all of these working groups, tripartite representation of government, businesses, and unions is ensured.

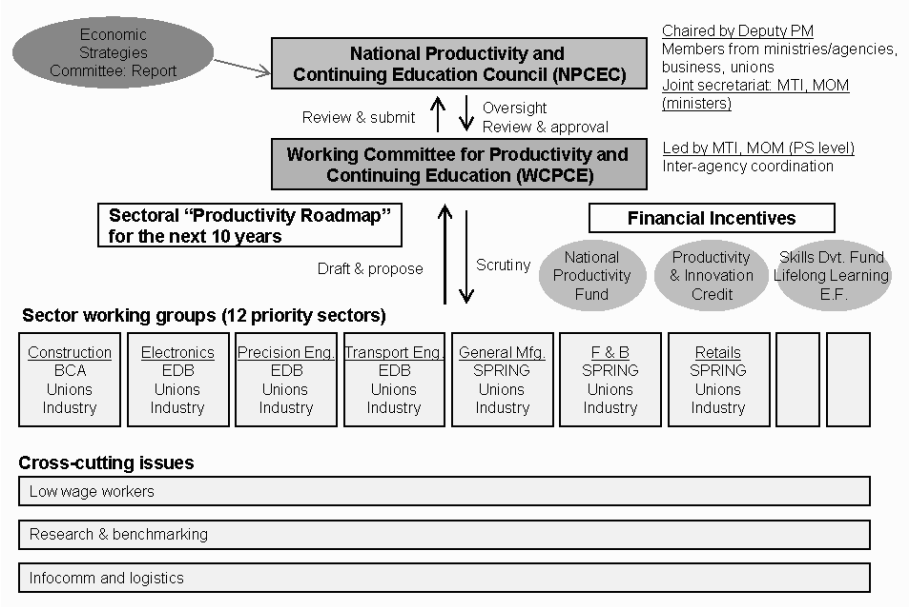


Figure 4-5. Singapore: National Productivity and Continuing Education Council

The Malaysian government puts high priority on SME development as a policy instrument to shift the growth engine from large multinational corporations to autonomous and innovative indigenous firms (Preface of the SME Annual Report, 2008). SMEs are to play key roles in job and income creation as well as moving the country out of the middle income trap and into high income. The National SME Development Council was established in 2004 as a leading body that sets the policy direction for

cohesive SME development. It is chaired by the prime minister and brings together 15 ministries and more than 60 government agencies to work together toward this goal. Initially, Bank Negara Malaysia (central bank) served as the secretariat of the Council which set three policy pillars (enabling infrastructure, capacity building, and financial access), five-year targets, and common SME definition, and published the Annual SME Integrated Plan of Action and the SME Annual Report. The Council also improved National SME Database and SME training and marketing, and introduced new financial products for SMEs.

In 2009 the SME Corporation Malaysia (SME Corp.) was created as a central coordinating agency at the operational level by upgrading the previous functions of the Small and Medium Industries Development Corporation (SMIDEC) which belonged to the Ministry of International Trade and Industry (MITI), a lead ministry for SME development. As the new secretariat to the Council, SME Corp. serves as a central reference point for all SME matters and undertakes impact studies on SME policies and programs across all economic sectors. Malaysia has many SME-related ministries, agencies, and private sector partners whose activities are now brought under the vertical policy organization consisting of the Council, MITI, and SME Corp.

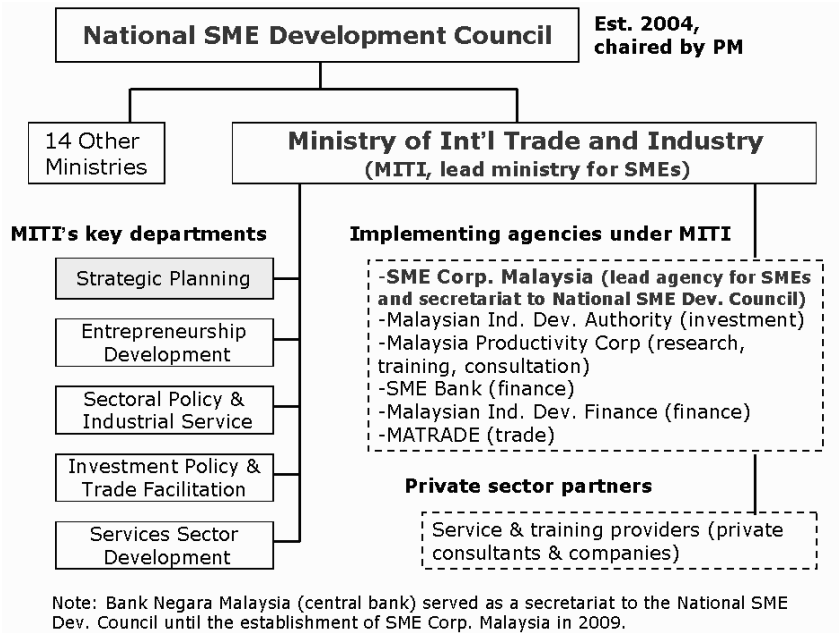


Figure 4-6. Malaysia: National SME Development Council

In present Korea, presidential committees serve as a key instrument for economic policy making. Upon assuming power, every president establishes a small number of presidential committees as a vehicle to concretize, implement, and monitor the priority agenda during his five-year term. Each presidential committee is headed by a person who has expertise in the chosen subject and enjoys strong confidence of the president as well as secretarial support by staff seconded from various

ministries.

President Lee Myung-bak, who assumed office in February 2008, established four Presidential Committees for Future and Vision, Green Growth, National Competitiveness, and Nation Branding. The most important among them is the Presidential Council for Future and Vision (PCFV), established in May 2008, which advises the president for designing overall national strategies and setting policy priorities. It is chaired by Prof. Seung Jun-kwak, Dean of Korea University, and has 26 members drawn from academia, non governmental organizations (NGOs), legal experts, and business leaders. Vice ministers also attend the Council. The Council meets on a need basis without any fixed schedule. PCFV is supported by the Executive Office of the Council, a secretariat of about 30 staff comprised of seconded officials from various government ministries and agencies. The secretariat is charged with drafting of policy documents, inter-ministerial coordination, and related administrative works. In addition to four presidential committees mentioned above, a temporary (one-year) presidential committee was created to host the G20 Summit which took place in Seoul in November 2010.

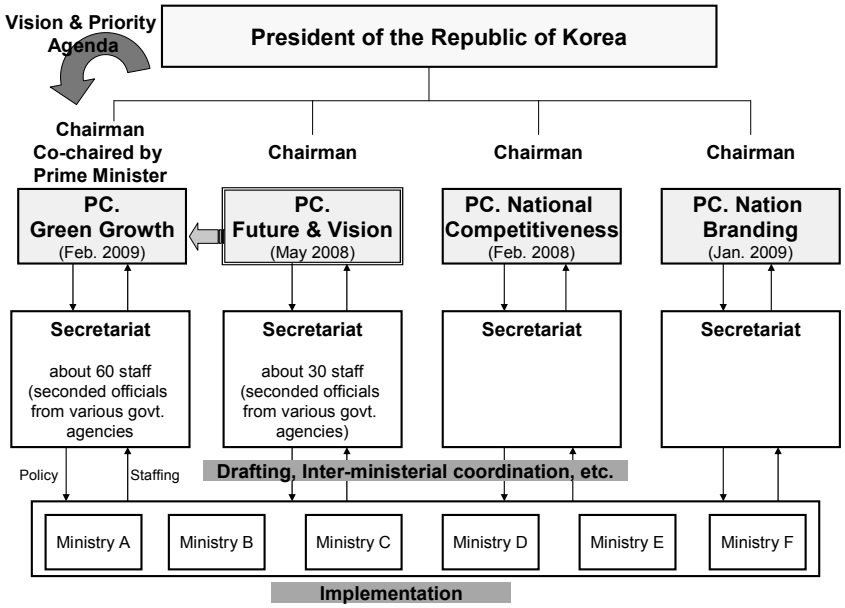


Figure 4-7. Korea: Presidential Committees

4-4-(iii). A super-ministry

Another way to secure dynamism and consistency in industrial policy is to give broad responsibility to one ministry and let this ministry do the designing and implementation of industrial strategies as well as additional works such as interface with political parties, interaction with non-government stakeholders, preparation of necessary laws and regulations, and dissemination of policy objectives and outcome. While this ministry is just one among many ministries in legal standing, it has sufficient

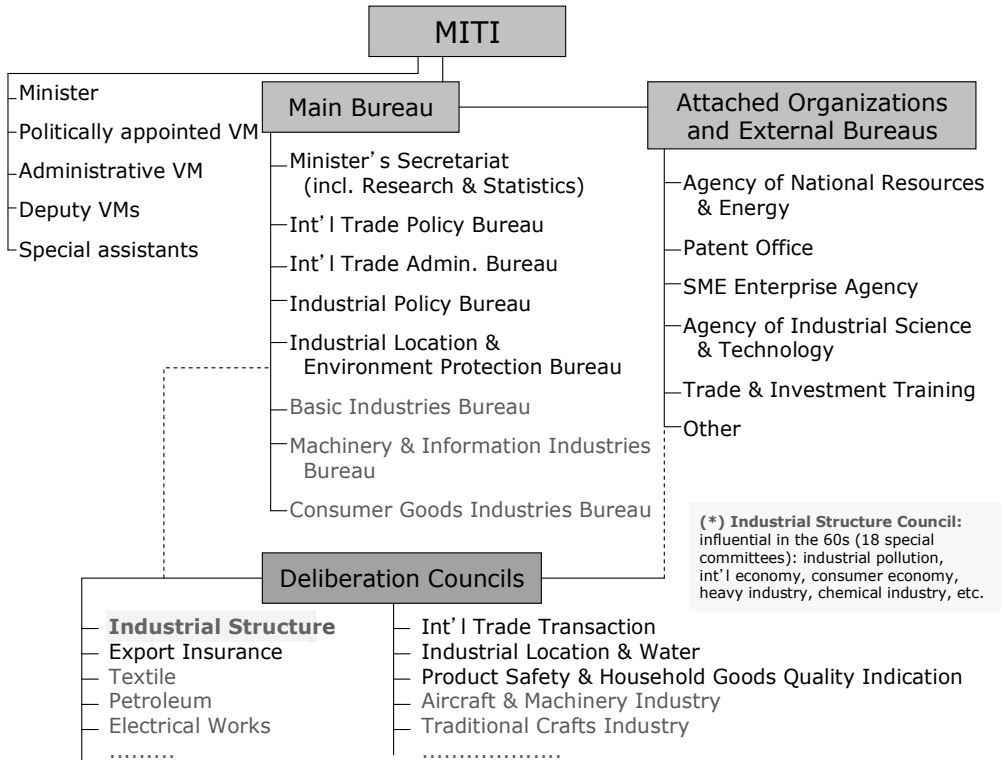
authorities and policy tools to become a one-stop house for initiating and carrying out industrial strategies. As long as the importance of industrialization is generally agreed, this approach may not even require a strong and wise national leader to constantly supervise the process since the ministry can internally and autonomously produce coherent visions and strategies with its highly motivated officials and extensive information network.

Japanese industrial policy making from the late 1950s to the early 1970s was the prime example of this model. The Ministry of International Trade and Industry (MITI) was created in 1949 by merging the Ministry of Trade and Industry, the Coal Agency, and the International Trade Agency to become the lead ministry for post-WW2 industrial catch-up.[6] MITI had broad authority over creation of visions and strategies; individual industrial sectors such as textiles, steel, machinery, and electronics; technology and productivity; trade promotion and negotiation; product, quality, and safety standards; intellectual property rights; competition and anti-monopoly policy; SME development; policy finance; restructuring of sunset industries; and energy and environment. Legal frameworks and policy tools needed to promote these policy areas were created during the 1950s.

According to Okimoto (1989), MITI was the *de facto* super-ministry for Japanese industrial policy. Compared with the fragmented industrial policy making mechanism in the United States, MITI was distinctive in having broad jurisdiction over many industrial sectors and functional issues as described above, as well as having both vertical (industry-based) and horizontal (cross-sectoral) bureaus in its organizational structure (Figure 4-8).

As the lead ministry for industrialization, MITI worked closely with the Economic Planning Agency (EPA) under the Prime Minister's Office and the Ministry of Finance (MOF). The former was in charge of national economic planning and assessment and the latter was responsible for budgeting and financial issues. The tripartite consisting of MITI, EPA, and MOF collectively assumed the primary role in formulating and executing medium- and long-term national visions and economic plans. In addition, EPA and, subsequently, the Land Agency (established in 1974) under the Prime Minister's Office, formulated spatial plans that included corridors, industrial zones, and land and regional development plans.

[6] Subsequently, in 2001, MITI was renamed to the Ministry of Economy, Trade, and Industry (METI).



Source: Adapted from Okimoto (1989), p.117, Figure 3.2.

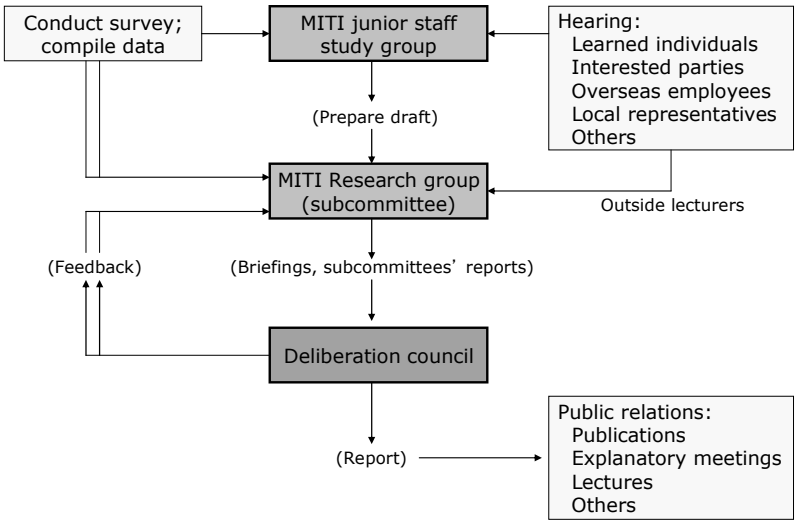
Figure 4-8. Japan: Organizational Structure of MITI

In Japan, deliberation councils functioned as the key instrument for vision making, policy consultation and coordination, and information sharing within and outside the government. Deliberation councils were extensively used by MITI. They provided a forum in which government and businesses met and discussed policy issues and business trends, and built consensus (World Bank, 1993). They were similar to national councils and committees discussed above but they were organized and managed by a super-ministry rather than the top leader, and MITI served as the secretariat. Members of a deliberation council included representatives from related ministries, business leaders, experts, and academicians. Additionally, the structure of deliberation councils reflected both vertical and horizontal bureaus within MITI. This contributed to enhancing MITI's capacity to aggregate diverse interests (Okimoto, 1989).

Among deliberation councils, the Industrial Structure Council, established in 1964, was most influential as it oversaw industrial policy in its entirety with the participation of representatives from the public and private sectors (Johnson, 1982). The Industrial Structure Council drafted a vision for industrial policies in each decade. It published the vision of Heavy and Chemical Industry (HCI) in the 1960s, the vision of knowledge-intensive industries in the 1970s, the vision of creativity and knowledge-based industries in the 1980s, and the vision of better quality of life in the 1990s (Kawakita, 1991). The Industrial Structure Council also discussed measures to support pioneer

industries and ensure the transition of sunset industries.

Japanese policy making process was bottom-up. It started with MITI's junior officials gathering and analyzing data and conducting intensive hearings from various stakeholders, especially the business community (Figure 4-9). Information thus collected served as the basic input for subsequent discussions in the subcommittee and the deliberation council, which respectively drafted and finalized policy recommendations. Throughout the process, deputy division directors (officials in their mid-thirties) were at the center of communication flows both inside MITI and between MITI and the private sector and thus had a considerable voice in determining the policy direction (Okimoto, 1989).



Source: Ono (1992).

Figure 4-9. Japan: MITI's Policy Formulation (late 1950s-early 1970s)

Akira Suehiro, a leading expert on East Asian development, stresses the Fiscal Investment Loan Program (FILP) and close linkage between technical and financial support to SMEs as Japan's two most successful policy instruments for high growth in the post WW2 period. FILP was a mechanism in which funds from postal savings and pension contributions from the private sector were mobilized to conduct investment and loans having public nature (typically infrastructure and business support) through state institutions and credit mechanisms. Its financial resource was at times as large as half the size of the central government's general budget. Part of FILP was combined with MITI's industrial policy, whereby policy formulation and technical support were provided to SMEs by MITI and financial support was provided to the same SMEs by the Japan Development Bank (JDB) under MOF using FILP funds. *Shindanshi* (state-certified SME management consultants) played a key role in linking management and technical support to SMEs with loans by JDB and commercial banks (Ohno, 2010).

During Japan's high growth period from the late 1950s to the early 1970s, there was no charismatic leader who ruled for a long time. Under the leadership of MITI, key economic ministries and agencies worked in close collaboration, with close contact with political leaders, to formulate visions and concretize them into various plans and policy measures.

4-4-(iv). A specialized institute as a policy making hub

While industrial visions and broad direction should be set by the government, detailed plans, master plan drafting, and daily contact and consensus building among stakeholders for any particular sector or issue can be delegated to a specialized, neutral, and non-profit organization. Thailand adopts such an approach together with other approaches for industrial policy formulation.

The Asian financial crisis of 1997-1998 prompted the Thai government to conduct a comprehensive industry review. The Industrial Restructuring Plan (IRP) was quickly formulated for enhancing industrial competitiveness with due attention to social conditions (this was conducted by the national council approach discussed above). IRP consisted of the Master Plan, the Strategic Plan, and the Action Plan for industrial restructuring, and included as its objectives upgrading labor skills in target industries, supporting SMEs, relocating high pollution industries, and promoting clean technology. The MOI was the lead ministry, which facilitated involvement of various stakeholders such as the public sector, businesses and academicians. Although IRP was formulated and implemented within the frameworks of structural adjustment loans from the World Bank and the Asian Development Bank, the Thai government took full initiative in developing its content.

To implement proposed plans, ten specialized institutes were established or re-created to design concrete measures for targeted industries and issues and to cope with problems arising in the implementation process. They were initially operated jointly by the public and private sectors, each with its own staff and board. They acted as a hub of information sharing and consultation between government and businesses and in some cases formulated industry-specific master plans. Some institutes were created by the Industry Promotion Department of MOI while others were transformed from existing agencies or established with donor assistance. As shown in Table 4-1, they included six industry-specific institutes (textile, food, automobiles, electrical and electronics, cane and sugar research, and iron and steel) and four thematic institutes (productivity, technical training, management and certification, and SME development). After five years of establishment, these institutes were required to become financially independent from the government budget.

Table 4-1. Thailand: Specialized Institutes

Name	Start-up Date	Organizations
Thailand Productivity Institute	June 1995	Originated from MOI industry promotion dept. 20 Board members, 161 staff.
Thai-German Institute	Nov. 1995	Financial cooperation from KfW, GDC. Technical training (CNC, CAM/CAD, etc.), 12 Board members, 79 staff, 5 German experts.
Thailand Textile Institute	June 1997	Based on MOI industry promotion dept. and industry association. 20 Board members, 27 staff.
National Food Institute (NFI)	Oct. 1996	Based on MOI industry promotion dept. and industry association. 20 Board members, 27 staff.
Management Systems Certification Institute (MSCI)	March 1999	Originated from Thai Industrial Standard Institute (TISI). 14 Board members, 55 staff.
Thailand Automotive Institute (TAI)	April 1999	Supporting industry development. 20 Board members, 28 staff
Electrical & Electronics Institute (EEI)	Feb. 1999	Supporting industry development. 29 Board members, 28 staff.
Foundation for Cane & Sugar Research Institute	April 1999	Originated from Cane & Sugar Research Institute. 13 Board members.
Institute for SME Development	June 1999	Modeled on Japan's SME Univ. Operated by Thammasat Univ. in cooperation with 8 local universities. 21 Board members.
The Iron & Steel Institute of Thailand	Dec. 1998 (cabinet approval)	Aimed at joint marketing promotion of four steel companies (oversupply)

Source: Higashi (2000).

Among these institutes, the Thailand Automotive Institute (TAI) has been among the most successful as a policy making and implementation hub connecting the Thai tripartite of government, businesses, and experts. TAI conducts policy study and advice, supports clustering of auto parts makers, and promotes export. It provides training for factory engineers and workers, runs an automotive testing laboratory, and serves as the secretariat for consensus building and drafting policy documents. TAI cooperates with MOI, MOF, the Ministry of Commerce, and the Ministry of Science and Technology (MOST) as well as researchers from ten universities in Thailand. It provides research and information services and manages an APEC-supported website for automotive part makers. At the beginning it was financed jointly by the government and the private sector. By now it has become a self-financing organization. As of November 2009, half of its 91 staff were at the testing laboratory and the remaining half were in policy research and training.

As the secretariat of master plan drafting, TAI supplies not only administrative support but, more fundamentally, key ideas for policy direction, selectivity and concentration, and coordination of different interests between government and businesses as well as among businesses. The idea of subsidizing Eco-Car production was one of such ideas emanating from TAI and accepted by the government and the industry in the current automotive master plan. The process by which TAI drafts the master plan was already explained in section 4-3 above.

Figure 4-10 depicts Thai policy making for specific policy areas adopted under Prime Minister Thaksin Shinawatra, a strong leader who served the country from 2001 to 2006. The prime minister produced highly vague visions, such as becoming the "Detroit of Asia" or the "Hub of Tropical Fashion," for relevant ministries to concretize and implement. A specialized institute functioned as a policy hub among the tripartite at the operational level while an industry-specific committee approved and adjusted policies at a higher level. The private sector could influence policy through these institutes and committees, and it also had direct access to the prime minister. Even after the strong leader was removed in 2006, the Thai policy system continues to function basically in the same way as before because these specialized institutes are already "institutionalized." Its operation does not hinge critically on the existence of a strong leader.

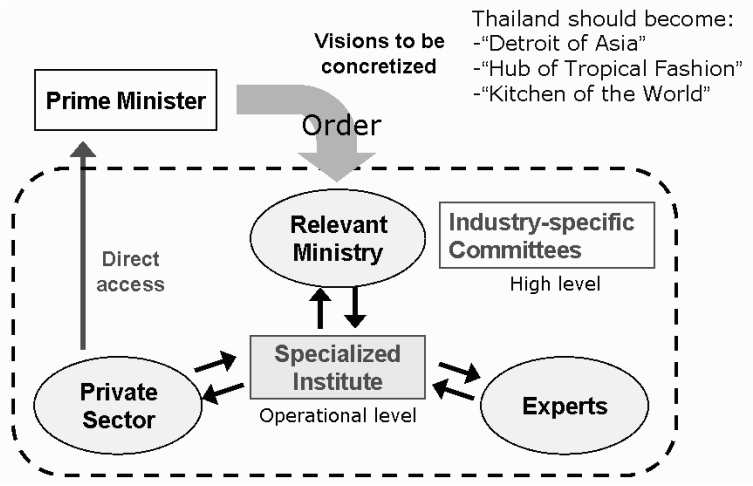


Figure 4-10. Thailand: Specialized Institute Approach (Under Thaksin Government 2001-2006)

The institutional hub approach works well in the case of the Thai automotive sector because there is deep trust among all stakeholders, because TAI has build solid relations with them, and because Thai policy making is pragmatic and flexible without too many bureaucratic requirements. According to Thai MOI officials, the Thai automotive sector is already sufficiently developed and becoming large in size, and the role of government has shifted from direct support to the industry to general policy making. Thus managerial, technical, and financial support for managers, engineers, and workers is to be conducted by private service providers and private financial institutions. However, in a country where the private sector is weak, where mutual trust between government and businesses does not exist, or where policy making is highly rigid and hierarchical, assignment of policy making authority to a neutral non-profit organization may not work as effectively as in Thailand.

4-4-(v). A strong top leader as a policy driver without institutionalization

A very different type of policy making is possible with the existence of a strong and economically enlightened leader without institutionalization. In this case, the head of the state (or a similarly high-level key actor) plays the instrumental role in all policy making functions. This includes vision and strategy making, coordination among ministries and agencies, implementation and monitoring, solving problems and coping with shocks, mobilizing the private sector, and dealing with foreign investors and development partners. Policies become action-oriented and coherent if the leader's mind is lucid and dynamic. Actions of different ministries become mutually consistent even though ministers do not talk to each other. The private sector and foreign investors will know where the country is headed and international cooperation will be made to align with the national development plan. All this is possible because the top leader personally directs every player in the game.

This type of policy making depends heavily on the personal capacity and dynamism of one particular individual and, for that reason, can be quickly realized if such a leader assumes power. In the early stage of economic take-off, a leader who sets everything right is highly welcome since the nation has no time or resource to build strong enough systems quickly for sustainable growth. But the risks of this approach are also clear. Without institutionalization, the exit of a capable leader will stagnate and even reverse economic growth and no policy learning among other policy makers will take place. To avoid this fate, the capable leader must work even harder not only to conduct good policies but also to create new laws, systems, and organizations that cement the way of policy making which he or she has started. This is indeed an enormous demand on the wise leader.

4-5. Policy structure[7]

While policy documents such as industrial master plans and strategies do not have one "correct" format applicable to all countries, structural variation must come from conscious choice based on local context and policy purpose at hand rather than by chance. If a policy document is produced without serious consideration of overall design, it may end up reflecting the whims of particular drafters—ministerial officials, academics, or foreign consultants—that happened to be assigned to the task. As argued in section 4-3 above, basic visions and policy direction must be established through a consensus building process involving major stakeholders before the drafting of a policy document is commissioned.

[7] For more discussion on policy document structure, see chapter 9 in this volume.

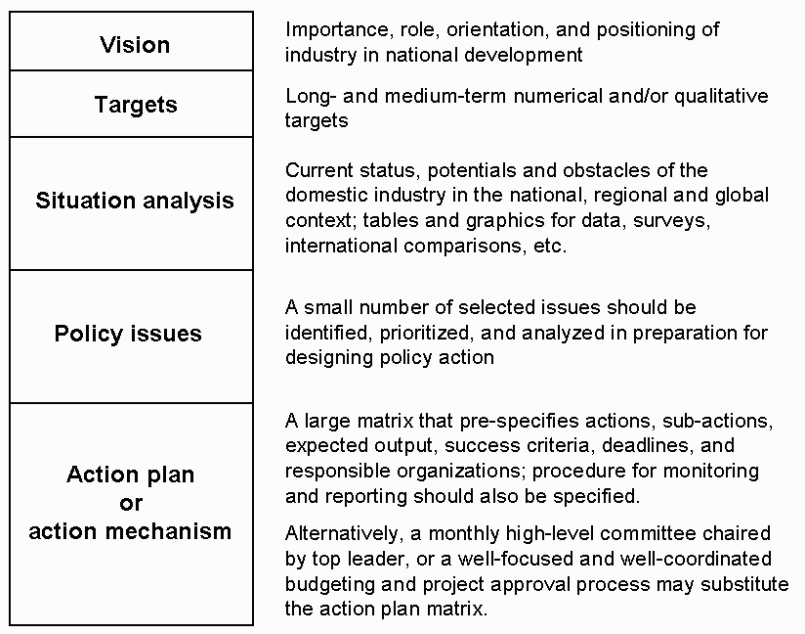


Figure 4-11. Standard Ingredients of an Industrial Master Plan

The standard components of an industrial master plan are illustrated in Figure 4-11 and discussed individually below. Each of these components may occupy either one chapter or a number of chapters. Selection and order of these components are somewhat flexible. For example, targets may be inserted after situation analysis and policy issues. However, the vision should most properly be stated at the outset and the action plan matrix should come at the end (unless specified in another document or mechanism). Terminology is also flexible and substitutable by other phrases of similar connotations. In addition to these basic components, there may be additional materials such as preface, table of contents, list of tables and figures, executive summary, introduction, drafting procedure and organization, appendices, and so on.

(i) *Vision*—a master plan must clarify the purpose of industrial promotion. This includes why a particular industry is important in national development, what role it should play in stimulating other sectors, what positioning it should take in the global, regional, and national economies, and so on. If these purposes are already presented in other documents and widely shared among stakeholders (such as Agricultural Development Led Industrialization (ADLI) and the Industrial Development Strategy (IDS) in the case of Ethiopia), they can be mentioned only briefly without spilling much ink. On the other hand, if these are not yet sufficiently expressed, the master plan should clearly and concisely state the importance of the sector in question. This section should be no more than a few pages. Vision is sometimes stated in a layered structure consisting of vision, missions, and objectives. This is acceptable but not obligatory.

(ii) *Targets*—long- and medium-term targets, quantitative or qualitative, should be presented with a clear time frame, which should normally extend over a few to several years.[8] These targets should be ambitious but realistic. Numerical targets should be higher than simple extrapolation of the present course but also reachable with serious exertion of cooperative efforts by both government and businesses. The appropriate number and levels of these targets, including how many numerical targets should be set with how much detail, depend critically on the characteristics of the sector in question as well as the capability of the government and the private sector of that country. For this reason, there is no fixed formula applicable to all master plans for all countries. Generally speaking, there should be fewer (numerical) targets if the industry is not capital-intensive, markets and prices are unpredictable, the industry produces final consumer goods, the domestic private sector is mature, policy capability is weak, or the private sector does not trust the government. Before setting any targets, policy makers should have a thorough discussion with all stakeholders, including businesses and experts, for the proper configuration of such targets.

(iii) *Situation analysis*—the master plan must analyze the current status, potentials, and obstacles of the domestic industry in question. Data should be presented in tables and graphics, and the results of surveys and benchmarking should be reported (if available and relevant). Information should not be thrown in randomly but must be inserted with a clear purpose of making certain points. Routinely reviewed issues include the past performance of output, capacity, demand, export and import, and localization; product mix and producer profiles; regional distribution of production; labor quality and market; productivity and competitiveness; demand forecasts; and global, regional or domestic market trends that may impinge on the development of the industry. The appropriate selection of these analyses depends on the degree of understanding and consensus among stakeholders. If businesses, policy makers and experts generally agree on the current position of the domestic industry, situation analysis can be brief or even skipped. If, on the other hand, policy formulation is in an early stage and stakeholders do not yet share basic information, situation analysis becomes an integral part of the master plan.

(iv) *Policy issues*—after the industry situation is reviewed comprehensively in (iii), specific aspects that need to be fortified by policy to realize vision (i) and targets (ii) above must be identified and analyzed. The issues may call for removal of negatives or strengthening of positives. Obviously, which issues are most important cannot be prejudged because circumstances differ from one industry to another and from one country to another. Here, some of the common focal issues are listed by way of examples: skills and technology, cost

[8] Targets are also called goals, objectives, strategies, action plans (different from "action plans" in (v) below), and so forth. We regard all of these as "targets" as long as they set some qualitative or quantitative aims to be achieved.

reduction, quality improvement, product design and development, input procurement (localization and supplier policy), marketing, export promotion, infrastructure, financing, labor supply and workers, and so on. The most relevant topics for the industry in question should be identified and agreed among stakeholders, and studies should be conducted for each of them. It is important to work on prioritized issues only rather than cover all issues broadly and superficially. Issues raised here should be given concrete solutions in the following action plan section.

(v) *Action plan or action mechanism*—an action plan matrix or an action mechanism is essential for ensuring implementation. An action plan matrix is a large table that translates analyses and proposals conducted in previous chapters into concrete actions. It may be included in the master plan text or prepared in a separate document. Either way, it is crucial that its progress is monitored and reported to the government at regular intervals and any problems are attended to as they arise. The action plan matrix typically contains the following cells: actions, sub-actions, deadlines, expected output, performance criteria (success indicators), main responsible organizations, and other cooperative organizations. One sample format from Zambia is presented in Table 4-2. The implementation procedure, such as who will report what to whom by when, must also be specified alongside the action plan matrix.

Table 4-2. Zambia: Action Plan Matrix Format for the Triangle of Hope Project (Example)

Recommendation (action)	**Activities** (sub-action)	**Status**	**Expected output**	**Status**	**Activity period**	**Responsibility**	**Monitoring indicator**
Promote investment in cotton production by allocating land to appropriate producers	1. Identify land to be held in MACO trust	Little progress	Land for cotton production identified and secured	Not yet started	Jun. 2007	MACO (main), MoL (sub)	Monthly report
	2. Write to MoL for title deed	Not yet started					
	3. Develop adm mechanism for farm blocks	Done					

Note: Extracted and edited by the author. The Triangle of Hope Project aims at improving investment climate and establishment of an industrial zone.

Alternatively, an action mechanism, such as a high-level monthly committee chaired by a top leader or minister, or a well-focused budgeting and project approval process coordinated by an effective hub organization, can be adopted. Compared with the action plan matrix approach which stipulates all actions in advance, these process-oriented approaches are more flexible in coping with shifting circumstances. However, their success requires strong and effective guidance by the leader or the designated hub organization. In cases where political and administrative support for policy execution is weak, the action plan matrix approach may be preferable.

An industrial master plan must be implemented and supported by all stakeholders. A policy document, however excellently written, is just paper if it is not implementable. As we close this section, a few general features that must be satisfied throughout chapters can be reiterated. These can be attained more easily if proper policy procedure and organization discussed in the previous sections are already in place.

First, relevance and conciseness should be the criteria for including any information in policy documents. All text and data should support the main arguments and proposals of the master plan. Statistics that add little informational value, abstract words with no concrete implication such as "improve," "strengthen," and "level up," and general statements applicable to any industry in any country should be removed as much as possible. If all chapters are logically connected, it is possible to summarize relations among key targets, strategies, and actions in one diagram or table—as done in Thailand's supporting industry master plan in 1995 and automotive industry master plan 2007-2011.

Second, flexibility and adaptability must be ensured across countries, sectors and time. Since all industries are different and countries face different challenges, cookie-cutter molds cannot be applied to the making of master plans. Even for the same industry in the same country, shifting circumstances will call for policy revisions over time. In particular, the relative scope of government intervention must be set properly. The optimal borderline between state and market must continue to be re-drawn for each industrial master plan. Industry's characteristics such as capital intensity, gestation period, product type, and market volatility should influence the appropriate weight of state intervention. In addition, the maturity and dynamism of the private sector and government's policy capability should also be taken into account. Creativity is needed to fit policy documents to the changing reality of the industry in question.

Third, proper balance between pre-determined actions and flexibility in implementation must be pursued. In general, the higher is policy capability, the more flexibility should be given to policy makers. In the early stages of policy learning, it is a good idea to regularly and strictly monitor the progress of each pre-agreed action. This will increase the percentage of actions implemented, but at the cost of agility as situations change. As implementation is generally assured and policy response to shocks is learned, rigid policy matrices should give way to the improvise-as-you-go approach. For this reason, low-income countries usually spell out proposed actions in large tables while advanced countries prefer to state strategies generally or even do away with master plans completely, and leave annual project formulation, budgeting and institutional revisions to a competent organization in charge.

Mr. Vallop Tiasiri, President of the Thailand Automotive Institute which drafts the automotive master plan, prefers the process-oriented approach in ensuring implementation. Although the first automotive

master plan of Thailand (2002–2006) had a large action plan matrix, the second automotive master plan (2007–2011) has only a small action summary table and relies heavily on ongoing project-based implementation toward agreed goals. If in any given year greater budgetary resources and more projects are available, policy implementation is accelerated and vice versa. In the case of the Thai automotive industry, strong leadership exercised by Mr. Vallop and his institute, and deep trust and information sharing among industry, government and donors, enable such an approach.[9]

4-6. Suggestions for Ethiopia

In the course of the Ethiopia-Japan Industrial Policy Dialogue conducted quarterly since June 2009, the Japanese side has identified the following three methodological problems which are mutually related. They are problems common to many of the industry-related issues in Ethiopia that the Japan International Cooperation Agency (JICA) and Japanese experts have observed or assisted with, including the quick survey of the basic metal and engineering sector, planning for *kaizen* institutionalization, revision of the micro and small enterprise (MSE) development strategy, and preparation for the industrial cluster strategy.

4-6-1. Quality over speed in policy making

In Ethiopia, priority policies are often formulated in great haste at the cost of quality and implementability. We understand that there is an urgent need to industrialize Ethiopia during the Growth and Transformation Plan (GTP) period, and the top leader is monitoring the progress of priority strategies. However, Ethiopia is trying to achieve great reforms in its mindset and economic structure at much faster speed than other, more advanced economies—Singapore, Korea, Malaysia, Thailand, and so on—which usually spend about one year to revise an existing industrial strategy and two to three years to draft a new one. A Japanese proverb says, “When in a hurry, take a roundabout way.” It is better to tread a steady path with sufficient preparation instead of taking shortcuts which often delays final achievement.

Quality must be the main concern over speed in the formulation of priority industrial strategies. New policy must be drafted in proper steps, as shown in Figure 4-1 above, over a few years as in most other countries. The prime minister’s vision, however clear and appropriate, cannot be put directly into the words and numbers of master plans and action plans without the intervening process of consensus building among all government and non-government stakeholders. This “missing middle” process must be consciously created by MOI (or any other lead ministry of any priority issue). Drafting work may be done internally or subcontracted to external consultants or academics but only after main

[9] Interview with Mr. Vallop, November 5, 2009.

policy contents and document structure have been agreed.

4-6-2. Establishment of inter-ministerial cooperation mechanisms

Many of the industrial challenges, including *kaizen*, MSEs, and industrial clusters, are multi-sectoral issues. The lead ministry should properly be the MOI, but MOI alone cannot design and implement comprehensive measures covering trade, investment, technology, quality and safety standards, agro inputs, marketing, education and training, labor, environment, logistics and connectivity, regional development, ODA, and so forth. MOE, MOUDC, MOFED, MOARD, MOST, etc. must also be brought in. However, a lead ministry cannot direct or intervene in other ministries horizontally. For multi-sectoral issues, a supervisory mechanism above all ministries must be created for facilitating inter-ministerial cooperation and solving any problems that may arise.

In Ethiopia, one option for this purpose is to establish a national council headed by the Prime Minister which supervises and coordinates several key industrial strategies as shown in Figure 4-12. Under the strong leadership and vision of the prime minister, policy planning should be supervised by the National Competitiveness Council (the precise name does not matter) supported by issue- and sector-based working groups. The Council and each of the working groups must have a responsible ministry which will serve as the secretariat. Members of the Council should include heads of concerned ministries and agencies, business leaders and associations, and academics and experts. Ministries and agencies participate in this mechanism in two functions: participation in planning and as implementing bodies. Inter-ministerial issues and conflicts will be solved at the level of the Council with the ultimate decision resting with the prime minister.[10] Five working groups shown in Figure 4-12 are for illustrations only. The Ethiopian government should select most appropriate working groups. However, the total number of such issue- or sector-specific working groups should not greatly exceed four or five.

[10] A similar idea of the National Competitiveness Council is proposed for Vietnam by Professor Michael Porter of Harvard University in the November 2010 launching seminar of *Vietnam Competitiveness Report 2010* published by the Central Institute for Economic Management of Vietnam and Lee Kuan Yew School of Public Policy of Singapore (Ketels, et al. 2010).

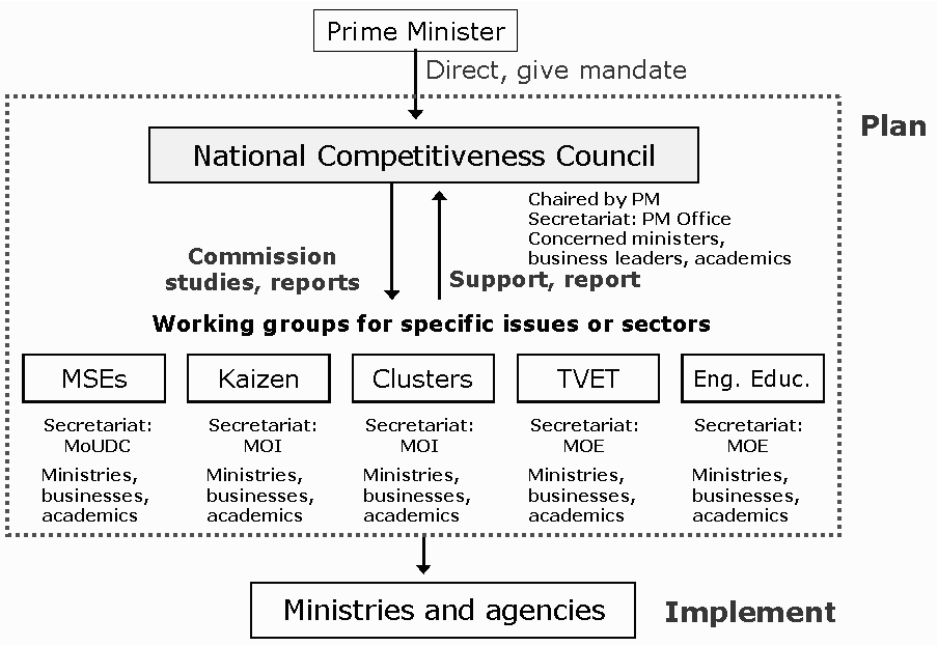


Figure 4-12. Ethiopia: A Suggested National Council Approach

Ethiopia already has the Export Steering Committee presided by the prime minister. However, as discussed earlier (footnote 5), this Committee is different from and smaller in scope than the proposed Council as it is an implementing mechanism mainly for export promotion without policy making authority such as consensus building and master plan drafting. One option is to upgrade and expand the scope of the Export Steering Committee to function as the National Competitive Council as described above with the designation of new secretariats, lead ministries and working groups.

4-6-3. Ownership and speed of kaizen institutionalization

On the issue of the proposed institutionalization of kaizen and establishment of the Ethiopian Kaizen Institute (EKI), common understanding on who will take the responsibility for the entire process and what must be done now remains somewhat unclear.[11] Details of the roadmap will be designed by the Kaizen Unit under MOI beginning in 2011. But it should be agreed clearly from the outset that policy substance is to be decided and owned by the Ethiopian side with foreign experts only filling information and knowledge gaps from the sideline. In some workshops, we have witnessed the situation where the Ethiopian side asks for concrete implementable strategies and action plans from foreign experts. But these must be prepared by MOI, and the very process of drafting them will constitute policy learning by which policy skills are internalized.

[11] This statement is based on the situation as of January 2011. Subsequently, the basic modality of EKI was discussed and agreed between Ethiopia and Japan, and JICA is assisting the design of EKI to be followed up by further assistance for kaizen institutionalization.

The roadmap drafting for kaizen institutionalization should not be rushed. As argued above, a good roadmap cannot be created within months for such important issues as national movement for kaizen. This is especially true for Ethiopia, a country that only recently began to systematically learn industrial policy making. Even in Singapore, it took a few decades for its Productivity Movement to produce clear results.[12] The Productivity Unit was established within the Economic Development Board in 1964, which was upgraded to the National Productivity Center in 1967 and the National Productivity Board in 1972. The JICA-supported Productivity Development Project was conducted from 1983 to 1990 in steps with the awareness stage (1981-85), the action stage (1986-88), and the follow-up stage (1989-). Only in the 1990s, Singapore felt confident enough to delegate remaining tasks to the private sector and initiate international cooperation programs to help other countries in productivity enhancement.

Ethiopia's current effort at kaizen, which started in July 2009 when Prime Minister Meles asked for Japanese cooperation, is in its early stage and on track. In less than two years, a number of policy discussions and dissemination seminars have been held, the Pilot Project supported by JICA is in place, the outcome of its first batch has been reviewed, reports are being drafted, and standardization tools such as manuals and videos are being prepared. JICA will dispatch another expert for designing EKI in early 2011, who will work with the Kaizen Unit to initiate a roadmap drafting for kaizen institutionalization. This is a relatively fast progress even by East Asian standards and we feel that the groundwork for kaizen institutionalization has been laid.

When a roadmap for kaizen institutionalization is agreed and when an inter-ministerial coordination mechanism, as proposed above or otherwise, is established, MOI as the lead ministry can—and should—mobilize active participation of all related ministries and agencies toward the ultimate goal of kaizen institutionalization. But this will take some time to materialize. In the mean time, initiating big actions on kaizen before such a roadmap is agreed runs the risk of being ineffective in the long run.

[12] Details of Singapore's Productivity Movement were reported by Professor Daniel Kitaw of Addis Ababa University and Professor Izumi Ohno of GRIPS in the Sixth High Level Forum of Ethiopia-Japan Industrial Policy Dialogue held in Addis Ababa on October 7, 2010.

Chapter 5
Democratic Developmentalism and Agricultural Development Led Industrialization*

This chapter reviews the two guiding principles of Democratic Developmentalism (DD) and Agricultural Development Led Industrialization (ADLI) which Ethiopia, one of the poorest countries in Africa, has embraced to advance its development under strong state leadership. DD is a political regime conceived recently in Ethiopia to execute development policies. Meanwhile, ADLI defines the policy orientation which was formulated in the early 1990s and subsequently elaborated in stages and put into serious implementation from the early 2000s. DD and ADLI constitute a complementary set of governing principles that inform the politics and economic development of Ethiopia.[1]

Both principles are in the early stages of implementation, and it is therefore too early for comprehensive evaluation. Nevertheless, they contain many points of interest for latecomer countries trying to establish a development-oriented regime in the international environment of the 21st century.

5-1. Steps toward a developmental state

5-1-1. Initial formulation

The Ethiopian attempt to build a developmental state in the current form dates back to the early 1990s when an interim regime of the Ethiopian People's Revolutionary Democratic Front (EPRDF) was established by ousting the previous socialist dictatorship by military force. The EPRDF was an association of ethnic political groups led by the Tigray People's Liberation Front (TPLF), which spearheaded the anti-government fight from 1975 onward (Ishihara, 2001). With the coming of the Interim Government in July 1991, Ethiopia abandoned economic planning and adopted a market-oriented economic system. The national economy at that time was on the verge of collapse. The radical shift in policy orientation was necessary because of the failure of the previous socialist government to realize economic growth and improve living standards; the need to secure finance and

* This chapter was prepared by the GRIPS Development Forum (GDF) for the first round of policy dialogue between Ethiopia and Japan in June 2009, and was later revised in response to information and comments received from the participants of the policy dialogue, especially Prime Minister Meles Zenawi. We would like to thank them for their valuable inputs. The views expressed in this chapter belong solely to the individual researchers of the GDF and neither to the Ethiopian nor the Japanese government.

[1] The basic literature on Ethiopia's DD is a series of statements and unpublished documents by Prime Minister Meles Zenawi from around 2006. Meanwhile, general research on DD, not confined to the Ethiopian context, is found in Edigheji (2005) and Robinson and White (1998). For ADLI, the key literature includes the internal documents of the Ethiopian government discussed in the text: *An Economic Development Strategy for Ethiopia* (1994), *Rural Development Policies, Strategies and Instruments of the Government of the FDRE* (2001), *Ethiopian Industrial Development Strategy* (2002), and *A Plan for Accelerated and Sustained Development to End Poverty (PASDEP) 2005/06-2009/10* (MOFED of Ethiopia, 2005).

cooperation from donors and international financial institutions; and pressing economic issues in transition from civil war to peace. This policy shift opened the door for the private sector to play an important role as opposed to the previous hostile environment that kept the private sector and market forces at bay and in a very rudimentary state.

During the transition period from 1991 to 1995, important policies were adopted and incorporated into key policy documents. The policy thrust of the Interim Government was proclaimed in *Economic Policy for the Transitional Period* in 1992, which contained a shift toward market orientation, removal of most restrictions on private sector activities, and liberalization and reforms in sectoral, investment, and public enterprise laws. Meanwhile, the Interim Government retained some features of the previous regime such as the state ownership of land and development centered on agriculture and rural areas. The idea of ADLI took concrete shape as an overarching economic strategy between 1992 and 1994, and *An Economic Development Strategy for Ethiopia* in February 1994 highlighted the concept of ADLI to define its strategic direction. On the political front, the Charter of the Interim Government in July 1991 upheld peace and democracy as guiding principles and introduced federalism based on ethnic autonomy. The Communist Military Junta (Derg) of the previous regime was replaced by a multi-party political system. These changes were incorporated in the new constitution, which established the Federal Democratic Republic of Ethiopia in August 1995. Additionally, the first phase of the structural adjustment program of the international financial institutions was also put in place during the transition period.

The main motivation behind ADLI has been the recognition that Ethiopia is an agrarian society in which the bulk of the population (84% in the 2007 census) resides in rural areas earning a livelihood from land. Agriculture has long dominated the economy in terms of output, employment, and export earnings. The government emphasizes that economic development and structural transformation should be initiated through robust agricultural growth, and that peasant farmers and pastoralists should be the main agents of agricultural transformation and economic growth. It is argued that labor and land are the main—and abundant—factors of production in Ethiopia and that their effective use should generate rapid and sustainable development. These arguments were clearly stated in *An Economic Development Strategy for Ethiopia* of 1994, mentioned above.

Initially, the ADLI strategy targeted smallholder farms, especially crop producers, so as to achieve rapid growth in agricultural production, raise income for rural households, attain national food self-sufficiency, and produce surpluses which could be marketed to the urban or industrial sectors. More specifically, the government introduced measures to provide smallholder farmers with technology and better farming practices, improved seeds, fertilizers, irrigation, rural roads, and marketing services. A rise in agricultural output was expected to stimulate industrial production by providing food and industrial materials, thus establishing a link between the rural and urban sectors.

The industrial sector, in turn, could produce input to agriculture such as fertilizers and farming tools and equipment as well as consumer goods for rural households. Such dynamic linkage, which we will call *Core ADLI* (see below), was intended to ignite the first stage of industrialization until the economy moved into a higher level of development.

5-1-2. Implementation and early results

The early 2000s saw the initiation of serious implementation of ADLI as well as the creation of a political model that justified state-led development in the Ethiopian context.[2] These developments were made possible by the fact that the Ethiopian government was finally able to squarely tackle developmental problems around that time, thanks to the (provisional) solution of the conflict with Eritrea as well as the passage of more than ten years after the establishment of the new leadership.

Beginning in 1995, the concept of ADLI was incorporated in the first and the second national development plans, which were published only in Amharic. The following development plan, the *Sustainable Development and Poverty Reduction Program* (SDPRP) 2002/03–2004/05, which further concretized the ADLI strategy, was prepared in both Amharic and English and took the form of a poverty reduction strategy paper in order to inform and solicit the cooperation of the international community. SDPRP promoted agricultural development and poverty reduction in rural areas by: (i) strengthening agricultural extension services; (ii) training extension agents in technical and vocational education and training (TVET) and training farmers in Farmers Training Centers; (iii) water harvesting and irrigation; (iv) improved marketing opportunities; (v) restructuring peasant cooperatives; and (vi) supporting micro-finance institutions.

However, policymakers gradually came to realize the limitations of SDPRP during its early implementation. By the time the next national development plan, *A Plan for Accelerated and Sustained Development to End Poverty* (PASDEP) 2005/06–2009/10, was prepared, there was sufficient recognition of the problems associated with an agricultural development strategy exclusively targeted to smallholder agriculture in rural areas. The productivity of the agricultural sector did not show significant improvement, and output remained volatile due to heavy dependency on the amount and timing of rainfall. In the 2002/03 season, the output of the crop sub-sector contracted by 16.5% following a decline of 3.7% in 2001/02. It was only in 2003/04 that growth in the agricultural sector in general and the crop sub-sector in particular started to recover significantly. From a long-term perspective, however, the labor productivity of agriculture has been on a declining trend (World Bank,

[2] For the creation of a suitable political model, a series of statements and documents by Prime Minister Meles were noteworthy. Among these, particularly important were “Speech by HE Meles Zenawi” at the First Meeting of the Africa Task Force of the Initiative for Policy Dialogue organized by J. Stiglitz (Columbia University) at Manchester University in August 2006; and the Prime Minister’s preliminary draft on “African Development: Dead Ends and New Beginnings” in 2008.

2007). Although agriculture has shown strong performance in recent years thanks to favorable weather, this did not herald a significant structural change such as crop diversification or productivity improvement.

PASDEP 2005/06–2009/10 made important adjustments to SDPRP 2002/03–2004/05 by broadening the policy scope from smallholder agriculture to other sectors, especially the industry sector and the urban sector. In what may be called *Enhanced ADLI*, strong emphasis was placed on growth acceleration, which was to be attained through commercialization of agriculture and private sector development (PASDEP, Eng. p.46).

In the first three years of the PASDEP implementation period of 2005/06–2009/10, good performance was recorded in agricultural and industrial production as well as export. Subsequently, however, the Ethiopian economy experienced a slowdown accompanied by inflation, balance-of-payments pressure, and a severe shortage of foreign exchange. Several causes are cited for this boom-and-bust cycle such as expansionary fiscal and monetary policies, an excessive inflow of foreign funds (including aid) relative to economic size, unfavorable weather, speculation and hoarding, and international events such as commodity inflation and the global financial crisis.

Performance of real sectors, such as agriculture and industry, is dependent on a number of factors including long-term trends in productivity and economic structure as well as short-term and largely external shocks in international economy and politics. The three-year boom starting around 2005 and the less spectacular results in the later years seem to have been affected more by short-term events rather than long-term trends produced by policy effort and private dynamism (chapter 8). Signs of significant structural change are not yet visible. In recent years the industry's share of GDP has hovered around 13–14% and Ethiopian export continues to be dominated by unprocessed commodities (Table 5-1). Although leather products and cut flowers have shown remarkable export growth, they still occupy a small part of total export without a notable breakthrough in competitiveness or productivity (Table 5-2).

Table 5-1. Basic Data

	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Real GDP growth (%)	5.2	6.1	8.3	1.5	-2.2	13.6	11.8	10.8	11.1	11.3
Nominal GDP (million Birr)	58,789	66,648	68,027	66,557	73,432	86,661	106,473	131,641	171,834	245,585
Nominal GDP (million USD)	7,828	8,188	9,167	7,794	8,559	10,042	12,306	15,164	19,539	27,939
Per capita GDP (USD)	129	131	127	118	126	143	171	205	257	357
Sectoral share of GDP (%) 1/										
Agriculture	51.2	49.8	50.9	49.1	44.9	47.0	47.4	47.1	46.3	44.6
Industry	12.4	12.4	12.1	12.9	14.0	14.0	13.6	13.4	13.3	13.1
Services	37.2	38.7	38.0	38.6	41.7	39.7	39.7	40.4	41.4	43.4
External relations (% of GDP)										
Export	11.6	12.0	12.0	12.6	13.3	14.9	15.1	13.8	12.7	11.8
Import	24.0	23.9	23.7	26.6	27.4	31.6	35.5	36.5	32.1	26.9
Trade balance (export - import)	-12.4	-11.9	-11.7	-14.0	-14.1	-16.7	-20.4	-22.7	-19.4	-15.1
Total trade (export + import)	35.6	35.9	35.7	39.2	40.7	46.5	50.6	50.3	44.8	38.7
FDI (approval, million Birr)	1,080	1,627	2,923	1,474	3,369	7,205	15,405	19,980	46,949	92,249
(approval, % of GDP)	1.8	2.4	4.3	2.2	4.6	8.3	14.5	15.2	27.3	37.6
Population (million)	60.8	62.9	64.4	66.3	68.2	70.1	72.1	74.1	76.1	78.2
Population in rural area (%)	85.5	85.3	85.1	84.9	84.7	84.4	84.2	84.0	83.8	82.9
Population in poverty (%)	-	41.9	-	-	-	-	38.7	-	-	-
Birr/USD (annual average)	7.51	8.14	8.33	8.54	8.58	8.63	8.65	8.68	8.79	8.79

Sources: Ministry of Finance and Economic Development, National Bank of Ethiopia, and Ethiopian Investment Agency.
1/ Numbers do not add up to 100% due to estimate errors of intermediary margins of financial institutions (service sector).

Table 5-2. Export Performance of Targeted Industrial Products

(In million USD)

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Total export	597	819	1008	1185	1481	1450
Leather and leather products	43	67	75	89	101	76
Semi-finished leather	42	56	58	49	67	…
Finished leather	–	3	8	27	12	…
Leather shoes	0.8	0.8	2	6	10	…
Agro products	20	34	36	43	52	48
Textile and garment	9	7	11	13	15	14
Cut flowers	12	21	63	111	130	…
(Memorandum items)						
Sum of above four (% of total export)	14.1%	15.8%	18.4%	21.6%	20.1%	…
Sum of above four (% of GDP)	0.8%	1.0%	1.2%	1.3%	1.1%	…

Source: Ministry of Trade and Industry.

5-2. Democratic Developmentalism

5-2-1. Democracy in a poor country

By adopting DD and ADLI, Ethiopia intends to radically transform the state management paradigm, politically and economically, from the system in which *rent seeking* is the dominant behavioral pattern to the system in which *value creation* is central. This reflects Ethiopian leaders' deep disappointment with the previous ruling paradigms: the paradigm of a predatory state, which was the root cause of rent seeking in Africa, as well as the neo-liberal paradigm that was introduced from outside in the 1980s and 90s with the purpose of eradicating such rent seeking but, according to Ethiopian leaders, failed miserably. Based on the rejection of both paradigms, an alternative development paradigm is proposed. The remainder of this chapter will describe and assess DD and ADLI as the models of political regime

and policy principle for development. Our intention is not to offer a comprehensive review of the current developmental situation of Ethiopia, of which DD and ADLI constitute only one, albeit very important, component.[3] It should also be noted that DD and ADLI go beyond theory or thought experiments to serve as pragmatic and action-oriented principles for establishing legitimacy and guiding policy formulation and implementation of the Ethiopian government. In particular, ADLI provides a set of ideas that govern concrete policies such as five-year development plans and industrial master plans as well as Ethiopia's relationship with donors and foreign businesses.

DD can be defined as a political regime in which a developmental party remains in power for a long time by consecutively winning multi-party elections and under which policies that punish rent seeking and encourage productive investment are implemented with strong state guidance. This should be construed as a model which Ethiopia is trying to attain rather than an already-established and well-functioning political regime.

The transformation of development strategy must begin with politics because, in the recognition of Ethiopian leaders, the developmental failure of Africa comes not only from the technical shortcomings of economic policy but also, more fundamentally, from political factors such as the lack of leaders, political will, and a regime that can resist private profiteering and promote national development. For this reason, a political regime consistent with national development must be installed before the formulation of concrete policy measures. The developmental state must prepare conditions for mobilizing available resources to create institutions, policies, and incentive systems to stimulate domestic value creation. Moreover, this endeavor must be undertaken under the rules of democracy rather than dictatorship.

The DD model aims to build a political regime unique to Ethiopia. DD is different from East Asia's Authoritarian Developmentalism (AD) which postponed democracy for the sake of development (section 5-2-4) or the Western style "good governance" that requires an early adoption of advanced governing principles in latecomer countries. The kind of democracy that can be adopted in a poor country is not an ideal type equipped with full conditions and features. Democracy is not an all-or-nothing choice; it comes with variations that reflect the history and structure of each society. The development of democracy must be supported by the creation of appropriate mindsets and institutions, which take time to be installed, just as a market economy must be supported by an array of suitable mindsets and institutions. In this sense, DD is a variation of democracy which is realistic, manageable, and consistent with the developmental goals of a poor country that faces many constraints and problems. The core element of this democracy is the election-based transition mechanism with the

[3] To review the political and economic situations of Ethiopia more comprehensively, the analytical scope should be enlarged to include the concept of Revolutionary Democracy, ethnic balance, federalism, opposition parties and anti-government groups, NGOs and CSOs, the Diaspora, foreign relations, international organizations, and donors (including emerging donors such as China, India, and Turkey).

existence of opposition parties. But even this limited aspect of democracy is subject to many challenges which prevent its smooth operation (section 5-2-2).

Why should a country in an early stage of development adopt democracy instead of authoritarianism? One reason is the inherent and universal values of democracy itself such as freedom, human rights, empowerment, and participation. Another reason, from the perspective of the ruling authority, would be to use democratic procedure to secure legitimacy, maintain national unity, and gain popular support for developmental policies. Additionally, it must be noted that no country at present, regardless of its development stage, can be admitted as a valid member of the international community and receive aid and cooperation unless it embraces a democratic form of government. This is an international environment sharply different from the one which, for instance, Taiwan or Korea faced during the Cold War era.

5-2-2. Instability of developing country politics

In developing countries, politics is often characterized by radicalism and instability even if democracy is formally in place. Based on extensive qualitative research, Prof. Paul Collier of Oxford University concludes that democracy has not yet produced accountable and legitimate governments and has rather increased political violence in many developing countries, especially in the societies of the "Bottom Billion" (Collier, 2009). This occurs because governing rules are yet to be institutionalized and authority has not been firmly established and accepted. If there is no consensus regarding how democratic procedure should be applied in practice, the incumbent government can exercise much discretion in such matters as election, human rights, budgetary allocation, and relationship with the parliament. Equally, opposition groups can easily criticize and challenge any action by the government. Such a confrontational situation is fairly common in developing countries.

On the basis of extensive qualitative research, Paul Collier, Professor at the Oxford University and the author of *The Bottom Billion,* argues that in many developing countries (especially in the societies of the bottom billion), democracy has not yet produced accountable and legitimate governments and has rather increased political violence.

As a result, politics becomes violent. This may partly reflect a serious schism in social structure associated with ethnicity, religion, region, income gaps, or urban-rural disparity. Nevertheless, political instability often goes far beyond what these social problems can explain. Potential areas of agreement are rejected, conflicts become entrenched, and policies swing from one extreme to the other. Vendetta politics is repeated as former leaders are prosecuted and their policies are reversed by incoming governments. Each time the government and those who oppose it exchange emotional volleys, radicalism is amplified.

Under such circumstances, elections may not go smoothly or peacefully. Those in power rarely intend to lose the next election and mobilize all political and economic means, many of which are not permitted in advanced democracies, to ensure a favorable outcome. Meanwhile, the announced victory of the ruling party, whether by a landslide or a slim margin, is routinely challenged by the opposition. The election itself becomes a complicated political game, and victory in it can hardly confer full legitimacy. If the angered opposition resorts to violence and the government responds in kind, an election may even further destabilize politics. In Ethiopia, the events following the 2005 national election showed that the country was not free from the risks associated with developing country politics. In the 2010 national election, however, the ruling party won a landslide victory and regained urban votes without major violence.

To reduce such instability, it is necessary to install a mechanism to find areas of possible agreement in concrete policy issues between the government and the (moderate) opposition. Even if the two parties totally disagree on some issues, there may be other issues on which they can come to partial or full agreement. In Ethiopia, meaningful discussion may be held on such topics as the upgrading of agricultural or industrial strategy, training of human resources, and macroeconomic analysis.[4] Establishment of a public-private forum to debate these issues would greatly reduce the emotional tension and policy gaps between the two parties, and may help to avoid extreme policy swings even when governments change. Such dialogue and policy stability are mutually reinforcing. The success of policy dialogue depends on the existence of constructive attitudes on both sides, but policy dialogue can also serve as the means to foster such attitudes.

Under DD, a legal procedure for political transition through election is installed, while the ruling party is often determined to stay in power for a long time. It may be argued that these requirements are in conflict with each other. If the possibility of power change is a real one, it is highly unthinkable that one party will consistently win elections for a number of decades. Every time a new government comes into power, previous policies will be cancelled or at least greatly modified, and long-term consistency of development policies will be lost. By contrast, if DD has a hidden mechanism which effectively prevents the opposition from winning, there is no real political competition and the opposition and anti-government groups will certainly cry foul. This is a real challenge that must be clearly recognized and eventually overcome for DD to work as an effective regime to accelerate national development. The existence of this challenge does not discredit the notion of DD but it requires the Ethiopian government to stay in power by successful execution of development policies successfully rather than through income re-distribution or political suppression.

[4] On the other hand, debate over land policy or liberalization of the financial and telecom sectors may be too difficult to launch between the government and the opposition in the present circumstances of Ethiopia.

EPRDF, the developmental party of Ethiopia, hopes to stay in power to implement development policies continuously and consistently. It wants to stay in power by persuading the people of the need to launch a new developmental paradigm and by achieving initial successes in its implementation. This is expected to foster a domestic political coalition supportive of developmentalism and to allow the government to execute more development policies. This virtuous circle will ensure victory in coming elections. In this scenario, the main political base of the ruling party is the smallholder farmers that account for 80% of the population (section 5-2-4). Small entrepreneurs in urban areas are also considered to be part of the support base although their number is not large at this moment. This is a political regime called "dominant party democracy" led by EPRDF or, alternatively, "dominant coalition democracy" if political coalition between the government and smallholder farmers is emphasized.

In a sense, the dominant party democracy aspired to by the Ethiopian government is akin to the Japanese political regime under the dominance of the Liberal Democratic Party (LDP) from 1955 to 2009. Equipped with highly developed democratic institutions and continuously winning elections, the LDP stayed in power alone or by forming coalitions with other parties for more than half a century (except for a short interruption). Its power base was also rural. However, Ethiopian DD has one crucial difference from the LDP regime in Japan: the LDP miserably failed to improve the productivity of agriculture and managed to stay in power by transferring income from industry to agriculture and from urban to rural residents through subsidies, protectionism, and allocation of public works. Japan, with high income and advanced industries, may have the luxury of pampering farmers but Ethiopia cannot follow such a model. The combined DD and ADLI will never succeed unless there is a significant breakthrough in agricultural productivity. This is a very important point to which we will return (section 5-2-4).

5-2-3. Government as an agent of systemic change

According to Comparative Institutional Analysis, which studies the diversity and dynamics of institution, it is not easy to transform a "system" (a collection of institutions) which has been installed and already solidified (Aoki, 1995a; Aoki, 2001). Different types of inertia work to defend the existing system such as *institutional complementarity* (mutual dependence of institutions in which removal of only one institution hardly changes the system), *strategic complementarity* (strong incentive for individuals to follow existing rules and play the existing game), and *path dependency* (difficulty of deviating from the system which was chosen first and subsequently solidified). At the same time, there are also patterns in which systemic transformation can occur even under such inertia (Figure 5-1).

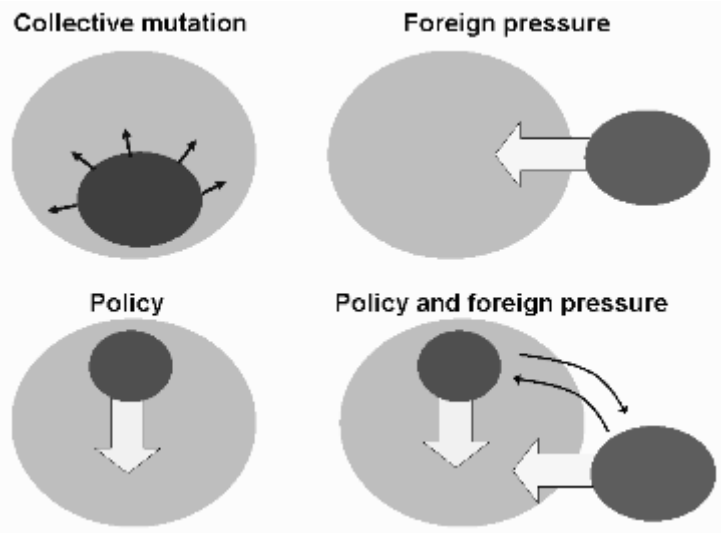


Figure 5-1. Patterns of Systemic Transformation

The first is collective mutation. This occurs when a sufficiently large number of people change their behavior spontaneously without external guidance or directives. In the context of developing countries, this may happen when a resistance movement arises against suppression or deprivation or, conversely, when a sustained rise in income and living standard changes the values and wants of the majority of the population. The second is policy launched by the government. The government is one of the insiders of a society but can become a dynamic actor (as *deus ex machina*, a god who appears out of context to solve confusion in an ancient Greek play) to force a change on other members of the society. The third is foreign pressure. For better or worse, foreigners and foreign organizations are not bound by domestic rules and can become an agent for systemic change in that society. Finally, there is a possibility of effective cooperation between the government and foreign pressure. This does not mean that the government and foreigners are always on good terms. But when the government as a leader initiates a clear direction for change and the foreigner as a follower supports it, the probability of systemic transformation will rise significantly.

Using this framework, what the Ethiopian government is trying to do can be interpreted as using policies as a primary driver to install developmentalism (i.e., to replace rent seeking with value creation) and additionally soliciting foreign investors, bilateral donors and international organizations to enhance this effort. This endeavor must achieve the two tasks of destroying selfish motives, patronage, zero-sum games, and dependency culture associated with the old system on the one hand, and building institutions, human resources, technology and incentive structure to support the new system on the other. Both will require enormous social energy to surmount political resistance.

The most critical element of state-led systemic transformation is *leadership*. This includes both the quality and capability of the top leader as well as the appropriateness of the visions and principles that

guide national transformation. The importance of leadership can hardly be overstated. Even in the high performing economies of East Asia, the value creation system was not in place when they entered the period of high growth. Before 1960, South Korea was a basket case with rampant corruption, administrative inefficiency, and high dependency on US aid for survival (World Bank, 1993). Similarly, in 1959, the World Bank report on Thailand lamented the absence of public investment management and the severe shortage of trained or experienced bureaucrats (World Bank, 1959). These situations were turned around by President Park Chung-hee (in power 1961–79) in South Korea and the governments of Prime Minister Sarit (in power 1958–63) and Prime Minister Prem (in power 1980–88) in Thailand. Similar systemic breaks occurred when strong and economically literate leaders emerged in Taiwan (President Chiang Kai-shek), Singapore (Prime Minister Lee Kuan Yew) and Malaysia (Prime Minister Dr. Mahathir).

The Ethiopian leaders explain the failure of the neo-liberal paradigm as follows. The neo-liberal paradigm failed to uproot the rent seeking system because it denied the role of government as a dynamic agent of systemic change. The naïve view of "market is good, government is bad," which preached a minimalist government, could not create an agent powerful enough to launch a systemic change in a latecomer developing country. The policy package consisting of liberalization, privatization, decentralization, and international integration generated a horde of new domestic and foreign rent seekers such as non governmental organizations (NGOs), voluntary organizations, mining companies, foreign firms, and ODA contractors and consultants who rallied for budgets and subsidies without producing a systemic change. The idea of "Trickle Up Democracy," which was intended to eradicate rent seekers by giving power to people and local communities, did not succeed in installing developmentalism in Africa.

Many studies confirm that economic liberalism does not necessarily generate development in low-income countries. Ishikawa (1990) presented evidence from China on the failure of liberalization policies to produce production incentives in an economy with underdeveloped markets; Nishimura (1994) and Aoki (1995b) showed that rapid privatization in Russia created new gigantic rents and their seekers; Khan (2008) argued that capability to direct rents to productive purposes such as investment and technology absorption, rather than to eliminate rents, was needed in a country that lacked market supporting institutions; and Ohno (2009) contended that Washington Consensus policies could take a country to middle income but climbing further would require a combination of more proactive policies and private dynamism.

In Ethiopia, a strong state is guiding the other members of society for development. A government led by a strong leader is giving incentives (carrots) and disincentives (sticks) to economic actors such as farmers, workers, merchants, entrepreneurs, and foreign investors to adopt behavioral patterns based on value creation rather than rent seeking. Donor assistance must also align closely with the

development strategy of the Ethiopian government in order to be accepted. Even with small farmers who are the main partners in political coalition, the government offers top-down directives and incentives for productivity improvement rather than responding to their voices in a bottom-up fashion. In this sense, the role of small farmers in political coalition remains a passive one.

The strategy of combining carrots and sticks is most clearly seen in the leather and leather product industry. The goal of this industry set by the Ethiopian government is to supply finished leather or finished leather products for export and domestic sales by acquiring management and technology capabilities to process what has hitherto been sold as raw or semi-finished leather. As sticks, a ban on raw material export and a high tax on semi-finished leather have been introduced. As carrots, a large number of supporting measures have been offered to the industry including (i) establishment of the Leather and Leather Product Technology Institute (LLPTI) to provide training, quality tests, and some production processes; (ii) donor assistance, foreign advisors, and twinning with a foreign institution for strengthening LLPTI; (iii) preference in finance and foreign currency allocation; (iv) business matching between domestic shoe producers and European firms; and (v) monthly government-business meetings to monitor the industry and solve its problems.

What will guarantee that DD will not repeat the same mistake as the neo-liberal paradigm—that it will not become a new playground for rent seekers? Experiences of other developing countries show that there is no magic formula to ensure that a strong state will generate long-term growth. On the contrary, it could easily fall pray to patronage and collusion among politicians, bureaucrats, and businesses. Although institutions and pressures for policing rent seekers should be built, this will take a long time in a country in the early stage of development. At present, Ethiopia is led by a strong and intelligent leader who is determined to avoid such political capture. This is a source of strength for the moment but may become a source of weakness when the time for power transition arrives.

5-2-4. Political and economic potential of small farmers

It is natural that a developmental party intending to win an election every five years would choose small farmers, which occupy 80% of the Ethiopian population, as its support base. In addition, small and medium size entrepreneurs in the urban areas are also counted as its future support base, although their number is still small.

Generally speaking, poor farmers are characterized by conservatism, low levels of education and knowledge, and submissiveness to authority. Although disgruntled farmers may resort to uprising and violence, it was rich farmers, village leaders, or landlords equipped with education, judgment, and material wealth who became constructive political partners in the early days of democracy in developing countries—as observed in Meiji Japan in the late 19th century. Even if small farmers are

elevated to the position of principal political partners, it is difficult to mobilize them on a national scale unless they are given orders from above—as seen in Mao Tse-tung's mass mobilization of Chinese peasants for the Great Leap Forward in the late 1950s. In the early years of development, small farmers are often passive followers rather than mature and independent partners of national politics. This is a point which is entirely different from the validity of autonomy, participation, empowerment, and other grass-roots activities in rural communities. The question therefore is what incentive small farmers have for accepting such a position.

The minimum condition for small farmers to accept the government's lead is the perception that the latter will not suppress them or drive them into despair. A better incentive is the receipt of official aid for the improvement of their livelihood such as famine relief, food aid, and education and health services. Better still, they will more willingly follow if the government provides productive assistance such as technology, fertilizer, seeds, irrigation, and finance. It will be ideal if farmers raise productivity and income thanks to such productive assistance and become commercial producers.

In Ethiopia, at least some of the above conditions are satisfied because a considerable number of rural assistance programs are already in place. A nationwide food aid program with a large amount of donor assistance has been established to improve food security. Expenditure on agriculture and rural development is relatively high in Ethiopia.[5] Productive support has also been consistently prioritized towards the agricultural sector in national development plans such as SDPRP 2002/03–2004/05 and PASDEP 2005/06–2009/10.

Besides these programs, agricultural extension services have been greatly strengthened in the last several years (Tables 5-3 and 5-4). Ethiopia has completed the process of assigning three agricultural extension workers in charge of agricultural technology, livestock management, and resource utilization respectively, and establishing a Farmers Training Center, in every village (*kebele*) of the country. Additionally, two female health workers are being stationed in every village. Nationwide extension services such as the ones Ethiopia has built are still rare in Africa. The next challenge for Ethiopia is to fully utilize this network to improve the agricultural productivity and livelihood of rural residents.

The most fundamental question is whether and how smallholder subsistence farmers, who are the dominant majority as well as the chosen coalition partner of the developmental state, can be commercialized and improve productivity and income. As noted above, political support of small farmers can be secured with a perception that the government is a positive—or at least not negative—factor in their livelihood. But the grand objective of DD and ADLI is to transform the

[5] According to the World Bank (2008) estimate, the ratio of agriculture-related expenditure to total government expenditure in Ethiopia is 6.7%, which is higher than the corresponding ratios in Mozambique (2.2%), Kenya (2.0%), Tanzania (2.1%), Vietnam (6.0%), Indonesia (0.2%), and Pakistan (1.2%).

national economic principle from a zero-sum game to a sustained increase of GDP. If the productivity

Table 5-3. Numbers of Farmers Training Centers and Agricultural Extension Workers

	Established or trained in each year						Cumulative as of Jan. 2010
	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	
Farmers Training Centers		1,500	2,200	2,000	1,782	・・・	9,265
Agricultural extension workers	9,368	13,899	13,383	15,095	9,404	636	61,785

Source: Agricultural Extension Department, Ministry of Agriculture and Rural Development.

Note: As of January 2010 the number of trained agricultural extension workers exceeded the official target of 60,000. However, the number of actually allocated extension workers was less than those trained (Table 2-4). The number of operational Farmers Training Centers as of January 2010 was 6,543.

Table 5-4. Numbers of Extension Workers and Service Delivery Stations (Allocated or Established)

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Agricultural extension workers		9,434	23,359	34,446	49,435	・・・
Health Centers	451	519	600	635	690	826
Health Posts	1,432	2,899	4,211	5,955	9,914	11,446
Health Workers			2,737	8,901	17,653	24,571
Primary schools		10,394	11,780	19,412	20,660	23,235
Primary school teachers		105,788	121,077	203,040	225,319	253,586

Sources: Education Management Information System; Health Management Information System; Ministry of Finance and Economic Development, *Annual Performance Review*, various issues; Ministry of Health, *Health Sector Development Plan-III Annual Performance Review*, June 2008; and Agricultural Extension Department, Ministry of Agriculture and Rural Development.

of agriculture does not improve, the state will eventually face fiscal crisis and aid dependency. If developmentalism results only in the buying of rural votes through redistribution of benefits, it must be considered a failure. What is needed is a detailed strategy and a realistic roadmap for commercialization of agriculture based on improved productivity. To meet this challenge, Ethiopia needs more selectivity and concreteness in its agricultural and rural development strategy.

In Central Highlands where the majority of the Ethiopians reside, small farmers are scattered across vast mountainous terrains with difficult road access. They live on what they produce with little external sale or purchase. The supply of electricity, drinking water, and hygiene is severely limited. Agriculture basically depends on the whims of rainfall. The use of fertilizer is inadequate, and the arable plot of each family is very small and frequently further subdivided under population pressure. Eastern Tigray, Eastern Amhara, and Eastern Oromia are particularly vulnerable to drought due to unstable rainfall and soil erosion. Land division has gone to extremes in some parts of Southern Region such as Gurage and Wolayita. Pastoralists lead nomadic lives in the sparsely populated dry areas in Eastern and Southeastern Ethiopia, especially Somali and Afar Regions. In recent years, the

Ethiopian government has made much progress in preparing necessary conditions for agricultural and rural development, including establishment of nationwide extension services mentioned above. Nonetheless, a productivity breakthrough from these unfavorable initial conditions is a task that requires long and concentrated effort.[6]

According to the sample surveys conducted by the Central Statistical Agency, agricultural production has shown an upward trend and land productivity of major crops is also rising (Tables 5-5 and 5-6). This seems inconsistent with the pessimism expressed in the foregoing paragraph, but there are a few catches. First, the periods covered in Tables 5-5 and 5-6 were marked by relatively good weather and an increase in fertilizer use, which cannot be sustained indefinitely in the future. Second, more seriously, Ethiopian agricultural data are unreliable and do not reflect real trends.[7] This is caused partly by inadequate statistical technique and shortage of personnel and partly by the incentive to overstate output relative to targets when local officials report the results. For this reason, it must be concluded that recent agricultural performance is unknown and no basic data on which policy discussion can proceed exists in Ethiopia.

Table 5-5. Agricultural Production

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Average growth per year
Cereals	90,062	100,308	116,242	128,798	137,170	144,964	10.0%
Edible oil	3,129	5,264	4,866	4,971	6,169	6,557	15.9%
Pulses	10,373	13,496	12,712	15,786	17,827	19,646	13.6%
Vegetables	3,879	4,320	4,502	3,451	4,720	5,989	9.1%
Root crops	16,055	16,152	13,375	14,095	15,309	12,136	−5.4%
Fruits	2,495	2,634	4,283	4,600	4,621	3,513	7.1%
Coffee	1,262	1,562	1,716	2,415	2,734	2,602	15.6%

Source: Ethiopia Central Statistical Agency, agricultural sample surveys.

Table 5-6. Land Productivity of Major Crops

(Quintal/ha)

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Barley	11.7	12.1	12.7	13.3	13.8	15.5
Maize	18.6	17.2	21.9	22.3	21.2	22.2
Teff	8.4	9.5	9.7	10.1	11.7	12.2
Wheat	14.7	15.6	15.2	16.7	16.3	17.5
Sesame	6.7	8.5	7.3	7.1	10.1	7.8
Broad beans	11.2	11.9	11.2	12.6	13.2	12.9

Source: Ethiopia Central Statistical Agency, agricultural sample surveys.

[6] After the severe drought of 2003/04, the Ethiopian government introduced the Productive Safety-net Program targeted to the most vulnerable areas and actively mobilized international aid amounting to about USD300 million annually. However, the number of farmers who have graduated from this program is limited. As of 2009, 7.57 million rural residents were in need of continued support from this program (World Bank, 2009).

[7] Dercon, et.al. (2009), as well as many donors, stress the need to check data reliability on agricultural production and land productivity.

The problem faced by small farmers is not only a supply-side problem of agricultural production but also a demand-side problem of finding markets. In addition, they face a quality-of-life problem that requires poverty reduction and empowerment. The policy package for small farmers must therefore have a broad perspective and pursue multiple objectives. In addition to the existing PASDEP and five-year agricultural development strategy containing a large list of supply-side targets and measures, proper re-organization of targets and measures in agricultural and rural strategy, including demand-side and livelihood issues, is in order.

On the demand side, the current strategy of commercializing smallholder agriculture targets export markets. For such products as coffee, leather products, and cut flowers, this seems a reasonable direction. However, marketing should be flexible enough to reflect different potentials of individual products and localities. For some agro products, penetrating a global (or even urban) market, which demands high quality and hygiene standards, stable supply in large quantity, and on-time delivery, may be too difficult initially. The policy menu should be broadened to include "closer" markets such as (i) expansion and diversification of agro and livestock products for nearby cities, towns, and villages; (ii) promotion of tourism; (iii) creation of local specialty products; (iv) the "one-village-one-product" approach; and (v) establishment of *michi-no-eki* (roadside stores to sell local products and serve local food). The newly created agricultural extension service network should be used fully to implement these options.

As for quality-of-life improvement, many programs are being carried out with government budget and donor support to realize the Millennium Development Goals (MDGs). However, the *rural life improvement movement,* which emphasizes improvement of concrete mundane activities at the grass-roots level and combines both top-down and bottom-up approaches, should also be considered. Mizuno (2008) warns that the mainstream strategy for rural development underestimates the importance of multi-faceted improvements of rural life aspects such as meals, clothing, housing, hygiene, and social relations. Rural development from a very low level must embrace production, marketing, and quality-of-life aspects simultaneously. Mizuno cites the experience of Japan immediately after WW2 as one of the most successful cases of a rural life improvement movement.[8] Similar movements have also been implemented in many other Asian countries including Korea, India, Indonesia, Thailand, and Vietnam with different scales and degrees of success (Cruz, 2002).

[8] Under the direction of the US occupation forces, the Japanese Ministry of Agriculture launched the "Life Improvement and Dissemination Movement" in 1948. Many local governments also introduced similar programs with great enthusiasm. This movement, though originally started with a top-down structure, encouraged grass-roots activities with strong participation at the village level. Life improvement dissemination staff consisting of rural women were organized. They took the lead in improving cooking, nutrition and meals; clothing, bedding and footwear; cleaning, washing, water carrying, and other domestic chores; child raising and training; wedding, funeral and other ceremonies; public morals; and elimination of superstition and feudal habits. Regular meetings were held with the participation of all village households where issues were debated and consensus was formed. Government officials and village staff jointly solved problems arising from complex social relations in rural communities such as the increase of absenteeism during planting and harvesting seasons, the feudal concept of family, and the lack of cooperation from husbands and mothers-in-law (Mizuno, 2008; Ikeno, 2008).

5-2-5. A comparison with East Asian Authoritarian Developmentalism (AD)

How does DD of Ethiopia compare with the AD which was popular in East Asia in the late 20th century? Let us first note that developmental regimes in East Asia have been quite diverse. The typical AD regimes were Taiwan and South Korea in the past. China after Deng Xiaoping, Singapore, and Malaysia can also be regarded as AD. On the other hand, Indonesia under Suharto and the Philippines under Marcos failed to solve structural problems in politics or economics (or both) to be counted as AD despite certain initial achievements in income and growth. Thailand, which has attained middle income despite frequent political and economic crises, is located between these two groups. Vietnam has sustained high growth under one-party rule since the early 1990s, but its policy formulation capability remains low. Besides these, East Asia also contains very poor countries such as Laos and Cambodia, and non-developmental dictatorships such as Myanmar and North Korea. Therefore, AD to be analyzed here for the purpose of comparison with DD is an ideal type which is most closely represented by Taiwan and South Korea before their transition to democracy.

With these caveats in mind, let us enumerate the outstanding features of East Asian AD: (i) emergence of the regime in response to a domestic or regional crisis (communist threat was the most common external crisis in East Asia); (ii) strong leadership exercised by one charismatic leader; (iii) an elite technocrat group carrying out the leader's vision; (iv) prioritization of developmental ideology (i.e., postponement of political reform); (v) legitimacy through economic performance rather than democratic procedure; (vi) continuation of the same regime for two to three decades and social transformation that it generates (Watanabe, 1995; Ohno and Sakurai, 1997; Banno and Ohno, 2010). The AD regime has the following sharp differences from the DD model which Ethiopia aspires to adopt (Figures 5-2 and 5-3).

First, East Asian AD is a proven model that has been adopted in many countries with remarkable achievements in income generation and structural transformation in at least some of them. In this sense, the validity of AD is indisputable under certain historical circumstances. By contrast, Ethiopian DD remains a plan to be fully implemented in the future. Its advocates ought to convince the skeptics of the feasibility of DD in the social context of latecomer developing countries in general and in Ethiopia in particular.

Second, East Asian developmental states from the outset formed political coalitions with domestic capitalists—large businesses, conglomerates, banks, and so on—who were the executers of industrialization while effectively refusing to adopt the multi-party system with free elections. By contrast, the DD model of Ethiopia adopts the latter as one of the key ingredients at the starting point. The legitimacy of AD depended solely on its economic performance whereas that of DD will depend on both economic performance and democratic procedure. This is a vital difference between the two.

Third, dynamic social transformation was observed in East Asian high performing economies. AD achieved economic results over time which transformed the social structure, mindsets, and demands of the people. This social change accompanied a rise of a middle mass who demanded democratization. Their increasing pressure eventually toppled the AD regime. This pattern has already run its course in Taiwan and South Korea while it is in progress in a number of other countries in East Asia. Watanabe (1995) calls this a "successful dissolution" of the authoritarian regime through the very success of its development. Meanwhile, what dynamic course the DD regime will trace if it is successfully implemented remains uncertain. It will probably take long for a strong middle class to emerge in Ethiopia. A government document states that Rural Democracy will eventually transform itself into Urban Democracy, but its concrete content or mechanism is unclear.

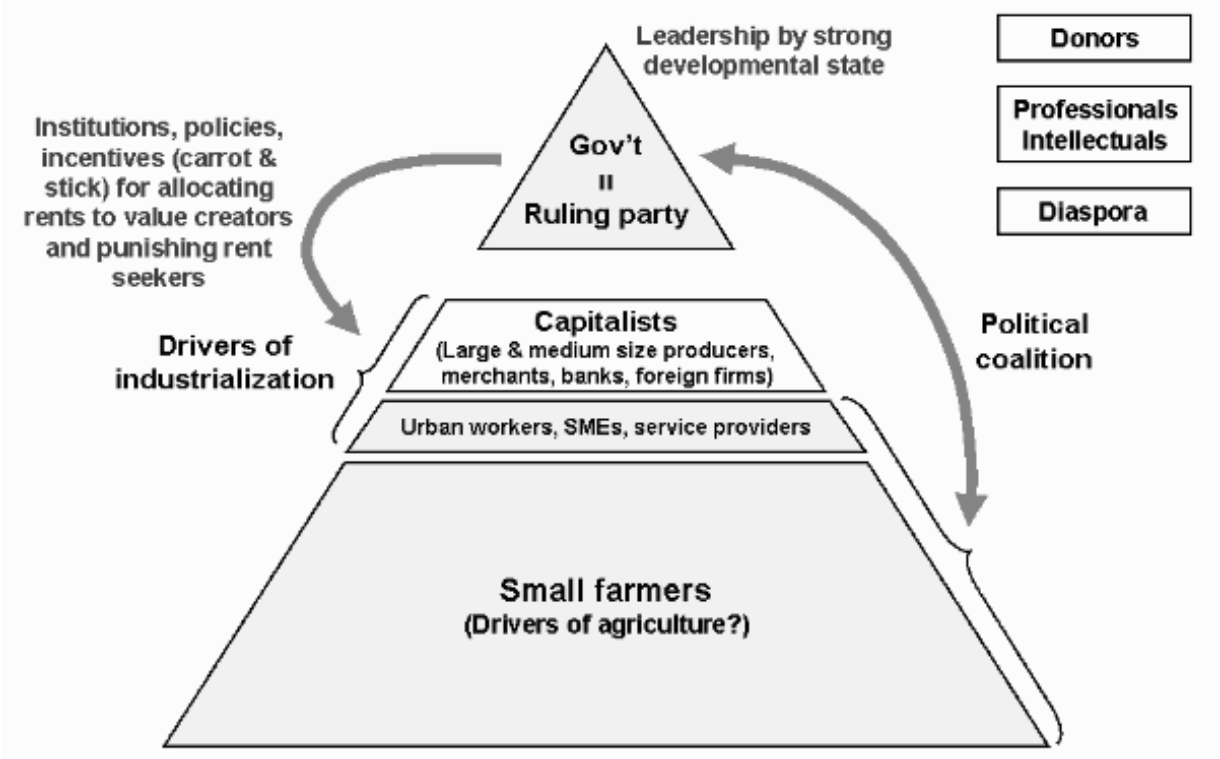


Figure 5-2. Democratic Developmentalism of Ethiopia

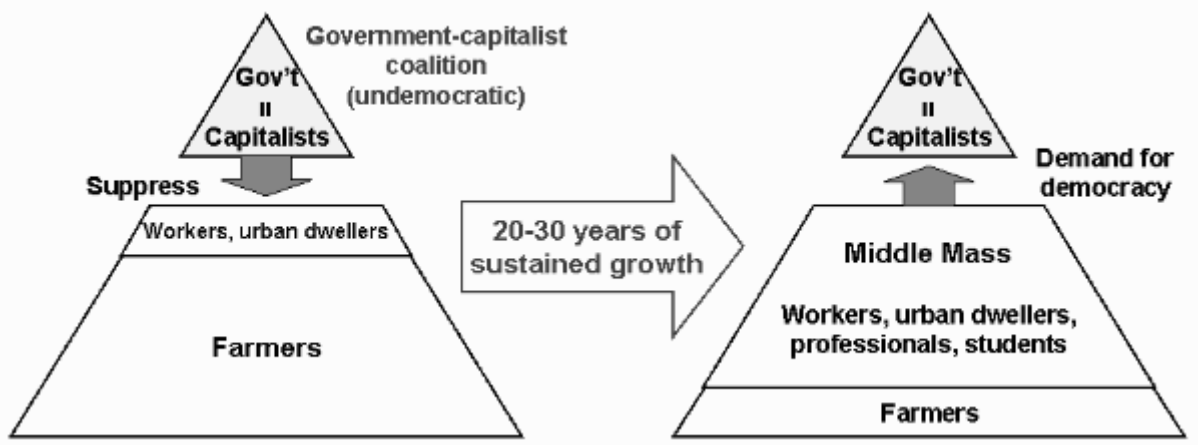


Figure 5-3. Dynamic Transition of East Asian Authoritarian Developmentalism

5-3. Agricultural Development Led Industrialization

5-3-1. Core ADLI

ADLI is defined as a development strategy which aims to achieve initial industrialization through robust agricultural growth and close linkage between domestic agriculture and domestic industry. This strategy was formulated in the early 1990s and has been implemented in stages, especially from the early 2000s, in Ethiopia. ADLI is considered to be an evolving strategy subject to pragmatic experimentation and adjustments rather than an immutable principle. The revisions made from SDPRP 2002/03–2004/05 to PASDEP 2005/06–2009/10 (section 5-1-2) as well as the currently proposed expansion of policy space, discussed below, reflect the evolving nature of ADLI that enables it to respond to changing circumstances, evaluation of past policies, and rising policy capability of the Ethiopian government.

An early exposition of ADLI was given in *An Economic Development Strategy for Ethiopia* in 1994 as follows.

> The long term objective of development in Ethiopia is structural transformation of the economy in which the relative weight of agriculture, industry and service changes significantly towards the latter two. Especially, the objective is to raise appreciably the share of the industrial sector in the economy both in output and employment. This structural transformation is envisaged to occur with a high growth of agriculture which is superseded by growth of industry and services.
>
> In essence the development strategy revolves around productivity improvement of smallholder agriculture and industrialization based on utilization of domestic raw materials with labor-intensive technology. The strategy is akin to what is known in economic literature as agricultural-development-led industrialization (ADLI), framed into the

> Ethiopian context. It visualizes export-led growth which feeds into an interdependent agricultural and industrial development. Exports, be it agricultural and mineral, initiates growth thereby creating space for a process of an interdependent agricultural and industrial development (or ADLI), which increasingly becomes a self-generating process of development. Here the strategy has two layers; an outer crust of export-led growth and an inner core of ADLI…
>
> The strategy of ADLI in Ethiopia focuses primarily on agricultural development. This is to be attained through improvement of productivity in smallholdings and expansion of large-scale farms, particularly in the lowlands. The contribution of agriculture to economic development is conceived in two ways. On one side, agriculture will supply commodities for exports, domestic food market and industrial output, and on the other side, it will expand the market for domestic manufacture. At present, the importance of agriculture lies as a source of supply rather than demand. As industrialization picks up pace, over the long term the significance of agriculture as a source of demand will also rise. (FDRE, 1994, pp.8–9)

If ADLI is interpreted narrowly and strictly as a strategy to achieve early industrialization through direct material interaction between domestic agriculture and domestic industry as the main engine of growth with exports providing initial markets (with the implication that agricultural or industrial development without such interaction receives less attention), the situation can be depicted as in Figure 5-4. Let us call this domestic input-output dependency *Core ADLI*. In this interdependence, highlighted industrial sectors are agro processing (including leather products), which uses domestic agricultural inputs, as well as sectors that produce goods for rural communities such as agricultural tools and machinery, chemical fertilizers and pesticides, construction materials, and basic consumer goods such as processed food and beverages, clothes, and simple household goods demanded by the rural population.

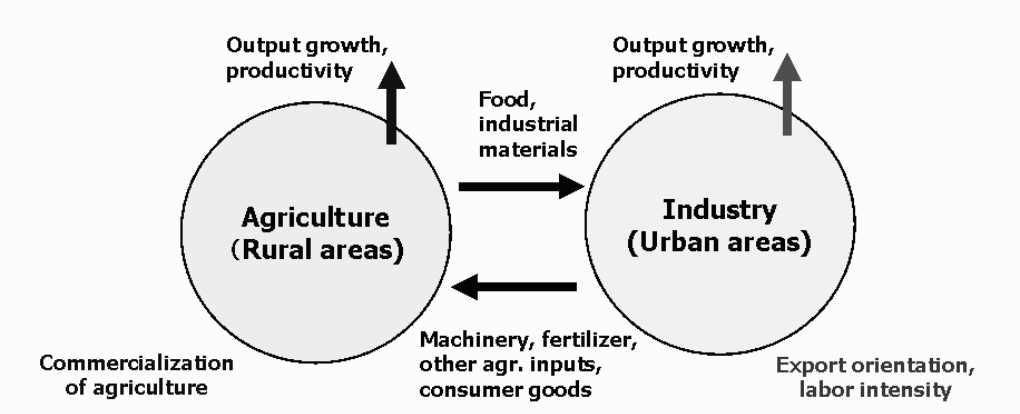


Figure 5-4. Linkages in Core ADLI

The *Industrial Development Strategy* (2002) additionally lists the following conditions under which industrialization must proceed: (i) the leading role of the private sector; (ii) parallel development of

agriculture and industry through mutual dependence (i.e., Core ADLI); (iii) export orientation; (iv) focus on labor-intensive industries; (v) proper roles of local and foreign direct investment (FDI) enterprises; (vi) strong state guidance; and (vii) mobilization of all social relations such as government-capitalists, capitalists-small farmers, and labor-management. The requirements of export orientation and labor-intensiveness should be underscored. Moreover, the second condition (Core ADLI) can be re-interpreted as the requirement for the maximum use of domestic resources. These three conditions are the main requirements for industry in establishing bi-sectoral interdependence. As noted above, this linkage is not a permanent one but something that can evolve into a new pattern in which industry will take the main lead once the initial stage of industrialization is realized. The *Industrial Development Strategy* clearly states that "[w]hen we say that we follow agriculture development led industrialization this does not mean that it will be so forever... if agricultural development led industrialization strategy is successfully applied it will be changed to industry led development strategy" (Eng. p.8).

The question concerning Core ADLI is whether this strategy is powerful enough to significantly propel early industrialization in Ethiopia. We do have historical examples in which agriculture grew relatively strongly prior to the period of full-scale industrialization and provided resources for industrialization through taxation and foreign exchange earnings (for example, silk and tea exports in late 19th century Japan, rice and sugar production in Taiwan up to the 1960s, and the rice export tax of Thailand up to the 1980s). There are also cases in which robust agro and fishery exports ameliorated the immiserization of rural communities often associated with globalization (for example, fish and shrimp exports of Southeast Asia). Agro and fishery products may even become leading exports (for example, Chilean wine and salmon). Agriculture can also serve as an income and employment buffer at times of economic crisis (for example, Japan immediately after WW2, and absorption of laid-off workers caused by state-owned enterprise (SOE) privatization in Vietnam in the early 1990s).

Despite all this, a historical example in which an industry using domestic materials as its main input has expanded dramatically to become the industrial pillar of that nation and contributed greatly to structural transformation is difficult to find. Agricultural development and industrial development are usually more distinct and separable than envisaged in Core ADLI. Japanese industrialization was not based on silk and tea, and neither the Taiwanese electronics industry nor the Thai automotive industry relied heavily on the domestic supply of rice.

In Ethiopia, the implementation of Core ADLI is most clearly seen in the leather and leather product industry in which domestic animal hides and skins are procured by tanneries and manufacturers to produce finished leather or final products such as leather jackets and shoes for domestic sales and export. However, even with significant expansion in recent years, this industry still remains small. In 2008/09, the export value of leather and leather products was USD76 million amounting to 5.2% of

total export or 0.2% of GDP (Table 5-2). Whether this industry will grow robustly to lead broader Ethiopian industrialization is an open question.

5-3-2. Enhanced ADLI and policy learning

Although the early formulation of ADLI emphasized the direct linkage between domestic agriculture and industry, the current thinking of Ethiopian leaders is no longer confined to the framework of Core ADLI. While continuing to attach importance to Core ADLI, other strategic options and relations are also explored to promote industrialization. The first clear step in this direction was seen in PASDEP 2005/06–2009/10 in which growth acceleration through commercialization of agriculture and private sector development were highlighted. Policy targets in this Enhanced ADLI were not limited to smallholder farmers in rural areas. Large-scale commercial agriculture[9] (including flower farms), urban micro and small producers, medium and large manufacturers, and foreign-invested firms all came within the purview of Ethiopian industrial policy. Politically, expansion of policy scope to encompass urban producers can be understood as the government's response to include them in the democratic developmental state in the aftermath of disturbances following the national election in 2005, which revealed the lack of support of urban dwellers for the ruling party.

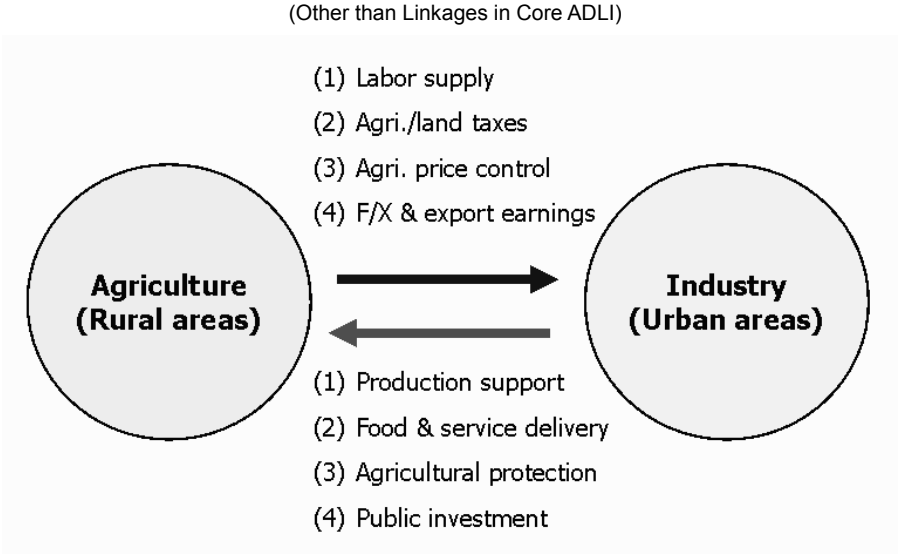
The current scope of Ethiopian industrial policy is sufficiently flexible that all policy options for industrial development, including those not compatible with Core ADLI, are freely studied and implemented. For instance, the agricultural sector can offer surplus labor, agricultural or land taxes, cheap food (wage goods), and foreign exchange and export earnings for the promotion of industrialization. The urban industrial sector in turn can transfer resources and technology through production support, food and service delivery, agricultural protection, or public investment (Figure 5-5). These transfers may be made directly as well as through fiscal and financial mechanisms. Furthermore, industrialization measures unrelated to agriculture, such as production of steel, cement, and other construction materials, FDI attraction, and establishment of industrial estates, have also been promoted.[10]

Although the policy scope was thus broadened and became more flexible, at least conceptually and in theory, the Ethiopian government could not immediately introduce a large number of additional measures to carry out all available policy options. Due to the lack of policy capability and experience, industrial measures had to be introduced in steps and through trial-and-error. In practice, during the

[9] *An Economic Development Strategy for Ethiopia* discussed policies for large-scale commercial agriculture separately from policies for small farms (FDRE, 1994). However, concrete policies for the former were not activated until the early 2000s.

[10] In the previous version of this paper, the GRIPS team recommended the broadening of policy scope beyond Core ADLI. However, Prime Minister Meles assured us that the Ethiopian policy scope was already much wider and that all possible contributions of agriculture to industrialization were being considered. He also remarked that the interpretation of ADLI as input-output relations between the two domestic sectors only was a caricature of this strategy which was in reality broader and more dynamic.

period of PASDEP 2005/06-2009/10, what the Ethiopian government did mainly was to select a few export-oriented sectors and provided them with generous policy attention and financial incentives. The *Industrial Development Strategy* (2002) chose meat, leather, and leather products; agro processing; and textile and garment as three export-oriented priority sectors (in addition to the promotion of construction and micro and small enterprises). Later, floriculture (large-scale production of cut rose for export), an industry which emerged autonomously from the private sector, was added to the list.



Note: These transfers may be carried out directly, through fiscal mechanisms, or through the financial sector.

Figure 5-5. Resource Transfers between Agriculture and Industry

For promoting these priority sectors, the government has adopted a number of policy tools, measures, and organizational arrangements through self-learning, dispatch of students abroad, consultation with foreign experts, and technical and financial assistance of donors. They included compilation of policy documents; the monthly export steering committee chaired by the prime minister; productivity enhancing tools such as benchmarking, business process re-engineering, and kaizen; establishment of centers and institutes for priority sectors; creation of new science and engineering universities and TVET institutions; installation of federal and local public-private dialogue mechanisms; public administration reform; building of key power and transport infrastructure; and strategic mobilization of ODA and FDI for these purposes. Some of the policy innovations were learned from East Asia, especially South Korea and Taiwan. Thus, the last several years was a period of vigorous policy learning and experimentation by the Ethiopian government (details of these efforts are discussed in chapter 8).

One remaining question, perhaps a rhetorical one, is regarding the significance of ADLI when its policy scope is enlarged this much. The current policy scope is no different from that of any developing country in Africa or elsewhere. What is the meaning of ADLI, a concept which is supposed

to guide the unique developmental path of Ethiopia? One possibility is that ADLI is a statement of political assurance that the interests of farmers and rural communities will never be sacrificed or forgotten no matter what industrial strategy may be adopted by the government. This may be similar to the use of the slogan of the "Socialist Market Economy" by the Chinese government, in which capitalism and globalization are embraced economically while communist power monopoly and effort to improve the livelihood of workers are firmly maintained politically.

5-3-3. Further expansion of policy scope and measures

At present, the expansion of industrial policy scope and measures is entering a new stage beyond what was envisaged in Enhanced ADLI. Specifically, there is an emerging interest in promoting import substitution industries such as construction materials (steel, cement, and so on), metal processing and engineering, and chemicals and pharmaceuticals in addition to a selected number of export-oriented sectors in the past. This policy shift is clearly observable in discussions within the government as well as among development partners. The Ethiopian government regards this as a "shift in emphasis within the same fundamental policy" whereas some call this a directional change in development policy. At this moment, however, this movement points only to a general direction without concrete principles, roadmaps, or action plans. Specifying these will be the task in the implementation period of PASDEP II.

One high official of the Ethiopian government stated that the introduction of import substitution policy had been discussed within the government for about two years. Others say that this change was advocated by Prof. Joseph Stiglitz of Columbia University who regularly advised Prime Minister Meles, Prof. Dani Rodrik of Harvard University who visited Ethiopia at the invitation of the World Bank, and Dr. Justin Lin, the chief economist of the World Bank. Some speculate that this policy shift was forced by the need to reduce imports to ameliorate the foreign exchange shortage that Ethiopia has been facing since 2008. Thus, there may have been multiple causes that jointly pushed the industry policy towards the inclusion of import substitution. What is important about this broadening of policy scope, however, is the fact that it is proposed on the basis of policy learning and experimentation of the Ethiopian government in the last several years. It is also interesting to note that import substitution, whose validity used to be summarily discredited by the Washington institutions, is now strongly recommended to Ethiopia by the World Bank and American economists.[11]

[11] The World Bank Executive Board approved the Protection of Basic Services (PBS) II, a budget support type program, for Ethiopia in May 2009 with the condition that the implementation of "directional change" mentioned above be implemented and monitored properly. The PBS I (2006–08), the precursor to this program, was initiated by re-organizing existing general budget support. PBS II will strengthen the delivery of basic services of local governments through budget support in the three year period of 2009–11. The International Development Association (IDA) will provide a total of USD540 million (USD309.78 million of grants and USD230.22 million of loans) and 12 other donors will supplement it with an additional USD737 million.

In the note prepared for the Ethiopian government, Rodrik (2008) argues that, while Ethiopia's "first-generation" industrial policies had achieved some success, especially in flower export, there is a need to move towards "second-generation" industrial policies aiming at both home and export markets. The existing industrial policy of Ethiopia consists of a short list of priority sectors which receive a variety of incentives. According to Rodrik, this narrow approach to industrialization has two limits:

> One is that many potentially successful sectors are almost certainly not on the list. There are potentially hundreds of different products in which Ethiopia can be competitive; yet it is hard to think of all of them ex ante. The most successful sector to date, floriculture, is a case in point. This is a sector that was brought to the government's attention—and made the priority list—only after private entrepreneurs had done the initial discovery and had come to the government for assistance. It is easy to imagine that there are many such industries that government policy fails to target simply because they are not in its list. At present, there is no mechanism in place to actively solicit "new" investment projects that may lie outside the priority list.
>
> Second, the assistance needed by investors may be highly specific to the needs of the project in a way that makes it impossible to specify ex ante. Cheap land and holidays on profits taxes may suit some investors just fine; but others may have different needs. One firm may need relief on payroll taxes, another from tariffs on inputs, and a third may want the relaxation of some regulation or legislation. In at least one instance, the prime minister has helped a large pioneer investor by agreeing to change a regulation (on qualification for DBE [Development Bank of Ethiopia] loans). But problems such as these are common at all levels, and it is unrealistic to expect that the PM himself can attend to them all. There is currently no mechanism in place to respond to such needs systematically. (Rodrik, 2008, pp.5–6)

For these reasons, Rodrik proposes the following six revisions to Ethiopian industrialization strategy: (i) broadening policy scope to include more sectors; (ii) supporting "new" activities for Ethiopia rather than exports; (iii) recognition that mistakes are both unavoidable and necessary; (iv) broadening the list of policy instruments; (v) giving incentives and subsidies to "pioneers" only and not emulators; and (vi) enhancement of lines of communication and coordination with the private sector. He also adds that success depends on the change in mindset in which industrial policy is regarded as a process of collaboration and problem-solving with the private sector rather than increasing the number of incentives or the volume of exports.

Most of Prof. Rodrik's recommendations are appropriate and supportable.[12] However, it is important to recognize the fact that the proper timing of policy expansion depends critically on the amount of policy learning. The proposed shift from the "first-generation" to "second-generation" industrial

[12] The GRIPS policy dialogue team does not agree with the idea that only pioneer firms should be provided with incentives and subsidies and not emulators (recommendation (v)) on the grounds that such selectivity is both impractical and unfair. See chapter 6 (section 6-3) for more discussion.

policies was hardly possible around 2003 when the Ethiopian government had just begun to promote industries with limited policy capability. At that time, selecting only a few export-oriented sectors and using simple measures such as cheap land, tax holidays, and preferential finance was reasonable because the government did not have sufficient knowledge or resources to conduct full-fledged industrial policies. By now, many policy tools and insights have been acquired through hands-on experimentation and donor support. Some initial achievements have also been made in the export of fresh flowers and leather products. With these records, Ethiopia is now set to go to the next stage of industrial promotion.

5-4. Concluding remarks

While the Ethiopian pursuit of DD and ADLI is in the early stage of implementation and their details may not be directly applicable to other countries, there are some general points of interest for all latecomer countries to observe. Three remarks are in order.

First, the Ethiopian effort at industrial policy innovation can be understood as an adaptation of political and economic regimes to the international reality of the early 21st century. For developing countries, the basic menu for development policy is mostly the same. Any country must promote education and training, skills and technology, domestic enterprises and industries, agriculture and rural development, and power and transport infrastructure. It must also build institutions, laws and regulations, and monetary and fiscal mechanisms that enable these policies. In addition, revenues from natural resources must be properly managed and invested, and problems associated with growth such as inequality, urbanization, traffic congestion, and the environment must be dealt with. On the other hand, the international environment surrounding developing countries changes over time. The collapse of the Soviet Union in 1991 brought a particularly large shift in external conditions. During the Cold War era, a developing country belonging to one of the two ideological camps could receive a large amount of economic and military aid without intervention in the management of domestic politics or economy. But today, all countries are required to embrace democracy, markets, and globalization. Without doing so, financial cooperation or full membership in the international community is not granted.

The Ethiopian development regime of DD and ADLI is different from the authoritarian developmentalism of South Korea or Taiwan in the 1960s or the FDI-led industrialization of Southeast Asia in the 1980s and 90s. This difference comes mainly from the different international environment in which development must be pursued and not from different policy goals that Ethiopia has set for itself. The broad goals of development remain the same across ages and countries, but Ethiopia has to adjust to the reality of the 21st century so that it can secure a respectable position in the world and sufficient cooperation from donors and international organizations. The combination of DD and ADLI

is innovative in the sense that it is a proactive attempt to ignite development with the rejection of the Washington Consensus and without counting on a large inflow of manufacturing FDI as in Southeast Asia. As a poor, landlocked, and resource-less country, Ethiopia's initial conditions are unfavorable. But policy innovation and learning initiated by Ethiopia—and its outcome—may offer important inspiration for other countries in Africa.

Second, the success of DD and ADLI critically depends on the concrete steps that Ethiopia will take in attaining the common policy goals mentioned above. Among these, the two real-sector goals of productivity breakthrough and commercialization of smallholder farmers, on the one hand, and emergence of a strong and broad manufacturing base not confined to a few export sectors, on the other, are crucial. The adjustment of political and economic forms to changing global reality alone is not sufficient to achieve the substance of development, especially a vibrant and competitive private sector. For this, pragmatic policy effort featuring speed, flexibility, and attention to detail must be maintained for years.

Two factors are required for real-sector promotion. One is decisive and effective leadership, which Ethiopia seems to possess at the moment. However, a developmental state heavily dependent on one top leader will become vulnerable at the time of power transition. Good policies and policy processes should be institutionalized as much as possible to diminish this problem. The second requirement is the accumulation of practical knowledge by the ministries and agencies in charge of industrial policy formulation. Proactive industrial policy calls for far greater knowledge than either laissez-faire or socialist planning. To interact successfully with the private sector, officials must share with producers and investors up-to-date information on the industries in question. They must also be well informed about the pros and cons of concrete measures adopted in other countries. Effective channels of public-private dialogue must be established and concrete international cases must be studied with zeal, with the help of foreign experts if necessary.

Third, policy learning and expansion of policy scope are dynamically linked in Ethiopia. This is a highly laudable feature which we call *dynamic capacity development* (Ohno and Ohno, 2008). In a typical developing country, problems are many while policy capability is limited. This makes it difficult to decide where to start development efforts, and in which sequence and at what speed various policies should be introduced. International financial institutions used to demand a long list of difficult policy actions to be implemented before a short-term rescue package was released. Meanwhile, some experts argued against trying any of the so-called "industrial policies" because the risks of policy mistakes and political capture were too great. However, neither type of advice proved to be very constructive in breaking the poverty trap.

In recognition of limited policy capability in developing countries, the World Bank's 1997 *World*

Development Report proposed a *two-part strategy* that called for constant effort to be made to improve policy capability while increasingly difficult policies were to be adopted over time to match the acquired policy capability. Ethiopia is practicing exactly what this World Bank report proposed. The only difference is that the World Bank emphasized general improvements in "rules and restraints," "competitive pressure," and "voice and participation," while Ethiopia prefers to improve its policy capability through problem-solving on such concrete matters as export promotion of leather products and proper selection of import-substitution sub-sectors for promotion. This approach is closer to the dynamic capacity development frequently seen in East Asia.

With the understanding and endorsement of the Ethiopian strategy that policy scope should be expanded gradually in line with policy learning, the GRIPS Development Forum hopes to provide specific, practical, and concrete information to support the planned policy expansion through the ongoing three channels of policy dialogue: Prime Minister, concerned Ministers and State Ministers, and operational levels.

Chapter 6
Broadening the Policy Scope: Cross-cutting Issues*

The policy scope of Ethiopia is expanding. In the last few years the government of Ethiopia has studied the possibility and desirability of broadening the policy scope for industrialization, and it is now ready to put this idea into practice. The policy change will be incorporated in *A Plan for Accelerated and Sustained Development to End Poverty* (PASDEP) II (2011–2015), which is the national five-year development plan currently under preparation. The broadening of policy scope is also recommended by a number of foreign experts.[1]

Ethiopia's vision for industrialization is Agricultural Development Led Industrialization (ADLI). ADLI has been concretized in a series of documents such as *An Economic Development Strategy for Ethiopia* (1994), *Rural Development Policies, Strategies and Instruments* (2001), *Industrial Development Strategy* (2002), *Sustainable Development and Poverty Reduction Program* (SDPRP) 2002/03–2004/05, and PASDEP 2005/06–2009/10. ADLI is an industrialization strategy in which agriculture plays a key role in preparing various conditions for full-fledged industrialization through the provision of industrial materials, consumption goods (mainly food), demand for industrial goods, labor supply, and foreign exchange. The transformation of small subsistence farming into commercial agriculture is at the center of this strategy (chapter 5).

ADLI shifted from the formulation stage to serious implementation around 2002–2003. In the last several years, the government of Ethiopia has concentrated limited human and financial resources on a small number of export-oriented priority industries. These industries, such as leather and leather products, textile and garment, food processing, and floriculture, were given generous incentives and high policy attention. Among these, floriculture, which was not included in the original list of priority industries, has recorded the fastest growth in output and export, followed by leather and leather products—albeit from very low bases. Meanwhile, the results of the other two priority industries were less spectacular. The government has also actively mobilized donor assistance for these industries in drafting master plans, strengthening industrial human skills, leveling up technology, establishing research and training centers, marketing and business matching, enhancing business associations, and

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* This chapter was prepared for the bilateral policy dialogue held in Addis Ababa in early September 2009 between Ethiopia and Japan. It is based on the information from official documents, a series of discussions and exchange of letters with Ethiopian leaders and high officials, and studies by the GRIPS Development Forum (GDF). All responsibility for the content shall be borne by the GDF.

[1] Joseph Stiglitz (Columbia University), Dani Rodrik (Harvard University), and Justin Linn (World Bank chief economist) are said to have advised in this way. Among them, Rodrik's note for Ethiopia calls for the following revisions: (i) broadening policy scope to include more sectors for promotion; (ii) supporting "new" activities for Ethiopia rather than exports; (iii) recognition that mistakes are both unavoidable and necessary; (iv) broadening the list of policy instruments; (v) giving incentives and subsidies to "pioneers" only and not emulators; and (vi) enhancement of lines of communication and coordination with the private sector (Rodrik, 2008).

so on. Important tools of industrial policy, such as benchmarking, business process re-engineering (BPR), pilot projects and subsequent scaling up, and public private partnership, have been learned and implemented. More recently, *kaizen* has been added to the policy toolkit.

In all fairness, it can be said that Ethiopia in the last several years has made good progress in early industrialization and can now take up the next round of challenges. Admittedly, past performance has not been perfect and a number of unresolved issues remain. For example, the expected emergence of competitive local firms has been slow and inter-ministerial coordination is far from effective. But the government feels that enough has been learned about the tools, roadmaps and pitfalls of industrialization so that policy space can be enlarged as it formulates the development strategy for the next five years. More specifically, Ethiopia from now on will support not just selected export-oriented industries but also other industries that mainly supply domestic markets such as steel, metal processing, cement, chemicals, and pharmaceuticals. In other words, parallel promotion of exports and import substitution is about to begin.

The National Graduate Institute for Policy studies (GRIPS) policy dialogue team strongly supports the expansion of policy scope of Ethiopia accompanied by enhanced policy capability. This is in line with Dynamic Capacity Development, the idea we put forward in another paper that internal capabilities should be selectively and strategically built up to attain concrete industrial objectives rather than generally and randomly (Ohno and Ohno, 2008). It should be emphasized that causality between policy capability and policy scope is mutual. Ethiopia can expand its policy space because its policy capability has improved but setting new policy goals in turn will require a further upgrading of policy capability.

It is in this context that the GRIPS policy dialogue team wishes to raise some cross-cutting issues and discuss organizational arrangements in industrialization for the review of the Ethiopian authorities. Broader policy space opens up greater opportunities but it also increases the risks of miscalculation, political capture, wasted resources, and macroeconomic instability. Policy makers should be fully aware of these risks in advance and take proper precautions in charting the new policy course. We will conduct this policy dialogue primarily from the perspective of high performing East Asia where proactive industrial policy is widely accepted and practiced. This does not mean, however, that East Asian good practices are always relevant in Ethiopia. The validity of each argument from East Asia must be carefully examined, with modifications if necessary, before applying to Ethiopian soil.

In the formulation of industrialization strategy, the largest difference between Ethiopia and high-performing East Asia—especially Southeast Asian economies—is the existence in the latter of large inflows of manufacturing foreign direct investment (FDI) which generates strong demand for quality, skills, logistics, institutions, infrastructure services, and the like in the national economy. This

demand for local capabilities from foreign manufacturers determines the kind of policy needed for further industrialization. But such demand by FDI firms is largely absent in Ethiopia. Export orientation does expose local industries to global competition, but export alone does not produce such strong and broad pressure for local excellence.

In this chapter we present a number of cross-cutting issues as a checklist to stimulate discussion among policy makers. Additionally, the next chapter deals with issues related to organizational arrangements for effective policy making. When concrete ideas and cases are offered, they are meant to be references and initial suggestions rather than final recommendations. Our discussion covers the existing export-oriented priority industries as well as the proposed import substitution industries located in or near the urban center. Rural industrialization, a topic of great importance in ADLI, is beyond the scope of the present chapter.

Below, we address six issues that may become important as Ethiopia's policy capability is raised and its policy scope is enlarged. Each issue contains a few sub-issues, which are summarized in introductory boxes.

6-1. Policy framework and structure

1-1. Ethiopia has an industrial vision but strategy, action plan, and review remain incomplete.
1-2. The industrial chapter of the next PASDEP, and the five-year industrial implementation plan to be prepared by the Ministry of Trade and Industry (MOTI), should state clearly the direction of industrialization strategy in the next five years.
1-3. All three levels of industrial policy (general, responsive, pro-active) should be strengthened.

Industrialization strategy should have a layered structure that runs from general to specific and from long-term to short-term. These layers are normally called vision, strategy, and action plan. The vision is a long-term goal often expressed in a slogan such as "becoming an industrialized country by 2020" or "attaining middle income by 2025." The strategy, also called the master plan or the roadmap, is a document that typically covers the next three to five years and contains policy principles, priority sectors, time tables, policy instruments, and so on, to give details on the road to achieve the vision. The action plan is a list or a matrix of concrete actions that must be taken typically within one to three years with clear designation of action content, performance criteria, deadlines, and responsible organizations. In relatively advanced countries where industrial policy is effectively managed by responsible officials or organizations, an explicit action plan may be replaced by the continuous process of policy initiatives and adjustments (chapter 9). Furthermore, a review mechanism ("monitoring and evaluation") must be installed to ensure implementation and facilitate necessary adjustments. Review may take various forms including commissioned reports by external experts, a

high-level government committee, and formal or informal internal review by the ministry in charge.

In Ethiopia, ADLI sets the fundamental direction and the Industrial Development Strategy (IDS) (2002) states key principles such as private sector initiative, export orientation, strong state guidance, and so forth, and specifies priority sectors. Together, ADLI and IDS stipulate the basics of industrialization strategy that can remain valid for a long time beyond the five-year cycle of PASDEP. These correspond to the "vision" and part of the "strategy" mentioned above. Meanwhile, industrial master plans have been compiled for the priority industries. Quality and structure of these master plans differ greatly—partly because they reflect distinct characteristics of each sector but mostly because they were commissioned to different donors with different methodologies. For action plan and review, the monthly Export Steering Committee and MOTI's regular contacts with the business community (business associations and individual enterprises) are the instruments for monitoring implementation, identifying problems and coming up with solutions.

ADLI and IDS are comprehensive and flexible enough to accommodate most policy shifts and therefore can continue to guide industrialization for a decade or two to come. What is required additionally is the statement of policy elaborations and adjustments that become necessary every few to several years, such as the proposed introduction of import substitution, due to changing circumstances and rising policy capability. Instead of drafting an overall industrial master plan separately, we suggest that the industrial chapter of the next PASDEP and the five-year industrial implementation plan, which will be prepared by MOTI after the approval of the next PASDEP, should serve this purpose. To do this, the content of both documents must coincide, with the one being the executive summary of the other, and must be based on the discussion and agreement of all main stakeholders in advance. This means that such stakeholder meetings should be held frequently between now and the completion of the five-year implementation plan. The industrial chapter of the current PASDEP, as it is written, is not strategic enough to set the medium-term policy direction.

Over time, the master plans of priority industries should be drafted (if missing) or revised (if they already exist) by imposing minimum common orientation and minimum common structure that reflect the overall direction of ADLI, IDS and PASDEP but allowing sufficient room for the unique features of each sector.[2] Given the limited human and financial resource and donor support, the number of master plans should be relatively small and perhaps should not exceed ten. They should be drafted for the existing export-oriented industries as well as the proposed import substitution industries.

To strengthen action plans and reviews, the current works by the Export Steering Committee and

[2] The existing master plans for leather and leather products (assisted by UNIDO) and textile and garment (assisted by China), for example, have very different style and structure. It is suggested that the government should be involved more deeply in the initial design of industrial master plans so the minimum level of conformity is ensured. At the same time, requiring all master plans to have the same chapter structure, as practiced in Vietnam, is going too far in imposing uniformity.

MOTI's regular interaction with priority industries should be supplemented by the compilation of standard action plan matrices for each priority industry. These matrices should contain actions, sub-actions, performance criteria, deadlines, and designations of responsible organizations. They may be attached to the sectoral master plan or produced separately from it.[3] Moreover, there should be a formal mechanism to regularly review and adjust the implementation of these action plan matrices. For this reason, the action plan and the review mechanism should be created simultaneously as inseparable and mutually dependent policy tools. Possible enhancement of Ethiopian industrial policy structure is summarized in Figure 6-1.

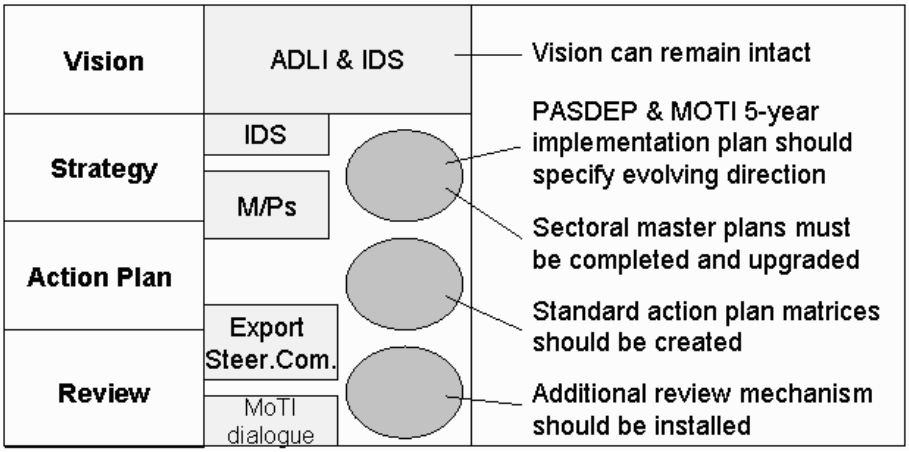


Figure 6-1. Possible Enhancement of Industrial Policy Structure

Industrialization strategy should properly address three aspects. The first is the establishment of a stable, transparent and business-friendly environment for domestic and foreign investors (i.e., cutting red tapes and leveling the playing field). The second is ensuring quick response to the requirements of the business community. Whenever there is a need or a problem, the government should act promptly to supply what is needed or remove what is impeding business activities. Ethiopia has already made significant progress in these two areas by implementing BPR aggressively in every ministry and agency. However, these aspects are still basic and passive.

The third aspect of industrialization strategy is the creation of dynamic comparative advantage in which proactive policy makers generate new industrial strengths and guide investors towards new activities under close coordination with private partners ("public private partnership") but without necessarily waiting for their move (chapter 1). Such proactive industrial policy, which anticipates and creates dynamic comparative advantage, is commonly practiced in East Asia but still remain controversial among Western donors. The disagreement arises from the fundamentally different views

[3] The standard action matrix format can be seen in the first automotive industry action matrices of Thailand and the Triangle of Hope action plan matrices of Zambia (for improving investment climate). The former are incorporated in the automotive master plan while the latter are produced as a separate document submitted to the Government at regular intervals.

about the role of government vis-à-vis the market in economic development. We believe that pro-activeness is essential for the effectiveness of industrialization strategy, but it requires deeper knowledge and higher policy capability than the other two. The industrialization strategy of Ethiopia, consisting of the MOTI's industrial implementation plan and sectoral master plans, should enhance all these aspects, especially the last.

6-2. Past review and future evaluation

2-1. There should be an *ex post* review of export industry promotion.
2-2. There should be *ex ante* analyses of proposed import substitution industrialization.

As Ethiopia expands its policy scope from a few export-oriented industries to the inclusion of import substitution industries, there is a need to review the past and evaluate the future as soon as practically possible in formulating industrial policy orientation for 2011–2015. Review here is different from the reviewing mechanism of action plans mentioned above.

In the last several years, Ethiopia targeted its human and financial resources to the promotion of a few export-oriented priority industries. Promotion tools included cheap land, preference in taxes and import duties, bank loans, foreign exchange allocation, research and testing facilities, training programs, close consultation with businesses, quick trouble-shooting, and concentrated use of official development assistance (ODA) for these purposes. The result of this generous policy package should be assessed before Ethiopia takes the next bold step in industrialization strategy. It is essential to document what has been offered to promote these industries and what progress has been made in industrial performance. It is also necessary to numerically compare the explicit and implicit costs of promotion relative to the direct and indirect benefits that accrued to the national economy. Although precise determination of these costs and benefits may be difficult, best estimates should be produced with available information and data. Studies should be conducted for leather and leather products, textile and garment, and floriculture. For food processing, one or two concrete agro products may be selected for this analysis.

At the same time, there should be preliminary studies of the import substitution industries that will be promoted during the next PASDEP cycle. For each industry, there should be assessment of the domestic situation, global and regional trends, Ethiopia's potential, hurdles and pitfalls to be overcome, and possible strategic orientation for promoting the industry.

We propose these studies, which should be completed within several months, to help deepen industrial policy debate in Ethiopia and draft the industrial chapter of the next PASDEP. They should also be used as preliminary input to the subsequent drafting or revision of sectoral master plans and the

feasibility studies to be conducted for import substitution industries (see next section). Since the preparation of master plans and feasibility studies will take time, these studies should be used to start policy debate as soon as possible.

Both of these studies—past review and future evaluation—should ideally be commissioned to independent and neutral Ethiopian researchers outside the government. For each industry, a medium-sized report should be submitted to the government and should also be circulated openly and widely. These reports may be published in one collected volume. The reports should be neither too theoretical nor too narrative. They should be sufficiently analytical and contain concrete numbers and estimates.

MOTI should cooperate with the drafting process of these studies by supplying data and information, but it should not take the lead in determining the content. First, MOTI is too occupied with its existing workload. Second, a self-assessment of industrial policies by MOTI is not nearly as convincing as an assessment by respectable outsiders. Third, evaluation of industrial policies by Ethiopian researchers at universities and research institutes, rather than government officials or foreign experts, will contribute to the strengthening of local research capability and the building of constructive relationships between the government and academia (as we see in Tanzania, for example). The Ethiopian government needs to foster its ties with local academics to strengthen its own capacity to design and implement industrialization strategies in the future. Assistance by donors and foreign experts may be sought if necessary, but, again, they should not dominate the outcome of the report.

6-3. Time dimension of industrial promotion

3-1. Industrial promotion must always be temporary with a pre-announced graduation schedule.
3-2. Time-bound support measures should be available to all producers, whether pioneers or copycats.
3-3. A long-term liberalization roadmap should be prepared in anticipation of the World Trade Organization (WTO) accession.

Industrialization strategy must balance the requirement of international integration with the requirement of local industry promotion. Policy makers must give proper weight to liberalization and integration vis-à-vis the amount and duration of support to local firms so that the policy package as a whole generates strong incentive for producers to work hard rather than shut down their factories or resort to political lobbying. Opening the country without regard to the competitiveness of domestic private industries is suicidal. Protecting local industries without the prospect of graduation is equally disastrous. Striking a balance between accepting global integration and promotion of local industry is a delicate matter. Concrete solutions must be discovered for each industry in each country.

Another inherent aspect of industrialization strategy is its temporary nature. Industrial promotion can never be permanent—if it is, the policy has failed. Priority industries may receive generous assistance for a time but not forever. The typical duration of intensive promotion is several years but it may be shorter or longer depending on the case. Promotion must end when it becomes clear that the industry has either succeeded or failed in gaining international competitiveness—in either case, additional support cannot be justified. Ideally, the duration of industrial promotion should be pre-announced and strategically linked to the internationally committed liberalization schedule of that industry. Promotion must be terminated when the time comes regardless of success or failure of that industry. As Prof. Rodrik remarks, the government must accept the fact that mistakes are unavoidable in industrial policy and that not all supported industries can be winners (Footnote 1).

Previously, Japan and Korea adopted the infant industry promotion strategy of using temporary tariff protection to shield domestic firms until they gained international competitiveness. In the early 21st century, however, latecomer countries are no longer allowed to use heavy protection to promote domestic industries. This does not mean that industrial promotion is no longer possible, but it does mean that promotion must take a different form. There exist a large number of measures for strengthening industrial capability without violating any international commitments—such as education and training, technology transfer, public private partnership, promotion of small and medium enterprises, development finance, efficient logistics and distribution, industrial estates, FDI marketing, and reliable power and transport. None of the policy measures we discuss violates WTO or any other international rules.

In Ethiopia, a few export-oriented industries have enjoyed incentives and subsidies in the last several years. In addition, MOTI has worked very closely with industry associations and individual firms in the priority industries to assess business strategies, report monthly exports, mobilize donors' assistance, conduct benchmarking, trouble-shoot problems, and so on. Young officials in the Textile and Leather Development Center (now upgraded to the Textile and Apparel Institute) of MOTI, who routinely visit member firms in these sectors, seem to know the ins and outs of the strategies and problems of individual firms. In the early stage of industrialization, such intensive public support and guidance is laudable. However, at some point, perhaps relatively soon, private firms must graduate from this heavy dose of guidance and assistance and make their own business decisions at their own cost and risk. Technical and financial aid from the government and donors should be reduced in appropriate steps. The (revised) master plan of each of these industries should have a chapter to discuss such graduation.

One related issue raised by Prof. Rodrik is how to allocate industrial support measures among producers. He argues that incentives and subsidies should be given only to "pioneers" who start "new activities" (in the context of Ethiopia) but not to emulators who follow pioneers without taking risks themselves.

> The key developmental question that a prospective investor needs to be asked before granting him incentives is not whether his project is export-oriented, but whether it is new to the Ethiopian economy—either a product not previously produced in Ethiopia or a significant technological upgrading of an existing product... It is the pioneer firms that bear the cost of discovery—can a particular activity operate profitably in Ethiopian conditions?—and of putting Ethiopia on the global radar screen of investors. So it is they who need the subsidy, and not the followers who simply emulate the success—if success is what they experienced—of the pioneers. Crudely put, the (rhetorical) question is whether the 91st firm investing in flowers still needs a tax break. (Rodrik, 2008, pp.6–7)

While this argument may have some theoretical merit, we do not think it is practical or fair. In reality, it is administratively impossible to determine who is pioneering and who is not. Mere order does not tell us the amount of new value created or new risks taken, because the tenth investor may well be crucial rather than the first. If support is given only to the first *x* investors, this will spawn a distorted incentive to go first and exclude others regardless of whether the first movers have proper managerial and technical capability. Such a race for initial privilege is called *license hunting* and encourages rent seeking and cartelization. The Ethiopian government does not have the capacity to rank firms according to the amount of value created, and even if it did, it should not waste its precious time and human resources on such ranking.

Industrial promotion measures must be available to all producers that satisfy the announced criteria defining eligible activities whether they are the first investor or the 91st. As argued above, support measures must be time-bound and phased out after a number of pre-specified years. But while these measures last, all eligible producers should be able to access them. In fact, this is the only administratively manageable and politically acceptable way of conducting industrial promotion in a low-income developing country. If further selection is desired, support may be linked to some readily recognizable performance criteria (such as output or export volume) so that competition among producers may be engendered. However, this type of industrial policy is a fairly advanced one and should not be attempted by a government without high capability, transparency, a sufficient toolkit, and strong trust and constructive cooperation with the business community.

In the medium to long run, there should be an overall industrial master plan (in addition to those for individual sectors) with mutually consistent schedules for industrial promotion and international integration. The timing of WTO entry must also be an integral part of this roadmap. Negotiations for WTO accession are complex and time consuming. Moreover, large existing members of WTO tend to impose unreasonable opening conditions, which they themselves do not abide by, on small new members. As a result, most negotiating governments become too pre-occupied with document preparation, legal adjustments, diplomatic battles, and the like and forget about building linkage between industrialization strategy and integration strategy. This is a big mistake. Trade liberalization

with a deadline is a challenge as well as an opportunity for industrial promotion. To effectively cope with this challenge and opportunity and make WTO accession meaningful for national development, there must be a clear roadmap for industrial promotion in advance.

The literature on the order of economic liberalization informs us that there is a proper liberalization sequence that must be followed to avoid macroeconomic crisis. Liberalization must start with domestic markets such as local goods, services, and labor. Then it must be followed by the liberalization of domestic finance. Capital-account liberalization must come at the end when all domestic markets are liberated and function reasonably well (McKinnon, 1993). Another important lesson from the developing world is that factors that contribute to resilience of the real-sector economy, such as growth potential, structural diversity, and regional integration, can greatly enhance the capacity of the national economy to withstand global shocks under integration. Ethiopia's liberalization schedule must have a proper macroeconomic sequence and must be synchronized with the progress of its industrialization strategy.

6-4. Import substitution

4-1. Import substitution must avoid the risks of *policy misjudgment* and *political capture*.
4-2. Technical details are key to the success of import substitution. A high-quality feasibility study (F/S) or master plan should be prepared for each import substitution industry to be promoted.

As Ethiopia embarks on import substitution, we would like to draw the attention of Ethiopian authorities to its well known risks. All arguments in the previous section regarding the temporary nature of promotion apply to import substitution. In addition, even greater precautions must be taken because import substitution is a riskier policy area than export promotion.

Import substitution is riskier than export promotion because the Ethiopian government can regulate domestic markets more easily than global markets. It can restrict entry, use subsidies and taxes that affect prices and profits, and introduce standards for quality, safety, the environment, and so on, that also influence business outcome. While exporters can hardly lobby for larger overseas markets or higher commodity prices, producers that sell domestically can often ask the government to do something about their plight. To the extent that the government has policy instruments to directly affect domestic markets, import substitution is more subject to *policy misjudgment* and *political capture* than export promotion. This is precisely why neoclassical economists dislike import substitution. Although import substitution may be a beautiful idea theoretically, they contend that it cannot be implemented effectively because (i) the government does not know the right industries to promote; and (ii) the policy will surely be captured by political interest groups. Anne Krueger, the former World Bank chief economist and champion of trade liberalization, states:

> The problem with the [infant industry] argument, as a basis for policy, is that it fails to provide any guidance as to how to distinguish between an infant that will grow up and a would-be producer seeking protection because it is privately profitable… The infant industry argument also is an excellent example of a theory that is nonoperational because criteria for bureaucrats to identify cases have not been put forward. (Krueger, 1997, p.12)
>
> No matter how careful economists are, special interests always will seize their research results in supporting their own objectives. And, no matter how sophisticated and careful research findings are, there always will be politicians formulating, and non-economists administering, policies. (*ibid*, p.19)

Today, the neoclassical ideology is no longer dominant as before and few would support Krueger's extreme pessimism over the capacity and intention of the government. Furthermore, as mentioned above, industrial promotion in our age is conducted with an array of WTO-consistent policy instruments rather than high tariffs and non-tariff barriers. Even so, the risks highlighted by Krueger are real and should not be ignored. Where we should differ from Krueger is the policy conclusion. We know that both market and government are imperfect. The fact that bureaucrats may not know the selection criteria and policy may be hijacked by rent seekers should not lead us to entirely abandon import substitution. We should proceed with utmost care to avoid these obvious risks. Policy capability is not given but can be improved over time.

Policy misjudgment must be minimized by sufficient learning in advance and readiness to abandon support of projects that fail in actual implementation. Ethiopia should study the nitty-gritty of each targeted import substitution industry to reduce expectable risks and wastes prior to the approval of concrete projects or promotion measures. A good F/S should be conducted and a good master plan should be prepared by experienced experts for each targeted import substitution industry. Political capture must be prevented by strong leadership that punishes rent seeking and encourages value creation. Democratic developmentalism (DD), the political regime adopted by the Ethiopian government for national development, aims to institutionalize precisely such a policy orientation. As long as this policy direction is firmly in place, Ethiopian economic policy is less likely to be captured into endless protection of inefficient industries.

Take the steel industry, for example. It is widely known that promoting the steel industry in latecomer countries is not an easy task (Kawabata, 2007). The steel industry consists of a wide range of activities from the cottage industry of long bar rolling with primitive technology to integrated steel mills with gigantic scale and frontline technology. Production is broadly divided into long steel and flat steel, each with many upstream and downstream processes. Each process in turn can be performed by various technologies and types of equipment with certain pros and cons. The market is subdivided into high, medium, and low quality products, each requiring different investments and technologies. The

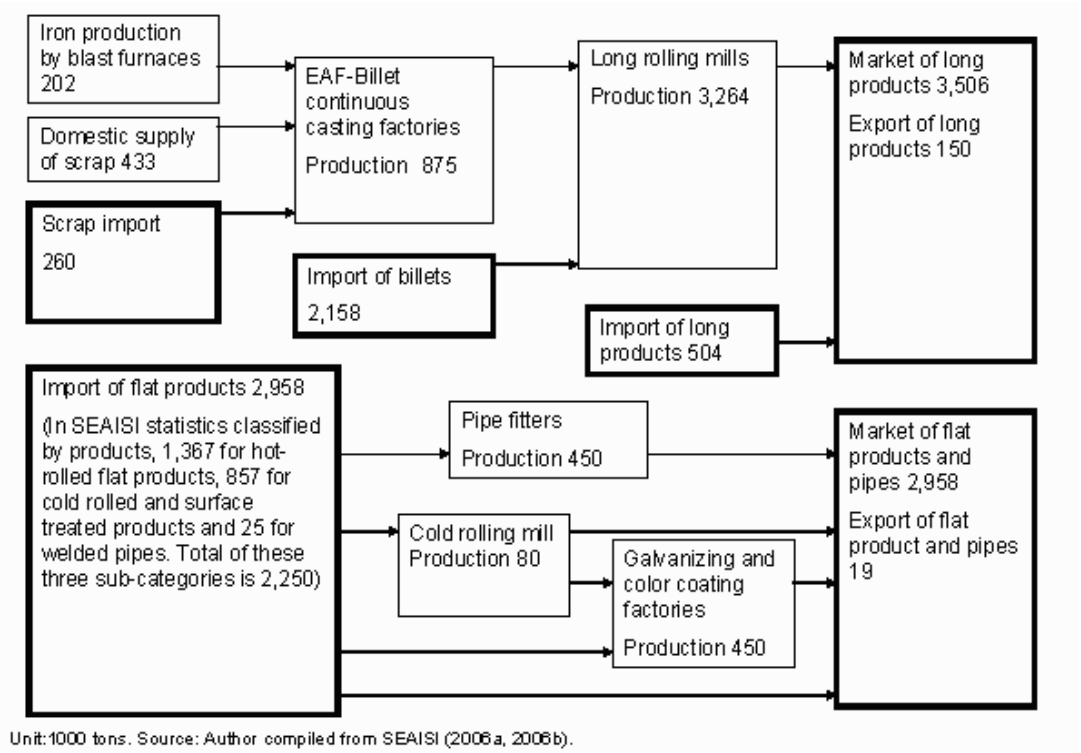
quality of raw materials (iron ore, cokes, scrap metal, etc.) largely determines the quality of output, while transport and logistics determine cost competitiveness. The demand size relative to efficient equipment capacity, the state of competition, and world business cycles are crucial determinants of profitability. Reduction of operational waste and downtime also contributes greatly to high yield and low cost. Environmental concern must be addressed as a matter of high priority. The role of government differs from one steel production process to another, and it should diminish over time as private firms grow and become competitive.

In such a complex industry, financial outcome depends crucially on the right choice of details—technology, production capacity, equipment type, input procurement, mill location, forward and backward linkage, factory management, training, targeted markets and customers, timing of investment, taxes and tariffs, finance, and so on. In Vietnam, for example, the nation's first modern flat cold rolling mill in Phu My could not supply to FDI customers such as Sanyo, Honda, and Yamaha because it did not have the right equipment for surface treatment, and its marketing was insufficient to meet customer needs. Hoa Phat, a local private business group, purchased a cheap electrical furnace from China to produce billets (intermediate input for steel bars and wire rods), but it later found out that the furnace capacity was too small for efficient operation and cost reduction. An enormous amount of money can be wasted and bankruptcies can soar if these technical details are not set right.

Before Ethiopia begins to promote the steel industry, the current status of the domestic steel market should be grasped with respect to material flows (input-output relations among processes), quality and technology, market segmentation, transport and logistics, operational efficiency, and so on. The compilation of a material flow chart, as shown in Figure 6-2 for Vietnam, is the very first step for this purpose. In many latecomer countries experiencing construction booms, demand for construction steel (bars, wire rods, galvanized flat steel) is strong while domestic supply is limited. While a few rolling mills may spontaneously emerge, the import bill for billets and finished construction steel surges. In the early stage, the steel industry should develop from long steel to flat steel, from downstream to upstream, and from low quality to medium quality. Another lesson from East Asia is the importance of steel market intermediaries, such as "coil centers" for flat steel and steel bar processors for long steel, in creating an efficient supply chain of the industry.

The government should not invest directly in production facilities but should manage markets and private investors, both local and FDI, to minimize inappropriate investments, cope with external shocks, and stabilize the market as much as possible (the global steel market is inherently unstable so it is impossible to eliminate all shocks and fluctuations). The history of the steel industry shows that private investments cannot always be regarded as efficient or environment-friendly. Many mistakes can be made in large and indivisible investments in steel. Oftentimes, too many investments are made in technology that is outdated or too small for achieving efficiency, which overcrowds the market and

damages the environment. The government must acquire sufficient capability to monitor and regulate private investments in the early stage of steel industry development.



Source: Kawabata (2007), p.9.

Figure 6-2. Material Flows of the Vietnamese Iron and Steel Industry, 2005

This is just a sketch of some of the problems in promoting the steel industry. Full details must be given in a thick feasibility study report or a master plan prepared by experienced steel experts. The same can also be said for any import substitution industry other than steel. If a full F/S or a master plan takes too much time, a preliminary study should be organized as a starter as suggested in section 6-2 above.[4]

6-5. Industrial clusters and corridors

5-1. There are many definitions of industrial clusters and corridors. Applicability of each to Ethiopia should be carefully examined.
5-2. The idea that related projects and programs should be implemented collectively in certain geographical areas is useful in building agro food parks and other industrial zones.

The concept of *industrial cluster*, as practiced in policy formulation, can be classified into several

[4] MOTI created master plans (the "strategic plan" and the "business plan") for chemicals (mainly soap and detergent) and pharmaceuticals in 2007. Strategic studies and documents also exist for cement and paper and pulp. Drafting was done by Ethiopian experts with occasional help from the German Engineering Capacity Building Program (ECBP).

different approaches.

(i) *Innovation through interaction between top-level researchers and businesses*—proximity of high tech firms and top-level research institutes or universities, under an effective local leader, is expected to generate new products or even new industries. Michael Porter's cluster approach and the industrial cluster initiative of Japan's Ministry of Economy, Trade and Industry (METI) belong to this category. Commercialization of advanced technology is anticipated. Silicon Valley in California and Zhongguancun in Beijing are typical examples.

(ii) *Agglomeration of related firms for effective inter-industry linkage*—producers with input-output relations, such as buyers-sellers and assemblers-part suppliers, gather for efficient trading, information sharing, and sharing of input and output markets. Kuchiki's (2008) "flow chart approach" is an attempt by policy makers to establish an industrial park, provide local capability and infrastructure services, and invite an anchor firm and a multitude of suppliers. To succeed, this approach must be accompanied by proper incentives, training, FDI marketing, FDI-local firm linkage, technology transfer, and so on.

(iii) *Concentration of small producers belonging to the same industry*—this kind of cluster, consisting of small and family enterprises, often emerges spontaneously in both urban and rural areas. Trade villages specializing in shoe making, ceramic production, etc. are such examples. According to Sonobe and Otsuka (2006), these clusters typically evolve in three stages: initiation, quantitative expansion, and productivity breakthrough.

(iv) *A broad definition of industry that includes supporting industries and supporting services*—in the cluster-based industrial development strategy in Malaysia's Second Industrial Master Plan 1996–2005 (IMP2), an industrial cluster is defined as "an agglomeration of inter-linked or related activities comprising industries, suppliers, critical supporting business services, requisite infrastructure and institutions" (IMP2, p.23). This is a functional agglomeration that may not necessarily be located in one small geographical area.

(v) *An industrial estate*—sometimes the term industrial cluster is used synonymously with an industrial estate (an industrial park, a special economic zone, an export processing zone, etc), a delineated area with rental plots and necessary infrastructure developed and operated by a private or state-owned management company.[5]

The related concept of *industrial corridor* also has different meanings:

(vi) *Building international transport infrastructure*—this typically involves the construction of a road that usually connects hinterland or landlocked countries with a sea port. Development programs and private investments may follow the construction of such a road, but not always.

(vii) *Asian Industrial Corridor Initiative*—the Japanese METI is launching an initiative to create new cross-border industrial regions in Southeast Asia and India by consciously combining transport infrastructure with other policy components such as public private

[5] In Vietnam, the term *cum cong nghiep*, which translates as "industrial cluster," means a small industrial park without boundary fences. This terminology is creating confusion when Vietnamese officials and researchers discuss industrial cluster-based development strategies.

partnership, efficient logistics, human resource development, electronic trading, speedy customs clearance, etc. in comprehensive regional development planning.

(viii) *Food processing industry zones*—in Ethiopia, the term *growth corridor* is used as an idea to link agro-ecological potentials with infrastructure and markets, including the building of several industrial zones specializing in food processing in rural areas or near local cities.

(xi) *Rural economic areas linked with an urban center*—when a city provides industrial goods and employment opportunities to surrounding rural areas which in turn supply agro products and labor, the resulting economic zone with a hub city can be called an industrial corridor.[6] In Ethiopia, Addis Ababa and its vicinity is a naturally arising industrial corridor. The federal government has a plan to create similar industrial corridors in other parts of the country.

Since industrial clusters and corridors have many definitions, the user of these terms should be careful not to mix different meanings. Some of them are useful for Ethiopia's industrial development, but others are not. Numbers (i) and (vii) are too advanced for Ethiopia's reality. Number (ii) can serve as a reference in building industrial zones to attract foreign investment, but perhaps on a smaller scale than in East Asia. Number (iii) is useful in formulating small and medium enterprise (SME) policy. Number (vi) gives another entirely different perspective on development along a transport corridor such as the Djibouti-Addis Ababa highway.

In Ethiopia, number (xi) is guiding the regional development plan of the federal government but the plan remains broad and ambiguous. This idea must be followed up with regional development plans with concrete projects. Separately, the establishment of integrated agro food parks, proposed in the food processing master plan draft, may take advantage of some of these concepts selectively. The idea that regional development must integrate all related programs by different ministries and donors into an organic whole is a sound one. Policy coordination required for this initiative should be provided jointly by MOTI and the Ministry of Agriculture and Rural Development (MOARD).

The concept(s) of industrial clusters and industrial corridors most useful for Ethiopia's development strategy should be identified, modified (if necessary), and integrated into the next PASDEP. Industrial estates for local investors and those aimed at inviting FDI generally require different conditions. While both may commonly require good administration, land preparation, access road, power, water, and a reliable labor supply, local investors may need more managerial, technical, and financial support, while harnessing FDI dynamism may require strategic FDI marketing, an appropriate incentive package, quick and low-cost access to global markets, and so on. Specific requirements also differ from one industry to another and even from one FDI firm to another. A development strategy should be drafted with these different requirements in mind.

[6] This is the definition of industrial corridor which Prime Minister Meles explained to us in our policy dialogue.

6-6. SME promotion

6-1. SME promotion should clarify targeted firms and activities.
6-2. SME promotion policy with clear targets and based on relevant international experiences should be created and strengthened as the key component of industrialization strategy.

SME promotion is a popular industrial policy tool around the world but its content and results differ greatly across countries. Most countries produce few results because they fail to identify proper goals and lack concrete knowledge of how to conduct effective promotion. Ethiopia's SME policy also remains underdeveloped. Its goal must be re-defined with clarity and concreteness and its policy instruments and mechanism must be strengthened by learning selectively from successful countries.

The objectives of SME policy can be broadly divided into the generation of income and job opportunities for the general population (poverty reduction) and the selective support of excellent SMEs to become creators of internal value and competitors in global markets (competitiveness). Both of these objectives are important and may be pursued in parallel, but the goals, strategies, and instruments they require are significantly different and should not be mixed.

In Japan, where both large enterprises and SMEs are historically well developed, the purpose of SME policy in the post-WW2 period shifted gradually from the protection of SMEs against exploitation by large parent firms to the encouragement of innovation by SMEs as a source of global competitiveness. Japanese policy instruments and mechanisms are highly complex, combining multiple channels for public private partnership, participatory policy making ("deliberation councils"), technical assistance, financial support, repeated consultation, and so on. The *Shindan* System (enterprise diagnosis and advisory system), established in 1948 to officially train and certify SME management consultants, is well developed and effective in Japan.[7] However, the Japanese model is probably too difficult for most developing countries to adopt initially.

In Malaysia and Thailand, where the economy is highly industrialized but dominated by FDI firms in electronics, automobile and other machinery industries, the main policy goal is to increase internal value and replace foreigners with local managers, engineers, and designers. SME promotion is at the core of this strategy, together with R&D, education, technology transfer, national brand creation, etc. SME Corporation Malaysia, the lead agency for SME promotion in Malaysia, has a large number of grant and loan programs for SMEs that implement concrete and verifiable activities to improve productivity and expand business. Although different from the Japanese approach and institutionally much simpler, we consider the Malaysian programs to be one of the best SME policy packages in the

[7] For the details of the Japanese Shindan System and efforts to replicate it in Thailand, Malaysia, and Vietnam, see Ohno (2010).

world. They are clearly aimed at boosting international competitiveness and not poverty reduction.[8]

Table 6-1. Malaysia's SME Support Programs

(Small and Medium Industries Development Corporation)

Eligibility	Enterprises with more than 60% local capital, with annual sales less than RM25m, and fewer than 150 employees.
Grants	Provided for industrial linkage, business planning, product and process improvement, logistic services, overseas marketing, obtaining quality certification, improved packaging, design, labeling, halal products, etc.
Soft loans	Provided for factory relocation, ICT, etc.
Selection	"Concept papers" submitted by enterprises are evaluated by SMIDEC within 14 days and benefits disbursed within 20 working days.
Monitoring	Proposed actions are monitored after 3, 6, and 12 months, and benefits may be withdrawn if they are not implemented.
Industrial Linkage Program	Database of 18,000 companies; annual matchmaking events with the participation of over 250 local suppliers and MNCs; pioneer status with 100% tax exemption for five years and other tax privileges.

Source: Ohno, ed. (2006). Also see www.smidec.gov.my/index.jsp.

In a poor agricultural country where industrial development remains primitive and FDI absorption is limited, SME promotion covers virtually the entire industrialization strategy because almost all producers are micro or small. The term SME promotion may be too broad and ambiguous for such a country. Goals, targeted firms, and policy instruments for such promotion must be realistic and relevant to the local situation, and must be quite different from those in more advanced countries.

Ethiopia's SME policy needs to target both poverty reduction and international competitiveness. These two directions are in principle separable, and should be drafted and implemented as different strategies. The first package, which should be available to all eligible enterprises in urban or rural areas, must provide general support such as elementary management, technology, accounting, information, marketing, etc. The second package should be designed more strategically and offered conditionally only to those enterprises that demonstrate willingness and potential to excel, with an appropriate monitoring mechanism. It is necessary to re-define and re-classify SME promotion into separate policy components whose responsibilities should be assigned to different organizations (ministries and agencies). For each, legal and policy frameworks, executing and supporting organizations, industrial human resource development, management and technology assistance, finance, and enterprise

[8] For updated accounts of supporting industry promotion, which is an advanced form of SME support, in Malaysia and Thailand, see Vietnam Development Forum and Goodwill Consultant JSC (2010).

matching and marketing should be clarified.

At present, Federal Micro and Small Enterprise Development Agency (FeMSEDA)'s workshop programs are mainly directed at nationwide poverty reduction while the work conducted at the Leather and Leather Products Technology Institute (LLPTI) and the Textile and Apparel Institute, with donor assistance, is directed at producing excellence.

Chapter 7
Broadening the Policy Scope: Organizational Arrangements*

This chapter gives concrete examples of organizational arrangements and related instruments for conducting industrial policies in selected countries in East Asia—Japan, South Korea, Malaysia, and Thailand. Different countries adopted different organizational solutions to facilitate industrial policy making. The type of leadership and its effective alliance with the technocrat team were crucial determinants of each country's organizational arrangements. Special attention will be paid to the two related issues of *inter-ministerial coordination* and *stakeholder involvement*. We will also examine how these countries executed high-priority programs. While these examples may not be transferred directly to Ethiopia because of differences in the backgrounds of the countries, it is hoped that they will provide concrete suggestions about organizational arrangements that Ethiopia can selectively adopt.

7-1. Leadership and the technocrat team

One of the key ingredients of the "East Asian Miracle" was alliance between the leader and the technocrat team (Campos and Root, 1996; Ohno and Shimamura, 2007). All of the countries examined here, with varying degrees of success, had (i) a visionary leadership that led long-term national development, (ii) a team of competent economic technocrats responsible for economic policy making and implementation, and (iii) institutionalization of inter-ministerial coordination and government-business partnership. Central coordination mechanisms were created in the government machinery for formulating, implementing, and monitoring development policies (Kondo, 2005).

It is also important to note that high-performing economies in East Asia did not possess strong institutional bases at the beginning of their rapid development. Capability and institutions were strengthened during (and not before) their high growth periods. East Asian experiences confirm that state-building is a dynamic process in which the government has to build up industrial policy capability through focused hands-on efforts in the process of industrialization.

There were significant country variations in leadership type, functions of the technocrat team, and approaches to the sharing of development and industrial visions. Table 7-1 summarizes these differences among Japan, South Korea, Malaysia, and Thailand in their respective high growth periods.

* This chapter was prepared for the bilateral policy dialogue held in Addis Ababa in early September 2009 between Ethiopia and Japan. It is based on the information from official documents, a series of discussions and exchange of letters with Ethiopian leaders and high officials, and studies by the GRIPS Development Forum (GDF). All responsibility for the content shall be borne by the GDF.

Table 7-1. Alliance between Leadership and Technocrat Teams in East Asia

	Leadership Type	Technocrat Teams	Development & Industrial Vision Formulation
Japan (late 50s-70s)	Organizational leadership	MOF, EPA, MITI (super-ministry for industrial policy)	Economic and physical plans for vision sharing; industry-specific policies
S. Korea (60s-70s)	Strong personal leadership	EPB (super-ministry)	5-year plans and plans for targeted industries
Malaysia (80s-90s)	Strong personal leadership	Prime Minister's Dept. esp., EPU (super-ministry)	Vision 2020, 5-year plans; and Industrial Master Plans (IMP)
Thailand (80s)	Organizational leadership	Core macro-economic agencies (no super-ministry)	5-year plans; no industry-wide plan (except after financial crisis)

South Korea and Malaysia had strong *personal leadership*. President Park Chung-hee of South Korea (in power 1961–79) and Prime Minister Mahathir bin Mohamad of Malaysia (in power 1981–2003) were charismatic leaders. They imposed national goals, exercised strong control, and became the driving force of national development and institutional building. The Economic Planning Board (EPB) of South Korea and the Prime Minister's Department (the Economic Planning Unit (EPU) in particular) of Malaysia functioned as super-ministries to centrally coordinate the formulation, implementation, and monitoring of vision documents and development plans. These super-ministries were technocratic arms to realize leaders' visions.

By contrast, *organizational leadership* was salient in Japan and Thailand. There was no charismatic leader who ruled for a long time and there was no single super-ministry in either country. A number of key economic ministries and agencies worked in close collaboration with political leaders to formulate the vision, which was concretized into various plans and policy measures. In Japan, economic technocrats and businesses shared the idea of industrial catch-up based on economic nationalism. While a number of economic ministries participated in policy making, the Ministry of International Trade and Industry (MITI) played the lead role in coordinating and supporting private sector activities. In Thailand, linkage between macroeconomic agencies and real-sector line ministries was relatively weak, preventing the formulation of effective industrialization strategies. However, close coordination among core macroeconomic agencies provided a stable economic environment conducive for promoting private-sector led growth.[1]

Regardless of such variations in leadership, the governments of successful East Asian economies

[1] Organizational leadership refers to "mission-driven control" by powerful groups or organizations, in contrast to "goal-oriented control" by a charismatic figure (Kondo, 2005). In Thailand, the Thaksin administration (2001–06) introduced a charismatic top-down approach based on new public management, but this short period was generally considered an exceptional case in the political history of Thailand.

institutionalized government-business interactions for information sharing and policy coordination (Weiss, 1998; Weiss and Hobson, 1995; Kondo, 2005). Large flows of high-quality information between the government and businesses contributed to building mutual confidence, credible commitments, and predictability between the public and private sectors. Moreover, the nature and intensity of government-business coordination have evolved over time as the private sector has improved its capability (see section 4-3-1 for Korea's HCI drive).

7-2. Mechanisms for inter-ministerial coordination and stakeholder involvement

Industrial development has multi-sectoral dimensions, involving not only industrialization strategy in the narrow sense but also agriculture (inputs and markets), infrastructure, skill development, science and technology, the environment, and so forth. Moreover, unlike the social or infrastructure sectors, the industry sector is not public-expenditure intensive. Since private agents are the main counterpart of industrial strategy making, consideration must be given not only to budget allocation but also to providing incentives and a regulatory framework conducive to business activities.[2] For these reasons, effective industrial policy formulation and implementation requires (i) inter-agency coordination mechanisms; (ii) constructive and continuous contacts with businesses; and (iii) mechanisms for frequently reviewing and flexibly adjusting policy implementation.

Not all East Asian governments had industry-wide policies or overall industrial master plans. Regardless of the existence of such documents, the governments of successful economies all devised centralized mechanisms for inter-ministerial coordination and instruments for government-business partnership for industrial policymaking and implementation. They included deliberation councils, steering committees at the national or sectoral level, working groups, special task forces, government-business forums, and industry-specific or function-specific institutes. The following accounts give concrete examples of organizational arrangements and instruments adopted by selected East Asian countries.

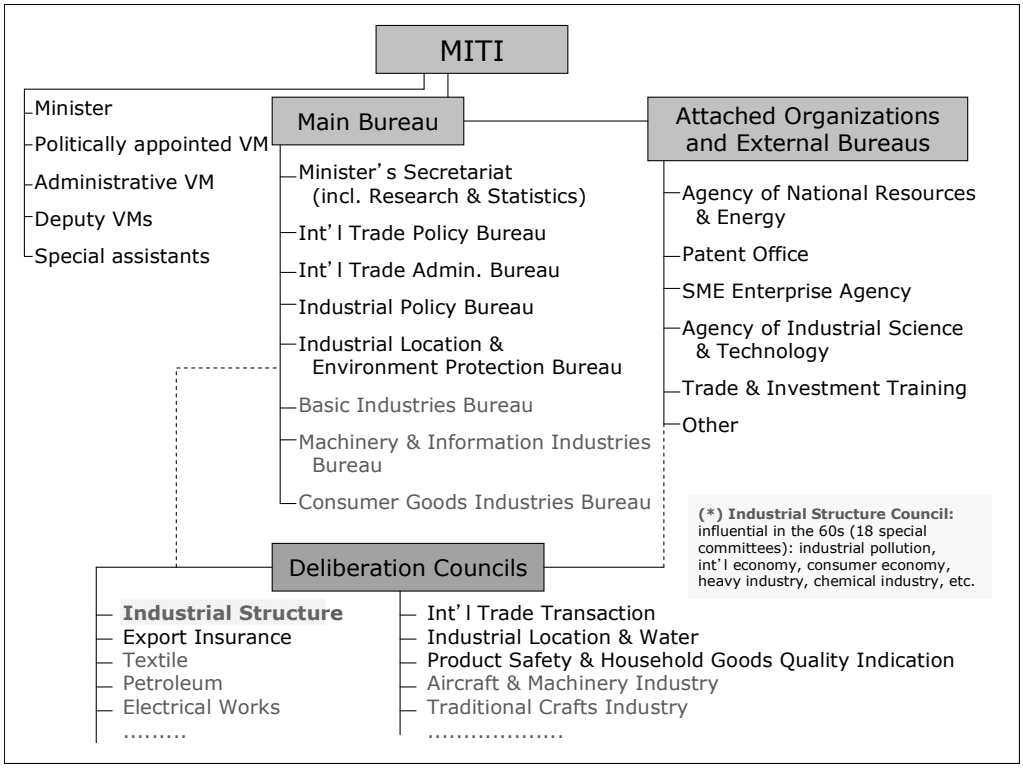
7-2-1. Japan: MITI and the use of deliberation councils in a bottom-up approach

Japanese economic ministries in the late 1950s to the 1970s included the Economic Planning Agency (EPA) under the Prime Minister's Office, the Ministry of Finance (MOF), and the Ministry of International Trade and Industry (MITI, currently the Ministry of Economy, Trade and Industry), which collectively assumed the primary role in formulating medium- and long-term national visions and economic plans. In addition, the EPA and, subsequently, the Land Agency (established in 1974)

[2] This applies to the productive sector in general, including agriculture. Based on similar analogies, Mick Foster, a proponent for Sector-Wide Approach (SWAp) and new aid modalities such as budget support, pool funds, and so on, recognizes the difficulty in introducing agricultural SWAp in Sub-Saharan Africa compared with using SWAp in the health and education sectors (Foster, et. al. 2001).

under the Prime Minister's Office, formulated spatial plans that included corridors, industrial zones, and land and regional development plans. Responsible ministries or agencies organized deliberation councils whose members were representatives from other ministries, business leaders, experts, and academicians. In Japan, deliberation councils functioned as the key instrument for vision making, policy consultation and coordination, and information sharing within and outside the government.

Based on a shared vision and shared policy directions, MITI assumed full responsibility in industrial policy formulation and implementation. According to Okimoto (1989), MITI was the *de facto* super-ministry for industrial policy. Compared to the more fragmented industrial policy making mechanism in the United States (US), MITI was distinctive in: (i) having broad jurisdiction over many industrial and functional sectors from small and medium enterprises (SME) to basic industries such as petroleum and steel, international trade, and even environmental protection; and (ii) having both vertical (industry-based) and horizontal (functional or cross-industrial) bureaus (Figure 7-1).



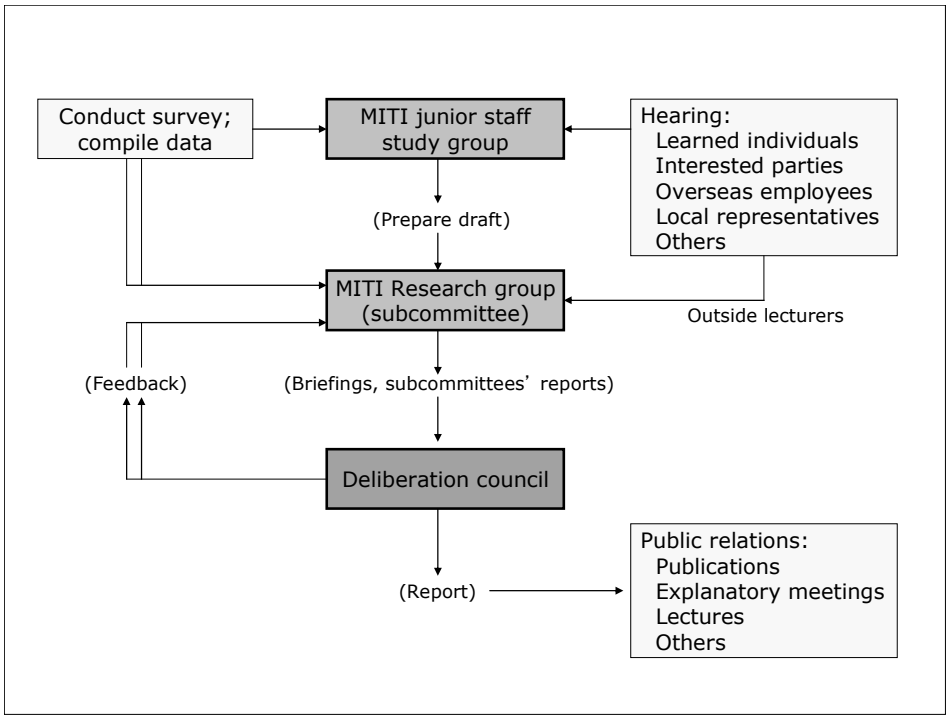
Source: Adapted from Okimoto (1989), p.117, Figure 3.2.

Figure 7-1. Japan: The Structure of the Ministry of International Trade and Industry

Deliberation councils were extensively used by MITI as a policy making instrument. Deliberation councils were managed by a secretariat staffed by MITI officials. With members from private businesses, deliberation councils provided a forum in which the government and businesses met and discussed policy issues and business trends, promoting consensus-building (World Bank, 1993).

Moreover, the structure of deliberation councils reflected both vertical and horizontal bureaus within MITI. This contributed to enhancing MITI's capacity to aggregate diverse interests (Okimoto, 1989). Among deliberation councils, the Industrial Structure Council, established in 1964, was most influential as it managed the industrial policy in its entirety by the participation of representatives from the public and private sectors (Johnson, 1986). The Industrial Structure Council drafted a vision for industrial policies for each decade. It published the vision of Heavy and Chemical Industry (HCI) in the 1960s, knowledge-intensive industries in the 1970s, creativity and knowledge-based industries in the 1980s, and better quality of life in the 1990s (Kawakita, 1991). The Industrial Structure Council also discussed measures to support pioneer industries and ensure the transition of sunset industries.

Japan's policymaking process was characterized by a bottom-up approach in which policy formulation started with MITI's junior officials gathering and analyzing data and information and conducting intensive hearings from various stakeholders, especially the business community (Figure 7-2). The information collected served as the basic input for subsequent discussions in the subcommittee and the deliberation council, which respectively drafted and finalized policy recommendations. Throughout the process, deputy division directors (officials in their mid-thirties) were at the center of communication flows both inside MITI and between MITI and the private sector and thus had a considerable voice in determining the policy direction (Okimoto, 1989).

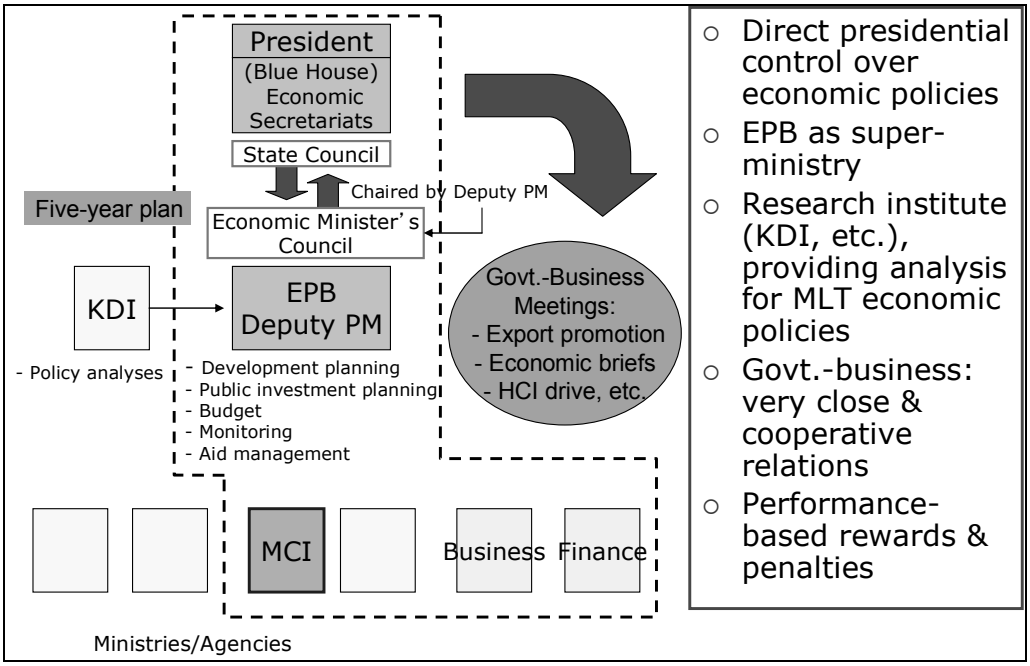


Source: Ono (1992).

Figure 7-2. Japan: MITI's Deliberation Council and Policy Formulation (late 1950s–early 1970s)

7-2-2. South Korea: the super-ministry and the top-down approach

During the 1960s and 70s, President Park Chung-hee exercised strong personal leadership. This was a top-down approach to economic policy making, implementation and monitoring (Figure 7-3). The EPB, created in 1961, was designated as a super-ministry integrating development planning, budget control, aid management, overall policy coordination, and monitoring.[3] Headed by the Deputy Prime Minister who chaired the Economic Minister's Council and directly reporting to the President, the EPB was above other ministries and agencies. Policy research institutes also played an important role in applying specialized knowledge and expertise to produce analyses of long-term issues. Among them, the Korean Development Institute (KDI), established in 1971, assisted the EPB in formulating medium- and long-term economic policies.[4]



Source: Author.

Figure 7-3. South Korea: Development Vision and Government-Business Partnership (1960s–70s)

[3] EPB combined several strategic functions previously entrusted to different ministries. These included: (i) development planning, which was originally with the Ministry of Reconstruction working with USAID in the aftermath of the Korean War; (ii) budget formulation; (iii) collection and evaluation of census and other statistics that was originally done by the Ministry of Internal Affairs; and (iv) jurisdiction over the inflow of foreign capital and technology (Kim and Leipziger, 1993).

[4] Stimulated by KDI's success, other ministries also established institutes under their jurisdictions. These included the Korean Education Development Institute (KEDI) in 1972 by the Ministry of Education, the Korean Rural Economics Institute (KREI) in 1978 by the Ministry of Agriculture and Fishery, and the Korean Institute for Human Settlement (KIHS) in 1978 by the Ministry of Construction. By 1992, there were at least 10 policy research institutes in the Korean government (Kim and Leipziger, 1993).

From the mid 1960s to the early 1980s, a close and cooperative relationship existed between the government and private businesses. Meetings were held frequently and regularly between leaders of both groups. The Monthly Export Promotion Meeting was particularly important in coordinating the export drive. It was presided over by President Park and attended by selected business association leaders, governors of financial institutions, major export enterprises, and economic ministries. In the meeting, President Park would first be given briefings on the achievement of export targets from every business receiving subsidized policy loans. Second, members discussed problems of specific industries. Third, business members expressed their views on export market trends and examined the drafts of regulations and policies. Fourth, based on the opinions of the business community, President Park ordered relevant departments of the ministries to adopt remedial measures. In subsequent meetings, ministries were obliged to report on their actions and industry performance (World Bank, 1993; Cheng, et. al., 1996; Kondo, 2005).

To prepare for these meetings, the Ministry of Commerce and Industry (MCI) collected information from individual exporters on a monthly, weekly, and sometimes even daily basis. It also monitored and analyzed market conditions. Moreover, lower-level meetings among middle managers in private industries, middle-level officials in the government, and experts and academicians supplemented the Monthly Export Promotion Meetings. These meetings took place in the form of industrial discussion groups, divided into either functional or sectoral groups depending on the issue (Campos and Root, 1996).

President Park also organized the Monthly Economic Briefing. Like the Monthly Export Promotion Meeting, the briefing was attended by the President, EPB, business leaders, and representatives of financial institutions. While the Monthly Export Promotion Meeting focused on devising countermeasures to eliminate impediments to export growth, the Briefing paid more attention to analyzing and monitoring economic performance regarding exports (Kondo, 2005).

7-2-3. Malaysia: A super-ministry and multi-layered, inter-ministerial coordination

Since independence in 1957, the successive Prime Ministers in Malaysia have generally exercised strong leadership, and technocrats have served as the support arm to realize the leader's vision. The organizations responsible for policymaking were mainly in the Prime Minister's Department such as the Economic Planning Unit (EPU), the Implementation and Coordination Unit (ICU), and the Public Service Department, in addition to the MOF. The EPU in particular functioned as a super-ministry, taking a lead in the formulation of long- and medium-term plans and reviews, public investment planning and development budget, as well as in aid management.

Malaysia established a multi-layered, inter-ministerial coordination mechanism for each of the

planning and implementation functions. The National Planning Council (NPC) was placed at the highest level of decision-making with regard to socio-economic matters. Chaired by the Prime Minister and comprised of key economic ministers, the NPC served virtually as the economic committee of the Cabinet. Below the NPC was the National Development Planning Committee (NDPC), a working level planning committee chaired by the Chief Secretary to the government and consisting of the heads of all ministries. The EPU acted as the secretariat, and a similar planning setup existed at the state and district levels. The National Action Council (NAC), chaired by the Prime Minister, had the highest authority over the overall implementation and coordination of development strategies. It met regularly with selected government agencies for intensive review of progress of and problems with development strategies. The ICU served as the secretariat. A similar institutional setup was copied at the state and district levels.

During the 1971–1985 period, *Bumiputra* or the New Economic Policy (NEP) was the overriding policy framework in Malaysia.[5] The government-business relationship became somewhat antagonistic because the NEP favored the ethnic Malay and the government also established a number of state-owned enterprises. A major breakthrough in industrial policy was made in 1981 when Prime Minister Mahathir took office. Mahathir renovated economic policies and institutional arrangements for a strategic government-business relationship. In 1981 he launched the Look East Policy, which urged Malaysians to learn from the Japanese and Korean experiences in economic development. He launched the Vision of Malaysia Incorporated in 1983 and started Vision 2020, with a pro-business orientation, in 1991. The Ministry of International Trade and Industry (MITI) of Malaysia formulated the first Industrial Master Plan (IMP1, 1986–95), which laid the foundation for manufacturing to become the leading sector of the economy.

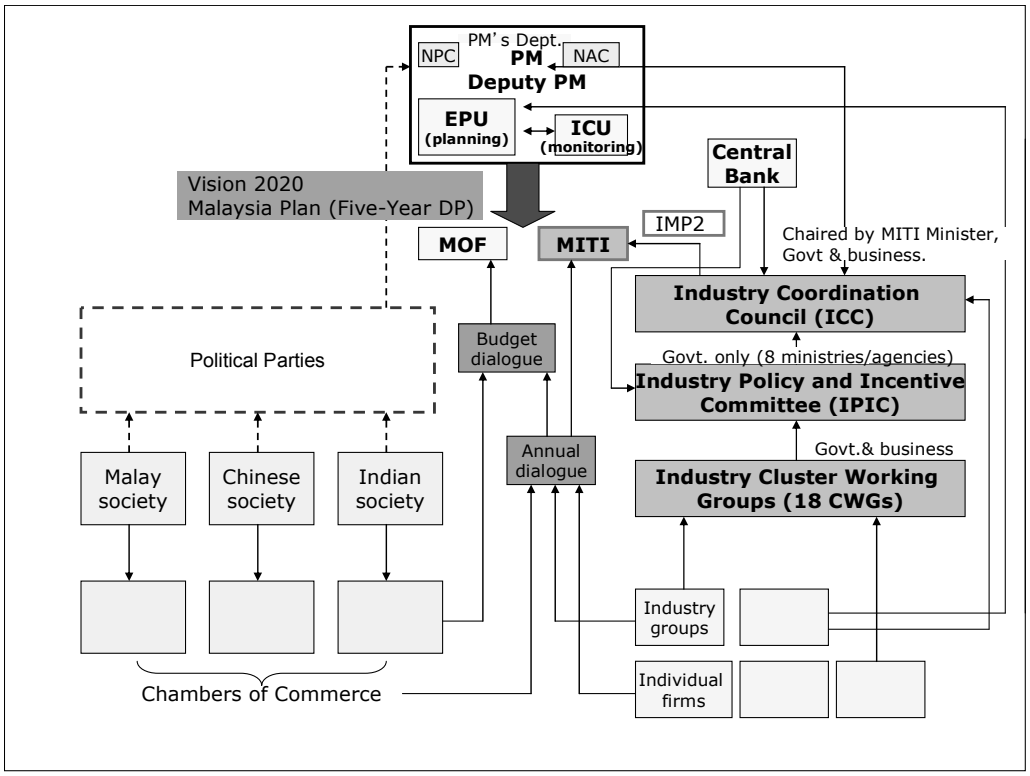
To realize Vision 2020, the second Industrial Master Plan (IMP2, 1996–2005) aimed at improving the competitiveness of manufacturing by broadening and raising its activities along the value chain curve. Its two key thrusts were “manufacturing plus plus” and “cluster-based industrial development” (Ohno, 2006). The background paper was prepared by a researcher at the Malaysian Institute of Economic Research (MIER). IMP2 paid greater attention than IMP1 to the institutionalization of policy coordination mechanisms and established the following three-layered bodies (Figure 7-4).

(i) The Industrial Coordination Council (ICC), aimed at monitoring the progress of IMP2 and examining problems raised by the subordinate committees. It was chaired by the Minister of the International Trade and Industry and included eight officials from MITI, EPU, MOF, Central Bank, related economic ministries (at the level of permanent secretary), and 15 business representatives (Chamber of Commerce, Federations of Malaysian Manufacturers, major industrial associations).

[5] The NEP (or *Bumiputra* policy) was an affirmative action plan aimed at poverty problems and imbalances among ethnic groups in favor of indigenous Malay. It was formulated in 1971 in response to the 1969 ethnic riot.

(ii) The Industrial Policy and Incentive Committee (IPIC), aimed at examining investment promotion policies. IPIC members were limited to economic technocrats (officials from eight ministries and agencies).

(iii) The Public-Private Cluster Working Group (CWG) and the Strategic Thrust and Initiative Task Force (STITF). The members consisted of both government officials and business representatives. As subordinate groups to IPIC, the former discussed the promotion of 18 targeted sectors in IMP2, while the latter examined policy measures to build up international competitiveness and prepare for economic globalization (Torii, 2000; Kondo, 2005).



Source: Adapted from Torii (2000), p.166, Figure 2.

Figure 7-4. Malaysia: Mechanisms for Industrial Policy Coordination (1991–)

Another important instrument for realizing Vision 2020 was the Vision of Malaysia Incorporated, which regarded the government-business relationship as a firm-type organization. Although announced in the early 1980s, its institutionalization began only in 1991 when Vision 2020 was launched. Similar to IMP2, the Vision of Malaysia Incorporated established multi-layered bodies.

At the highest policy level, the Malaysian Business Council (MBC) was established in 1991 to share problems and information on industrial development among political, government, and business leaders. Modeled on Korea's Monthly Export Promotion Meeting, the MBC was chaired by the Prime Minister and managed by the Prime Minister's Department. The members included 10 key ministers and 10 officials, 55 business representatives, and some representatives from labor. MBC facilitated

direct communication among big businesses, labor, and the Prime Minister. At the working level, the Malaysia Incorporated Officials' Committee was established in 1993. The Committee was chaired by the Chief Cabinet Secretary of the Prime Minister's Department, and the members included government officials, business associations, and business leaders. It was modeled after Japan's government-business relations.

Furthermore, all government branches and federal states were requested to establish government-business councils and annual forums. Although the frequency of their meetings varied among agencies, well-known examples included the annual budget dialogue organized by the MOF to seek business opinions prior to budget formulation, and the annual trade industrial dialogue organized by MITI, which had started even before 1991.

7-2-4. Thailand: National and sectoral steering committees for Industrial Restructuring Plan

Unlike the three countries mentioned above, the Thai government traditionally had no industrial sector planning and no industrial targeting strategy (Christiensen, et. al., 1993). Policies were most effective in maintaining macroeconomic stability, which was conducive to trade, investment, and private sector growth. No single super-ministry existed, and until the late 1990s the core macroeconomic agencies—the National Economic and Social Development Board (NESDB), the Bureau of the Budget, the Fiscal Policy Office (FPO), and the Bank of Thailand—collectively exercised strong power and shared responsibilities for economic policymaking.

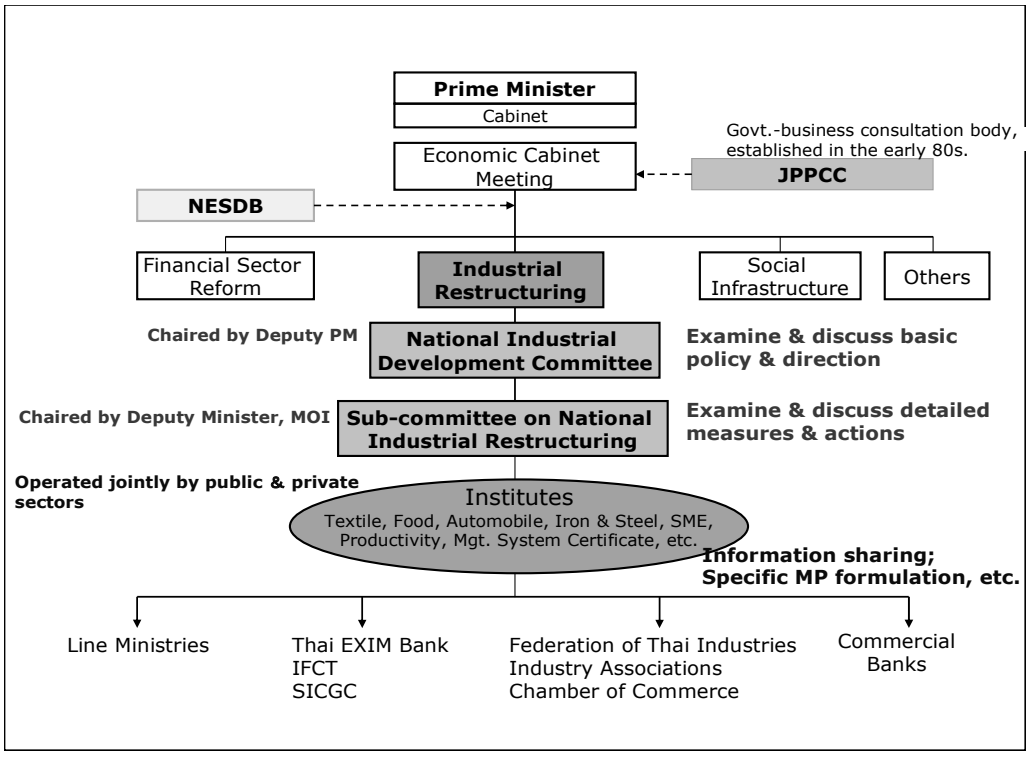
The Asian financial crisis that erupted in July 1997 prompted the Thai government to conduct a comprehensive industry review. Pressed by the circumstances, the government quickly formulated the Industrial Restructuring Plan (IRP) for enhancing industrial competitiveness with due attention to social conditions. The IRP consisted of the Master Plan, the Strategic Plan, and the Action Plan for industrial restructuring, and it included as its objectives upgrading labor skills in target industries, supporting small and medium enterprises, relocating high pollution industries, and promoting clean technology. The Ministry of Industry (MOI) was the leading ministry, and it organized the involvement of various stakeholders such as the public sector, businesses, and academicians. Although the IRP was formulated and implemented within the frameworks of structural adjustment loans from the World Bank and the Asian Development Bank, the Thai government took full initiative in developing the content of the Master Plan, the Strategic Plan, and the Action Plan.

The IRP was formulated in the following steps (Figure 7-5).[6] First, MOI reviewed industrial research

[6] Based on the Industrial Restructuring Plan (1998–2002), the National Industrial Development Committee, unofficial translation by Vibool Chandrangsu, as a contribution of Deutsche Investitions und Entwicklungsgesellschaft mbH (DEG) and the Regional Advisory Service Project.

from several sources, such as the Thailand Development and Research Institute (TDRI) and the Chulalongkorn University, and drafted the guidelines for industrial restructuring in consultation with the agencies concerned. The Cabinet approved the guidelines, and the National Industrial Development Committee was established in September 1997 to supervise and manage the formulation of the IRP. The Committee was chaired by the Deputy Prime Minister and managed by MOI with the participation of related ministries, businesses, and academicians. In January 1998, the Industrial Restructuring Master Plan was approved by the Cabinet.

The National Industrial Development Committee appointed a subcommittee to prepare the Strategic Plan and the Action Plan for Industrial Restructuring. The subcommittee was chaired by the Deputy Minister of MOI. The Director General of the Office of Industrial Economics and a representative from the Industrial Promotion Department acted as the secretariat and prepared these plans in consultation with the public and private sectors, investment promotion agencies, and academicians. Workshops were held for this purpose. The Strategic Plan, approved by the Cabinet in March 1998, provided a framework for the restructuring of 13 industrial sectors. Guided by this framework, the Action Plan was drafted and approved by the National Industrial Development Committee in June 1998, and subsequently by the Cabinet.



Source: Adapted from Higashi (2000), p.166, Figure 3.

Figure 7-5. Thailand: Formulation and Implementation of IRP (after 1997)

Furthermore, ten specialized "institutes" were established to design concrete promotional measures for targeted industries and themes and to cope with problems in the IRP implementation process. They were operated jointly by the public and private sectors, each with its own staff and board. They acted as a hub of information sharing and consultation between government and businesses and in some cases formulated industry-specific master plans (e.g., Thai Automobile Master Plan 2002–2006). Some institutes originated from the Industry Promotion Department of the MOI while others were transformed from different existing agencies or established by donor assistance.

Table 7-2 shows these ten specialized institutes. They included six industry-specific institutes (textile, food, automobile, electrical and electronics, cane and sugar research, and iron and steel) and four thematic institutes (productivity, technical and vocational education and training (TVET), management and certification, and SME development).

Table 7-2. Thailand: Institutes Created as Part of IRP (as of Oct. 1999)

Name	Start-up Date	Organizations
Thailand Productivity Institute	June 1995	Originated from MOI industry promotion dept. 20 Board members, 161 staff.
Thai-German Institute	Nov. 1995	Financial cooperation from KfW, GDC. Technical training (CNC, CAM/CAD, etc.), 12 Board members, 79 staff, 5 German experts.
Thailand Textile Institute	June 1997	Based on MOI industry promotion dept. and industry association. 20 Board members, 27 staff.
National Food Institute (NFI)	Oct. 1996	Based on MOI industry promotion dept. and industry association. 20 Board members, 27 staff.
Management Systems Certification Institute (MSCI)	March 1999	Originated from Thai Industrial Standard Institute (TISI). 14 Board members, 55 staff.
Thailand Automotive Institute (TAI)	April 1999	Supporting industry development. 20 Board members, 28 staff
Electrical & Electronics Institute (EEI)	Feb. 1999	Supporting industry development. 29 Board members, 28 staff.
Foundation for Cane & Sugar Research Institute	April 1999	Originated from Cane & Sugar Research Institute. 13 Board members.
Institute for SME Development	June 1999	Modeled on Japan's SME Univ. Operated by Thammasat Univ. in cooperation with 8 local universities. 21 Board members.
The Iron & Steel Institute of Thailand	Dec. 1998 (cabinet approval)	Aimed at joint marketing promotion of four steel companies (oversupply)

Source: Higashi (2000). Reprinted from Table 4-1.

7-3. Mechanisms for executing high priority programs

Successful East Asian economies organized special task forces and national committees to plan, implement and monitor high-priority programs. As the examples below show, these task forces and committees were closely supervised by top leaders, and their decisions were often accorded cabinet-level authority. Secretariat teams were established in relevant ministries and agencies and

given the strong authority to manage the entire process and do the necessary inter-agency coordination and stakeholder consultations. In many cases, the process combined both top-down and bottom-up approaches. This strategy facilitated the gathering of high-quality information, "fast-track" decision-making, and rapid problem-solving.

7-3-1. South Korea: Special task forces for export drive and HCI drive

As mentioned, in South Korea, the export drive was one of the highest national priorities under the Park administration. The President chaired monthly export promotion meetings at which MCI served as the secretariat. The meetings monitored export performance, identified bottlenecks, and discussed concrete measures for promoting exports. A notable point was that the President imposed rigid performance standards on subsidized businesses under a strict monitoring mechanism. The government and businesses assumed mutual responsibilities. On the one hand, ministries were ordered by the President to take measures and report the results at the next meeting. On the other, businesses were rewarded and penalized according to their export performance; high performing companies were not only given financial and fiscal incentives but also awarded medals.[7] As explained above, this top-down approach was complemented by a range of bottom-up activities coordinated by MCI with the involvement of businesses, concerned ministries and academicians at the operational level.

The HCI drive was another high-priority program during 1973–79. Under the promotional laws, six strategic industries were targeted including industrial machinery, shipbuilding, electronics, steel, and petrochemicals. The Third Five-Year Plan (1972–76) set specific targets for physical quantities of steel, ships, automobiles, and so on, to be produced by 1980.

To implement this program, the HCI Promotion Committee was established in 1973. Chaired by the President himself, the Committee was given the highest authority, equal to the State Council. At the working level, a special task force, called the HCI Planning Team, was established with the membership of high-level economic technocrats from the Economic Secretariat of the Blue House, the EPB, and MCI. Because the HCI Planning Team was headed by the Presidential Secretary of Economic Affairs of the Blue House, the HCI program was entirely under the direct control of the President (Hong, 1997). Massive government support, including import protection, tax incentives, and most importantly, preferential access to the credit of the National Investment Fund, was provided to strategic industries.

It must be admitted that the HCI drive provoked controversy. This was partly because the decision making was highly centralized at the Blue House and the MCI, bypassing the more orthodox

[7] In the Confucian culture, public recognition by the president has special meaning with high prestige.

mechanism led by the EPB. It was also because its large financial and fiscal mobilization forced the EPB to make difficult decisions to balance micro investment planning with macroeconomic management.

The nature of industrial policy making changed significantly under President Chun Doo-hwan (in power 1980–88). A typical example was his semiconductor-related policies. In contrast to the promotion effort up until the 1970s, the government focused on formulating industry guidelines and refrained from actively pushing policy targets. In addition, most of these policies were demanded by the private sector rather than initiated by the government. When the Basic Plan for the Promotion of the Electronics Industry was prepared, MCI formed a working group with sixteen members including the head of MCI's Electric and Electronics Industry Bureau (secretariat), related ministries, private companies, the Korean Institute of Electronics Technology, and the Electronics Industry Association of Korea (Hong, 1997).

7-3-2. Thailand: Cabinet-level and national committees for Eastern Seaboard Development

The 1980s was the time when Thailand made a leap forward in development by adopting export-oriented industrialization. Prior to this, in the late 1970s, the government faced serious balance of payments problems triggered by the oil crises, and strengthening industrial competitiveness became an urgent goal for the country. Prime Minister Prem Tinsulanonda (in power 1980–88) took the lead in pushing a priority policy agenda and instituted mechanisms for addressing three national priorities: (i) Eastern Seaboard Development (ESD); (ii) government-business consultation; and (iii) rural development. All of these were highlighted in the Fifth National Economic and Social Development Plan (1982–86).

For each of the three priority programs, Prime Minister Prem established a national committee under his chairmanship and entrusted the technocrat teams of NESDB to plan, coordinate and monitor respective programs. Below, we will examine how these committees were organized and functioned for two of the national priority programs, (i) and (ii) above.

As Thailand's first forward-looking strategic initiative for economic take-off, the ESD program was a flagship regional development program that received the highest priority in the Fifth and Sixth Development Plans.[8] Located 80 to 200 km southeast of Bangkok (the Thai capital), the ESD program had an unprecedented scale with numerous project components in infrastructure development including deep seaports, roads, railways, power and communication, etc; industrial zones; urban development; water resources; and environmental management.[9] It aimed to strengthen international

[8] The Fifth Development Plan had one entire chapter dedicated to the ESD program.
[9] The basic plan for ESD was formulated with the funding of the World Bank. Japan provided wide-ranging assistance

competitiveness by building industrial zones and to generate employment outside Bangkok to mitigate concentration of population and industry.

In late 1980, Prime Minister Prem established special coordination and decision-making mechanisms exclusively for the program. These included: (i) the Eastern Seaboard Development Committee (ESDC), a cabinet-level national committee chaired by the Prime Minister and managed by the Secretary General of NESDB; (ii) sub-committees chaired by the ministers of government organizations in charge; and (iii) the Office of the Eastern Seaboard Development Committee (OESD) within NESDB to act as the secretariat. The OESD was headed by the Deputy Secretary General of the NESDB.

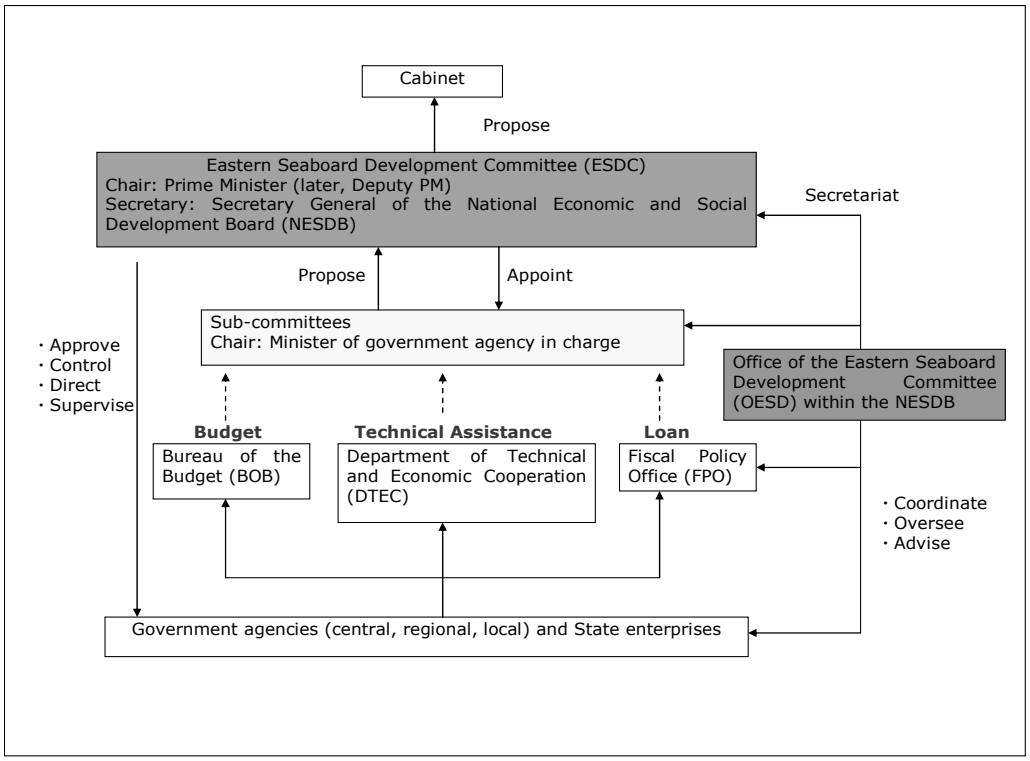
These mechanisms combined top-down (policy issues) and bottom-up (technical issues) approaches and facilitated both vertical and horizontal coordination. The presence of a cabinet-level committee enabled quick decision-making on priority policy issues (*de facto* "fast track" processes) and strategic use of donor assistance. The OESD coordinated the Budget Bureau, the Department of Technical and Economic Cooperation (DTEC), and the Fiscal Policy Office (responsible for loan aid) to work on the details of the budget and aid resource mobilization. In this way, the ESD program was treated as a special program outside the routine policy making channels. The mechanisms also incorporated multi-layered check and balance functions. The NESDB secretariat acted as an influential liaison office to plan and implement the program. Highly motivated and competent technocrats were recruited, many of them seconded from related ministries and agencies, for this task (Ohno and Shimamura, 2007). Figure 7-6 describes the overall decision-making structure for the ESD program.

The National Joint Public and Private Consultative Committee (JPPCC) was the first formal mechanism for public and private sector collaboration in Thailand. Designating the private sector as the engine of growth, Prime Minister Prem established JPPCC in 1981. Like the ESDC, it was chaired by Prime Minister Prem, and the Secretary General of NESDB served as the committee secretary. Other members were deputy prime ministers, ministers and deputy ministers of economic ministries, the Governor of the Bank of Thailand, and the Secretary General of the Board of Investment. The private sector was represented by the Thai Chamber of Commerce, the Federation of Thai Industries, and the Thai Bankers Association.

JPPCC differed from the government-business forums in Japan and Korea examined above. Only matters of general interest were discussed, typically, problems that plagued the majority of (if not all) large firms. Nevertheless, because these forums were open to the press, they put pressure on the Prime

including both technical cooperation (master plans, feasibility studies, etc.) and financial cooperation. Regarding the latter, during the period of 1982–1993, Japan financed 16 major infrastructure projects amounting to a total loan commitment of 179 billion yen (via 27 loan agreements). The total public investment for ESD-related infrastructure was estimated at around USD1.5 billion, which was largely funded by Japanese ODA loans.

Minister to respond to the reform proposals put forward by the business community. Through JPPCC, information on the impact of regulations, tax measures, and trade policy on the performance of individual firms as well as the national economy was quickly communicated to officials, helping the government to respond to the problems. Big businesses were incorporated into the policymaking process, especially in the making of trade policy (Campos and Root, 1996).



Source: Masumi Shimamura – drawn upon provisions from the Regulations of the Office of the Prime Minister Governing the ESD (1985) and information provided by NESDB, TICA, BOB, FPO, PDMO and MOI to the GRIPS team.

Figure 7-6. Thailand: Coordination and Decision-making for ESD

7-4. Implications for Ethiopia

Over the last five years, the Ethiopian government has made impressive achievements in building mechanisms for implementing the Industrial Development Strategy (IDS).

First, the government organized the Monthly Export Steering Committee, chaired by the Prime Minister and managed by MOTI, with the participation of related ministries and agencies, to review export performance and discuss measures to be taken for export promotion.

Second, MOTI regularly organizes sectoral forums with businesses and meets industrial associations (for example, textile and garment, leather and leather products, agro-processing, horticulture) to discuss export targets of respective industrial sectors.

Third, MOTI has built its structure around "priority" industry departments, based on the strategic vision of IDS, and established industry-specific "Development Centers" to act as a hub of formulating and implementing sectoral master plans, monitoring business performance, supporting problem-solving, and preparing reports to the Monthly Export Steering Committee. Furthermore, sector-specific technology and training institutes, especially the Leather and Leather Products Technology Institute (LLPTI) and the Textile and Apparel Institute, have been established to mobilize donor support and provide technical advice to firms.

Fourth, Ethiopia has devised instruments to gather information on the problems faced by the private sector. These include dialogues between government and chambers of commerce at both national and local levels; the Private Sector Development (PSD) Hub, located in the Addis Ababa Chamber of Commerce, which conducts research and analyses for private sector development; and the PSD Sector/Technical Working Group, which facilitates government-donor aid coordination.

These are laudable achievements in a relatively short period. Nevertheless, as Ethiopia hopes to move up to the next stage of industrial development, continuous efforts are required to build additional policy capability. For this purpose, based on the experiences of East Asia, the Ethiopian government may consider strengthening the following organizational aspects:

(i) A mechanism for constantly reviewing and adjusting industry-wide policy. This is particularly important as there are ongoing discussions on the possible expansion of the policy scope of the IDS or moving to the "second-generation" of industrial policy.[10] Such a mechanism would also be useful in coping with unexpected shocks, such as a global financial crisis or an acute foreign exchange shortage.

(ii) A mechanism for involving various stakeholders—not only businesses as has already been done, but also research institutes, experts, and academicians. East Asian economies have actively mobilized the knowledge and expertise from experts and researchers outside the government and involved them in the policymaking process through deliberation councils, national and sector committees, institutes, and other informal discussion meetings. As suggested in chapter 6, Ethiopian experts and researchers may be mobilized for the evaluation of past and future industrial promotion measures, whose results should serve as analytical input to the industry chapter of the next *A Plan for Accelerated and Sustained Development to End Poverty* (PASDEP) (see (iv) below).

(iii) A mechanism for addressing cross-cutting or functional issues, in addition to industry-specific

[10] World Bank (2009), Annex 10: Macroeconomic Assessment and Monitoring Arrangements, p.150.

issues. Now that MOTI has made progress in building capacity to respond to industry-specific issues, it may also wish to consider how to address cross-cutting issues—for example, quality and safety standards, international trade policy, and industrial location—and make effective links between these perspectives and industry-specific support. This will become important when the planned *kaizen* program, focusing on selected pilot companies with the Japan International Cooperation Agency (JICA)'s technical cooperation, comes to a scaling-up stage and involves a larger number of firms. Cross-cutting perspectives would also be useful for ensuring methodological uniformity on sectoral master plans.

(iv) A mechanism for strengthening inter-ministerial coordination, especially among MOTI, the Ministry of Finance and Economic Development (MOFED), and the Ministry of Agriculture and Rural Development (MOARD). Collaboration between MOTI and MOFED is crucial as MOTI prepares the industry chapter of the next PASDEP and, subsequently, the five-year industrial implementation plan. Moreover, since incentive measures have fiscal and financial implications for both export industry promotion and proposed import substitution, MOFED should be involved in the discussion on the possible expansion of industrial policy scope. Furthermore, to promote ADLI, it is vital that MOTI and MOARD work jointly to concretize several concepts related to the agro-industry sector such as "integrated agro food parks" and "growth corridors." Moreover, ministries and agencies charged with infrastructure development and regional governments should also be involved when necessary. All these can be achieved by strengthening inter-ministerial coordination mechanisms centered around MOTI.

To achieve these organizational goals, it is important to consider how National Graduate Institute for Policy Studies (GRIPS)-JICA industrial policy dialogue with the Ethiopian authorities may be used for the building of industrial policy capability mentioned in (i)–(iv) above. This is related to the question of how the policy-level forum and the working-level forum (Policy Dialogue Steering Committee) of the bilateral policy dialogue can contribute to promoting industrial policy coordination and stakeholder interactions that include both businesses and researchers.

Additionally, it is also useful to consider the following possibilities: (i) whether MOTI's Development Centers can in the future assume the role of managing government-business partnership in respective industrial sectors; (ii) whether to establish functional centers similar to Malaysia's STITF and Thailand's "Institutes"; and (iii) how the experience of inter-ministerial coordination under the Engineering Capacity Building Program should be used to improve the design of an inter-ministerial coordination mechanism.

Chapter 8
Policy Direction for the Next Five Years*

This chapter contains ideas and issues that may be useful in drafting the trade and industrial chapter of the *Plan for Accelerated and Sustained Development to End Poverty* (PASDEP) II (2010/11–2014/15), a national planning document currently under preparation in Ethiopia. This paper is a sequel to the previous chapters 6 and 7, which discussed cross-cutting issues and organizational arrangements for industrial policy making. The present chapter is more sharply focused on the expected content of the aforementioned chapter of PASDEP II.

In recent years the Ethiopian government has made significant efforts to enhance the policy content of the trade and industry sector. The Sustainable Development and Poverty Reduction Program (SDPRP) (2002/03–2004/05) did not have an independent chapter on trade and industry comparable to those on agricultural development, food security, education, or health. Issues on trade and industry were dealt with lightly in a cross-cutting chapter of less than four pages.[1] Subsequently, with the adoption of the Industrial Development Strategy (IDS, 2002), PASDEP I had an independent chapter for trade and industrial development that discussed more extensively (over 12 pages) the vision and principles of the IDS, targets for selected strategic sub-sectors, integration of Ethiopia's trade sector, export development, and private sector development. Nevertheless, there is a need to further upgrade the policy content of the trade and industry sector during the PASDEP II period. This is partly because the Ethiopian government plans to enlarge the policy scope from a few export-oriented industries to include import substitution industries that have high domestic demand, and also because the government is strengthening policy measures and institutions to support industry. It is hoped that sharing our ideas and concrete suggestions for Ethiopia's industrial policy direction in the next five years will contribute to the Ministry of Trade and Industry (MOTI)'s ongoing drafting work of the trade and industry chapter of PASDEP II.

The trade and industrial chapter of PASDEP II should first review recent industrial performance, a topic discussed in section 8-1 below. It should then clearly set policy direction for the next five years. This important issue is discussed in sections 8-2, 8-3, and 8-4. Priority sectors and priority issues are considered in sections 8-5 and 8-6. Additional topics of numerical targets and policy documents and organization are contained in sections 8-7 and 8-8. The last section is the conclusion.

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* This chapter was prepared in November 2009 by the GRIPS Development Forum (GDF) members of the Ethiopia-Japan bilateral policy dialogue, consisting of Kenichi Ohno, Izumi Ohno, and Akio Hosono, based on their discussions with Prime Minister Meles Zenawi, Economic Advisor to Prime Minister Dr. Newai Gebre-ab, MOTI State Minister Tadesse Haile, and other high-level policy makers of the Federal Democratic Republic of Ethiopia. We are grateful for the intellectual input of these leaders. However, the GDF bears all responsibility for the content of this document.

[1] See VIII Private Sector and Export Development of SDPRP, especially discussions on Investment Climate (8.1), Developing the Manufacturing Sector (8.7), and institutions (8.9, which refers to public-private consultative forum, chambers and sectoral associations, and other institutions giving services to the private sector).

8-1. Recent performance

During the implementation period of PASDEP I (2005/06–2009/10), overall performance of industrial growth and exports was initially very positive, especially in the first three years, but later marred by the emergence of negative effects of an overheated economy and global financial crisis—inflation, balance of payments pressure, and an acute shortage of foreign exchange—which collectively put a significant damper on the industrial performance in the last two years of PASDEP I. The drafting of PASDEP II must start with reflection on this turn of events and its implications for industrial policy formulation.

The causes of these macroeconomic difficulties will surely be analyzed by the Ministry of Finance and Economic Development (MOFED) in the first few chapters of PASDEP II. The recent macroeconomic overheating may be attributed variously and with different weights to fiscal and monetary policies, inflows of external funds, shocks transmitted from global commodity inflation and the global financial crisis, weather conditions, speculation, hoarding, and so on. The assessment of these causes is not the responsibility of MOTI, and the topic does not have to be dealt with in the trade and industry chapter of PASDEP II. However, the *consequences* of macroeconomic instability do have important bearings on the future conduct of industrial policy.

The recent decline in industrial momentum cannot be blamed solely or even mainly on the low quality of industrial policy. Unlike the health and education sectors and infrastructure construction, whose progress largely depends on proper management and adequate funding by the government (supplemented by foreign sources), the performance of productive sectors such as industry and agriculture, in which production is carried out by private agents under shifting conditions, is determined by a combination of private effort, industrial policy, and external circumstances. For illustration, let y_t be industrial performance, x_t be private effort, z_t be industrial policy and ε_t be unpredictable shocks due to external circumstances such as natural, political and macroeconomic events, then:

$$y_t = \alpha x_t + \beta z_t + \varepsilon_t$$

where α and β are coefficients that translate private effort and industrial policy into performance. Alternative functional forms, time lags, and interaction among variables may be imposed on this model. However, the key point is that the rise and fall of industrial performance cannot be traced to the movement of the policy variable alone. In fact, short-term fluctuations in y_t are often dominated by external shocks ε_t, while private effort x_t and industrial policy z_t strongly influence the long-term trend of y_t.

This means that industrial policy should not be overly affected by short-term cyclical events but should be designed and evaluated for its contribution to long-term industrial achievements smoothed over the ups and downs of the macroeconomy. For this reason, Ethiopia's recent macroeconomic difficulty by itself does not give a compelling reason to change its industrial policy.[2] In fact, the evolution of Ethiopia's industrial policy seems generally consistent with the situations that the country must cope with, which include current levels of policy capability and private dynamism. If industrial policy is to be revised, we must cite other structural reasons (see section 8-3 below). Similarly, over- and under-achievement of numerical targets in the industrial sector, such as output, export, and investment, must be interpreted with care. Neither should be the cause of unsubstantiated optimism or pessimism. To properly assess industrial policy in the PASDEP I period, we must look for signs of structural changes ($\alpha x_t + \beta z_t$) rather than simply reporting actual numbers that contain large, uncontrollable shocks (ε_t).

In this respect, there is little evidence that Ethiopian industries have made strong progress in quality improvement, international competitiveness or structural transformation in the last several years despite all-out policy support to the selected export industries. The manufacturing share of the GDP has remained stagnant in recent years and the export structure continues to be dominated by unfinished commodities. It is true that leather and flower exports rose rapidly from small bases. These were bright spots in the achievements of PASDEP I. But these results, however laudable, fell short of the high expectations of the leaders of the Ethiopian government.[3] Furthermore, many of the good industrial results may have been due to external circumstances (positive ε_t) rather than effective policy or emerging private dynamism ($\alpha x_t + \beta z_t$). In the next five years, scientific reviews examining both the costs and benefits of policy support for export promotion should be conducted in preparation for industrial policy formulation.[4]

8-2. Proactive industrial policy

The basic tenets of Ethiopian industrial policy are given by the Agricultural Development Led Industrialization (ADLI) strategy and the IDS (2002), which were discussed and analyzed in chapter 3 of this report. As all Ethiopian government officials know ADLI and IDS well, there is no need to repeat their contents in the trade and industry chapter of PASDEP II. What that chapter should do

[2] We do not entirely agree with the view that macroeconomic difficulties such as those Ethiopia is experiencing mainly come from the structural weaknesses or the lack of reform and liberalization of the real sector. Macroeconomic problems should be countered mainly by macroeconomic measures and not by industrial policy. We would at the same time like to stress that the existence of a competitive and well-diversified manufacturing sector can mitigate the impact of global shocks. In that sense, macroeconomic crisis may be a good reason to accelerate and enhance the existing industrial policy.

[3] The UNIDO/MOTI technical paper of May 2007, which examined the Ethiopian shoe manufacturing sector, pointed out a number of problems to be overcome for this sector to become internationally competitive, including the need to improve product design and quality.

[4] Such studies were suggested by section 6-3 above, initially in September 2009. JICA is currently exploring possibilities of review studies by Ethiopian researchers on the effectiveness of export promotion in the recent past.

instead is to present the orientation, the expanding scope, and the medium-term vision of industrial policy for the period up to 2014/15 in order to eventually realize the long-term goals prescribed in ADLI and IDS.

A notable feature of Ethiopia's industrial development is that the government is pursuing an industrial policy that is private sector-driven but with strong state guidance and directives as stipulated in IDS. This policy orientation is different from any of the well-known policy regimes such as socialist planning and state production (USSR or China in the past), laissez-faire and rapid integration under small government (Hong Kong, Kyrgyzstan), developmental states with infant industry promotion (Korea, Taiwan, and Malaysia), foreign direct investment (FDI)-led industrialization (Thailand, Malaysia, and Vietnam), or liberalization, privatization and integration advocated by the Washington Consensus organizations (International Monetary Fund (IMF) and the World Bank).

Nevertheless, the developmental path that Ethiopia is following seems highly relevant and applicable to the developing world in the 21st century. It is for this reason that Ethiopia's policy orientation, repeated by its leaders and stated in IDS, should be given a proper name and defined more precisely for visibility and international attention. This will also help to avoid unnecessary misunderstanding or criticism arising from confusing this policy orientation with past developmental regimes.

We propose the term *proactive industrial policy* to describe what Ethiopia aims to achieve.[5] This is a strategy adopted by a latecomer country with a strong commitment to international integration for seeking a proper balance between the state and the market through continuous learning to overcome initially weak policy capability. Its key components are acceptance of market mechanisms and globalization, dynamic learning by both government and the private sector, and complex and ever-changing interaction between the two sectors. More precisely, proactive industrial policy must satisfy all of the conditions below.

> (i) *Market-driven development under globalization*—production, investment, trade and other economic activities must be carried out primarily by the private sector under an open competitive environment generated by the market mechanism and the globalization process. Privatization, the World Trade Organization (WTO) rules, regional integration, and Free Trade Agreements (FTAs) are to be positively embraced. State-owned production is not adopted except in cases where no private agents have yet emerged to take over the state role.
>
> (ii) *A strong state*—the state assumes a strong and active role in guiding and supporting development despite the fact that all productive activities are in principle to be conducted by

[5] In section 6-1 above, industrial policy was divided into three types: (i) improving business climate generally and for all; (ii) responding quickly to the needs of the private sector; and (iii) creating dynamic comparative advantage in which proactive policy makers generate new industrial strengths and guide investors towards new activities under close coordination with private partners but without necessarily waiting for their move. The current section expands on the last type.

the private sector. The state will mobilize necessary policies to reward value creation, punish rent seeking, and lead the private sector toward a consistent national vision. A great transformation of political and economic systems must be orchestrated by the state because the market cannot initiate such a transformation.

(iii) *Retaining sufficient policy instruments for latecomer industrialization*—although globalization is willingly accepted, this does not mean that all industrial policy instruments must be instantly given up and replaced by market pressure. Rather, this means that the policy toolbox for the 21st century is different from those of Japan, Taiwan, or Korea in the past. It also implies that enlargement of the market sphere must be done in proper steps to ensure the availability of necessary policy instruments and that international pressure to open up must be consistent in scope and speed with the development strategy of the latecomer country.

(iv) *Dynamic capacity development*—improving policy capability and private dynamism, both of which are often weak in early stages of development, must be the central component of industrial policy formulation. Policy must identify immediate and concrete goals and aim at enhancing existing or potential strengths of the country rather than improving governance or capacity generally without specific goals. The policy scope and policy measures should be gradually expanded in accordance with the enhancement of policy capability and private dynamism.[6]

(v) *Internalizing skills and technology*—in the private sector, the principal method of attaining industrialization must be internalization of skills and technology embodied in the human capital of domestic citizens. This must constitute by far the most important part of industrial policy goals and measures. Resource extraction, FDI, official development assistance (ODA), and ecological and geographic advantages are also important, but they must be given positions secondary to support of skill and technology development rather than themselves becoming main policy goals or measures.

(vi) *Effective public private partnership (PPP)*—when a strong state guides the private sector, there is a risk of market distortion and suppression of entrepreneurship, which leads to economic stagnation. To avoid this risk, proactive industrial policy must always be accompanied by effective cooperation between the government and the private sector. This cooperation must be *in substance* based on mutual trust and active exchange of information and views rather than just the formal role of hosting dialogues, conducting BOT (Build-Operate-Transfer) projects, or establishing PPP mechanisms. Only when this cooperation is truly and firmly in place can the state understand the (often diverse) intentions of private firms, and the visions and strategies initiated by the state will be strongly supported by the private sector. Although the state leads, the direction it imposes is exactly what private firms want or something they admit to be desirable after the government first points out its merits.

[6] For more discussion on dynamic capacity development as practiced by East Asian states, see Ohno and Ohno (2008), a paper presented at the Initiative for Policy Dialogue conference in Addis Ababa in July 2008.

(vii) *Deep knowledge of the industry*—to avoid policy misjudgment and political capture, another important requirement for the government is accumulation of sufficient knowledge of the industries in which it intends to intervene. Leaders and practitioners of the government must go the extra mile to acquire the practical knowledge of the industry to make intelligent and well-informed decisions. Knowledge can initially be outsourced from private experts, academicians, or donors, but unless it is digested by policy makers themselves, the quality of industrial policy cannot be assured.

The industrial policy formulation described above is very different from the two extreme developmental models: socialist planning, in which the state dominates and private activities are suppressed, and the Washington Consensus doctrine, in which the state recedes to the background and markets are given full sway. Proactive industry policy aims to strike a delicate and ever-changing balance between state guidance and market orientation, between commitment to globalization and the retaining of sufficient policy tools, or between strong leadership and the need to listen to private firms carefully. As such, this policy is far more difficult to implement than simply letting the market loose or planning everything by the state machinery. A comparison of the basic approach (Washington Consensus) and the proactive approach is given below.

Table 8-1. A Comparison of Two Approaches

	Basic Approach	Proactive Approach
Market-driven development under globalization	Yes	Yes
Retaining sufficient policy tools for latecomer industrialization	?	Yes
Dynamic capacity development	?	Yes
Internalizing skills and technology	Yes	Yes
Effective public private partnership	Yes	Yes
Deep knowledge of the industry	?	Yes
A strong state	No	Yes

Policy makers may consider this to be confusing and contradictory, but one needs complex policy formulation to deal with complex reality. Ambivalent orientation in proactive industrial policy is not a problem but in fact its greatest strength. It forces policy makers to be always pragmatic, responsive and alert to changing circumstances rather than turning a blind eye to reality for the sake of ideological integrity.

Proactive industrial policy shuns abstract debates such as whether the state should intervene in the

market or whether globalization is beneficial for latecomer countries. Instead, it works at much more concrete levels of policy formulation where finding a proper mix of conflicting forces in each case is the main objective and, therefore, one-size-fits-all solutions without reference to specificities are hardly meaningful. As a result, the information requirement for proactive industrial policy is far greater than other policy regimes. Information must be constantly gathered and updated through studies and reports, visits and workshops, contact with the private sector and academics, and international assistance.

Another important feature of proactive industrial policy is its dynamic perspective. Starting from an inefficient government and a fragile private sector, it stresses learning by both sectors as the main driver of the industrialization process. This implies that the policy mix must change not only in response to shifting circumstances but also because of new capabilities acquired through effort and experience. Proactive industrial policy must grow continuously; it cannot exist under static policies and rigid organizations.

Above is a restatement of what we believe is the essence of industrial policy towards which Ethiopia is moving. Although the intention of the Ethiopian government is clear to anyone who has read its key documents and conversed with its leaders, we think it important to extract its components, detach them from the immediate Ethiopian context, and apply them more universally to assess and compare policies of other developing countries. Only through this process can a new developmental model be constructed. We recommend that this policy orientation be clearly stated as a model with broad applicability in the coming PASDEP II or any other appropriate document.

8-3. Expansion of policy space and measures

Another important statement that must be made in the trade and industrial chapter of PASDEP II is the expansion of policy space and policy measures to promote industrial development. Ethiopia's industrial policy is shifting and expanding not only because of changing circumstances but also because the country has improved or is improving its policy capability. These policy shifts and their reasons should be made clear in PASDEP II.

Improvement of industrial policy capability of the Ethiopian government is evident from the many policy actions it has taken recently as well as the statements of its leaders. This is not to say that policy capability is already high; Ethiopia needs to learn much more to become an effective industrializing country. However, it must be acknowledged that the country has vigorously learned the basics of industrial policy formulation in a relatively short period and built enough institutional foundations to tackle the next round of challenges.

Ethiopia had long been plagued by problems such as unfavorable weather, famine, and regional conflicts. By around 2002, however, most of these problems were significantly ameliorated, if not eliminated, and the country was ready to launch a serious development strategy to realize the vision of ADLI. It was at that time that the IDS was drafted and the SDPRP (2002/03–2004/05), the Ethiopian version of the poverty reduction strategy paper, was initiated. The Ethiopian achievements since then in the field of industrial policy formulation can be summarized as follows.

(i) *Policy documentation*—in addition to the IDS and SDPRP mentioned above, the master plans for leather and leather products, textile and garment, food processing, basic metal and engineering, chemicals, sugar, etc. were completed or drafted with various degrees of sophistication. The three-year plan of the SDPRP was followed by the five-year plan of PASDEP I.

(ii) *Selective export promotion*—priority sectors were declared, and meat, leather and leather products, textile and garment, and food processing were given the highest attention and generous incentives. Fresh flower exports were later added to the priority list and given similar support.

(iii) *Export steering committee*—an export steering committee based on the Korean model was established and its monthly meetings chaired by the prime minister functioned as a high-level instrument to monitor export promotion and solve problems.

(iv) *Industrial policy toolkit*—common techniques such as benchmarking, business process re-engineering (BPR), scaling up of pilot projects, business matching, institutional twinning, public private dialogue (see below), etc. have been learned and tried. Among them, benchmarking has become a popular tool for comparing performance and setting targets for Ethiopian manufacturing firms. The concept of *kaizen* was recently added to the toolkit.

(v) *High-level technology education and TVET*—to enhance engineering capability, the government has launched a fast-track program to build a number of science and technology universities all over the country and to train their teaching and research staff. At the same time, a national network of technical and vocational education and training (TVET) was established for strengthening the capability of rural small and medium enterprises (SMEs).

(vi) *Development centers and training institutes*—as a focal point to strengthen priority sectors and receive assistance, a number of development centers and training institutes have been established in leather and leather products, textile and garment, metal products, and so on.

(vii) *Public-private dialogue*—a comprehensive system of public-private dialogue at the national, regional and local levels is under construction, and industrial and business associations to promote business activities and communicate with official bodies are being set up and enhanced.

(viii) *Public administration reform*—virtually all ministries and agencies of the government have gone through a restructuring process for quick response and waste elimination by the application of BPR, a technique normally used for businesses.

(ix) *Infrastructure*—transport and power, the two infrastructure services most vital for industrial promotion, are given high priority.

(x) *Strategic mobilization of ODA, FDI and academics*—in all of the above activities, the Ethiopian government has strategically approached bilateral donors, multilateral organizations, foreign investors and foreign experts to maximize and accelerate their contribution to the national development vision.

Based on these achievements in policy capability building, the Ethiopian government should now expand its policy space and measures in the following ways.

First, the list of priority sectors should be broadened from a few export-oriented industries to include a number of import substitution industries with high domestic demand (and therefore high impact on reducing balance of payments pressure) and whose technologies are relatively easy to learn. The Ethiopian government has tentatively identified steel and metal processing, cement, glass, chemicals and pharmaceuticals as candidates. But a more detailed list of newly promoted industries must be constructed with careful studies and clear selection criteria.

Second, policy measures must also be expanded. In the PASDEP I period, greatest emphasis was placed on monthly export performance and provision of incentives to attain that goal. Incentives are one important element of industrial policy but other measures that improve skills and technology more directly or manage market failures and instabilities (such as excess competition, asset bubbles, speculation, short-termism, environmental destruction, sub-standard quality, dumping and cheap imports, global business cycles, intellectual property infringements, etc.) should be added and enhanced. Over time, the latter should become dominant to give depth and width to industrial policy while the relative weights of incentives and export monitoring should be reduced. As noted above, Ethiopia has already started to move in that direction. This movement should be accelerated in the next PASDEP period.

Third, time limits and the graduation rule should be introduced. As argued in section 6-3 of this report, industrial promotion must always be temporary and should be terminated when the purpose is achieved or when the targeted industry fails to grow. In the very early stage of industrialization (PASDEP I), the graduation clause was unnecessary because industrial promotion was just started and no industry had grown enough to warrant graduation. In the future, however, serious assessment of the export-oriented industries that have enjoyed generous incentives and the import substituting industries earmarked for promotion is highly desirable. Even if it turns out that no termination of policy support

is needed during the PASDEP II period, proclamation of time limits and the graduation rule *in advance* is essential for avoiding policy misjudgment and political capture.

In this connection, it is important to build policy capability and analytical method to be able to routinely evaluate the costs and benefits of any promoted industry from the perspective of both static and dynamic policy impacts. Moreover, promotion measures should be available to all eligible enterprises until the time of promotion expires without asking whether they are early innovators or latecomer copycats because such discrimination is both unfair and operationally impractical.[7]

With regards to proactive industrial policy, this can be restated as follows. The capability of government must be strengthened as the policy scope is expanded from (1) to (3) in Table 8-2 below. Since import substitution entails increased risks of policy misjudgment and political capture, more attention must be given to (i) time limits of promotion and the graduation rule, (ii) competitiveness and value creation, (iii) clear selection criteria for priority sectors, and (iv) master plans and action plans with effective implementation mechanisms.

Table 8-2. Two Approaches to Export Promotion and Import Substitution

	Basic Approach	Proactive Approach
Export Promotion	(1) Liberalize, privatize, open up, level playing field	(2) Policy skill and in-depth industrial knowledge required
Import Substitution	(1) (Same as above)	(3) Strong policy skill and in-depth industrial knowledge required

8-4. Internalizing skills and technology

We would like to propose the following as the most important achievements that Ethiopian industries should aim for in the next five years.

> Medium-term industrial vision: *internalization and scaling up of skills, technology, and other capabilities that support the competitiveness and value creation of the manufacturing sector.*

Ethiopia should broaden its operational policy scope from the current one centered on export target-setting to skill-intensive industrialization that highlights competitiveness and internal value creation. This should apply to both export-oriented industries and import-substituting industries.

Ethiopia should strengthen domestic capabilities of both the private sector and the policy making

[7] This is a negation of Prof. Rodrik's "pioneers only" rule. For more on this argument see section 6-3 above.

mechanism. For this purpose, appropriate targets, both numerical and qualitative, should be agreed on for building these capabilities (however, see also section 8-7 for caveats in setting numerical targets), necessary programs and institutions must be launched or enhanced, master plans and action plans must be drafted (section 8-8), and implementation should be followed up with an effective monitoring mechanism. Success must be scaled up by a well-established dissemination procedure across sectors and regions, and ODA and foreign enterprises must be mobilized strategically.

In this regard, the Ethiopian government has already identified skills and technology as the main pillars of industrialization, and policy efforts to enhance them have already been started. Certain initial results have been gained in the first PASDEP period. As explained, the government has come to use many policy tools such as benchmarking and BPR, building technology universities at full speed, establishment of the Metal Products Development Center, the Leather and Leather Product Technology Institute and the Textile and Apparel Institute, and requiring that ODA projects be accompanied by staff training and maximum local procurement. These laudable efforts should continue and be further strengthened along with the expansion of industrial policy space. Our suggestion is to clearly declare this policy orientation in PASDEP II and further develop and adjust it (where necessary) on the basis of initial attainments.

8-5. Priority sectors

As argued in section 8-3, it is important to clearly state the new (and continuing) priority sectors for the next five years in the trade and industry chapter of PASDEP II. Although the IDS listed five priority sectors (textile and garment; meat, leather and leather products; agro-processing; construction; micro and small scale enterprises), Ethiopia may modify this list in response to the outcome of past promotion, rising policy capability, or changing domestic and international situations. For each priority sector, targets and policy orientation for the PASDEP II period should be spelled out.

The following export-oriented industries can continue to be supported in the next five years:

Leather and leather products
Agro-processing
Textile and garment
Floriculture

However, there should be studies to review the performance of these industries in response to policy support and to evaluate the static and dynamic costs and benefits of policy support (especially for leather and leather products, sugar, garment, and floriculture). The amount of incentives received also differed across these industries. These sectoral studies will inform the policy makers as to how intensively and in what form policy support should be continued for each of these industries. For agro-processing, the concrete mix of targeted crops or products should be re-examined (including

performance review on the sugar industry).

Duration of additional policy support is also in question. If the industry is considered to have grown sufficiently or to have failed to grow despite generous support, policy support should be terminated. It is premature to end support to any of these export-oriented industries at present or perhaps even in the next five years. But the conditions of graduation can be generally stated in advance because promotion measures cannot be provided endlessly. Even if the proposed sectoral studies cannot be completed by the time PASDEP II is approved, MOTI should continue to adjust its promotion measures for these industries in the course of implementing the trade and industry five-year development plan.

The following import substitution industries may be added to the priority sector list:

Steel
Metal processing
Cement
Glass
Consumer soap and detergent (“chemicals”)
Popular medicine (“pharmaceuticals”)
Other

We are not recommending the designation of all of these as priority sectors. This is a tentative list to be finalized after more information is gathered, sufficient discussion is held among all stakeholders, and policy makers become confident about their decisions. For each candidate industry, a preliminary feasibility study should be conducted. Based on its result, the Ethiopian government should determine whether the industry deserves policy support. If the answer is affirmative, a full-fledged master plan with detailed action plans should be drafted. Special attention must be paid to sharing enough technical and market information about the targeted industry among key decision makers and establishing mechanisms to prevent policy misjudgment and political capture, which are the two most common risks of import substitution (section 6-4). Given the time needed to build new policy capability and receive external assistance, the drafting of master plans for import substitution industries should proceed in realistic steps, with one or two industries at first, to be accelerated to cover all industries in the medium to long run. It is desirable for all master plans to be completed by the end of the PASDEP II period, but that should not be a rigid requirement. Building true policy capability is more important than speedy drafting of all master plans with low quality.

Due to time constraint and lack of information, MOTI may not be able to adequately specify concrete targets and policy measures for all of the priority industries within the drafting period of PASDEP II. MOTI should do its best with the currently available data to set targets and leave the task of giving more details and making adjustments to the five-year industrial plan and the sectoral master plans to follow.

8-6. Priority issues

In the *PASDEP Annual Progress Report 2007/08*, progress is reported in the following issues related to trade and industry:

Privatization
WTO accession process
Negotiation for Economic Partnership Agreement
Export performance

However, grounds covered by these topics are narrower than expected on the basis of the important role given to industrialization in the ADLI vision or proactive industrial policy proposed in the present chapter. In the next PASDEP, we advise that issues that are closely related to the enhancement of competitiveness, industrial human resources, logistic efficiency, and industrial linkage and structure—these are in our opinion core issues in latecomer industrialization—be highlighted and stressed (section 8-4). The topics presented below are our tentative suggestions. Other issues that are equally important in leveling up private industrial capability can also be discussed.

(i) *Quality-based competition*—while benchmarking has taken a strong hold in Ethiopia as a method for comparing and setting targets for productivity improvement, excessive reliance on it may be harmful. Although benchmarking can handle quantity-based competition very well (for instance, raising worker productivity from cutting 175 shoes to 300 shoes per day), sources of value and competitiveness can also emerge from producing customized products in small lots and many variations, ensuring "only one in the world" quality at high cost and price, creating national brands, or providing excellent customer service. In some cases, quantity-based competition runs the risks of cut-throat price war, shrinking profit, direct competition with Chinese products, and inability to invest in innovation. Ethiopia should pursue both quality-based competition and quantity-based competition depending on product type and targeted markets. Too much emphasis on the production of undifferentiated commodity products at low cost will constrain the future path of industrialization. Policy tools for quality-based competition such as *kaizen*, branding, strategic marketing, design training, and so on, should be strengthened.[8]

(ii) *Matching industrial human resources with demand*—Ethiopia is building new technology and engineering universities at great speed. This is a highly commendable move, because young people equipped with frontline skills and technology are undoubtedly the foundation of industrialization. But demand for this human capital must be prepared along with the dramatic increase of the supply. A common problem in many developing countries is the unemployment

[8] Two of the Ethiopian agro-products with high raw material quality are leather and coffee. Their commercial value in the global market can be greatly improved if proper design, processing, marketing, and branding are conducted. According to a Japanese high-quality leather and fur company, Ethiopian sheep skin is the best in the world in its softness, thinness and beauty but to maximize its potential requires very high processing and cutting skills. For such a product, *kaizen*, which can pursue endless improvement, is better suited than benchmarking.

of professionals due to the limited size of domestic sectors that can gainfully hire them. This generates strong pressure for brain drain to advanced countries. Another problem often encountered in East Asia is the mismatch of graduating students with company needs. While many young engineers are produced, FDI firms are not satisfied because these engineers do not have the skills and knowledge they require. This is caused by outdated teaching materials and equipment, untrained teachers, and the lack of industry-university collaboration in building the curriculum. If these demand-side issues are neglected, Ethiopia may face similar difficulties when a stream of new engineering graduates comes into the labor market several years from now. Ethiopia must think harder because it does not yet have a large agglomeration of manufacturing FDI firms craving talented young staff and workers.

(iii) *Agriculture-industry linkage*—this is key to the success of Ethiopia's industrialization as envisioned by ADLI. So far, such links are beginning to form in the leather industry (from domestic hide and skin to leather products) and some agro-processing industries (for example, sugar, nutrition food, edible oil, macaroni and pasta), but the scale of these links remain small. In the next five years, serious policy effort should be made in agro-processing industries to enlarge the existing links and to create new ones. For this purpose, the quality and content of the agro-processing industry master plan and action plan, as well as effective cooperation between MOTI and the Ministry of Agriculture and Rural Development (MOARD), are crucial.

(iv) *Geographical aspects of industrialization*—the importance of the road sector is highlighted in the current PASDEP, but policy interest must be expanded beyond the construction of transport infrastructure to include other spatial aspects of industrialization. In the next PASDEP period, attention should be paid to, for example, (i) logistic performance of the Addis Ababa—Akaki area, which is the nation's largest industrial zone (especially time and cost aspects of access to Djibouti Port, including the possibility of building a railway connection); (ii) policy criteria for creating and operating industrial estates; and (iii) initiation of the construction of Growth Poles and Growth Corridors as overall regional development, which encompasses agriculture, agro-processing, water management, tourism, and related manufacturing and services.

8-7. Numerical targets

Numerical targets will be required for each sector in PASDEP II. In fact, MOFED is asking for a more systematic list of numerical targets for the trade and industry sector than in PASDEP I. In principle, the use of numerical targets is not only acceptable but also highly desirable for ensuring implementation. However, the important question is which indicators are chosen as targets and at what levels they are set. To make numerical targets meaningful, serious deliberation is needed. Mechanical and careless choices will be harmful to industrialization, as they distract policy makers' attention from their true objective.

In the current PASDEP, most of the targets in the trade and industry sector are expressed in growth rates, shares of GDP, or export earnings in USD. Some of them count numbers of policy actions taken or firms supported. Tables 8-3 and 8-4 show respectively the numerical targets and major achievements by 2007/08 in the trade and industry sector as reported in the *PASDEP Annual Progress Report 2007/08*:

Table 8-3. Current PASDEP: Numerical Targets Related to Industry

	Baseline (end 2004/05)	Target (2009/10)
Growth rate of industry value added (%)	8.1	11.5 (average)
Share of industry in GDP (%)	13.6	16.5
Revenue generated from industrial export (leather and leather products) (USD million)	63.73	500

Source: *PASDEP Annual Progress Report 2007/08* (MOFED draft, 2009, p.121).

Table 8-4. Current PASDEP: Major Achievements in Trade and Industry by 2007/08

1. Textile and garment	Encouraging steps have been observed; 71 projects were at different stages of operation. Export earnings recorded USD14.5 million (15.1% higher than previous year).
2. Tanning industry	Support has been provided in manpower, machinery, market access and other areas. Five of 16 tanneries supported registered better performance, and 3 tanneries have shifted their export to crust and finished leather products.
3. Leather export	The tanning industry generated revenue of USD101 million, 13% higher than previous year but lower than target (USD153.4 million). Shoe export recorded USD 9.66 million.
4. Sugar	Production was 296,009 tons (3 sugar factories), slightly above target.
5. Cement	Mugher produced 737,043 tons (against the target of 871,000 tons); Messebo produced 950,000 tons (18% higher than the previous year); five new plants produced 146,833 tons. Due to construction boom, supply gaps emerged and 613,767 tons of cement was imported in 2007/08.
6. Floriculture	Flower farms reached 922 ha (43% increase over previous year); flower export reached USD111.7 million (against the target of USD166.7 million).
7. Privatization	Fifteen public enterprises (PEs) given decision to privatize; 3 PEs for re-tender; 31 PEs carried out business evaluation; 10 PEs completed transfer with different modalities, etc.
8. Export earning	Export in 2007/08 was USD1,481.4 million (25% higher than previous year), with coffee earning 35.5% of total. Target for 2007/08 was USD1,727.5 million. Export performance has been evaluated monthly first by MOTI and subsequently by the National Export Steering Committee.
9. WTO accession	Process has continued.

Source: Extracted from *PASDEP Annual Progress Report 2007/08* (MOFED draft, 2009, p.16). This is a summary of more detailed discussion of achievements and challenges in the main text of the Report (pp.83–88).

Purely quantitative targets expressed in percent or USD million, without examining the *quality* of such achievement, are still useful because they can visualize the progress of industrialization in concrete and comparable numbers—just as the final scores of a football game. Developing countries often use these targets in their industrial policy formulation. However, mindless obsession with such numbers also carries risks. Ethiopia should broaden the scope of industrial targets by introducing more indicators for skills, technology and other internal capability in addition to the traditional "macro" targets.

Three questions should be asked before including numerical targets in any planning documents.

First, it must be asked whether the indicator in question properly belongs to the domain of government or the domain of market in the context of a specific industrial sector in Ethiopia.[9] If a certain outcome is mainly determined by market forces, or if micromanagement by the government only complicates business decisions, the government should stay out. In most circumstances, outcome is determined jointly by market forces and industrial policy. In such cases, targets may be set but results must be interpreted with balance and care.

As argued in section 8-1, industrial performance, such as growth rates and export earnings, is a function of private effort, industrial policy, and uncontrollable shocks (which may be positive or negative). The last term dominates in the short run while the first two largely determine industrialization in the long run. In the medium run of PASDEP's five-year horizon, all of these matter, but shocks coming from political, climatic, macroeconomic, and global events still have significant influence. In the current PASDEP period, for example, domestic macroeconomic overheating and the global financial crisis impacted industrial performance. For this reason, the actual growth rate or industrial export earnings should be treated with care. High growth in the early years should be somewhat discounted and subsequent slowdown should not be blamed entirely on MOTI. These targets should be indicative ones that call for careful interpretation and review rather than those that carry legal responsibility and force assigned ministries to attain them by all means.

Second, qualitative goals must be translated into proxy variables that are both meaningful and quantifiable. For example, skills and technology embodied in human capital are hard to measure directly but can be counted in the number of graduates from engineering universities, the number of patent applications, R&D expenditure, and so on. Similarly, the international competitiveness of an enterprise may be gauged by its output and export growth, the International Organization for Standardization (ISO) certificates, quality awards, the number of foreign business partners it has, and

[9] As a general rule, the domain of government should be relatively small if the industry is not capital-intensive, the market and prices are volatile, the industry produces final consumer goods, the domestic private sector is highly developed, policy capability is weak, or public private partnership is fragile—and vice versa (see section 9-4 below).

so on. While these proxy variables are useful, there is always a gap between true performance and these "achievements" due to quality problems, distorted incentives, or measurement errors. Again, care must be exercised to avoid mechanical interpretation.

Third, goals and timetables must be set properly. They must be both *ambitious* and *realistic* in the sense that serious joint effort by the government and the private sector should be able to attain them, barring unexpected large negative shocks. The timetable must also be such that it accelerates joint effort. If the goal is too high or the timetable is unreasonably short, the target is unattainable by any effort and becomes meaningless. It only generates buck passing without any industrial development. To put it differently, numerical targets should not be set politically or haphazardly; they must be backed by good situation analyses, demand forecasts, and sound judgment about Ethiopia's dynamic capability. Various numerical targets contained in Ethiopian policy documents should be scrutinized from this perspective. For example, the textile and garment industry is said to be unable to attain the export target of USD500 million per annum by 2009/10 by a wide margin. One of the many reasons for this "failure" is that the target was set unrealistically high in its master plan. Reconsideration of the target is required among other policy actions.

Additionally, it is necessary to ponder how many industrial targets should go into PASDEP II. It is not a good idea to overcrowd PASDEP II with too many targets that should properly belong to the five-year industrial plan of MOTI or master plans and action plans of individual priority sectors.

8-8. Policy documents and organization

As industrial policy scope is expanded, organizational reform of MOTI becomes necessary. This must be undertaken from the viewpoint of ensuring policy quality and substance rather than from the angle of administrative and procedural efficiency pursued by the BPR. Although the trade and industry chapter of PASDEP II does not have to include discussion of this internal reform, it is nonetheless important to carry it out so that the working of MOTI will be strengthened to take up the new challenges.

First, master plans of priority sectors and priority issues must be drafted or revised. PASDEP II may wish to declare that all existing industrial master plans will be revised with new content and structure, and new master plans will be drafted for the remaining (new) priority sectors in appropriate steps in the next several years (not necessarily by the end of the PASDEP II period). This includes both export-oriented industries and import substitution industries (section 8-5). All master plans must be equipped with an action plan matrix with sufficient detail and an effective monitoring mechanism. For priority issues (section 8-6), master plans with practical action plan matrices must also be drafted. The speed of master plan drafting and revision must be adjusted so as to allow MOTI to improve policy

making capacity significantly while avoiding the risk of the process becoming superficial and mechanical due to too much time pressure. By 2014/15, several master plans for priority sectors and priority issues should be prepared.

Second, MOTI's policy organization must be upgraded to cope with the following tasks, which will become important in the PASDEP II period.

(i) *Cross-cutting issues applicable to all industrial sectors*—this includes benchmarking, *kaizen*, quality standards and control, environment regulation, and other common industrial issues and tools to assist all types of enterprises.

(ii) *Integration of trade policy and industrial policy*—this is essential for drafting a strategy for trade and investment liberalization, which are closely linked with industrialization strategy, as well as for strategic WTO accession.

(iii) *Inter-ministerial coordination*—regular and substantive cooperation with MOARD is crucial in promoting agro-processing or leather industries and creating industrial corridors. Cooperation with other ministries such as MOFED, the Ministry of Science and Technology (MOST) and the Ministry of Education (MOE) should also be firmly established.

(iv) *Public-private dialogue (PPD)*—new institutions for national and regional PPD are being constructed. MOTI must use this framework effectively to produce concrete results in public private cooperation.

(v) *Development centers and institutes*—sectoral departments should be upgraded as need arises to "development centers" or "institutes" with enhanced staff and budget so they can handle master plan revisions, action plan monitoring, PPD, enterprise support, etc. more effectively. Also on an as-needed basis, similar centers or institutes should be established to handle cross-cutting issues (see (i) above).

Generally speaking, MOTI needs more "horizontal" mechanisms among its departments and vis-à-vis other ministries to combine and coordinate different functions. This will complement the existing "vertical" line of command emanating from the top. This can be accomplished in various ways including high-level meetings strongly directed by the Minister, a support team under the Minister to oversee all ministerial affairs, frequent inter-departmental meetings, or creation of more "horizontal" (functional) departments.

8-9. Conclusion

To sum up, our suggestion is that the trade and industry chapter of PASDEP II should have basic ingredients as shown in Table 8-5 below. Wording, ordering, and addition and subtraction of contents remain flexible and the ultimate decision rests with the Ethiopian government in general and MOTI in

particular. Since space devoted to trade and industry in PASDEP II is limited, these must be written compactly in several pages or, at most, ten pages. In policy documents like this, the important thing is what is said and not how long it takes to say it.

Table 8-5. Possible Ingredients of Trade and Industry Chapter

Review of industrial performance [5-1](5-7)
Medium-term orientation and vision
Proactive industrial policy [5-2]
Expansion of policy scope and measures [5-3] (5-5) (5-6)
Internalizing skills and technology [5-4](5-7)
Priority industries (possibly with targets) [5-5](5-7) (5-8)
Export-oriented industries
Import substitution industries
Priority issues (possibly with targets) [5-6] (5-7) (5-8)
Quality-based competitiveness
Matching industrial human resource with demand
Agriculture-industry linkage
Geographical aspects of industrialization
Others

Note: Numbers in square brackets indicate the most relevant section of this chapter and numbers in round brackets are sections with supplementary relevance.

Chapter 9
An International Comparison of Industrial Master Plans *

This chapter reviews the structural format of industrial master plans of developing countries, mainly from Asia, and offers some ideas for improving them. Many studies have analyzed particular development policies or particular policy documents in specific countries. However, studies that pay primary attention to the *methodology* of industrial policy formulation are few, and international comparisons of policy methodology are even rarer. Nevertheless, such information is extremely useful for latecomer countries that wish to conduct proactive industrial policies for economic take-off. If a policy document is produced without serious consideration of overall design, its content, style, length and structure may end up reflecting the whims of ministries or donors—and even individual drafters—that happen to be assigned to the task. As a result, the policy document may suffer from a lack of focus, relevance or implementability. To avoid these problems, careful thinking is needed before drafting an industrial master plan or strategy. The author hopes that this research will prove useful to interested policy makers.

9-1. Master plan types

Industrial master plans[1] can be classified broadly into the following four types.

(i) *Overall industrial master plans*—these cover multiple industrial activities. Some of them feature sectoral chapters (electronics, machinery, food processing, etc.) while others are organized into issue-oriented chapters (technical and vocational education and training (TVET), technology, small and medium enterprises (SMEs), etc.). Not all countries produce this type of master plan, and the coverage of industries differs from one plan to another.

(ii) *Sector-specific master plans*—these are master plans for the development of one specific industry such as textile and garment, food processing, electronics, and so on.

(iii) *Issue-specific master plans*—these are strategies targeting cross-cutting aspects of national industrial development such as transport and logistics, information technology, small and

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[1] Master plans are alternatively called policies, strategies, strategic plans, roadmaps, blue prints, etc. In this paper we regard all official documents that contain policy targets, analyses, and actions with a time span of a few to several years as master plans.

medium enterprises, education and training, and so on.

(iv) *Regional development master plans*—these are strategies for the industrial development of particular regions, corridors, economic zones, and other geographically delineated areas.

There may be other variations and combinations of these basic types. Type (i) can be regarded as an amalgamation of the other types. In this paper we mainly discuss the first three types.

Apart from these *policy* master plans, there are also *technical* master plans that stipulate physical dimensions and proper technology and equipment requirements for large investment projects such as highways, steelworks, power plants, industrial estates, and so on. These technical blueprints are beyond the scope of our analysis.

9-2. Chapter components

Policy-oriented industrial master plans normally have the following components.

Table 9-1. Ingredients of an Industrial Master Plan

Vision	Importance, role, orientation, and positioning of industry in national development
Targets	Long- and medium-term numerical and/or qualitative targets
Situation analysis	Current status, potentials and obstacles of the domestic industry in the national, regional and global context; tables and graphics for data, surveys, international comparisons, etc.
Policy issues	A small number of selected issues should be identified, prioritized, and analyzed in preparation for designing policy action
Action plan or action mechanism	A large matrix that pre-specifies actions, sub-actions, expected output, success criteria, deadlines, and responsible organizations; procedure for monitoring and reporting should also be specified. Alternatively, a monthly high-level committee chaired by top leader, or a well-focused and well-coordinated budgeting and project approval process may substitute the action plan matrix.

Each of these components may occupy either one chapter or a number of chapters. The order of these components is somewhat flexible. For example, targets may be inserted after situation analysis and policy issues. However, the vision should most properly be stated at the outset and the action plan matrix (or the action mechanism) should come at the end. The terminology is also flexible and

substitutable by other phrases of similar connotations. In addition to basic components, there may be other materials such as preface, introduction, table of contents, list of tables and figures, drafting procedure and organization, executive summary, appendices, and so on. These materials are not considered in our analysis.

(i) *Vision*[2]—the master plan must clarify the purpose of industrial promotion. This includes why this industry is important in national development, what role it should play in stimulating other sectors, what positioning it should take in the global, regional, and national markets, and so on. If these purposes are already presented in other documents and widely understood among stakeholders (such as Agricultural Development Led Industrialization (ADLI) and the Industrial Development Strategy (IDS) in the case of Ethiopia), they can be mentioned only briefly without spilling much ink. On the other hand, if these are not yet sufficiently expressed, the master plan should clearly and concisely state the importance of the industry. This section should be no more than a few pages. One way to state the vision is to present it as part of the introductory chapter.

[Example: Vietnam's Draft Motorcycle Master Plan states its vision as follows. "*Motorcycles should continue to be used to ensure people's mobility and reducing infrastructure cost per year, provided that sound and sustainable solutions are found and effectively implemented to cope with traffic congestion, traffic accidents, environment, and industrial property rights. At the same time, the motorcycle industry should become the principal industry by which supporting industry base is built and indigenous industrial capability is promoted.*" (Vietnam 2, p.20).
The Thai Automotive Mater Plans for 2002–2006 as well as for 2007–2011 continue to carry the same vision: "*Thailand is the automotive production base in Asia which creates more value added to the country with strong automotive parts industry.*" (Thailand 2, Executive Summary p.2)]

(ii) *Targets*[3]—long- and medium-term targets, quantitative and/or qualitative, should be presented with a clear time frame, which should normally extend over a few to several years. The appropriate scope and number of these targets, including how many numerical targets should be set with how much detail, depend critically on the characteristics of the sector in question as well as the capability of the government and the private sector of that country. For this reason, there is no fixed formula applicable to all master plans for all countries. Generally speaking, there should be fewer (numerical) targets if the industry is not capital-intensive, the

[2] Vision is sometimes stated in a layered structure consisting of vision, missions, and objectives. This is acceptable but not compulsory.
[3] Targets are also called goals, objectives, strategies, action plans (different from "action plans" in 9-2-(v) below), and so forth. We regard all of these as "targets" as long as they describe some qualitative or quantitative aims to be achieved.

market and prices are unpredictable, the industry produces final consumer goods, the domestic private sector is mature, policy capability is weak, and the private sector does not trust the government. Before setting any targets, policy makers should have a thorough discussion with all stakeholders, including private businesses and experts, for the proper configuration of such targets (see section 9-4 for more discussion).

[Example: The Thai Automotive Master Plan 2002–2006 had the following numerical targets for the ending year 2006. (i) Produce 1 million cars (700,000 one-ton pick-up trucks and 300,000 passenger cars), with 40% exported; (ii) produce 2 million motorcycles valued over 100 billion baht, with 20% exported; (iii) export 200 billion baht of high-quality spare parts; and (iv) localization (percentage of local value-added) of produced vehicles and parts should be 60% (Thailand 1, p.2). This was the entire set of targets and not the summary of more detailed ones. Numerical targets for the intervening years of 2002–2005 were not set.]

(iii) *Situation analysis*—information must be given to analyze the current status, potentials, and obstacles of the domestic industry in question. Data should be presented in tables and graphics, the results of surveys and benchmarking should be reported (if available), and theories and empirical analysis should be cited (if relevant). Information should not be included randomly but inserted with a clear purpose of making certain points. Routinely reviewed aspects include the past performance of output, capacity, demand, export and import, localization, etc; the current status of product mixes, producers, regional distribution of production units, quality, competitors and competitiveness, and impediments to further development; demand forecast (possibly with alternative scenarios); and global, regional or domestic market trends that may impinge on the development of the industry. The appropriate selection of these analyses depends on the degree of understanding and consensus among stakeholders. If businesses, policy makers and experts generally agree on the current position of the domestic industry, situation analysis can be brief with minimal pages or even skipped. If, on the other hand, policy formulation is in an early stage and stakeholders do not yet share basic information, situation analysis becomes an integral part of the master plan.

[Example: In Indonesia's National Industrial Development Policy, situation analysis is contained in three chapters to review the conditions of both export potential industries (natural resources intensive industries, labor intensive industries, capital intensive industries, and technology intensive industries) and domestic market potential industries. This section occupies 71 pages, which is 30% of the 238-page document (Indonesia 1).]

(iv) *Policy issues*—after the industry situation is reviewed comprehensively in (iii), specific aspects that need to be fortified by policy to realize vision (i) and targets (ii) above must be

identified, prioritized, and analyzed. The issues may involve either removal of negatives or strengthening of positives. Then action must be proposed (later to be elaborated into detailed action plans (v)). Obviously, which issues are most important cannot be prejudged because circumstances differ from one industry to another and from one country to another. Here, the common agenda from which the policy maker should carefully choose is listed. They are skills and technology, cost reduction, quality improvement, product design and development, input procurement (including localization and supplier policy), marketing, export promotion, infrastructure (especially transport and power), financing (including the use of official development assistance (ODA) and external borrowing), limitation of domestic market size, labor supply and workers, coping with cheap imports and dumping, speed and scope of globalization and international commitments, foreign direct investment (FDI) policy, tariff policy, design of incentive measures, certification and award systems, legal reforms, international standards (the International Organization for Standardization (ISO), quality, environment, accounting, etc), SME support, business matching, industrial associations, public private partnership, use of ICT, testing centers, and so on. The most relevant topics for the industry in question should be identified and discussed among stakeholders. It is important to work on prioritized issues only rather than cover all issues broadly and superficially. Issues raised here should be given concrete solutions in the following action plan section.

[Example: discussion of policy issues is the main part of India's National Strategy for Manufacturing 2006–2015 (India 1). It occupies 61 pages, which is 78% of the 78-page document, and covers 12 topics including macroeconomic stability, education and skill building, investing in innovation and technology, and so on. This may be a little too much from the point of view of selectivity and concentrated effort, but it may be helpful for forming consensus on key issues.]

(v) *Action plan or action mechanism*—an action plan matrix or an action mechanism is essential to ensure implementation. An action plan matrix is a large table that translates analyses and proposals conducted in previous chapters into concrete actions. It may be included in the master plan text (as in Thailand 1) or prepared in a separate document (as in Zambia 1). Either way, it is crucial that its progress is monitored and reported to the government at regular intervals. Two sample formats of action plan matrices are presented below. The matrices typically contain the following cells: actions, sub-actions, deadlines, expected output, performance criteria (success indicators), main responsible organizations, and other cooperative organizations. The implementation procedure, such as who will report what to whom by when, must also be clearly stated alongside the action plan matrix.

Example 1: The action plan matrix of the Triangle of Hope Project (Zambia 1):

Recommendation (action)	**Activities** (sub-action)	**Status**	**Expected output**	**Status**	**Activity period**	**Responsibility**	**Monitoring indicator**
Promote investment in cotton production by allocating land to appropriate producers	1. Identify land to be held in MACO trust	Little progress	Land for cotton production identified and secured	Not yet started	Jun. 2007	MACO (main), MoL (sub)	Monthly report
	2. Write to MoL for title deed	Not yet started					
	3. Develop adm mechanism for farm blocks	Done					

Note: Excerpted and edited by the author. Reprinted from Table 4-2.

Example 2: The action plan matrix of the first Thai Automotive Master Plan (Thailand 1):

Strategy (action)	**Action Plan** (sub-action)	**Output**	**Key success indicator**	**Main resp. org.**	**Cooperative org.**
1.2 Automotive Human Resource Development	3. Automotive training center project	Standardized automotive training center	1. Number of trained persons	TAI	OIB/TAIA/ TAPMA/FTI
	3.1 Provide Systematic training to the industry from workers to management level		2. Number of companies sending employees for training		
	3.2 Skill training		3. Increased income of trained persons		
	3.3 Provide training to engineers in the field of advanced engineering and specialized technology		4. Cost reduction and profitability		

Note: Excerpted and edited by the author. The deadline for all actions in this table was 2006.

Alternatively, an action mechanism, such as a high-level monthly committee chaired by the President or the Prime Minister or a well-focused budgeting and project approval process coordinated and monitored by an effective hub organization, can be adopted. Compared with the action plan matrix approach, which stipulates all actions in advance, these process-oriented approaches are more flexible in coping with shifting circumstances. However, their success requires strong and effective guidance by the top leader or the designated hub organization. In cases where political and administrative support for policy execution is weak, the action plan matrix approach may be preferable.[4]

[4] Mr. Vallop Tisasiri, the President of the Thailand Automotive Institute, which drafts the automotive master plan, prefers the process-oriented approach in ensuring implementation. Although the first automotive master plan of Thailand (2002–2006) had a large action plan matrix, the second automotive master plan (2007–2011) has only a small action summary table and relies heavily on ongoing project-based implementation of proposed actions. If a greater budget and more projects are available, policy implementation is accelerated and vice versa. In the case of the Thai automotive industry, strong leadership exercised by Mr. Vallop and his institute and deep trust and information sharing among industry, government, and donors,

(vi) *Optional materials*—in addition, there are optional ingredients of industrial master plans as listed below. These can be regarded as general background materials from which the issues (iii), targets (ii), and vision (i) above are distilled.

- General review of the industry in question and of global and regional trends
- Review of recent economic performance and the results of the previous master plan
- SWOT, growth diagnostics, benchmarking, investors' country rankings, and other general tools and indicators to assess the potential and problems of the industry
- Any theoretical, empirical, or field study results

These are supplementary issues to the main thrust of the master plan. They may prove useful in the preparation stage such as brainstorming, problem identification, and general education. Whether they should be cited in the main text depends on each case. If they provide clear evidence of why certain policy issues, targets, and vision are singled out in the master plan, such information should definitely (but briefly) be incorporated in the main text. On the other hand, if these materials are not directly linked to the main arguments but were produced just as preliminary and general inputs, they can be safely omitted from the master plan. The reason for this treatment, as explained further below, is that the master plan should contain only key ingredients without being diluted by information of secondary importance. This makes the master plan lean, readable, and sharply focused.

9-3. Required features

There are several required features that must be borne in mind when drafting an industrial master plan.

First, long-term and medium-term targets in (ii) above should be ambitious but realistic. Numerical targets should be higher than simple extrapolation of the present course but also reachable with serious exertion of cooperative efforts by both public and private agents. Targets that are unattainable even with great effort are meaningless, while targets that can be reached without effort are redundant. In either case, the appropriateness of the original targets should be questioned.

Second, *relevance* should be the criterion for including any information in policy documents. All text, data and graphics should support the main arguments and proposals of the master plan. Statistics that add little informational value, abstract words with no implication, and general statements applicable to any industry in any country (such as "improve X," "promote Y," "properly manage Z") should be

enables such an approach (interview with Mr. Vallop, November 5, 2009).

removed from policy documents as much as possible. A lengthy account of the history and circumstances of domestic industries, which are already well known to policy makers and business people, is also unnecessary. Conciseness is preferred since lengthy documents are not read by many. Low-value content reduces clarity and impact. Master plan drafters should be reminded that the addition of non-essentials will not contribute to policy quality. Sharply focused and well-reasoned policy documents are effective even when they are short and Spartan.[5]

Third, a related point is that all chapter components—vision, targets, situation analysis, policy issues, and action plan—must be closely and logically linked. The action plan matrix must be able to achieve the proposed targets, which in turn should contribute to the fulfillment of the vision. Situation analysis and policy issues must inform the selected visions and targets. The master plan should be a concise and consistent statement of a policy direction. Information not related to the rest of the master plan should be removed.

Fourth, flexibility and adaptability must be ensured across countries, sectors and time. Since all industries are different and all countries face different challenges, cookie-cutter molds cannot be applied to the making of master plans. Even for the same industry in the same country, a rise in private dynamism, improved policy capability, or shifting circumstances will call for policy revisions. Creativity is needed to fit policy documents to the changing reality of the industry in question.

Fifth, implementability is crucial. A policy document, however excellently written, is just paper if it is not implemented. All efforts should be made and all devices must be mobilized to make sure that what is stated in the master plan is actually put into practice. Inclusion of the action plan matrix with a proper monitoring mechanism is one such device. Budgeting, personnel, and organizations necessary for execution must be prepared. Clear assignment of responsibility, inter-ministerial coordination, reporting within the government, and political will and strong commitment at a high level, are additional requirements to ensure implementation.

Sixth, effective stakeholder involvement must be ensured in the entire process of designing, drafting and implementing the master plan. The most important stakeholders are business people. Industrial experts and academics should also be intensively consulted. This is essential if the policy is to be implementable, realistic, and supported by the business community, which must execute the agreed action plans. Stakeholder involvement should be substantive, not nominal or superficial. All parties should be given enough time and occasions to voice their opinions until consensus is reached or at least until the points of dispute are clarified.

[5] However, if the industry is new to the country or if policy discussion among stakeholders is seriously lacking, a master plan may include, for educational purposes, a general description of the industry and other general materials to facilitate common understanding on basic issues. Even in that case, such materials should be presented concisely and should not become the main part of the master plan. Separate background papers may be attached for expounding them.

9-4. Relative scope of government versus market

One common and vital issue in designing any industrial policy is the determination of where government ends and markets begin. Very generally, it can be said that the state and the market must be combined optimally rather than the former dominating the latter or the latter operating completely freely beyond the reach of the former. But determining how the two should be combined in the concrete context of any particular industry is a very difficult matter. Should the government stipulate technology and equipment to be adopted or should that be left to private investors? How hard or soft should be the targets for output, export, and investment for individual firms and for the nation as a whole? Are they to be achieved by any means or are they just indicators with no responsibility for realization? How should future demand scenarios be interpreted?

Clearly, the borderline between government and markets must be drawn and re-drawn for each individual case in every industrial master plan. This requires much wisdom, knowledge and judgment. The table below only suggests general tendencies. Greater scope of government is often appropriate when many of the conditions in the left column are met, and greater scope of markets is often appropriate when many of the conditions in the right column are satisfied. Not all conditions on the left or right need to be met for either conclusion. Moreover, the importance of each condition may be case-dependent.

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Table 9-2. Relative Scope of Government versus Market

	Setting targets and specifying products, producers, investment, technology, location, markets, etc.	
	Greater scope for government ⟷	Greater scope for markets
Initial capital investment (sunk cost)	Large	Small
Gestation period	Long	Short
Market volatility	High	Low
Product type	Industrial inputs	Consumer goods
Private sector maturity and dynamism	Low	High
Government policy capability	High	Low
Trust between government and business	High	Low

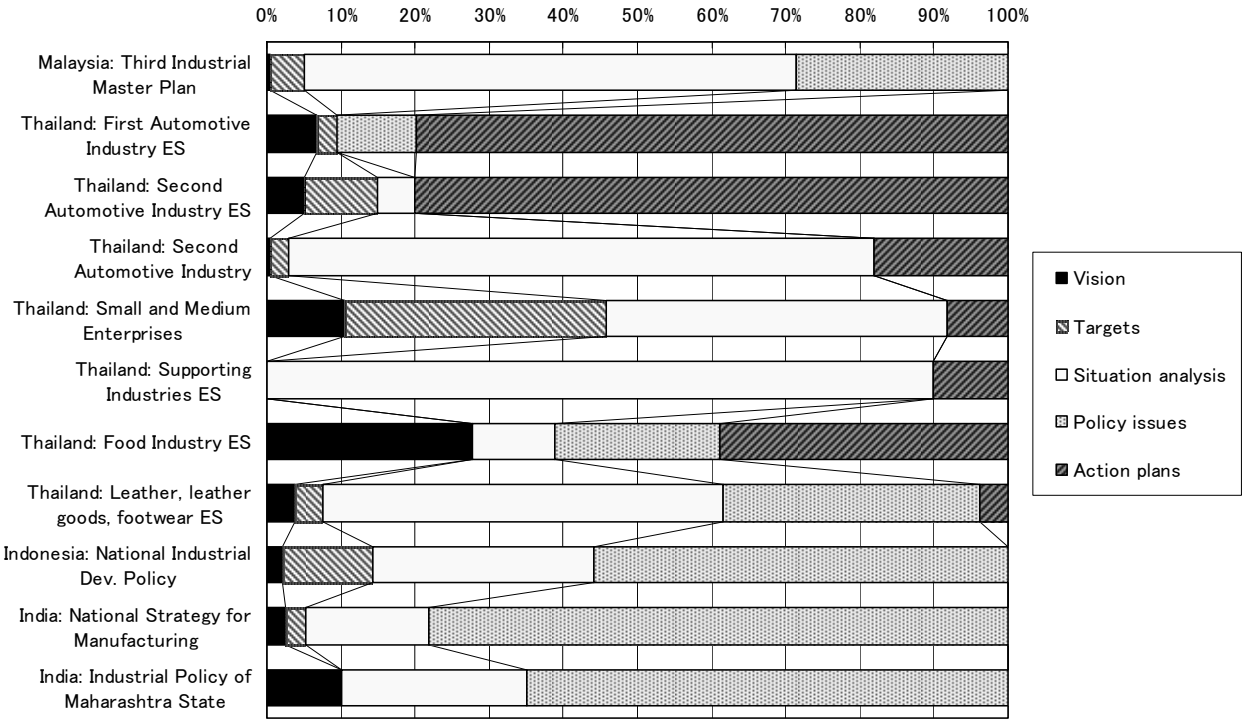
With regard to industry characteristics, consumer goods industries such as fashion garment and mobile phone assembly with short product cycles, unpredictable demand, and relatively small initial investment can be largely left to the decisions of private firms in response to market trends because micromanagement by the state will surely prove counter-productive. By contrast, petro-chemicals or integrated steelworks that require a huge investment, relatively predictable domestic demand, and volatile global markets must be properly guided by the state, even when private firms are the

producers, to avoid overcapacity, inadequate scale of production, adoption of inappropriate technology (obsolete, too capital-intensive, etc.), excessive debt burden, or environmental damage.

With regard to national capabilities, a country with a well-developed private sector, low policy capability, and ineffective public private partnership should embrace something close to laissez-faire since official intervention in such circumstances will certainly make things worse. But if the government has built up its policy capability sufficiently while the private sector remains weak and its relationship with the government is constructive, proactive industrial policy has a greater chance of success.

9-5. International comparison

In this section, a number of industrial master plans from Asian countries are compared. The structures of these master plans are graphically summarized in Figure 9-1. More details, including the main contents of selected master plans, are shown in the table and figures in the appendix. It is clear that master plans have different structures depending on the sector, country, or purpose. There is no single prototype for all countries to emulate.



Note: The structure of main text in number of pages. ES means executive summary. Care should be taken to interpret the structure of executive summary as it may not be the same as that of the full version. Meanwhile, executive summaries are sometimes used more often than the full version.

Figure 9-1. Master Plan Structure: A Comparison

All master plans contain a vision and/or targets except Malaysia's Third Industrial Master Plan, for which the national vision (*Vision 2020*) is too well known among Malaysian officials and citizens to require restatement. In most cases visions and targets occupy from 5 to 15% of the entire document.

Some master plans, such as the Thai automotive (Thailand 1 and 2) and the Thai food (Thailand 3), include "action plans" in the main text while others do not. Where they do not, the reason may be due to (i) the compilation of action plans in a separate volume; (ii) the use of a process-oriented action mechanism such as a high-level committee or a budget and project process as explained in section 9-2-(v) above; or (iii) the fundamental lack of an action plan matrix or an action mechanism. For some master plans, such as the Thai leather (Thailand 4), the Indonesian National Industrial Development Policy (Indonesia 1), and the Indian National Strategy for Manufacturing (India 1), situation analysis and policy issue analysis are the dominant parts of the master plan.

A few selected master plans are discussed below.

(i) *Thailand: Automotive Master Plan 2007–2011 Executive Summary*[6]—this master plan is worthy of careful study because it effectively directs the development of the Thai automobile industry, which has so far been successful despite two major macroeconomic shocks (the Asian financial crisis of 1997–98 and the global financial crisis of 2008–09) that severely reduced automobile sales at home and abroad. The policy formulation and implementation process is competently coordinated by the Thailand Automotive Institute with close-knit networking among all stakeholders through the automotive master plan committee, focus groups, and CEO Forum. The essence of the master plan has a lean and simple structure:[7]

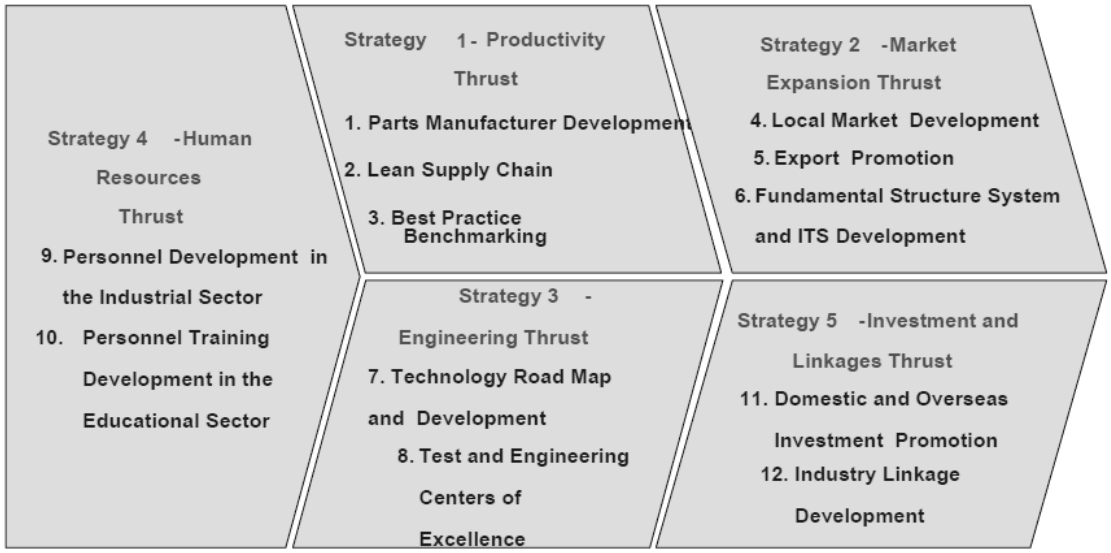
Vision 2011 ➔ 4 objectives (success indicators) ➔ 5 strategies ➔ 12 action plans

The executive summary, which basically has the same content as chapter 8 of the full-version document, presents this policy structure in the first four pages while the remaining pages are devoted to explanation of the 12 Action Plans, one by one. There is no situation analysis or discussion of policy issues in this executive summary. The five strategies and twelve action plans are compactly summarized in the figure below.

[6] The executive summary is essentially the same as chapter 8 (entitled "Automotive Industry Master Plan 2007–2011") of the full-version Thai document. The rest of the original document contains frameworks, situation analysis, policy making organization, and so on. In Thailand, the full text of the industrial master plan is prepared in Thai while the executive summary is produced in both Thai and English, either in one volume or in separate volumes, and uploaded to the web. Stakeholders often use executive summaries for reference and discussion. Thai officials seem to prefer a concise checklist of needed actions and a diagram to explain relationships among these actions rather than a thick document containing many supplementary materials.

[7] Vision 2011 is "*Thailand is the automotive production base in Asia which creates more value added to the country with strong automotive parts industry.*" Also see Section 7-2-(i) above. Note that "action plans" here are not the same as the detailed action plan matrix discussed in Section 9-2-(v).

The Thailand Automotive Institute uses the process-oriented action mechanism to execute these strategies and action plans. Various projects supported by the state budget or international cooperation are approved and mobilized to attain them.[8] Since available funds fluctuate from year to year, the exact size and scope of support measures cannot be decided in advance.



Source: Thailand Automotive Institute, *The Automotive Industry Master Plan 2007–2011 Executive Summary*, p.4.

Figure 9-2. Thai Automotive Master Plan: 5 Strategies and 12 Action Plans

(ii) *Malaysia: Second Industrial Master Plan (IMP2) 1996–2005*—this master plan encompassing all manufacturing sectors in Malaysia was unique in having a clear overarching logic and objectives that evolved around the concepts of *cluster-based industrial development* and *manufacturing plus plus* (lifting and broadening activities along the value chain). These ideas were proposed by a researcher at the Malaysian Institute of Economic Research and adopted throughout the master plan. The chapter structure of IMP2 was as follows.

> Past review and macroeconomic framework ➔ analytical framework (two concepts above) ➔ 8 sectoral chapters[9] ➔ strategic directions (policy issues) ➔ institutional framework (relatively weak)

In the eight sectoral chapters constituting the main body of this master plan, the same structure was repeated for each subsector as follows.

[8] Japan assists Thailand with the Automotive Human Resource Development Program with the participation of Denso, Honda, Nissan and Toyota; dispatch of experts to universities by the Japan Overseas Development Cooperation (JODC); and cooperation with the Technology Promotion Association and the Thai-Nichi Institute of Technology.

[9] Electrical and electronics; textiles and apparel; chemicals; resource-based industries; agro-based and food products industries; transportation industry (automotive, etc); materials industries; and machinery and equipment.

Current status ➔ issues and challenges (SWOT) ➔ policies and strategic direction (short term; and medium to long term)

While this master plan had lucid organization, application of the same format and the same perspective on all major industries of Malaysia was somewhat too mechanical. In addition, this master plan lacked an effective procedure to ensure implementation either in the form of an action plan matrix or a process-oriented mechanism.

(iii) *Ethiopia: Leather and Leather Products (March 2005)*—This master plan has two volumes. The first volume, "Master Plan," contains situation analysis (including SWOT and benchmarking), vision ("Top Down Approach," which means final demand-oriented policy formulation), and roadmaps of targets and required actions. The second volume, "Business Plan," contains more detailed targets and required actions separately for footwear, leather garments, and leather goods. While this master plan contains rich information about the industry, content structure and ordering are unique and overlap in some places; for example, "targets" and "actions" appear in both volumes.

This master plan contains a large number of numerical targets for output, material procurement, investment, markets, capacity building, and so on, for each year and even for each month. From the viewpoint of the existing capacity and time constraints of the Ministry of Trade and Industry (MOTI), and also from the viewpoint of proper division between government and markets in industrial policy formulation (section 9-4 above), these numerical targets may be too many and too difficult to follow in reality.

(iv) *Ethiopia: Basic Metal and Engineering (2007–2008)*—the content of this strategy is as follows.

General information about the industry ➔ situation analysis ➔ "gap analyses" (capacity vs. demand forecasts) ➔ vision/mission/strategic objectives and goals ➔ action plan matrix

This structure is simple and reasonably standard. Placement of general information at the outset is understandable since steel and metal engineering is a new industry for Ethiopia to promote, and basic information must be provided and shared among stakeholders. Inclusion of demand forecasts is fairly common in materials industries such as steel although it is not so common in specific metal processing industries. The main problem with this strategy is not the overall chapter design but the concrete contents of its strategies, goals, and action plans.

More information and analyses are needed to improve policy content and ensure implementability. For example, information on material flows, alternative demand scenarios for long and flat steel consumption, feasibility of domestic iron ore and other inputs, diagnosis of individual establishments, and so on, must be prepared. Based on that information, appropriate vision, proper government domain, desired domestic production ratios, cost estimates and risk analysis, and the possible use of FDI and foreign financing, must be studied and debated.

9-6. Recommendations for Ethiopia

From the analyses above, the following recommendations are offered to the drafting teams of Ethiopian industrial master plans.

First, sectoral master plans for priority industries—these include both export-oriented industries and import substitution industries—should be drafted one by one over the next several years. Existing sectoral master plans should also be revised every several years to reflect new situations and enhanced policy capability. Quality, not speed of drafting, should be the most important consideration. When this process is completed will depend on the ability, funding, and time constraints of the drafting teams of MOTI as well as the availability of international cooperation. Completion of all proposed industrial master plans during the *Plan for Accelerated and Sustained Development to End Poverty* (PASDEP) II period is desirable but not absolutely necessary.

Second, the total number of industrial master plans should not exceed 10 when the above drafting cycle is completed. The number of sectoral master plans should not be increased endlessly. Attention should be paid to executing proposed policies effectively instead of creating a large number of documents.

Third, the documents should not be too long. We recommend something like 50–100 pages. Thick documents are difficult to read or use. Compactness is achievable by careful planning and removing all analyses and discussions that do not directly support proposed policy actions. An executive summary is useful when the document is large, but if the main text is concise enough, there is no need for an executive summary.

Fourth, as argued above, there are different ways to ensure implementation: (i) an action plan matrix that formally specifies required actions in detail and a monitoring mechanism in advance; (ii) a high-level monthly committee chaired by a leader who oversees progress and solves problems (such as the Export Steering Committee of Ethiopia); and (iii) a hub organization that effectively mobilizes projects through the state budget, donor assistance, and private cooperation to implement designated

action plans. While (ii) and (iii) are more flexible than (i), there are also constraints. The second approach can be used for a few important national targets (such as export performance) but not for implementing a large number of master plans. The third approach requires a competent hub organization, such as the Thailand Automotive Institute, which can navigate itself through different ministries, donors, and private stakeholders. For Ethiopian industrial sectors, the most appropriate initial step may be to adopt an explicit action plan matrix of reasonable size (not too large).

Fifth, a model structure for each industrial master plan (sector-specific or issue-specific) is suggested below. The order and relative weight of each component can be adjusted as necessary. Different industrial sectors can have different structures to reflect the uniqueness of each sector.

Introductory materials (brief)
Overview – vision, goals, positioning, significance, 5–10%
Situation analysis (review of past and current domestic situation, 20–30%
Analysis of policy issues, 20–30%
Implementation procedure (brief)
Action plan matrix, 40–45%

If the action plan matrix approach is not adopted, the last component should be deleted. Background papers containing supplementary information, such as field surveys, benchmarking, SWOT, international experiences, technical appendices, and so on, may be prepared separately from the main text.

Chapter 10
Basic Metal and Engineering Industries: Policy Framework and the Firm-level Study

The Basic Metal and Engineering Industries (BMEIs) are identified as one of the eight priority sub-sectors for medium and large industries development in the Growth and Transformation Plan (GTP). In particular the BMEIs are considered as the primary industries to contribute to import substitution-based industrial development, which is newly emphasized in the GTP. In response to the strong request from the Ethiopian Government, The Japan International Cooperation Agency (JICA) conducted the BMEI Firm-level Study, in conjunction with the Metal Products Development Center (MPDC)[1] under the Ministry of Trade and Industry (MOTI)[2] and the German-supported Engineering Capacity Building Programme (ECBP), throughout the first half of 2010. As the BMEIs were a model case of a specific sub-sector in the Industrial Policy Dialogue program, it was featured twice in the series of the High Level Forums (HLFs) as inputs for *A Plan for Accelerated and Sustained Development to End Poverty* (PASDEP) II[3] with following presentations: (1) *BMEIs: International Comparison of Policy Framework and Ethiopia's Approach* (at the fourth HLF in March 2010); and (2) *BMEIs Firm-level Study: Results of parts conducted by JICA/MPDC* (at the fifth HLF in July 2010).

This chapter presents an international comparison of BMEI policy framework and the results of the JICA's part of the Firm-level Study with recommendations, based on the two discussions in the HLFs mentioned above.

10-1. International comparison of BMEI policy framework

10-1-1. Metal/engineering industrial master plans in selected countries

It is hard to find "BMEI" or equivalent sector master plans in other countries. The Ethiopian Government defines the BMEIs to be the industries classified as the Division 27-35 in the United Nation's International Standard Industrial Classification (ISIC) Rev. 3.1 (Table 10-1). The BMEIs, in particular engineering industries, are rather wide to be singled out as one group of sub-sectors.

[1] MPDC was reorganized as the Metal Industry Development Institute (MIDI) in June 2010.

[2] In October 2010, MOTI was separated into the Ministry of Trade and the Ministry of Industry, of which latter is currently responsible for BMEIs.

[3] During the preparation process of *GTP*, national five-year development plan for 2010/11-2014/15 which follows *PASDEP* was tentatively called PASDEP II. This chapter uses PASDEP II and GTP interchangeably although the former tends to be used in the context of policy making process.

Table 10-1. Definition of BMEIs

- **Basic Metal Industries** (ISIC Rev.3.1 Div. 27): *production of metal from ore, scrap and conversion of billet, slab etc. into primary metal products*
- **Engineering Industries** (ISIC Rev.3.1 Div. 28-35):
  28. *Manufacture of fabricated metal products, except machinery and equipment*
  29. *Manufacture of machinery and equipment n.e.c.*
  30. *Manufacture of office, accounting and computing machinery*
  31. *Manufacture of electrical machinery and apparatus n.e.c.*
  32. *Manufacture of radio, television and communication equipment and apparatus*
  33. *Manufacture of medical, precision and optical instruments, watches and clocks*
  34. *Manufacture of motor vehicles, trailers and semi-trailers*
  35. *Manufacture of other transport equipment*

Source: summarized from UN (2002) and MPDC/MOTI (2008)

Although there is no master plan that singles out BMEI in other countries, there are some comparable master plans as a part of some industrial master plans (for example, Malaysia's Third Industrial Master Plan 2006-20) and as a master plan at an individual ISIC classification level (for example, Vietnam's Master Plan of Vietnam Motorcycle Industry for the Period of 2006-2015, with a Vision to 2020). Table 10-2 lists some master plans and other planning documents which are beneficial for plan making on Ethiopia BMEIs.

Table 10-2. List of Master Plans and Other Planning Documents Referred in This Chapter

(1) As a part of an industrial master plan

- **Indonesia:** National Industrial Development Policy, 2005-2025 (2005)
  - 9 out of 32 priority industries can be classified as "BMEI": steel, machinery and equipment, transport and others
- **Malaysia:** Third Industrial Master Plan (IMP3) 2006-2020
  - 5 out of 12 target growth manufacturing industries can be classified as "BMEI": electrical and electronics, medical devices, machinery and equipment, metals, transport equipment
- **India:** National Strategy for Manufacturing 2006-2015
  - 2 out of 7 core sub-sectors can be classified as "BMEI": auto components, IT hardware - and steel is one of 3 additional core sub-sectors
- **Zambia:** Commerce, Trade and Industrial Policy (2009)
  - 1 out of 6 priority sectors can be classified as "BMEI": engineering products

(2) As a sub-sector specific master plan

- **Thailand:** Master Plan for Iron Industry
  - Iron/steel industry considering linkages with downstream industries (a part of engineering industries)
- **Indonesia:** Automotive Industry Roadmap 2025 (2008)
  - Based on the automotive chapter of the National Industrial Development Policy
- **Vietnam:** Master Plan of Vietnam Motorcycle Industry for the Period of 2006-2015, with a Vision to 2020 (2007)
  - Motorcycle industry including its supporting industries

Source: Homma (2010a)

Major findings from these policy documents in other countries are summarized as follows:

(i) *Duration*—The plans tend to have rather long period, such as 10–20 years, while they are often supplemented by medium-term (ex. five years) master or action plan. A rolling plan is an alternative approach (for example, the Malaysian document is a 15-year rolling plan). The combination of the 20 year long-term master plan (as a vision; rolling plan basis) and five year medium-term action plan (as a practical guidance) is considered to be reasonable as they can complement each other.

(ii) *Volume*— (a) *As a part of an industrial master plan*: the volume varies – ex. Malaysia (15–35 pages for each sub-sector out of total 750 pages); Indonesia (six formatted pages for each sub-sector out of total 250 pages). (b) *As a sub-sector specific master plan*: it also varies from several pages to 100 pages. A brief and concise one would work; a formatted sub-sector master plan would be useful and easy for comparison.

(iii) *Industry classification and prioritization*—Most of the master plans identify priority industries (or sub-sectors). Some BMEI-related sub-sectors are identified as priority industries and occupy a significant part in the industrial master plans. However, it is not as an overarching "BMEI" sector but as more focused sub-sectors within the engineering industries (such as agriculture machinery, automotive and electric components).

(iv) *Performance review*—It is indispensable to begin the policy document with critical performance review of preceding plans. Major performance items and indicators reviewed in the surveyed plans include structural change, number of companies, new investments, productivity improvement, export/import trend, technological development and major products. They identify various challenges such as low capacity utilization, dependency on external resources (imported inputs, funding and others), low technological/technical capability, limited political/financial support and inadequate infrastructure. The review often compares domestic situations with performances of neighboring countries, regional performances and international trends. The primary purpose of performance review is provision of relevant information for benchmarking for which critical analysis and accurate data are required.

(v) *Numerical target setting in basic metal industries*—Setting numerical targets in the basic metal industries is common. Some master plans set numerical targets on directly related indicators (ex. Indonesia) and some others set indirect numerical targets (ex. Malaysia and Thailand). The former case covers indicators on steel consumption per capita, production capacity of crude steel, iron making capacity and capacities of products such as flat, long, hot rolled and cold rolled products. In the latter case, for example in Malaysia, the government sets

macro-economic targets, overall manufacturing sector targets and investment targets by the priority sector.

(vi) *Numerical target setting in engineering industries*—As the engineering industries are quite diversified, numerical targets vary according to countries and sub-sectors. They include production volume, installed capacity utilization, investment and export value (when they are considered as export-oriented industries), supply-side capacity of component industries against demand (when they are considered as supporting industries) and employment creation (when they are considered as labor-intensive industries).

(vii) *Target markets*—Regarding the basic metal industries, the compared plans explore downstream market creation other than construction materials, for example electric appliances, automotive, furniture and canning as is designated by Thailand. On the other hand, markets for the engineering industries vary from final machinery users to assembly industries. Contribution to machinery development and prototyping is often suggested. Market destinations of the BMEIs also vary from domestic consumption to export, depending on type and level of products.

(viii) *Institutional framework*—Identification of key stakeholders with their roles and functions is described in all plans, which include various ministries (industry, trade, finance, technology, higher education, energy, mineral resources etc.), regional governments, R&D and training institutes (ministerial, governmental, university, educational, vocational and private), and business associations (by sub-sector, by elemental technology, by region and by size). In order to avoid unnecessary duplication and build up an effective institutional framework, coordination among these organizations with appropriate division of labor is quite important.

(ix) Identification of appropriate technology and process—Basic metal industries, in particular the steel industry, tend to have process-oriented identification, while engineering industries have elemental technology-oriented identification. Depending on market needs and technological availabilities, the former includes the full ranged process with blast furnace iron making, electric arc furnace steel making process, direct reduced iron (DRI) process as well as steel product making (such as hot rolling, cold rolling, long products and flat products) without steel making process. On the other hand, the latter includes elemental technologies such as casting, forging, welding, machining, metal stamping and pressing, heat treatment and surface treatment and mold and die.

(x) *Technology development and technical capability improvement*—The comparable master plans discuss various aspects of technology development and technical capability improvement such as: adoption of new and appropriate technology that matches available resources;

improvement of current technology quality; improvement of quality and productivity management; research and development; prototyping and product development; facility improvement and development; certification and standardization system; partnership and strategic alliance among industry, academics and government; partnership between upstream and downstream industries; and adoption of foreign technology through partnership, investment and technology transfer.

10-1-2. Ethiopia's BMEI policy framework

As the BMEI has been considered as one of the priority industries for import substitution, a series of documents were prepared for building up the policy framework of BMEI in the course of PASDEP II formulation. This includes: (i) *Basic Metal and Engineering Industry Development Strategy and Action Plan (BMEI Strategy)* drafted by MPDC/MOTI in 2008; (ii) *Metal and Engineering Industries Sub-sector 5-Year Development Plan 2003-2007 EFY (BMEI 5-Year Plan)* prepared by MPDC/MOTI in May 2010; and (iii) *Basic Metal and Engineering Industries Firm-level Study* (see section 10-2 for further details) conducted in the first half of 2010.

The BMEI Strategy is well structured and has a smooth flow from general and technical background to performance review, circumstance (infrastructure, human resource and policy), gap analysis and development strategy. On the other hand, strategic issues, strategic objectives and goals and action plans presented in the BMEI Strategy need to be more logically consistent. The document is informative with some detailed data and 100 pages of contents but additional industrial information and data are required to capture the whole picture of the BMEIs. This is why the Firm-level Study was required to complement it.

The BMEI 5-Year Plan was prepared as an input for PASDEP II, focusing on BMEI's possible role in import substitution. It was prepared in Amharic and only a summary was available in English. It was treated as a given framework for conducting the Firm-level Study.

The BMEI 5-Year Plan notes that 85% of demand for BMEI products is currently fulfilled by imports. It sets various targets including: (i) gross production value in 2014/15 to be ETB101 billion,[4] which equivalents five times the value in 2010/11; (ii) steel demand to grow 28% per annum and per capita steel consumption to grow from 12.1kg (EFY2002) to 34.72kg (EFY2007); (iii) forecasted demand for BMEI products by major industrial sectors in the next five years; (iv) domestic design and manufacturing capacity targets in percent of forecasted demand for each industrial sector and each year (for example, 90% for the leather industry; 35% for the textile industry; 85% for the sugar

[4] ETB is the Ethiopian currency (Ethiopian Birr). USD1 = approximately ETB17.1 as of August 2011.

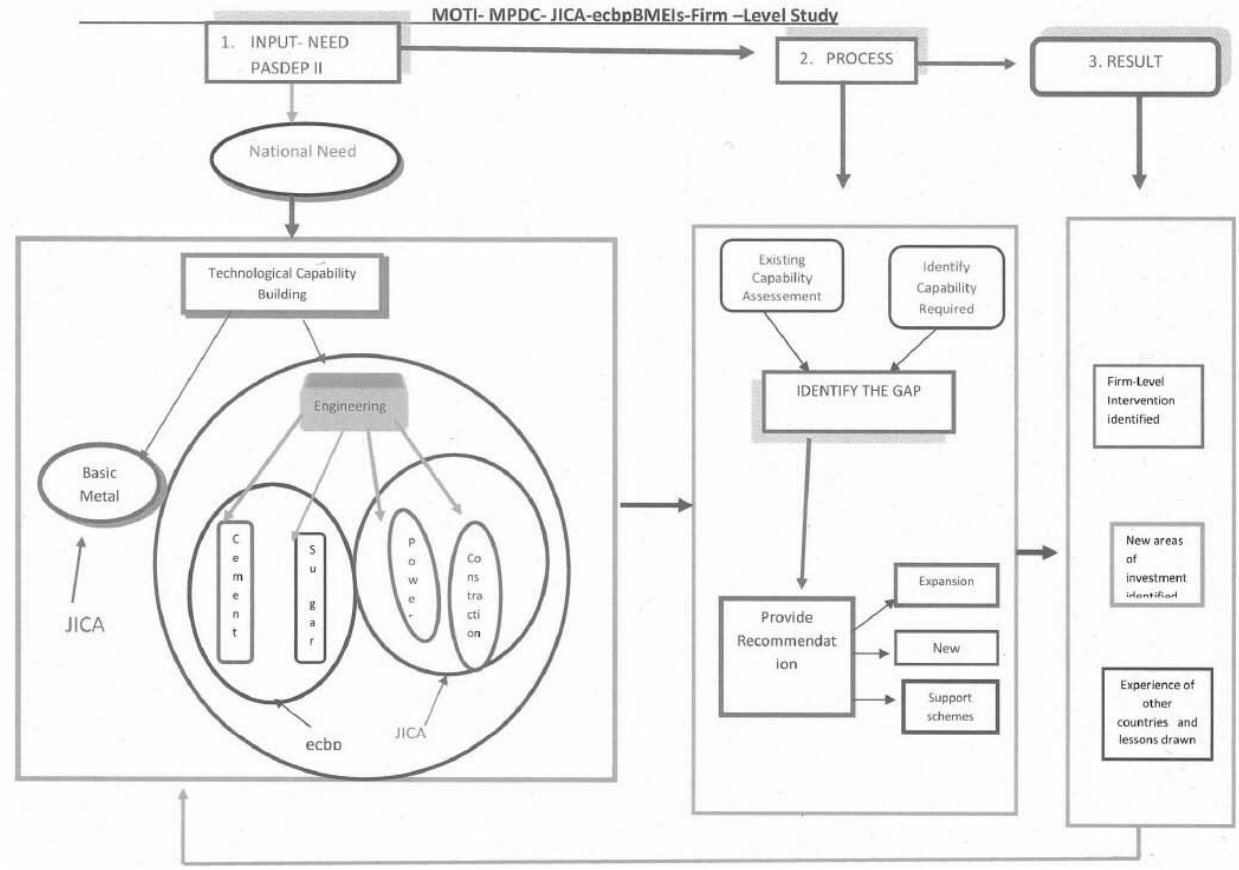
industry; 85% for the cement industry; 95% for construction steel; 85% of small and medium transport vehicles at the end of the five-year period).

Compared with plans in other countries, the BMEI 5-Year Plan is clearer in terms of quantitative targets. The target figures are quite challenging and sometimes not certain whether they are targets or projection, but the figures and the plan itself are consistent with PASDEP II / GTP. Approaches to achieve these ambitious targets need to be further elaborated and visualized including material flow, geographical strategies and vertical and horizontal industrial linkages.

10-2. Results of the BMEI Firm-level Study

10-2-1. Outline of the BMEI Firm-level Study

The BMEI Firm-level Study was requested to JICA in cooperation with MPDC and ECBP, in the course of a series of the Ethiopia-Japan Industrial Policy Dialogue. It was conducted intensively from April to June 2010. Initial outline consisted of Phase 1 by MPDC and ECBP to conduct a field survey for collecting data with basic data processing and Phase 2 by MPDC (a team including external consultants) supported by experts from ECBP (demand side – user industries) and JICA (supply side – BMEI industries) for analysis based on the collected data. The outline was, however, changed by the Ethiopian side after the dispatch of experts. Finally JICA was requested to contribute to technical survey on basic metal industries and a part of engineering industries (for the power sector and the construction machinery sector), while ECBP contributed to technical survey on another part of engineering industries (for the sugar and cement industries) under overall responsibility of MPDC (Figure 10-1).



Source: Ministry of Trade and Industry.

Figure 10-1. Study Flow

A summary of major findings on both basic metal industries and engineering industries entrusted to JICA respectively are presented in the following sections. The basic approach in respective industries was to analyze the current situation, grasp the supplying capacity and the market demand, identify the supply-demand gap both quantitatively and qualitatively and finally to present technical recommendations to fill the gap.

10-2-2. Major findings on basic metal industries

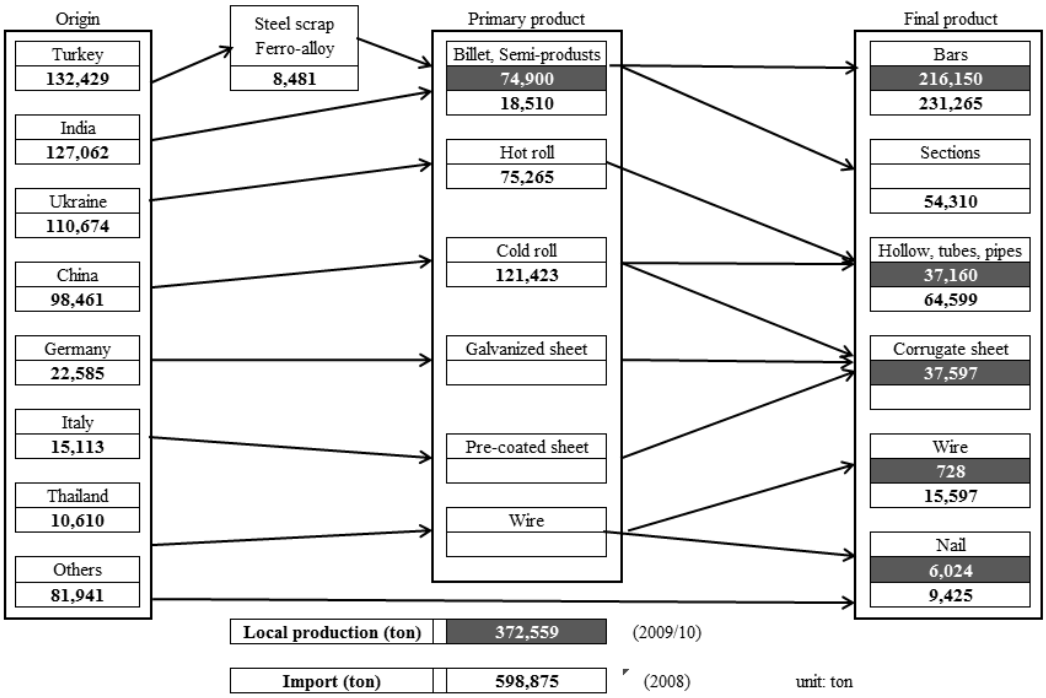
10-2-2-1. Iron ore exploration and possible utilization

Bikilal Iron Ore Deposit located in Western Ethiopia is a promising site with an estimated 22 million tons of iron ore. According to the two previous studies by (i) the Ethio-Korean team in 1988; and (ii) Swedish Boliden Contech in 1995, it has relatively low Fe content (41%) but high TiO_2 (15-18%) and V_2O_5 (0.18%) contents, which increases the ore value. At the time of the two studies, it was not proved to be strictly economically feasible. But its estimated production cost was ETB 2.5/kg (if converted in current price), which compares to the current steel scrap cost of ETB 3-5/kg. This implies that it is

worthwhile re-investigating its feasibility under the current and prospective high mineral price situation, with a view to introducing the DRI process which can fully utilize the potential of Bikilal iron ore (see also sub-section 10-2-2-6 on the availability of DRI).

10-2-2-2. Material flow: iron and steel in Ethiopia

It is quite significant for the basic metal industries, in particular the steel industry, to analyze the material flow to find out the linkages among raw materials, primary products, semi-products and final products. There are many missing data to complete it but a tentative material flow chart was prepared in the Firm-level Study as in Figure 10-2. It clearly shows that the Ethiopian steel industry heavily depends on raw material import from multiple countries such as Turkey, India, Ukraine and China, rather than domestic iron making process. The products are mainly final products for basic construction materials such as bars, hollows, tubes, pipes and corrugate sheets. It is recommended that a data collection system should be established to clarify the material flow further so that appropriate intervention can be made.



Source: JICA (2010).

Figure 10-2. Material Flow of Steel Industry in Ethiopia

10-2-2-3. Existing capability assessment

Aggregate production capacity of the 14 major basic metal companies surveyed, which cover almost all national production, exceeds 1 million tons per annum (Table 10-3). It is interesting to note that

half of this capacity has been recently installed (Table 10-4). The two tables also show that the products produced in Ethiopia are concentrated in rather basic construction materials such as reinforced bars, hollow sections and corrugate sheets as well as billets which are intermediate products. It is also found that iron and steel manufacturing processes that exist in Ethiopia are still limited (Figure 10-3) and need to be expanded toward upstream processes.

Table 10-3. Production Capacity and Actual Production in 2009/10 (Unit: ton)

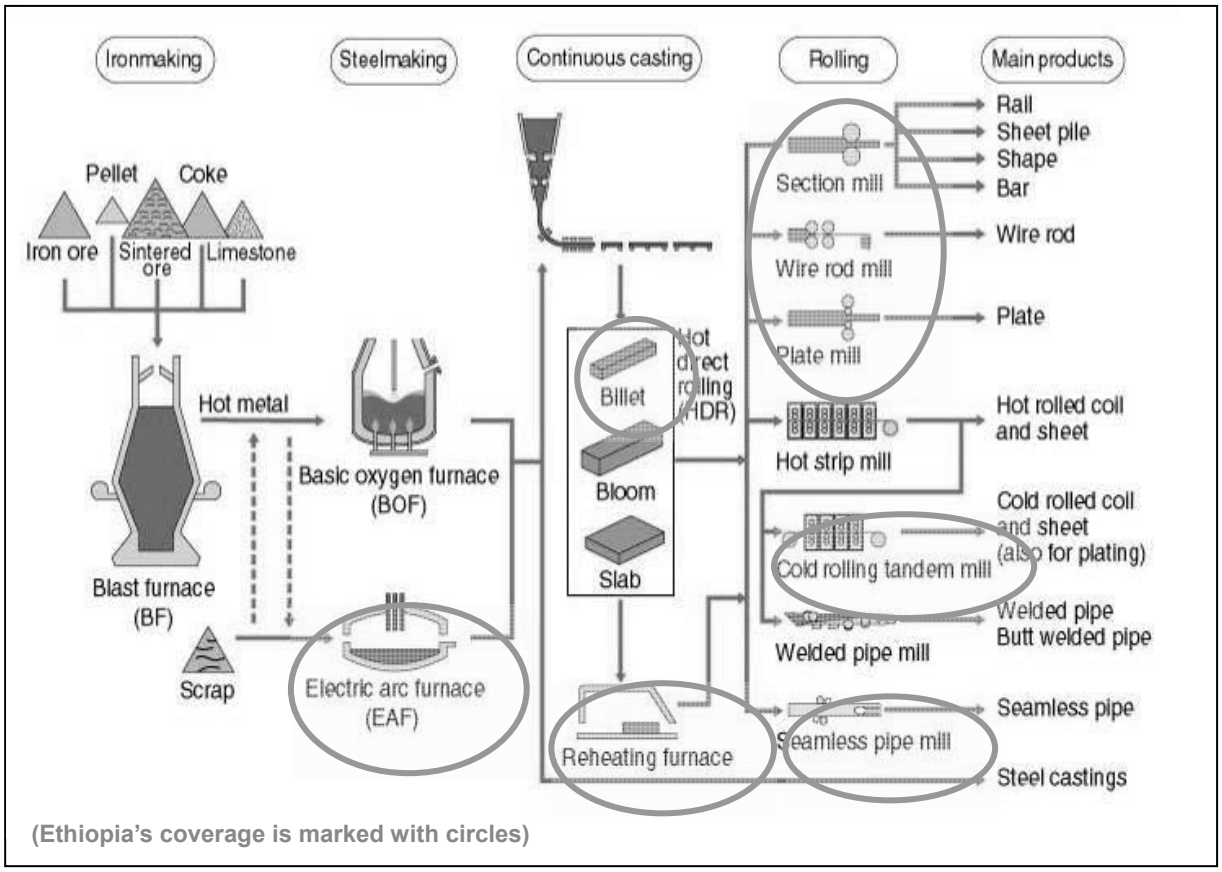
No.	Firm-code	Billet		Reinforce bar		Hollow section		Corrugate sheet		Wire		Nail		Total	
		Attainable	Attained	Attainable	Attained	Attainable	Attained	Attainable	Attained	Attainable	Attained	Attainable	Attained	Attainable	Attained
1	2					2,300	460	1,000	200					3,300	660
2	3	13,000	3,900	13,500	9,600	30,000	18,000	25,000	7,500					81,500	39,000
3	4							22000	9,000					22,000	9,000
4	5			100,000	36,000									100,000	36,000
5	7	35,000	10,500	156,200	52,900									191,200	63,400
6	9	9,600	2,900	6,823	6,650					1,700	520	6,246	3,440	24,369	13,510
7	10	72,000	21,600	108,000	27,000									180,000	48,600
8	E-12									600	70	4,000	2,000	4,600	2,070
9	MA					48,000	12,000							48,000	12,000
10	S-1							35,000	16,000					35,000	16,000
11	S-4							12,000	3,000	904	138	480	4	13,384	3,142
12	S-5					7,200	6,700	2,430	1,897					9,630	8,597
13	S-7											800	580	800	580
14	ST	120,000	36,000	280,000	84,000									400,000	120,000
Total		249,600	74,900	664,523	216,150	87,500	37,160	97,430	37,597	3,204	728	11,526	6,024	1,113,783	372,559

Source: Questionnaire and hearing by the JICA study team (2010).

Table 10-4. New Facilities Installed in the Last Five Years (Unit: ton)

Company No.	Product	Capacity (ton/year)
1	Hollow section, corrugate sheet, reinforced bar	43,500
2	Reinforced bar	60,000
3	Hollow section	20,000
4	Reinforced bar	280,000
5	Reinforced bar, section	108,000
Total		511,500

Source: Questionnaire and hearing by the JICA study team (2010)



Sources: JFE 21st Century Foundation (2003) and JICA (2010).

Figure 10-3. Iron and Steel Manufacturing Process

10-2-2-4. Identification of capability required

According to the five-year projection shown in the Metal and Engineering Industries Sub-sector 5-Year Development Plan 2003-2007 EFY (BMEI 5-Year Plan), steel consumption grows 28% per annum and in 2014/15 demand will reach 3 million tons (Table 10-5), which is over the minimum efficient scale to introduce domestic iron making such as the DRI process (see 10-2-2-6 for further details). This projection is based on the assumption that per capita steel consumption will increase from current 12kg to 34kg, which is equivalent to the current African average,[5] in five years.

[5] The current world average of per capita steel consumption is approximately 200kg (World Steel Association).

Table 10-5. Steel Consumption Projection (Unit: ton)

		Present 2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Population	(million)	-	81.7	83.7	85.7	87.8	89.9
	growth (%)	-	-	2.4	2.4	2.5	2.4
Average crude steel consumption	(kg)	12.1	14.23	17.78	22.23	27.75	34.72
	growth (%)	-	17.6	24.9	25.0	24.8	25.1
Demand for steel	(ton)	908,385	1,162,733	1,488,298	1,905,021	2,437,427	3,121,187
	growth (%)	-	28.0	28.0	28.0	27.9	28.1

Sources: MPDC/MOTI (2010) and JICA (2010).

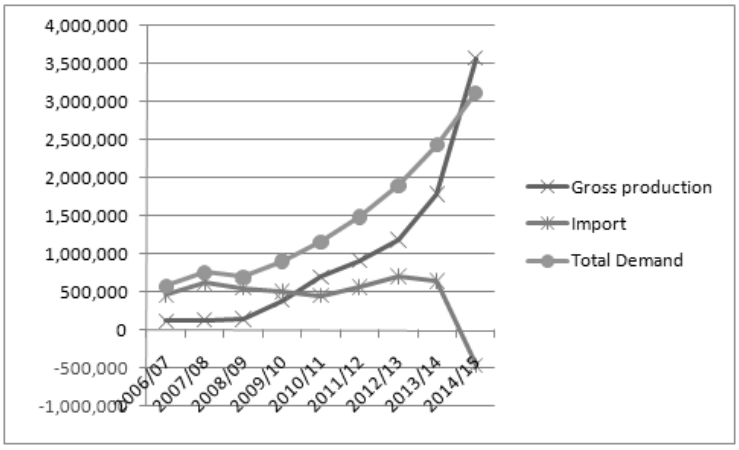
According to the projection shown in the BMEI 5-Year Plan, domestic production must grow at more than 30% per annum, in order to achieve the target set in PASDEP II / GTP (Table 10-6).

Table 10-6. Projection of Gross Production (Unit: ton)

	Billet	Bar	Hollow	Corrugate	Wire	Nail	Total
2009/10	74,900	216,150	37,160	37,597	728	6,024	372,559
2010/11	140,438	405,281	69,675	70,494	1,365	11,295	698,548
2011/12	182,569	526,866	90,578	91,643	1,775	14,684	908,113
2012/13	237,339	684,925	117,751	119,135	2,307	19,089	1,180,546
2013/14	356,009	1,027,388	176,626	178,703	3,460	28,633	1,770,819
2014/15	712,018	2,054,776	353,252	357,406	6,921	57,266	3,541,639
%	20.1	58.0	10.0	10.1	0.2	1.6	100.0

Source: MPDC/MOTI (2010) and JICA (2010).

These projections of steel consumption and gross production imply that a capacity gap will exist until 2013/14 while gross production will surpass total demand in 2014/15 (Figure 10-4). However, the data presented here is based on a number of assumptions and requires further explanation to be considered as reliable projections.



Source: MPDC/MOTI (2010) and JICA (2010).

Figure 10-4. Estimation of Basic Metal Production (Unit: ton)

10-2-2-5. Technical recommendations

Considering the current situation analyzed in the previous sections and targets set in the BMEI 5-Year Plan, five steps are proposed to achieve domestic production and import substitution as described in Figure 10-5. The first two steps are based on the existing production capacity, while steps 3-5 require investment to expand capacity.

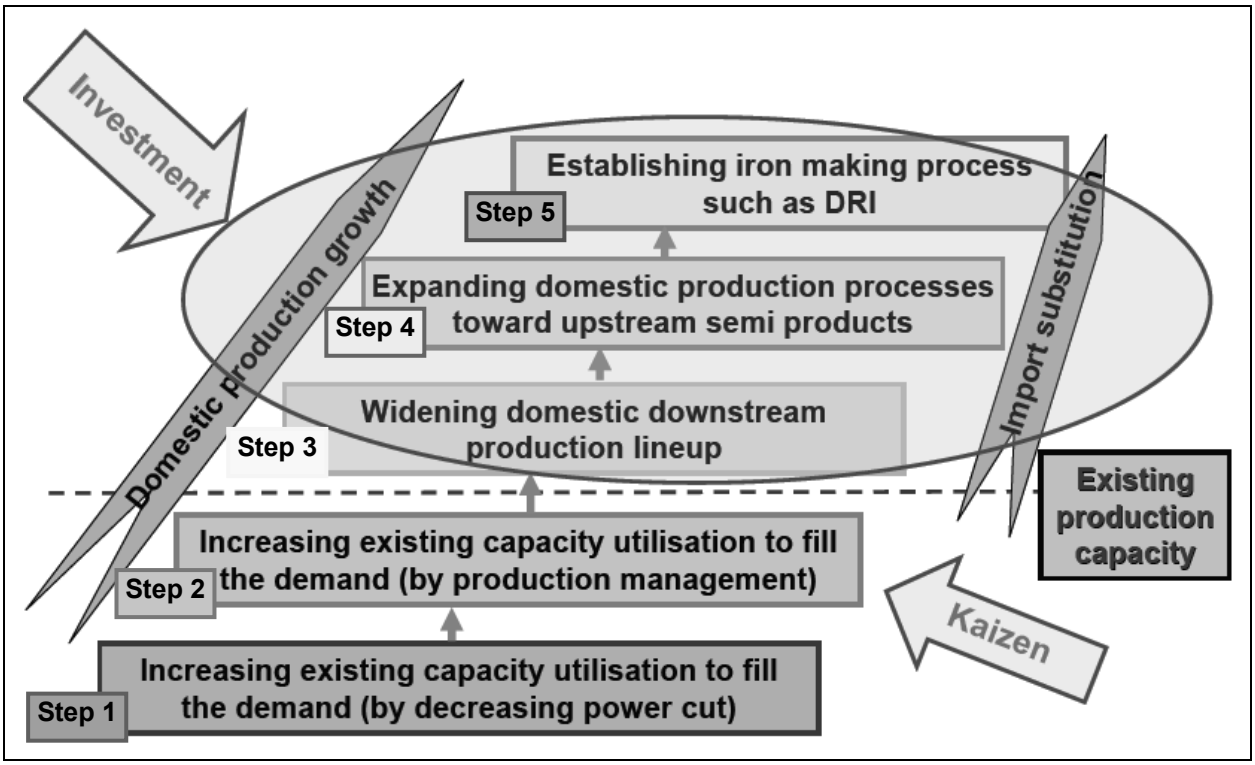
(i) Step 1—*Increasing existing capacity utilization to fill the demand by decreasing power outage*—Currently the existing capacity is underutilized despite high demand, mainly due to frequent power cuts. Ethiopia's power industry is rapidly expanding its capacity along with the GTP and reduction of power disruption is promising. It will increase existing capacity utilization.

(ii) Step 2—*Increasing existing capacity utilization to fill the demand by production management*—Compared with Step 1 which relies on external conditions, Step 2 encourages internal efforts to increase the existing capacity utilization by production management, in particular quality and productivity improvement such as *kaizen*.

(iii) Step 3—*Widening domestic downstream production line-up*—From this step onward, investment is required. The current structure of Ethiopian basic metal industries is concentrated in limited conventional downstream products such as basic construction materials. It is necessary to broaden the downstream production line-up gradually. The standard sequence of development of downstream products is as follows: (a) cold rolled coil & sheet; (b) heat treatment, galvanizing & coating; (c) pipe and tube; (d) hot rolled sheet and coil.

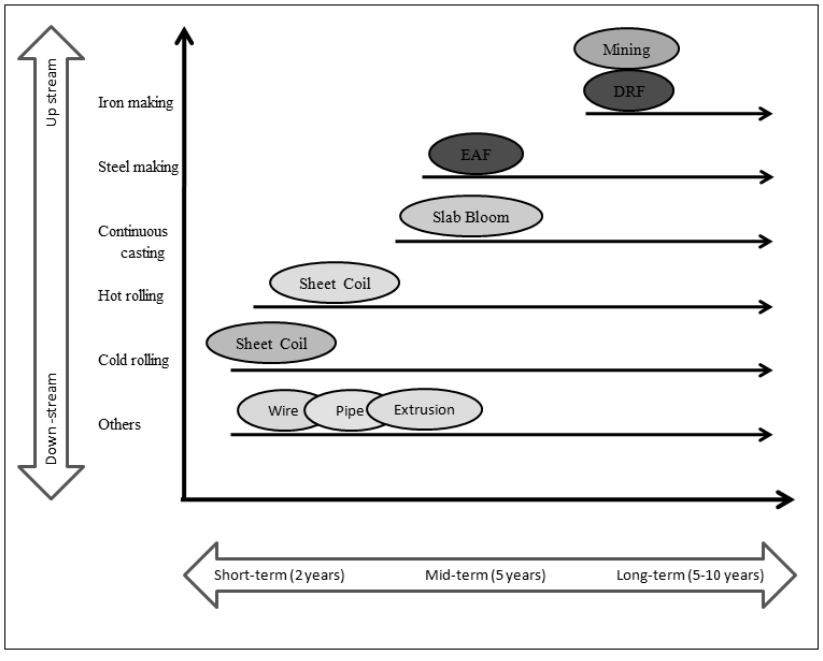
(iv) Step 4—*Expanding domestic production processes toward upstream semi products*—The other direction of expanding the currently limited production is to climb up the ladder from downstream products to upper-stream semi products as described in Figure 10-6. It is the critical step in particular for import substitution of basic metal industries.

(v) Step 5—*Establishing iron making process such as DRI*—The final step is localization of iron making, which is at the upper end of the production process as seen in Figure 10-6. The DRI process is considered to be most reasonable for Ethiopia (sub-section 10-2-2-6).



Source: Homma (2010b).

Figure 10-5. Proposed Scenario for Achieving Domestic Production and Import Substitution



Source: JICA (2010).

Figure 10-6. Basic Metal Products: Technological Development Scenario

10-2-2-6. International experience: initial investment and direct reduced iron (DRI)

As the steel industry heavily depends on large-scale facility which needs large investment, minimum efficient scale and initial investment cost for major processes must be considered in selecting appropriate processes. Sato (2008) summarizes them from the experiences of many countries (Table 10-7). Regarding the upstream process which is the most facility-intensive part, it suggests that, while the conventional blast furnace based process requires minimum three million ton per annum which is triple of current Ethiopia's whole steel production amount, electric furnace based process needs only 1 million ton as the minimum efficient scale and furthermore DRI process requires only 0.5-1.0 million ton to become economically viable to absorb initial investment cost easily.

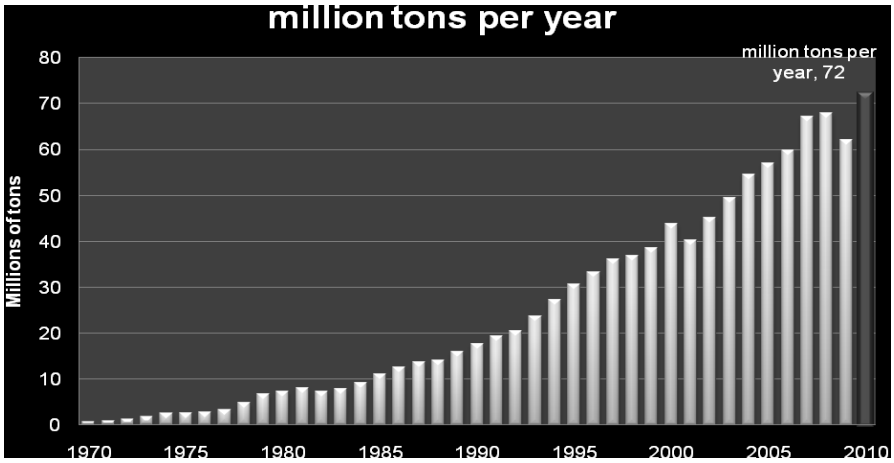
Table 10-7. Minimum Efficient Scale and Initial Investment Cost for Major Processes

- Conventional process
  - Simple rolling of steel bars and shapes: 100,000 tons/year (t/y) (USD20 million)
  - Steel rolling companies which uses electric furnace: 300,000 t/y (USD100 million)
  - Simple rolling and hot strip milling of steel sheets: 2 million t/y (USD400 million)
  - Blast furnace - integrated steel mill: 3 million t/y (USD4 billion)
- Alternative process
  - Hot coil production based on electric furnace and thin slab continuous casting: 1 million t/y (USD300 million)
  - Direct reduction method: 0.5-1.0 million t/y (USD100 million)

Source: H. Sato (2008).

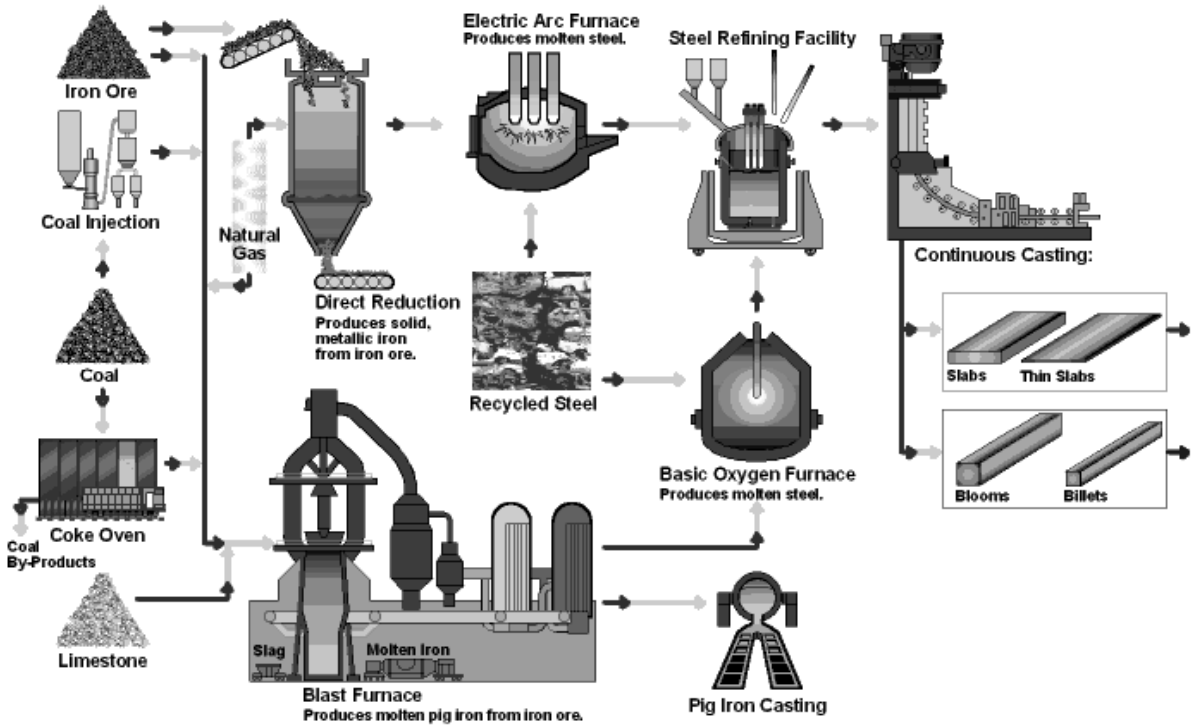
This points to the possibility of using the Bikilal iron ore in Ethiopia by introducing the DRI process. DRI production continues to increase in developing countries as an alternative to the blast furnace-based integrated iron making (Figure 10-7). The basic flow of the DRI process is as described in Figure 10-8. Gas-based reduction is currently dominant occupying 74% of total DRI production, while 26% adopts coal-based reduction.[6] As there are several kinds of DRI processes available, it is important to choose the most suitable type of DRI for the current situation in Ethiopia by conducting detailed feasibility study.

[6] Source: Midrex technologies, Inc (2010).



Source: Ravenscroft (2010).

Figure 10-7. World Direct Reduced Iron Production



Source: American Iron and Steel Institute.

Figure 10-8. Direct Reduced Iron versus Blast Furnace

Southeast Asian countries have diverse experiences reflecting their different historical situations. They are useful inputs for drafting Ethiopia's basic metal industry development plan.

The first case is *Indonesia* (Y. Sato, 2008). It is interesting to note that Indonesia is one of the few countries which realized DRI integrated production (natural gas-based) and was to some extent successful in introducing conventional level steel production. Indonesia's steel industry, however, is a

state-owned integrated production system, which now faces problems of high cost structure and weak competitiveness. Indonesia's steel industry is expected to grow fast as it has a vast market potential with the world fourth largest population and strong economic growth. Its currently small per capita steel consumption (29kg, compared to 228kg in Thailand and 65kg in Vietnam) provides large room to grow.

The second case is *Vietnam* (JICA and Nippon Steel, 1998). The government of Vietnam requested the government of Japan to provide assistance for master plan making in order to develop the domestic steel industry. Key recommendations of the master plan included: preferential tax system; maintaining competitiveness of the integrated steel mill; infrastructure development; advanced technologies; quality improvement; state-owned enterprise reform; and environmental conservation.

10-2-3. Major findings on engineering industries (power sector and construction machinery industries)

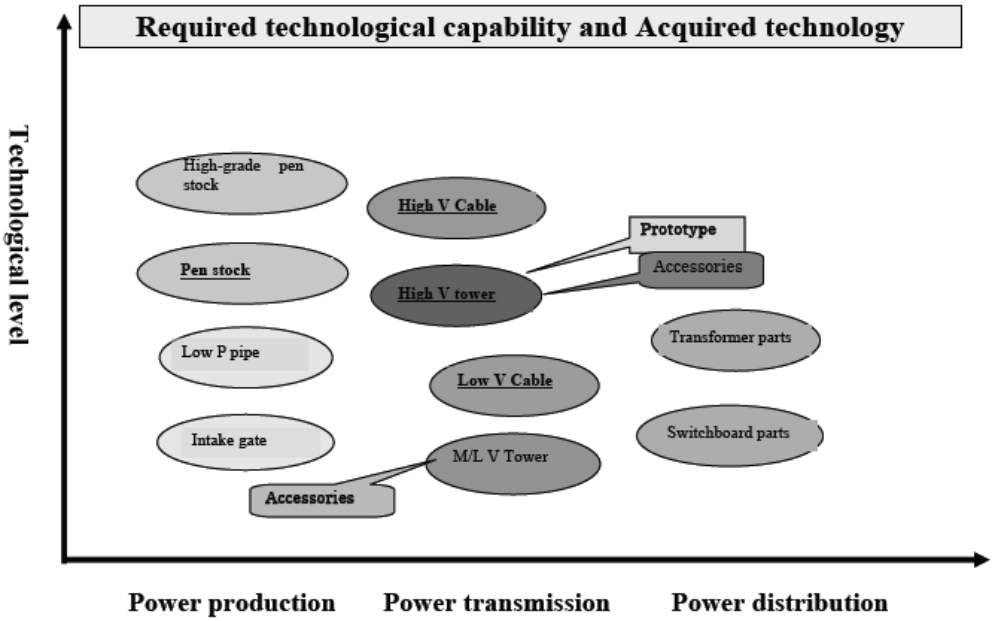
10-2-3-1. Gap analysis and technical recommendations for engineering industries for the power sector

(i) *Overview of the power sector*—Ethiopia's current power capacity is 1,600 Megawatt (MW), which consists of hydro (86%), diesel (13%) and geothermal (1%). This is not enough to meet national power demand and as a result power failure is frequent, which is considered as the most serious obstacle for industries. The GTP addresses this issue in depth and the Ethiopian Electric Power Corporation (EEPCO) plans to develop the capacity of 11,600MW consisting of hydro (10,710MW), wind (540MW) and geothermal (350MW) within the 5-year period (according to the Firm-level Study analysis based on EEPCO's data). This if realized will be enough to cover the future national demand and additionally to export to the neighboring countries. Ethiopia's potential power resource is estimated to be 60,000MW in total, consisting of hydro (45,000MW), wind (10,000MW) and geothermal (5,000MW).

(ii) *Existing technical capability*—Ethiopia's power facility and equipment heavily depends on import or foreign companies' engineering services on a "full turn key basis". This has resulted in limited opportunities to enhance technical capabilities of domestic companies and human resources. On the other hand, in the past, EEPCO with domestic companies had some experiences in producing (a) medium-level products such as penstock, (b) lower-level consumable products such as accessories for middle voltage transmission, and (c) prototypes such as high voltage transmission tower. It also plans to produce new products such as wind power facilities.

(iii) Identification of technical capability required—The BMEI 5-Year Plan estimates the five-Year demand in the power sector for BMEI products to be ETB860,112 million equivalent in gross value of which 50% (ETB430,056 million equivalent) should be domestically produced. This will account for 75% of whole demand for BMEI products in all major industries. According to the Firm-level Study with EEPCO, demand for steel fabrication in power plants and transmission towers is estimated at 650,000 tons per annum in the next five years. Extension of transmission lines over 2,440km is planned and emerging demand for wind power farms is identified. EEPCO encourages domestic production of BMEI products and prepared new strategies on increasing domestic procurement, such as "Detailed Technical Requirement for Transmission Line Materials" and "Detailed Technical Requirement for Power Transformers and Steel Structures". To facilitate import substation, EEPCO also summarizes concrete demand for BMEI products in long and short lists, such as "List of machinery/equipment and metal products for a typical hydropower plant (258MW)," "List of parts and materials for Finchaa-Amerti-Neshe multi purpose project," "List of BMEI parts and components necessary for rural electrification and distribution" and "List of machinery/equipment/metals/instruments for procurement at the EEPCO mechanical workshop for five years after 2010."

(iv) *Technical recommendation on how to fill the gap—First*, strengthening of design capacity is critical in localizing the manufacturing process of BMEI products for the power sector. Approaches for this include: capacity building of design engineers, disseminating CAD/CAE and standardizing of specification of power products. Wind power facilities have a large potential to be designed domestically. *Second*, developing engineering products to be newly produced domestically should be prioritized. Considering potential demand and technological capability of domestic industries, concrete products that can be developed include penstock, water gate, valve for dam, transformer, induction motor, direct current synchronized motor, high voltage transmission products, various parts for wind power generation system and others, according to the BMEI Firm-level Study. Figure 10-9 maps out these products based on technological level and power sub-sector. For developing these products, feasibility studies are needed to utilize existing capacity fully and organize joint product development where applicable. *Third*, management capability is another area that requires policy intervention. Effectiveness of quality and productivity improvement through *kaizen* is demonstrated by the experience of the JICA Kaizen Project implemented in Ethiopia in recent years. Other approaches are establishing the quality assurance/quality control (QA/QC) system, inspection ability and preventive maintenance, utilizing the Metal Industry Development Institute (MIDI) as an incubator, and developing human resources in basic elemental technology on metal and engineering. *Fourth*, increasing the power and voices of domestic engineering companies should be further considered by strengthening the Ethiopian Association of Basic Metals and Engineering Industry (EABMEI) and organizing events such as reverse exhibitions.



Source: JICA (2010).

Figure 10-9. Required Technological Capability and Acquired Technology of BMEIs for the Power Sector: A Possible Scenario

10-2-3-2. Gap analysis and technical recommendations for engineering industries for the construction machinery industry

(i) *Overview of the construction machinery industry*—Compared with the power sector, there are less potential engineering products to be targeted for future import substitution. They can be classified into two groups, Type A and B. Type A machinery is of simple design; for housing/building construction; portable; and produced by many domestic manufacturers even now. For example, portable concrete mixer, hollow block making machine (HBM) and jaw crusher belong to the Type A category. Meanwhile, Type B products are of heavy duty; for road construction and large concrete structure; with wheels; and almost all are imported at present. Typical machinery of Type B is concrete mixer lorry, motor grader and road roller.

(ii) Existing technical capability—Regarding Type A, almost all processes are available domestically including steel welding, machining, gear making by casting and gear cutting. No bottlenecks are observed including parts supply, skilled labor and number of makers for local demand. On the other hand, Type B machinery and equipment are produced by only handful countries. It is quite difficult to enter this market as it needs comprehensive technological capability, except for concrete mixer lorry, which could be locally fabricated.

(iii) Identification of technical capability required—There is continuous demand for Type A machinery. With regard to Type B, some demand for concrete mixer lorry is observed. The import of this product was 894 tons (112 lorries equivalent if the average lorry size is assumed as 8 tons) in 2008. Although there is no significant visible demand for high level Type B machinery, demand for their spare parts is relatively high.

10-2-3-3. International experience in engineering industries

There are a large number of international experiences in Total Quality Management (TQM) and *kaizen* available for study and adoption by engineering companies, such as the Indian case mentioned in the BMEI Firm-level Study. As elemental technology is important for engineering industries, as mentioned earlier, the Firm-level Study discusses other countries' experiences in developing casting technology as an example, featuring JICA projects in Brazil, Indonesia and Ghana. It also advances some recommendations on approaches to develop casting industry in Ethiopia for engineering industries in general. It suggests first that the cost factor is important and second that several casting products, such as agricultural equipment (irrigation and pump), cement ball, axle shaft drum, hub, balance weight for tractor, incinerator and other machined components, should be considered for import substitution.

10-3. Conclusions

The international comparison of BMEI policy frameworks and the BMEI Firm-level Study revealed that Ethiopia's basic metal and engineering industries have the potential to contribute to import substitution. The following recommendations are given as the summary and conclusions of this chapter.

First, the proposed development scenario for the basic metal industries has five steps, among which the first two steps do not require new investment in BMEI while the remaining three will require investment to achieve targeted domestic production and import substitution: (i) increasing existing capacity utilization to fill the demand by decreasing power outage; (ii) increasing existing capacity utilization to fill the demand by production management methods such as *kaizen*; (iii) increasing the variety of downstream products ; (iv) expanding into upstream processes that should strengthen the steel industry; (v) iron making using the DRI method with Bikilal ore as input should be considered.

Second, regarding the engineering industries, a large part of the demand for BMEI products by the power sector, which is the largest consumer (75%) of engineering products in the next five years, is currently fulfilled by imports but there are various products which can be domestically produced in the future. Enhancement of designing capacity is required to exit from "full turn key" dependency which

deters industrial development.

Third, technical capability and human resource development, particularly in basic elemental technology and managerial methodology including quality and productivity improvement using *kaizen*, are fundamental to the creation of sound industrial base and thus should be further stressed.

Fourth, it is revealed in the course of the Firm-level Study that many projections are based on weak assumptions rather than detailed analyses and facts. Lack of reliable data and a data collection system are also observed. Addressing these issues will take time and require certain amount of financial and human resources but the problem should at least be recognized and shared among stakeholders. Establishing a monitoring and evaluation system is also necessary to improve planning and implementation based on feedback.

Fifth, experiences in Asian and other countries can provide useful and practical lessons. While international comparison of policy framework is the very objective of the Industrial Policy Dialogue, comparison of approaches at the operational level should also add value. Ethiopia's strong and sustained interest in learning Asian experiences is a positive factor that contributes to such policy learning.

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Appendices

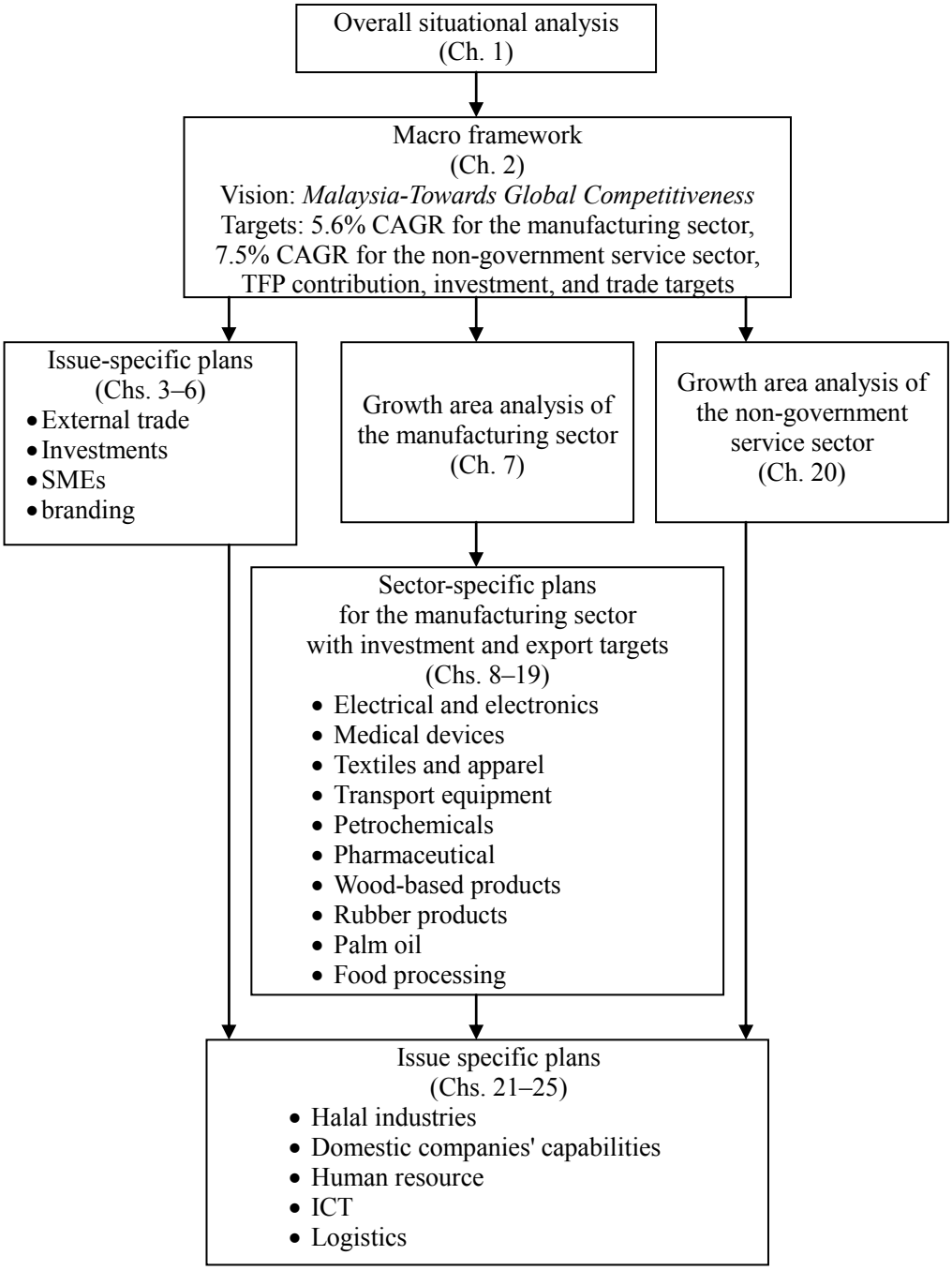
Appendix 1

Master Plan Structure: A Summary

Master Plan	Type	Years	Pages	Language	Contents				
					Vision	Targets	Situation analysis	Policy issues	Action plans
Malaysia: Third Industrial Master Plan	Overall	2006–2020	674	English	0.4%	4.7%	66.2%	28.6%	0%
Thailand: Automotive Industry (exec. summary)	Sector specific	2002–2006	19	English	6.7%	2.7%	0%	10.7%	80.0%
Thailand: Automotive Industry (exec. summary)	Sector specific	2007–2011	20	English	5.0%	10.0%	5.0%	0.0%	80.0%
Thailand: Automotive Industry	Sector specific	2007–2011	227	Thai	0.5%	2.5%	78.9%	0.0%	18.1%
Thailand: Small and Medium Enterprises Promotion (exec. summary)	Issue specific	2007–2011	38	English	10.0%	33.4%	43.6%	0.0%	7.7%
Thailand: Supporting Industries (exec. summary)	Issue specific	1995	38	Thai and English	6.7%	2.7%	0%	10.7%	80.0%
Thailand: Food Industry (exec. summary)	Sector specific	?	9	English	27.8%	0%	11.1%	22.2%	38.9%
Thailand: Leather, Leather Goods, and Footwear Industry (exec. summary)	Sector specific	10 years	6	English	3.8%	3.8%	53.8%	34.6%	3.8%
Indonesia: National Industrial Development Policy	Overall	2005–2025	238	English	2.1%	12.2%	29.8%	55.9%	0%
India: The National Strategy for Manufacturing	Overall	2006–2015	78	English	2.6%	2.6%	16.7%	78.2%	0%
India: Industrial Policy of Maharashtra State	Overall	2001–2006	10	English	10.0%	0%	25.0%	65.0%	0%

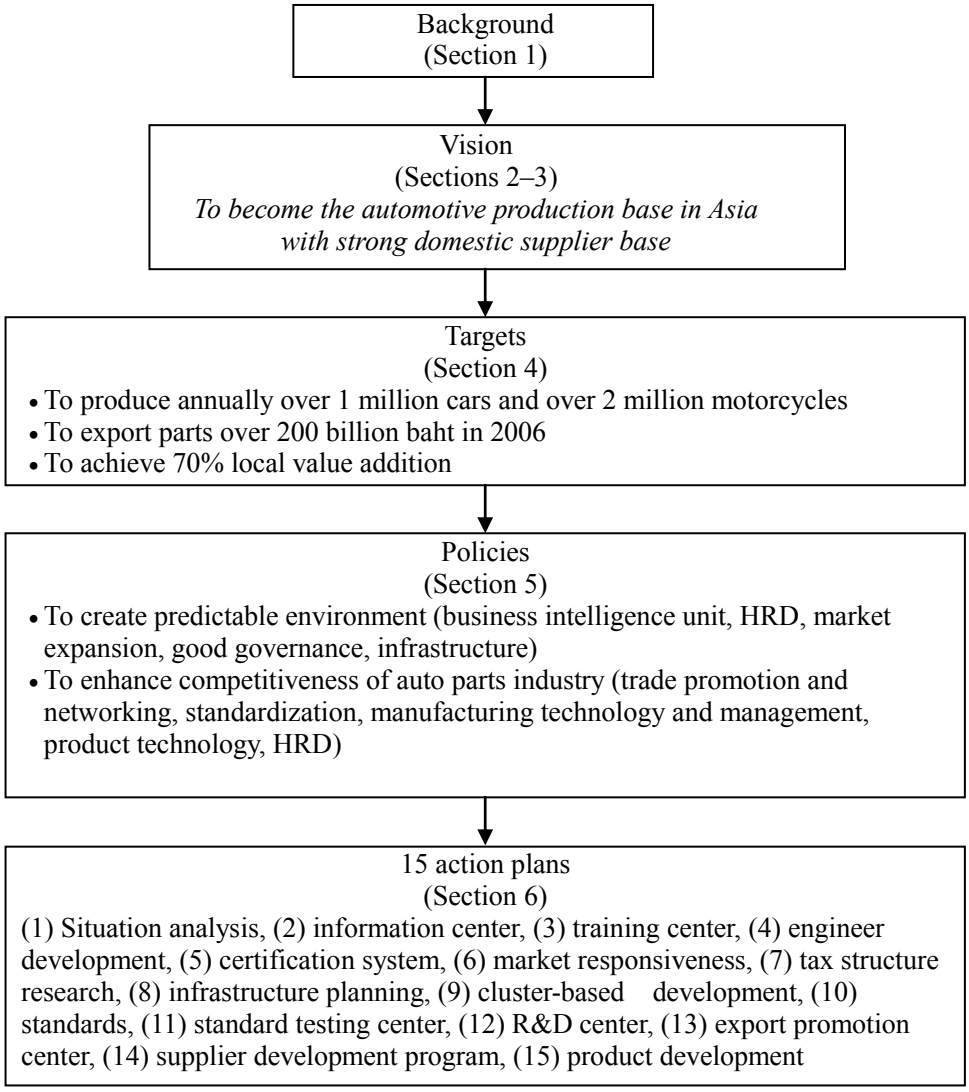
Note: Page numbers and content proportions are for the main text only; appendices are not counted. Action plans include both full action plan matrices and short listings of required actions.

Appendix 2
Malaysia: Third Industrial Master Plan (IMP3) 2006–2020



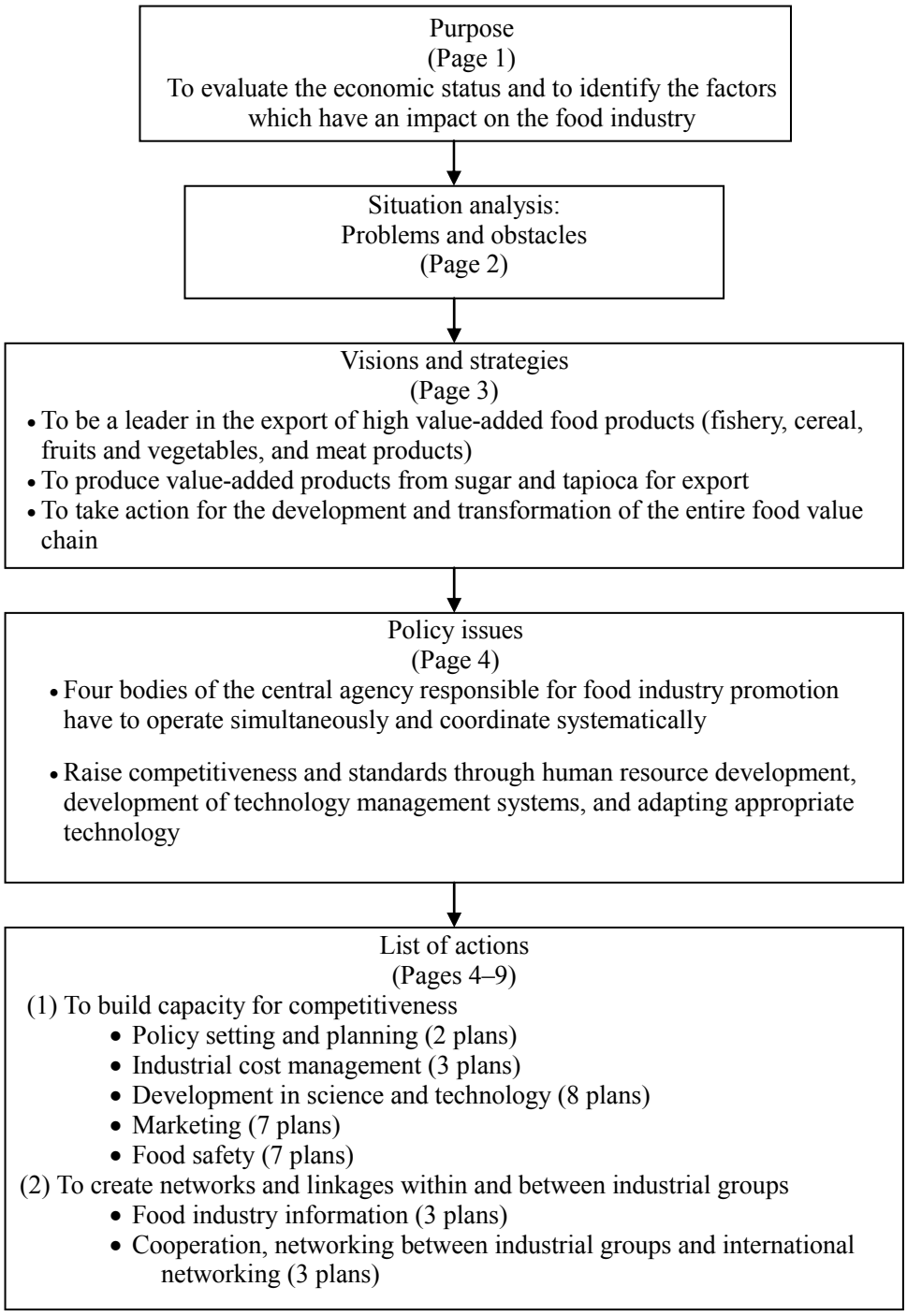
Appendix 3

Thailand: Master Plan for Thai Automotive Industry 2002–2006, Executive Summary



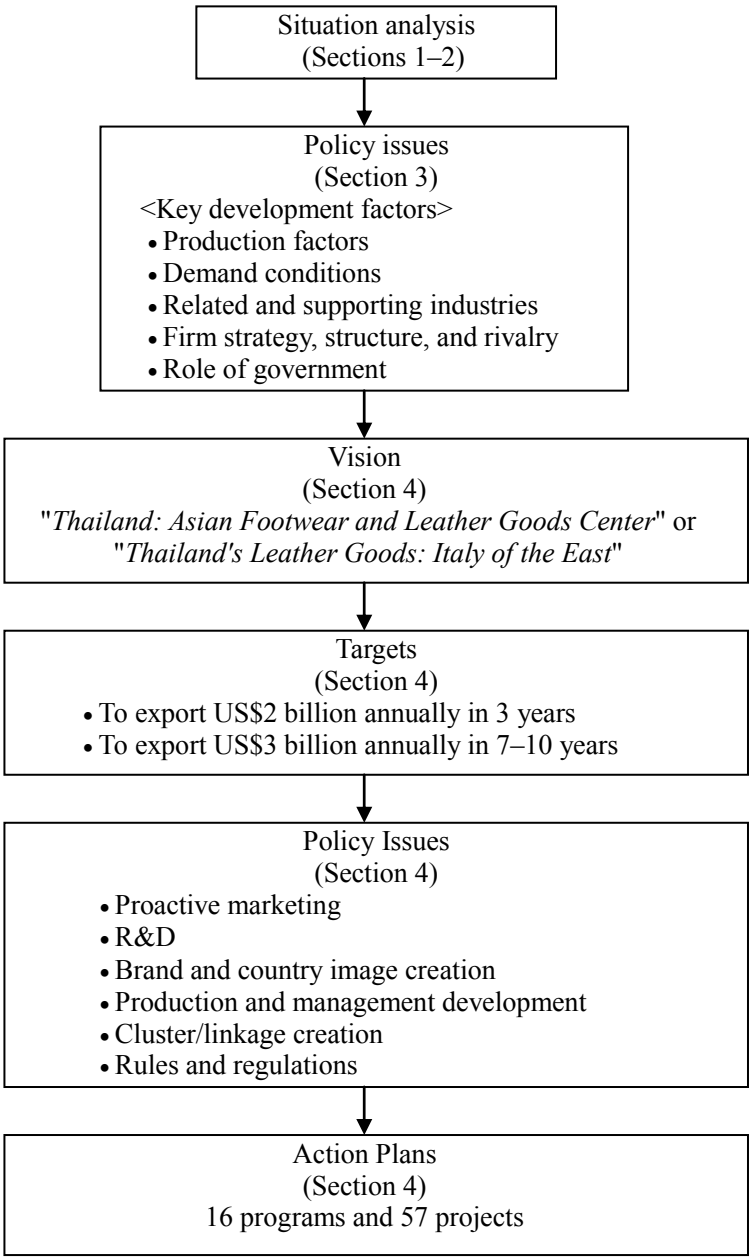
Appendix 4

Thailand: Master Plan for Thai Food Industry, Executive Summary



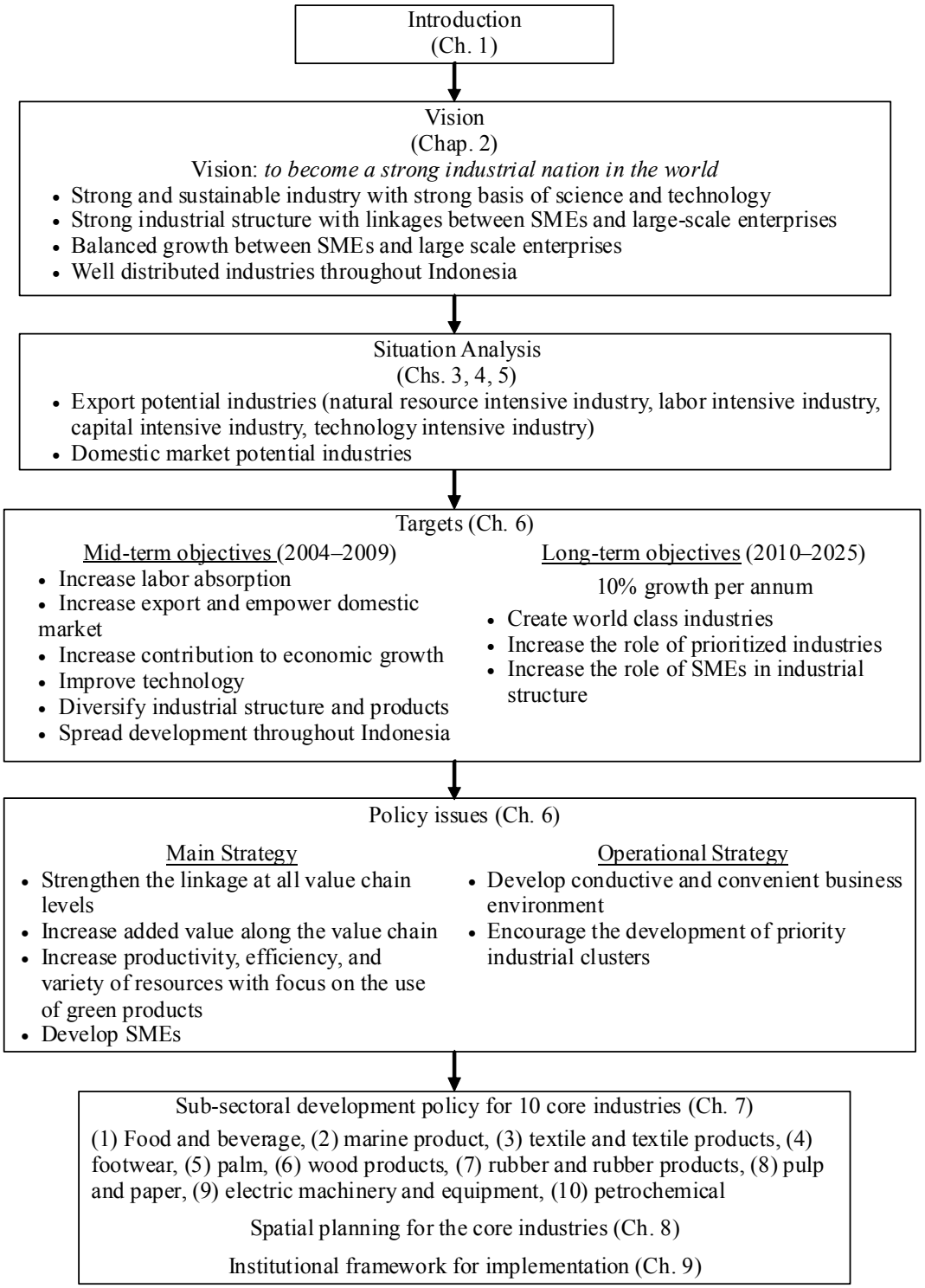
Appendix 5

Thailand: Master Plan for Leather, Leather Goods and Footwear Industry, Executive Summary



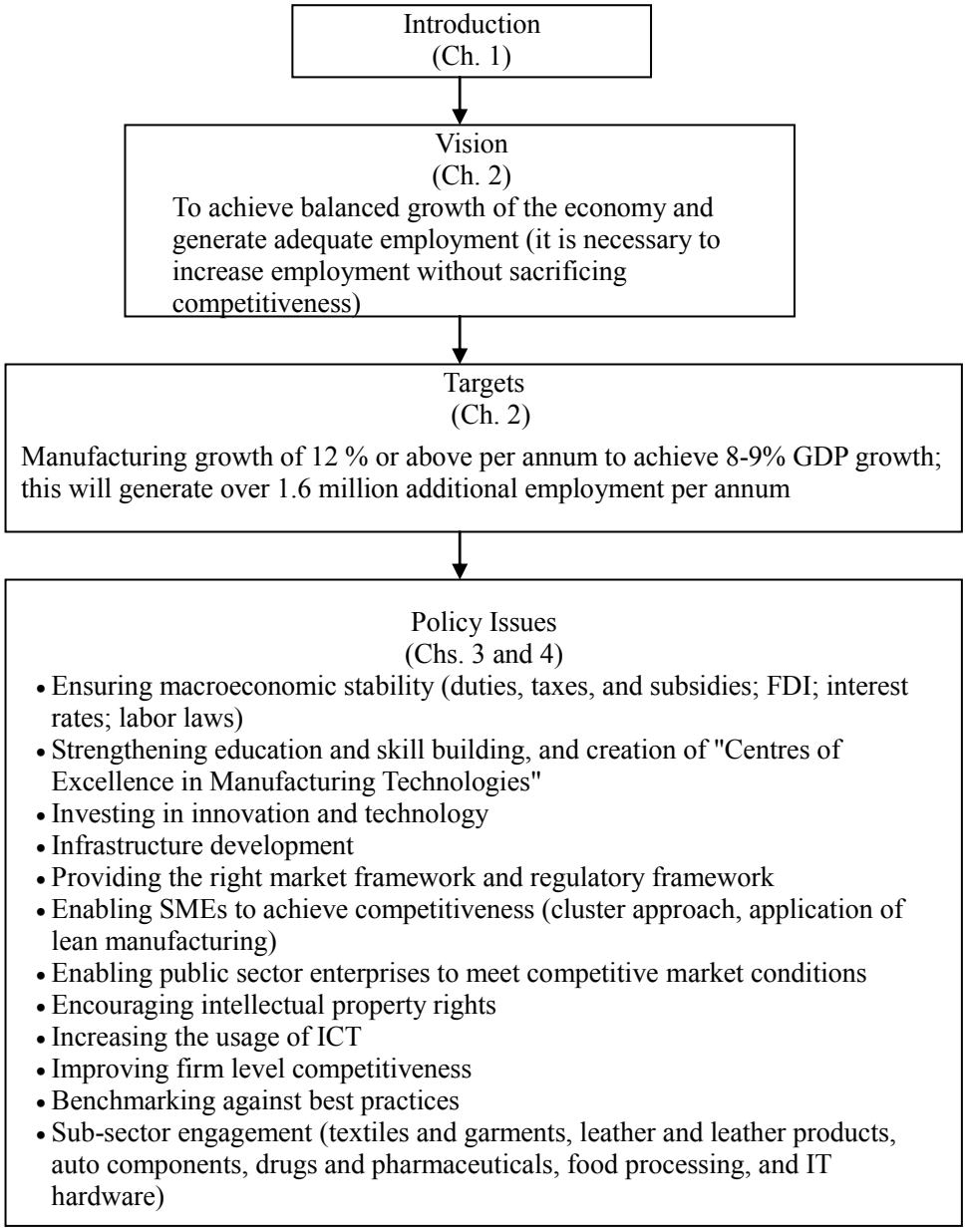
Appendix 6

Indonesia: National Industrial Development Policy



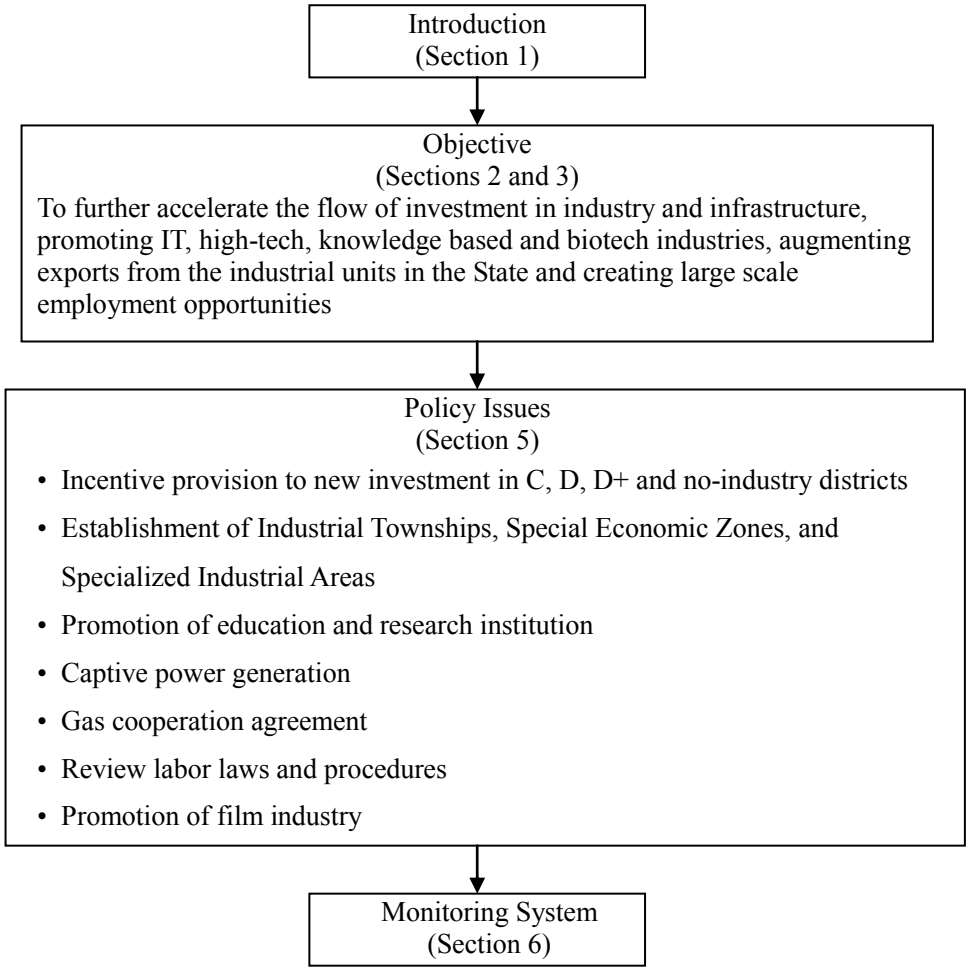
Exhibits:
(1) Analysis on international competitiveness
(2) Map of technological development for prioritized industries
(3) Export-import development (2002–2004)
(4) Projected growth 2005–2009

Appendix 7
India: National Strategy for Manufacturing



Appendix 8

India: Industrial Policy of the State of Maharashtra



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