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JAPAN INTERNATIONAL COOPERATION AGENCY

THE GOVERNMENT OF THE KINGDOM OF THAILAND
NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT BOARD

THE STUDY ON THE REGIONAL DEVELOPMENT PLAN FOR THE LOWER NORTHEAST AND THE UPPER EAST REGIONS IN THE KINGDOM OF THAILAND

FINAL REPORT

4. Trade and Distribution

September, 1993

NIPPON KOEI CO., LTD.

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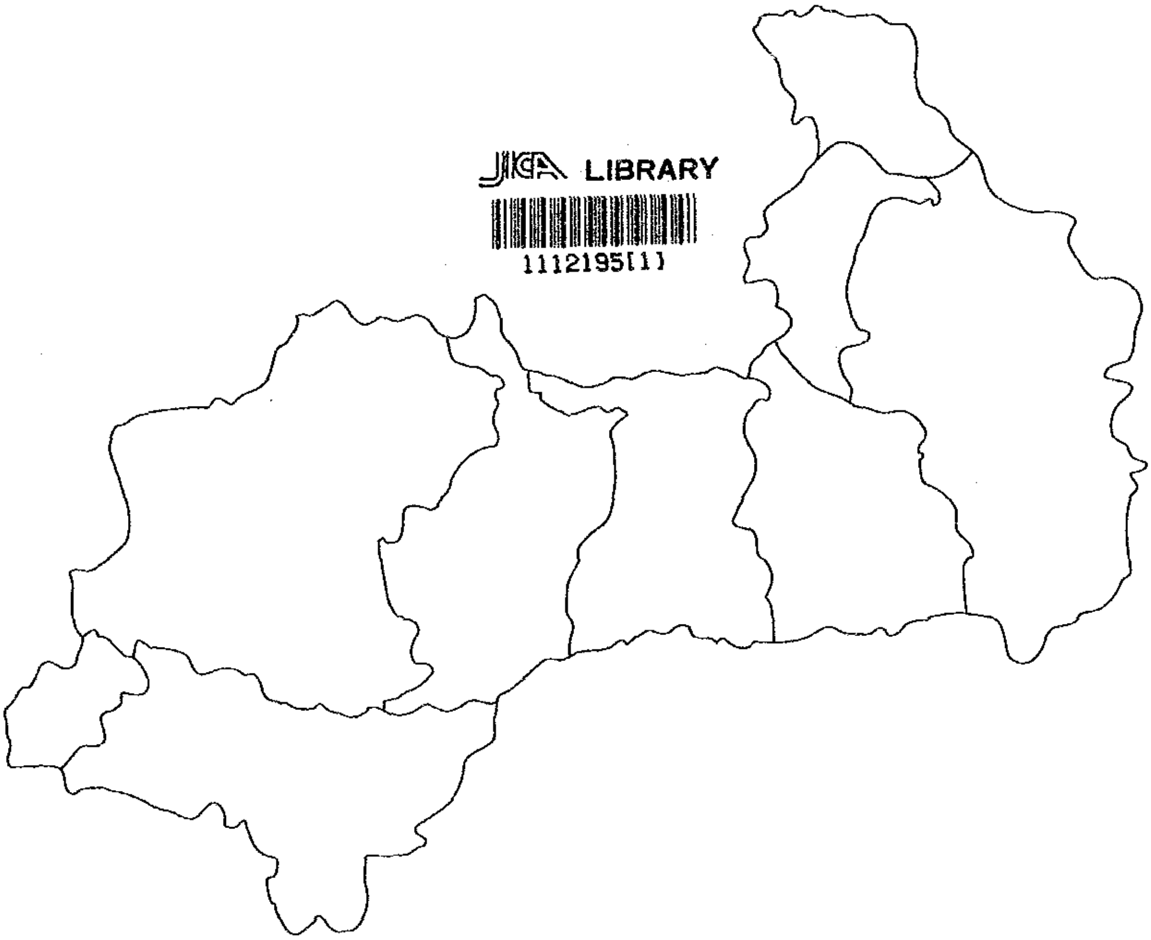

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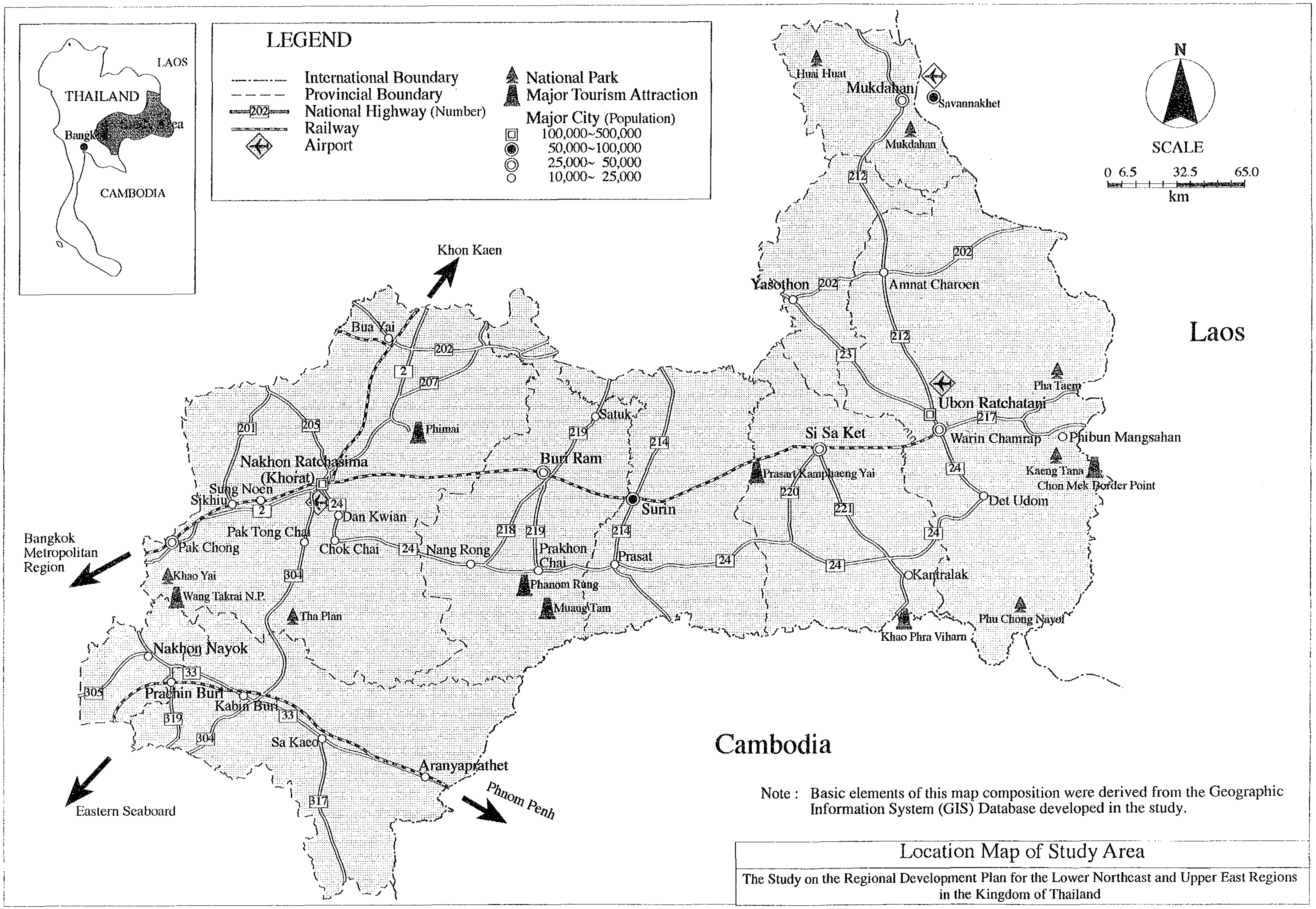

Note : Basic elements of this map composition were derived from the Geographic Information System (GIS) Database developed in the study.

Location Map of Study Area

The Study on the Regional Development Plan for the Lower Northeast and Upper East Regions in the Kingdom of Thailand

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Abbreviations

AAT	Airports Authority of Thailand [MOTC]
ADB	Asian Development Bank
AED	Agricultural Extension Department [MOAC]
BAAC	Bank for Agriculture and Agricultural Cooperatives [MOF]
BMA	Bangkok Metropolitan Area
BMR	Bangkok Metropolitan Region
BOB	Bureau of the Budget [OPM]
BOI	Board of Investment [OPM]
BOT	Bank of Thailand
CAO	Changwat Administration Organization [MOIT]
CAT	Communication Authority of Thailand [MOTC]
CDD	Community Development Department [MOIT]
CPD	Cooperatives Promotion Department [MOAC]
CRDP	Coordinating Committee for the Royal Development Projects
DFPOT	Dairy Farming Promotion Organization of Thailand [MOAC]
DOA	Department of Aviation [MOTC]
DOH	Department of Highways [MOTC]
DOLA	Department of Local Administration [MOIT]
DRDC	District Rural (or Regional) Development Committee
DTEC	Department of Technical and Economic Cooperation [OPM]
EGAT	Electricity Generating Authority of Thailand [OPM]
ESBC	Eastern Seaboard Committee [NESDB]
ERTAT	Expressway and Rapid Transit Authority of Thailand [MOIT]
ETOT	Express Transportation Organization of Thailand [MOTC]
FIO	Forest Industry Organization [MOAC]
GCST	Government Cold Storage Organization [MOAC]
IEAT	Industrial Estate Authority of Thailand [MOID]
IFCT	Industrial Finance Corporation of Thailand
IPD	Industry Promotion Department [MOID]
ITD	Internal Trade Department [MOC]
JICA	Japan International Cooperation Agency
JPPCC	Joint Public / Private Consultative Committee [BOI]
LDD	Livestock Development Department [MOAC]
LNE-UE	Lower Northeast - Upper East
LTD	Land Transport Department [MOTC]
MOAC	Ministry of Agriculture and Cooperatives
MO	Marketing Organization [MOIT]
MOC	Ministry of Commerce
MOD	Ministry of Defence
MOE	Ministry of Education
MOF	Ministry of Finance
MOFF	Marketing Organization for Farmers [MOAC]
MOID	Ministry of Industry
MOIT	Ministry of Interior
MOPH	Ministry of Public Health
MOTC	Ministry of Transport and Communications
MOUA	Ministry of University Affairs
MSTE	Ministry of Science, Technology and Environment
NEB	National Environment Board [MSTE]
NESDB	National Economic and Social Development Board [OPM]

NESDC	National Economic and Social Development Committee
NHA	National Housing Authority [MOIT]
NRDC	National Rural (or Regional) Development Committee
OARD	Office of Accelerated Rural Development [MOIT]
OCSC	Office of the Civil Service Commission [OPM]
OECF	Overseas Economic Cooperation Fund (Japan)
OPM	Office of Prime Minister
OPP	Office of Policy and Planning [MOIT]
PDA	Provincial Development Committee
PEA	Provincial Electricity Authority [MOIT]
PRDC	Provincial Regional Development Committee
PRDCC	Provincial Rural (or Regional) Development Coordination Center
PWA	Provincial Waterworks Authority [MOIT]
PWD	Public Works Department [MOIT]
PWO	Public Warehouse Organization [MOC]
RFD	Royal Forest Department [MOAC]
RID	Royal Irrigation Department [MOAC]
SNRDC	Office of the Secretary to the National Rural (or Regional) Development Committee
SRT	State Railway of Thailand [MOTC]
TAT	Tourism Authority of Thailand [OPM]
TCPD	Town and Country Planning Department [MOIT]
TOT	Telephone Organization of Thailand [MOTC]
TRDC	Tambon Rural Development Committee
UNDP	United Nations Development Program
UNIDO	United Nations Industrial Development Organization
USAID	United State Agency for International Development

Abbreviation of Measures

Length

mm	=	millimeter
m	=	meter
km	=	kilometer

Area

ha	=	hectare
km^2	=	square kilometer

Volume

l	=	lit = litre
m^3	=	cubic meter
MCM	=	million cubic meter

Weight

mg	=	milligram
g	=	gram
kg	=	kilogram
t	=	ton = MT = metric ton

Time

sec	=	second
hr	=	hour
d	=	day
yr	=	year

Money

US$	=	U.S. dollar
B	=	Baht

Energy

kcal	=	kilocalorie
J	=	joule
MJ	=	megajoule
HP	=	horsepower
TOE	=	tons of oil equivalent
kW	=	kilowatt
MW	=	megawatt
kWh	=	kilowatt-hour
GWh	=	gigawatt-hour

Others

%	=	percent
°	=	degree
'	=	minute
°C	=	degree Celsius
cap.	=	capita
md	=	man-day
mil.	=	million
no.	=	number
pers.	=	person
PCU	=	passenger car unit
ppb	=	parts per billion

Unit Conversions

1 rai	=	0.16 hectare

INTRODUCTION

This report consists of two chapters; Distribution and Marketing Sector, and Border Trade Sector. Both sectors are overlapped each other in large parts, but separately presented in order to give clear view on the possibility of border trade development in the Study Area.

As for the organization of the report, Distribution and Marketing Sector has four sections. The first section contains existing conditions of distribution sector in the kingdom and the Study Area. The commodity flow patterns in agricultural and manufacturing products are carefully studied based on the existing data and studies, and the result of Distribution Survey conducted by a local consultant. The second section presents constraints and prospects for development of this sector. The third section presents the objectives and strategies along the overall frameworks of the Study. The fourth section contains the proposed development projects and programs with support measures.

In Border Trade Sector, the development potentials in the broad based border trade activities are emphasized. This sector also comprises four sections. The first section contains existing conditions on the international and border trade in the kingdom and the Study Area. In order to know the current border trade activities in detail, Border Trade Survey was conducted employing a local consultant. The second section presents constraints and prospects for development. The third section presents strategies in this sector. The fourth section contains development projects and programs in border areas in the Study Area.

CHAPTER 1

DISTRIBUTION AND MARKETING SECTOR

1.1 Existing Conditions in Distribution and Marketing Sector

1.1.1 Main policy directions for distribution sector

Main directions for the development of the distribution sector in Thailand, as most other economic sectors, are the privatization and the decentralization as reflected in the seventh five year plan. Also, the central government takes a consistent policy for traders to promote free trade by removing rules and regulations causing market distortions on a step by step basis. Important policy instruments here are (1) to promote private sector role through provision of supporting market facilities and services for effective quality preservation and efficient storage and (2) to protect consumers and small producers through proper frameworks with respect to pricing, quality control and marketing rather than direct interventions.

General measures stipulated in the seventh five year plan include the establishment of markets and marketing system at various levels for specific commodities and the organization of farmers for agriculture, the development of marketing system for small and cottage industries and the dissemination of business and market information for industry, and various support measures for trade and services. These policies and measures provide a framework for planning the development of the distribution sector in the Study Area. Furthermore, the needs of construction of public truck depots in appropriate locations in city areas are indicated as development guidelines by transport sector.

1.1.2 Magnitude of distribution sector

The distribution sector is defined here as the totality of wholesale and retail trade, and transport and storage industries. The gross provincial products (GPP) of this sector in the Study Area are dominated by wholesale and retail trade accounting for 85% of the total. This corresponds to 24% of the GPP of the Study Area, the second largest share following the agricultural sector (28%). This accounts for 10.3% of the gross domestic products (GDP) in this sector of Thailand.

Gross Domestic Products in 1989 at constant 1972 prices
(Unit: million baht)

	Study Area	Whole kingdom	(%)
Wholesale and retail trade	10,401 (24.3)	100,984 (17.6)	10.3
Transportation and Communication	1,903 (4.4)	40,650 (7.1)	4.7

Source: NAD, NESDB
Note: Numbers in parentheses are shares of each sector in the total GDP

The number of business establishments in the broad trade sector were 137,604 in the Study Area in 1988, accounting for 14.5% of the total in Thailand (Table 1.1). The total employment in these establishment was 409,453 in 1988, corresponding to 13.1% of the total employed in the same sector in the kingdom. These larger shares in the total of Thailand than the share in terms of gross products indicate the dominance in the Study Area of smaller establishments with lower productivity.

As for distribution by province, Nakhon Ratchasima province has the largest share in both numbers of enterprises and workers at 26.6% and 26.1%, respectively. This is followed by Ubon Ratchathani and Buri Ram.

1.1.3 Commodity flow in Thailand and the Study Area

(1) Dominance of truck transportation

Commodity distribution in the Study Area is heavily dependent on truck transportation. According to Transport Statistics in 1989, road transport accounts for 96.8 % of the freight from Northeastern Region to Bangkok Metropolitan Region (BMR), followed by rail (3.2%). Other transport modes are nil. Also, on the freight from BMR to Northeastern Region, road transport have the predominant share of 91.5 %. The share of railway transport follows at 8.5 %.

Transport Flows from/to Bangkok to Northeast region

Mode (%)	To Bangkok	(%)	From Bangkok	
Road	6,540	(96.8)	6,610	(91.5)
Rail	217	(3.2)	615	(8.5)

Source: Transport Statistics 1989, MOCT

(2) Commodity distribution pattern in the kingdom

A large part of goods hauled throughout the Kingdom passes through BMR. It may be simplified that the major commodities such as consumer goods and petroleum are shipped from Bangkok to other regions including the Study Area, while agricultural products such as rice, tapioca, maize and construction materials such as sand and cement are transported from other regions to Bangkok. Data indicate that 39.1 million tons of material hauled by truck into the BMR in 1989. Much of this freight is related to the construction boom as haulage of sand, stone and cement accounted for approximately 68 % of the total tonnage carried by truck into the BMR in 1989. The volume of goods hauled out of the BMR to other regions amounted to 10.7 million tons in 1989.

(3) Commodity flow in the Study Area

<u>Flow pattern between the Study Area and Bangkok</u>

As for commodity flow from the Study Area to Bangkok (supply side), agricultural products such as rice, tapioca and maize have the largest shares as shown in Table

1.2. Especially rice accounts for approximately 40 % of the total volume in terms of tonnage. In terms of shares in total volume of commodities to Bangkok from the whole kingdom, jute products, maize, processed food, tapioca and rice from the Study Area have large portions with shares of 65%, 27%, 22%, 21% and 15%, respectively.

At demand side (commodity flow from Bangkok to the Study Area), petroleum products, other manufactures, and fertilizers have large shares in terms of tonnage as shown in Table 1.3. Animals, beans and jute products hauled to the Study Area have large shares in the total volume from Bangkok to the whole kingdom.

Within the Study Area, Nakhon Ratchasima is dominant in both demand and supply. Its volume hauled to and from Bangkok accounts for 48 % and 50% of the total volume in the Study Area as shown in Table 1.4.

Among major commodities from the Study Area to Bangkok, processed food, tapioca, maize, and jute products from Nakhon Ratchasima province have the bulk of the share with 85 %, 79 %, 63 % and 96 %, respectively (Table 1.5). Also, among major commodities from Bangkok to the Study Area, petroleum product, fertilizer and other manufactures to Nakhon Ratchasima accounts for 63 %, 38 %, 46 %, respectively, of the total volume to the Study Area.

<u>Flow pattern between the Study Area and selected regions/provinces</u>

Based on the result of Distribution Survey by the study team through a local consultant, commodity flow between the Study Area and other regions/provinces are seen. Fig.1.1 through Fig.1.5 show origins of major commodities transacted in the Study Area. As to home appliance, it should be born in mind that a certain portion of this commodity is already coming from Indochina countries such as Laos and Cambodia to the Study Area although a large portion is coming from Bangkok. A part of vegetables and fruits are provided within the Study Area itself and the rest are coming from Bangkok, Chanthaburi, and other regions. As for processed food and animal and fish, the Study Area is almost self-supporting within the Study Area except the portion from Bangkok. Most of construction material including wood are coming from Bangkok, but a part of it is already coming from Indochina countries.

Table 1.6 shows the distribution of origins of commodities transacted in each province by region. Among provinces, Ubon Ratchathani and Si Sa Ket have the share with more than 50% in origins from the Study Area, while the shares from Bangkok are relatively low compared to other provinces. Buri Ram and Surin are almost dependent upon both the Study Area and BMR. Nakhon Ratchasima shows a strong network and linkage of distribution because commodities are coming from the whole kingdom although the share of Bangkok is large. Nakon Nayok relies on Bangkok. Prachin Buri shows relatively strong ties with Northeast, others (11.2%, mainly Cambodia) and East regions. Mukdahan has already strong ties with Indochina countries (mainly Laos), which is shown in 39.2% as "others." Nakon Nayok's "others" at 5.4% also means the trade with Indochina countries.

(4) Distribution channels

Agricultural products

There are accumulations of studies on the distribution channels on agriculture products/crops in the whole kingdom. According to those existing studies and interview results to provincial officers, the distribution channels for major crops (rice, tapioca and maize) in the Study Area are summarized in Fig. 1.6.

Most paddy is sold to merchants or middlemen, and rice mills in the local area, and then hauled to regional/central market. Farmers who are members of cooperatives or farmer's groups sell paddy to those organizations which then mill the grain and transfer it to consumers through national level cooperation or farmers' groups.

Regarding tapioca marketing channels, merchants at the district level buy fresh cassava from farmers and other merchants. They make cassava chips and pellets. They own their own processing equipment and transportation.

There are two types of maize merchants. First, merchants in the local area buy from individual farmers. Some of them are agents for larger merchants. The second type of merchants operate at the district/provincial level, buying maize only from those farmers who deliver their maize to the merchants' place of business.

Other agricultural products such as vegetables and fruits are basically distributed within small areas for local consumption. These agricultural products are collected by local merchants/middlemen and then transported to local markets.

Cattle/buffalo are transacted at established markets or at informal markets. Village level merchants and agents buy cattle/buffalo from farmers. They are, then, transported to Bangkok slaughter house and other factories by truck through provincial merchants. Sales and other shipping documents along with health certificates are checked by government officials prior to final sale.

Manufactured goods

Basically industrial and consumer products are mostly produced in BMR or imported from foreign countries. These commodities are transported from Bangkok to the whole kingdom through wholesalers/agents and retailers at various levels.

As for manufacturing products, which are produced or processed in the Study Area, the result of the Socio-Economic Survey (Manufacturing Survey) shows their market destinations (Table 1.7). Almost 39% of product are sold in the province or the same region. About 10% each of product is shipped to Bangkok and for export. The factories with combined destinations of markets account for 37%. This result shows that a large part of the manufacturing products in the Study Area is sold to local traders. For shipment of products, factories hire private truck operators.

Most of raw materials for products (84%) are provided in the Study Area and surrounding provinces. Only 4% of product is coming from Bangkok and 8% is imported. (Table 1.8) On transportation of raw materials, most of manufacturers ask the suppliers to deliver them to the factory site.

Type of raw materials used in the production are shown in Table 1.9. Agricultural products has the largest share with 58%, followed by components and parts (17%), semi-finished products (14%), and intermediate goods (7%). In Nakhon Ratchasima, the shares of components and parts, and semi-finished products are relatively high compared with other provinces.

1.1.4 Market Structure

(1) Central commodity market

As of mid 1992, there are 15 central commodity markets including 4 markets in Nakhon Ratchasima (2 places), Buri Ram and Si Sa Ket in the whole country except BMR. (Fig.1.7) According to the definition by Internal Trade Department (ITD), Ministry of Commerce, "commodity" means paddy, field crops, vegetables and fruits, livestock and aquatic animals. Also, "central market" means a place where the buyers and sellers meet to buy and sell commodities in the form of wholesale that can make direct sales or sales through the agent, and where trading must be conducted by auction or bargain. That is, the sellers (farmers/producers) can obtain higher prices for their produce because there is competition between buyers and there are strict grading.

Most of markets are operated by the private sector under the aegis of ITD. The operators of these markets can obtain the market information from ITD as an incentive although subsidies or financial assistance are not provided. Only the Supan Buri and Kong Kaen markets are operated by BAAC.

In Nakhon Ratchasima, there are two central commodity markets for vegetables and fruits. One is Suranakon and the other is Yamo. According to an interview to Suranakon market, total investment including infrastructure is some 250 million baht and the volume transacted in the market amounts to 25 - 30 million baht per day. As shown in Fig. 1.8, the trading area covers the large parts of Northeast and East regions as well as a part of North and Central regions. Traders coming here sell their local produce, and buy the produce in other provinces/regions.

Some of the markets, including Buri Ram and Si Sa Ket markets, however, are not actively operated. This is because that (a) location of the markets are not appropriate to collect crops, (b) merchants or traders do not participate positively and (c) farmers do not bring crops since they do not know benefits from the markets.

In the Study Area, most of provinces have a plan to promote a central commodity market in the period of the seventh national plan .

(2) Local market

Based on Distribution Survey, type of business activities of traders in local markets are shown in Table 1.10. Major respondents are retailers (68%). 26% of traders are operated as both wholesaler and retailer. This means that functions of wholesaler is not clearly separated from the functions of retailer. From the accumulation of wholesalers, it seems that wholesale functions has been developed in Nakhon Ratchasima and Ubon Ratchathani provinces.

Type of customers are mainly consumers and parts of retailers in local markets. Ten working hours is typical and services such as electricity, water and cleaning are provided in general. Number of employee in each shop is very small. Majority is no employee (owner only) and one or two at most.

Type of commodities transacted by province in the Study Area are shown in the Table 1.11. House appliance has the largest share with 37%, followed by vegetables and fruits (13%), processed food (11%), and construction materials (10%).

Trading area for local market is generally limited within the same province and parts of the neighboring provinces at most.

1.2 Constraints and Prospects for Development

1.2.1 Commodity flow and production

(1) Low production level

The data on commodity flow between the Study Area and Bangkok reveal some interesting characteristics related to prospects of the distribution sector in the area. Commodity flow from the Study Area to Bangkok is only 3.5% of the total flow into Bangkok from the whole kingdom and commodity flow from Bangkok to the Study Area is 12.8% of the total outflow from Bangkok. These shares are much smaller than the population share (18.2%) and the territorial share (17.3%) of the Study Area. The share of commodity flow from the Study Area to Bangkok is even smaller than the share of the Areas GPP (6.8%) in the GDP of Thailand. This implies that although the Study Area has to import certain basic commodities from Bangkok despite its low economic level, it can not afford exporting as much. Thus, as the Study Area's economy develops, exports from the Study Area would increase accordingly.

(2) Balanced transaction in volume

Commodity flow to and from Bangkok is surprisingly balanced for all the provinces in the Study Area in terms of tonnage. This may be a reflection of a trucking industry policy. That is, truckers usually want to have full load on both ways. This means if the production in the Study Area increases especially in the dry season, not only export but also import may increase. Another possible reason for this balance between out-going and in-coming volume is that the trade between provinces in the Study Area and other provinces is very small as compared with trade with Bangkok. This is another area for future expansion of the distribution sector in the Study Area.

1.2.2 Distribution of agricultural input and output

In agriculture, the distribution system for agricultural input and marketing of agricultural produce is reasonably well developed given the institutional and the market structure. Primarily because of low incomes, the volume of commodities traded is small. This increases the distribution margins and constrains the commercial development of physical facilities which will facilitate improvements in efficiency.

For agricultural input, the demand is spread throughout the year in small volumes. For the small farmers, in particular, timely procurement of input and their prices increase their production costs and may hinder input use.

The output marketing system is reasonably well developed for the major commercial crops such as cassava, kenaf, and sugarcane. For other commodities, however, market information, transport services and marketing facilities are largely not available. Provincial commercial officers stress that farmers have limited choices in selling their products and are obliged to rely heavily on traders or middlemen. This discourages farmers to diversify the output composition in favor of perishable, high value-added goods.

1.2.3 Distribution of manufacturing/consumer products

For consumer goods distribution and services for the rural population, the key constraint is the low density and long distances to market/service centers. This shall be supported by the results of Socio-Economic Survey (to manufacturers) in Table 1.12. According to them small number of buyers (16%) and high freight rate (12%) are indicated as the second and third problem among the manufacturers in the Study Area. The results of the Distribution Survey to traders (Table 1.13) also indicate that they face problems such as "shortage of goods"(undersupply, seasonal fluctuation) and "transportation problems"(high transportation cost etc.).

1.3 Objectives and Strategy for Development

1.3.1 Overall objectives

The objectives for this sector in the Study Area have been established as follows (i) to support the LNE-UE regional development objectives and (ii) to overcome long standing constraints in this sector.

1) To expand the distribution and trade sector to support the growth of production sectors and create employment opportunities with relatively small initial resource commitment;

2) To improve the access of rural population to market outlets and rural services, including health and education;

3) To improve the efficiency of this sector to increase incomes of people working in this sector and reduce costs to final beneficiaries through maintaining free trade policy; and

4) To support the development of specialized subsectors such as business services, higher order services for education, culture and recreation.

1.3.2 Development strategy

As a necessary condition, increasing production holds a key of expanding the distribution sector in the Study Area. A sufficient condition will be to assure marketing outlets of various forms.

(1) Marketing of agricultural products

For marketing of agricultural products, the emphasis will be placed on improving market access. This calls for improvements in transport and information, marketing outlets in rural market centers, and institutional measures to promote competition among traders. Another element of strategy is to reduce farmers' dependence on middlemen and seasonal price fluctuations by developing the storage infrastructure (drying facilities, silos and cold storage) and improving farmers' access to institutional credit.

For input delivery, both the private channels, including the distribution system of input manufacturers, and cooperatives should be supported. The government could play a key role in the latter by providing finance to rural input distribution associations/cooperatives through BAAC.

(2) Distribution of manufacturing products

To enlarge the production level and the market of manufacturing products is a key for development of distribution sector. Development of the facilities such as regional truck terminals, facilities for modal split between rail and road transport, and other storage and handling facilities will be enhanced to facilitate inter-regional trade and to improve the distribution of manufacturing products and delivery of services to the rural population. Storage facilities for office supplies, intermediate goods, parts and final products will be required for an efficient stock control. This is also important from the point of supporting higher order services such as business services.

1.4 Development Projects and Support Measures

1.4.1 Agricultural marketing network development

(1) Description

The project will establish central commodity markets in provincial and district centers with agricultural marketing services centers, and local assembly markets. A central commodity market will accommodate commodity transactions in wholesale under established rules and regulations; facilities for trading, storage, grading and information distribution and related personnel will be provided. Local assembly markets will serve individual farmers for collection, sorting, simple processing, loading/unloading and transportation of crops; they would preferably be operated on a cooperative basis.

(2) Objectives

(a) to increase farmer's bargaining power
(b) to maintain price stability
(c) to distribute accurate market information

(3) Period

Phase I (1992-96)

(4) Background

Most of provinces in the Study Area already have a plan to establish central commodity markets. At present there are a few central markets in the Study Area, but some of them are not active. The reasons for this include: (a) the farmers can not afford transportation cost, (b) farmers can not adjust to grading of crops, and (c) rice mills or traders do not participate actively. To develop a mechanism to ensure a smooth operation is the key.

(5) Functions

This development program has functions such as (a) to facilitate operations for buyers and sellers under the regulations and procedures in an open manner, (b) to control quantities of crops/ products marketed and contribute to stabilize the prices and (c) to set quality standards.

(6) Key for implementation

The governments' assistance and guidance are imperative. The provincial and central governments should give more incentives such as providing a loan and exempting a tax in the initial stage. Institutional support for fostering farmers' group and cooperatives are helpful either. Also, support on transportation services for farmers may be needed. Moreover, further promotional activities for investors, traders and farmers shall be needed to stress benefits of a central commodity market.

(7) Implementing bodies

The operator of a central commodity market is basically a private entreprise. There may be some cases operated by BAAC. The Internal Trade Department (Ministry of Commerce) can promote this project through offering more incentives.

(8) Project cost

The cost will vary depending on the size and the level of services in market facilities and location. The investment costs of the existing central commodity markets are shown below for reference.

		Suranakhon	**Suphan Buri**	**Buri Ram**
Place	:	Nakhon Ratchasima	Suphan Buri	Buri Ram
Operator	:	Private Company	BAAC	Private Company
Commodity transacted	:	Vegetables & Fruits	Paddy	Paddy
Area size	:	48 rai	27 rai	10 rai
Investment cost	:	250 million Baht	30 million Baht	0.5 million Baht

1.4.2 Agropolis (Agricultural export/processing complex)

(1) Description

The project will provide complex facilities for trading, storage, processing and development of agricultural produce within a large compound. A quality control center and an agricultural exhibition hall will be included to encourage the improvement of the quality of agricultural products and development of new produces. Quality control component would be needed for the following considerations.

(a) Quality control will be necessary for some products to comply with government food safety standards and regulations. The quality control center by public-private partnership, therefore, would be efficient.

(b) Limited intervention by the government in Thailand has been working well for traditional commodity sub-sectors. This approach, however, does not work well for encouraging non-traditional crops for non-traditional purposes. Without an appropriate quality control system, it would be difficult to supply urban population and foreign markets with sophisticated foodstuffs. The level of sophistication of quality control must be adapted to the prevailing market and regulatory demands and the foreign market's quality requirements. From this point of view, the role of public sector in the proposed quality control center would be important.

The project may be implemented by a private enterprise, but public-private partnership may be preferable for quality control. The project may be located in Ubon Ratchathani or Si Sa Ket. The compound can make full use of Ubon Ratchathani International Airport for exports to Bangkok and international markets. Basic structure in this project is shown in Fig.1.9.

(2) Objectives

(a) to enlarge market of products by increasing value-added
(b) to reduce the risk of price fluctuation

(3) Period

Phase I (1992-96) and Phase II (1997-2001)

(4) Background

The image of these centers are based on the concept of "Agro-town" being developed by a private company.

A Thai private agro-industry has a plan called "Agro-town", which establishes an integrated marketing network for farm products on about 2,000 rai (320 ha) of land in Petchabun province in five years. This would require over 1 billion baht investment for the construction of public utilities and administrative buildings. The investment on the part of participating firms is estimated at 5-10 billion baht in total. The main facilities are (1) trading ground, (2) storage facilities, (3) processing plants, and (4) quality control center and agricultural exhibition center. The company plans to handle many markets such as a commodity market, a fresh green market, poultry and meat, crop seeding, flowers, consumer goods, and so on for domestic and overseas market.

According to an interview to this company, the second best locational candidate for this project was Ubon Ratchathani area. This is mainly because Ubon Ratchathani area can have access to raw material, which is pointed out as the most important location factor by the company.

Another private agro-business also stressed the high potential of this area from the point of utilizing raw materials and foreseeing the markets in Indochina countries.

(5) Functions

This center has functions such as (a)contract-farming, (b) process, (c) trade and distribution and (d) storage.

(6) Key for implementation

Although this project may be implemented by private sector, the official support is helpful for realization. Concretely, the following promotional activities for introduction of private investors should be taken into consideration by the public sector.

(a) to designate the project in the central and/or provincial development plan;
(b) to help to secure the land for the project;
(c) to help coordination among investors, farmers/agricultural cooperatives and concerned agencies; and
(d) to stress the eligibility for BOI incentives in the activities of agricultural processing, warehousing, cold storage and agricultural export zone.

(7) Implementing bodies

The main operator is a private agro-industry or trader. Quality control facilities may be operated by the public agencies.

1.4.3 Commerce and industry plaza complex

(1) Description

This project should be implemented as a public-private joint venture. The plaza complex will accommodate offices of traders, suppliers and distributors with stock of essential parts and office supplies and maintenance personnel, public information and one-stop service center for investors, exhibition hall for manufactured products and new technology, and meeting rooms for business transactions and management seminars. A plaza complex may be established first in Nakhon Ratchasima, followed by another in Ubon Ratchathani.

(2) Objectives

(a) to promote efficient economic activities
(b) to reduce cost on distribution and stock of parts, and maintenance of machinery

(3) Period

Phase II (1997-2001)

(4) Background

At present, provision of parts and office supplies and maintenance services in the Study Area mainly depends upon Bangkok. Since the accumulation of non-agro manufacturers is not high even in Nakhon Ratchasima, this is not a serious constraint. The rapid development of Nakhon Ratchasima as a regional center, however, needs this kind of facility especially for export oriented manufacturers and business and professional services industries because the timing of shipment of products or services become critical. As for Ubon Ratchathani, since its function as another regional center in the Study Area will be strengthened, the same facility shall be needed.

According to an interview with one of the largest office machine and consumable goods suppliers in the Kingdom, they have already two subsidiary service branches in Nakhon Ratchasima and Ubon Ratchathani. However, the service level there is very limited. Both branches only store a part of the first moving parts and only two service engineers. Thus, in many cases Bangkok head office provides parts and maintenance services. Therefore, in response to expansion of demand in the Study Area, the company shall grade up the roles and functions of the branches in Nakhon Ratchasima and Ubon Ratchathani. In fact, the expansion of demand is foreseeable since some manufacturers in the Suranaree Industrial Zone have already started their operation in Nakhon Ratchasima.

(5) Functions

The major functions are (a) to stock appropriate volume of parts and office supplies, (b) to hold experts for maintenance and (c) to provide information network among suppliers, traders, distributors and other related service industries. As an example, existing condition of distribution of office supplies and future image of functions through the proposed complex is shown in Fig.1.10.

(6) Key for implementation

The same type of industries/services do not want to locate in the common distribution or storage facilities in general because stock volume of parts give information of their marketing strategies to the competitors. Therefore, it may be a appropriate way to introduce the different parts industries/services such as office suppliers, automobile parts, parts of agricultural machines (tractor) and parts of construction machines in the complex.

(7) Implementing bodies

The operators are private enterprises comprising an office machine supplier, an automobile parts distributor, a distributor of spare parts for agricultural machinery and so on. As for public information and one-stop service center for investors, the Ministry of Commerce, the Ministry of Industry and BOI can provide services and facilities.

1.4.4 Regional truck terminal

(1) Description

The establishment of regional truck terminals is proposed in Nakhon Ratchasima and Ubon Ratchathani areas. This facility may be developed by private sector, but the support by the central and provincial governments is preferable. A private-public joint venture is one approach for the development. (This project is jointly proposed in transportation sector.)

(2) Objectives

(a) to improve efficiency in goods distribution and handling
(b) to reduce the burden on transportation problems including cost for manufacturers and traders
(c) to smooth road traffic

(3) Period

Phase II (1997-2001)

(4) Background

Based on the existing conditions on commodity flows, it can be said that Nakhon Ratchasima has already played important roles as a distribution center in the Study Area and the Northeast region. The dominance of Nakhon Ratchasima in commodity distribution will continue as the city is located in a strategic position in the Northeast. Therefore, the establishment of a regional trucking terminal in Nakhon Ratchasima shall be justified, as recommended by another JICA study (Study on the Project of the Regional Truck Terminal, 1988). Also, Ubon Ratchathani will have the same role as the distribution center in the eastern part of the Study Area in the near future.

Moreover, the regional truck terminals will contribute to lessen the impact of the following problems such as "high operation cost", "labor shortage" and "transportation problems" (lack of truck, overloading) , which are pointed out from the trucking companies. (Table 1.14)

(5) Functions

The functions to be assigned or absorbed by the regional truck terminals are summarized as follows.

(a) to serve as regional center for receiving, sorting, and delivering to consignees general cargo brought in/out of Bangkok and urban centers

(b) to take charge of picking up, sorting and loading local manufactured products destined for Bangkok and urban centers for shipment on line-haul heavy trucks

Basically regional truck terminals need to be installed or equipped with facilities such as berths for loading and unloading general cargo, handling space/platform for sorting general cargo, and reserved space for temporary storage.

(6) Key for implementation

Relation to Bangkok terminal

As basic policy, Land Transport Department (LTD) recognize the importance of the regional truck terminals and their networks. However, development of regional truck terminals relies on the development of the Bangkok truck terminals (3 places as pilot terminals). The completion of these terminals seems to be a necessary condition for the deployment of the regional truck terminals because the networking of the Bangkok terminal and regional terminals is important.

Incentives for construction

To decrease the burden of the construction cost is a key factor. Since land cost has rapidly increased in recent five years in the Kingdom, providing the land that are already owned by the central or provincial governments in rent style shall be an incentive. Also, the providing a loan with lower interest rate is another incentive.

(7) Implementing bodies

The owner or operator of this facility is sometimes a trading company, a trucking company or a public-private joint venture. The Department of Land Transport and provincial governments are expected to support this project.

(8) Project cost

The construction cost will vary depending on the size of the truck terminal facilities and location. On an assumption of the moderate size with 35 berths, the total investment cost is roughly estimated at 42 million baht according to the sector report on transportation.

Based on the another JICA Study (Study on Regional Truck Terminal, 1988), the estimated construction cost of the proposed Nakhon Ratchasima Truck Terminal with 75 berths amounted 89 million baht in 1987 prices.

CHAPTER 2

BORDER TRADE SECTOR

2.1 Existing Conditions in Border Trade Sector

2.1.1 International trade in Thailand

The value, composition, and destination of Thailand's international trade in goods have changed much in recent five years as shown in Table 2.1. The importance of the traditional agricultural exports has been reduced from 38.4 % in 1986 to 20.6 % in 1991 of the total exports. On the other hand, manufacturing goods constitute the major bulk of Thai exports representing 71.8 % in 1991 in contrast with 51.2 % in 1986.

As to imports, the share of capital goods was the next to intermediate goods which have the largest share in 1986 (Table 2.2). According to the figures in 1991, however, the share of capital goods has increased to 39.9% and it stands first. This is partly because of the tax reform in 1990-91. In this reform, import duties on machinery and equipments were lowered from 30-60 % to 5 %. This measure led to the replacement of old machinery and equipments by imports.

2.1.2 Trade between Thailand and Indochina

(1) Main policy directions for trade with Indochina countries

The central government clearly shows the guidelines for the development of trade with Indochina countries in the seventh national development plan. In the plan, Thailand is regarded as a trade center for the Indochina region. Concretely, the plan states (a) the designation of an agency to be responsible for formulation of an operational plan to coordinate guidelines and necessary measures including provision of basic services and facilities and (b) encouragement of setting up of regional offices with necessary supporting measures and services.

(2) Trade volume and types of commodities

The rapid development of Thai economy places Thailand in a prime position to assist the Indochina countries. For Indochina countries, their expanding trade with Thailand could substitute for the sharp decline in trade with the former Soviet Union and the Eastern European countries.

As a result, the amount of bilateral trade between Thailand and Indochina countries has risen significantly, particularly in recent years, although it is still small in terms of its share in the total trade volume of the whole kingdom. In 1991, the trade volume of Indochina countries (Laos, Vietnam and Cambodia) with Thailand amounted to 7,112 million baht, which is a 0.42 % share in Thailand's total trade volume as shown in Table 2.3.

In terms of trade volume among Indochina countries, Vietnam stood first followed by Laos in 1991. Trade volume in Cambodia is still tiny although growth rates for recent years are high. (Thai official data show that trade volume during January and April in

1992 is already 1.7 times larger than that of the whole year of 1991.) As for exports, the volume to Laos, which amounts to 1,959 million baht, is predominant. In regards to imports, the volume from Vietnam has the largest share and amounts to 2,970 million baht.

Exports from Thailand to Indochina countries by commodity are different from each other. Exports to Laos are relatively diversified as shown in Table 2.4. Among them in 1991, rice has the largest share followed by motorcycle, chemical products, milk and cream, cane sugar, rubber products and so on. Surprisingly, value of motorcycle export to Laos accounts for about 49 % of the total export of the commodity in the whole kingdom in 1991. Exports to Vietnam are also diversified. Among them, sugar cane, motorcycles, chemical products, polymer of styrenes, and woven products hold the relatively large share in 1991 (Table 2.5). As for exports to Cambodia, rice has the largest share of 27.9% in 1991 (Table 2.6).

Import commodities from Indochina are not diversified as shown in Table 2.4 through 2.6. Wood and lumber is predominant in three countries followed by waste and scrap metals and animal and vegetable crude materials. It should be born in mind that the imports volume of wood and lumber from these countries accounts for 16.2 % in the total imports of this commodity to Thailand in 1991.

2.1.3 Border trade in the Study Area

(1) Trade volume and types of commodities

<u>The Study Area as a whole</u>

According to the Ministry of Commerce, ten official border trading points (two points in Nong Khai) are designated along the Thai-Laos and the Thai-Cambodia borders at present as shown in Fig.2.1. Out of ten official trading points, four points are located in the Study Area, namely, from the north to south, Mukdahan (Mukdahan Province), Khemarat/Pak Saeng (Ubon Ratchathani Province), Phibun-Mangsahan/Chong Mek (Ubon Ratchathani Province), and Aranyaprathet/poipet (Prachin Buri Province).

The trade volume of these border points in monetary term is shown in Table 2.7. In 1989-91 almost half of the imports from Laos to Thailand passed through trading points in the Study Area (mainly Mukdahan and Chong Mek), while 10-30 % of exports of Thailand to Laos are shipped through the Study Area. These data shows that the eastern part of the Study Area has already strong ties with Laos.

Within the Study Area, imports from Vietnam mainly go through Mukdahan. The share of the imports value transacted in ports of the Study Area accounts for about 10% in 1990-91.

As for trade with Cambodia, the official trade value is still small and not recorded fully because of political instability for long time in that country. Aranyaprathet (Poipet) has just reopened as a permanent gate in April 1992 after the closure of the border since 1977.

The trade volume in terms of weight is shown in Table 2.8. Imports from Laos and Vietnam through trading points in the Study Area amount to some 100 thousand tons and 50 thousand tons, respectively, for 1990-1991.

Features in each point in the Study Area

In 1991, trade volume at Mukdahan amounts to 666 million baht imports from Laos and Vietnam and 134 million baht exports to Laos, respectively. For recent three years volume of imports is much larger than exports. Major imports commodities are wood, scrap iron, and other scrap materials. Wood (612 million baht) through Mukdahan accounts for 2.9% of the total imports of this commodity in the kingdom in 1991. Of exports, consumer goods, electrical appliances, fuel, vehicle and spare parts have the large shares.

Trade volume in Chong Mek is 147 million baht in imports from Laos and Vietnam and 94 million baht in exports to Laos in 1991, respectively. Of imports from Laos, wood is predominant at 95 %, followed by all kinds of scrap. As for exports to Laos, medicine, construction materials, beverage, sugar, motorcycle and electrical appliances have the large shares.

Trade volume in Khemarat in 1991 amounts to 3.4 million baht in imports from Laos and Vietnam and 8.8 million baht in exports to Laos, respectively. The major commodity from/to Laos through this point is cattle at 89 % of imports and consumer goods like soap and rubber products and furniture-like tables in exports.

Trade volume at Aranyaprathet amounts to 9.9 million baht for exports to Cambodia in 1991. Rice is predominant with the share of 74% in exports.

(2) Border trade market

The border trade market in Mukdahan is located along the Mekong river. Many products from Laos, Vietnam and China are seen. Generally scale of transaction by Laos traders are very small. They bring and sell local products to the border markets and buy consumer goods in shops/stores in the Mukdahan municipality.

The border market at Chong Mek is small. From Chong Mek to Pakxe (Laos) about 40 km distant, it takes one day by truck due to gravel road and infrequent ferry service over the Mekong in front of Pakxe.

At Khemarat, there are two separated trading points. One is Khemarat and the other is Pak Saeng. Border markets are not seen at both points.

The border trade market in Aranyaprathet is active at present. There are 2000 shops approximately in the border market in Thai side although all of them are not fully utilized. Daily necessities, clothes and electrical equipments are exported to Cambodia, while pottery and china, handy crafts, and other goods are imported to Thai side. The facilities of border trade market are not permanent at present.

In addition to these official trading points, there are a few temporal trade contact points along the Thai-Cambodia border, which are under the control of the military. These points are located in Buri Ram (Ban Kruat), Surin (Chong Chom), Si Sa Ket (Chong Phra Pai) and Ubon Ratchathani (Chong Arnma) provinces. In these points, daily products are shipped to Cambodia and raw materials such as wood and gem stones are conveyed into Thailand although sometimes gates are closed suddenly due to the order of the military for security reason.

According to Border Trade Survey, retailers play major roles. Thai Baht is the main currency used in the border trade markets.(Table 2.9) In Ubon Ratchathani and Prachin Buri, there are a few cases when traders use Kip (Laos) and Riel (Cambodia). Also, US dollar is used in a few cases in Mukdahan.

For consumers who visited border trade markets , the largest reason for visiting is to live near the markets with 59%, followed by "tour" with 35% and "business" with 5%. (Table 2.10)

The distribution of consumers based on their residence in major border trading markets is shown in Fig.2.2. This is a sort of trading area in each market. Functionally, these markets can be divided into three types. The first type is the markets in Aranyaprathet and Mukdahan. The second is the market in Chong Mek and the third is the other markets. The first type can attract the people from the Study Area and other regions widely. At Aranyaprathet, 60% of customers are coming from the outside of the Study Area including BMR. Within the Study Area, this market attracts the residents of Nakhon Ratchasima. On the other hand, Mukdahan attracts Northern and BMR residents as well as the residents in the Study Area. Chong Mek (the second type) is for Lao people and neighboring residents. This is mainly because the border market here is far from the center of Ubon Ratchathani municipality and does not have a good transportation access. The third type markets have very limited trading areas. Customers there are basically local residents.

2.2 Constraints and Prospects for Development

2.2.1 Constraints for development

Prerequisites to increasing border trade and related activities are, of course, stable political and social conditions and consistent foreign trade policies of the Indochina countries. These are beyond control at the regional level.

The major constraint to expansion of border trade in the Study Area is inadequate facilities and services. Consumers clearly stress that trade areas are small and unsanitary, bus services are insufficient, and infrastructure is inadequate such as the lack of common utilities.(Table 2.11). Major problems from traders' point of view are high competition, high initial costs and high transportation costs.
As for potentials of border trade, about 60% of the traders who responded expected the increase of border trade, followed by instability of trade with 30%. By province, traders of Mukdahan in particular realize increasing future potential on border trading. (Table 2.12)

2.2.2 Prospective border trade routes

Development of the following routes could be expected from the point of development structure in the Study Area. (Fig. 2.3)

(1) Aranyaprathet route

Current trade activities at Aranyaprathet may be transient, a reflection of anarchy in Cambodia. However, Aranyaprathet has advantages that can be utilized to further develop the border trade on a permanent basis. First, it has a direct road connection to Cambodia leading to Phnom Penh. Second, it is located the closest from the BMA and the ESB of all the border trade points in Thailand. Third, it is close to a transition area from the East to the Northeast.

(2) Mukdahan route

The border trade through Mukdahan deals not only with goods from Laos but also with those from Vietnam and further from China and Russia. It will increase steadily as Laos further opens up and develops its economy. A new bridge across the Mekong river would expand the opportunities for border trade significantly. More important would be export of various commodities from Thailand to Laos, Vietnam and countries in the East Asia through the Danan port in Vietnam rather than import along this route.

(3) Chong Mek route

Chong Mek/Phibun-Mangsahan in Ubon Ratchathani is located on the route to the Southern Laos and further to Vietnam and Cambodia. As far as the access to Vietnam and Cambodia is concerned, this route seems secondary. Prospects of border trade along this route would depend on availability of specific raw materials to be processed in the border area and demand related to tourism development in the Ubon Ratchathani area.

(4) Chong Chom (Surin) route

Chong Chom in Surin province is situated on the northern edge of Cambodia. This route may be another gate for inflow of raw materials (wood in particular) from the northern part of Cambodia and also for tourists to Angkor Wat although this route seems secondary.

2.3 Strategy for Development

Strategy in the first phase (1992-96) is to develop border trade related facilities and border trading centers in the key border points. Also, to encourage broad based border trade related activities, a new institution should be developed in this phase. These activities include not only commodity trade but also processing, financial transactions and skill training.

The new institution would allow to combine effectively advantages available in Thailand and advantages available in Cambodia and Laos. The former include the proximity to large markets and the access to reliable suppliers of intermediate goods and parts. The latter are primarily low cost labor and raw materials.

Through a new institution introduced, the Study Area can become a distribution and trading basis in the second (1997-2001) and third phases (2002-10) through increasing Thai investment in the Indochina countries across the border as new production basis for labor-intensive export oriented manufacturers in particular.

As a result, the distribution and sales promotion basis in the Study Area (at the opposite side of the factory site across the border) can be developed in order to supply raw materials and intermediate goods to the plants and distribute and export the final products to the markets.

2.4 Development Projects and Support Measures

2.4.1 Border market and trade center development

(1) Description

This program has two components. One is to develop and improve border market facilities and the other is to establish border trade centers at Aranyaprathet, Mukdahan and Chong Mek (Ubon Ratchathani) with public-private cooperation in the initial phase. This program could be combined with the Welcome Plaza proposed in the tourism sector.

(2) Objectives

(a) to promote trade activities at the border markets
(b) to expand border trade activities through delivering information, strengthening coordination, and providing other services.

(3) Period

Phase I (1992-96)

(4) Background

Border Trade Survey (consumer survey) clearly stressed the space/site problems such as insufficient space in the border trade markets. The need for improvement of transportation services to markets is also indicated. The trade centers are proposed based on the requests from local governments and local private sectors and the concept of spatial development framework (development of artery route) in this Study.
In fact, the Ministry of Interior has approved a 189 million baht investment plan by Ubon Ratchathani province for Chong Mek area. The plan has 12 components. Major components are (i) construction of the customs office (61 million in total; 20 million in building, 27.5 milllion in car check point and 13.5 million in others), (ii) improvement of the road along the route 217 (34 million baht), (iii) development of water network system and sewerage system (21 million baht) and (iv) construction of trade center with storage facilities (17 million).

(5) Functions

As for market facilities development, stable selling and buying activities in retail and wholesale basis are major functions. On the other hand, the border trade center has functions such as (a) trading information center, (b) coordination center with Indochina countries (including the grievance committee on trade dispute), (c) small exhibition center, (d) temporary storage and processing center like labeling and packaging, (e) the customs office, and (f) financial facility (bank).

(6) Implementing bodies

As for the border trade market facilities, the main implementing bodies are traders or other private enterprises. Public agencies will promote the development of infrastructure (road, water supply, drainage, electricity etc.) in the surrounding area. Concerning the border trade center, the Ministry of Interior, the Ministry of

Commerce and the Ministry of Finance (for the customs office) may be implementation agencies.

(7) Project cost

The cost estimation for the border trade market facilities is not elaborated because the cost vary in the size and the level of services of market.

As for the border trade center, since the functions proposed by this study include those of the trade center and the customs office in a plan by Ubon Ratchathani province, which is described in the preceding sentences, the total cost by public sector for building will be some 40 million baht. Thus, it amounts to 120 million baht for three places.

2.4.2 Isarn Indochina In-Bond program (III-B Program)

(1) Description

The program will introduce a new institution to promote broad based border trade related activities (Figure 2.4). It should be formulated and developed jointly with the governments of neighboring countries.

(2) Objectives

(a) to promote broad based border trade activities including production in the Study Area and Thailand in accordance with Indochina countries
(b) to assist reconstruction of Indochina countries

(3) Period

Phase I (1992-96): Institutional Development
Phase II (1997-2001) and Phase III (2002-2010): Operational Development

(4) Background

Maquiladora in Mexico

III-B program is based on the concept of Maquiladora along the US-Mexican border. Maquiladora or the In-Bonds program (sometimes referred to as the "Twin Plant" program) was established by the Mexican government in 1965 as part of its long-range industrial and economic policies. This program has permitted many large corporations and smaller firms to establish highly competitive offshore production facilities in Mexico which can take advantage of some 800-series provisions of the U.S. Tariff Schedule in serving the U.S. market. Most of the final products of the Maquila-designated factories are exported to the USA.

Through the In-Bond program companies can ship equipment, raw materials and assembled product to and from their 100 % U.S. owned facility in Mexico, "in bond". The U.S. duty on the returning assembled product is limited to the "value-added" in Mexico. This is roughly equivalent to the per piece cost of assembly in Mexico minus the value of any U.S. components.

Companies also may have the opportunity to take advantage of the U.S. Generalized System of Preferences (GSP) if 35% of the value of the assembled product in labor and/or material is of Mexican origin. If GSP requirements are met, product may enter the U.S. duty-free.

Some advantages of establishing an In-Bond facility in Mexico are as follows:

(a) A large work force, at very competitive labor rates.
(b) The ownership and control can be 100 % non-Mexican.
(c) Duty free import of equipment and materials into Mexico.
(d) No Mexican export duty on the products.
(e) U.S. import duty only on the value added in Mexico.
(f) Proximity to U.S. market/distribution center.
(g) Proximity to U.S. suppliers.
(h) Fine quality of life for U.S. managers living in the U.S.

According to a study on Maquiladora, the system has generated some 40,000 Mexican jobs between 1977-1985 and has also created about 20,000 U.S. jobs in the same period at the Juarez/El Paso border area. (Juarez is a city in Mexico and El Paso is a city in USA across the border.) Also, the study said that the system positions El Paso as market hub although this city is located at the southern edge of Texas.

Trend of outward investment from Thailand to Laos/Cambodia

Since many Thai manufacturers in particular have already found that expanding their business in certain areas of Thailand is now too expensive in terms of land price and labor cost, this program can give an option for them. They can expand and/or relocate their operations in Indochina countries where production costs are still low. To assist these investors, the BOI has recently established the Outward Investment Programme. The primary focus of the programme is to provide information services about the country and industry the entrepreneurs are interested in.

According to the data by Foreign Investment Management Committee (FIMC) of Laos, projects approved by the Lao government numbered 225 during September 1988 - June 1992, involving a total investment of US$392.5 million. (Table 2.13) By nationality, Thais topped the list of investors with 93 projects and a total investment of US$138 million. By type in the production sector, textiles and garments factories have the largest number (39), followed by wood processing factories (19), agribusiness (13), and other manufacturing (48). Export-import related firms stand first in the number of the total approved projects although the investment amount is not large per firm basis.

On the other hand, the Cambodian government have already approved 46 foreign projects from Thai, Hong Kong, Taiwan, France, U.S.A., Singapore and Japan with the investment amount of more than US$300 million. Type of industries to be invested comprises airlines, banking, restaurants, tourism, hotel, construction, transportation, import/export, manufacturing for woods products, vegetable oil, and machinery and so forth.

(5) Key features of III-B program

The features of III-B program based on the mechanism of Maquiladora are proposed as follows.

(a) III-B program are planned to apply Thai-invested factories (production and processing centers) in the border Cambodia and Laos just across at Aranyaprathet and Mukdahan areas.

(b) Thai corporations are permitted 100% ownership and control of their manufacturing facilities (production and processing centers), including land.

(c) These subsidiaries are allowed to import duty-free the raw materials, equipment and supplies needed to effect finished products, provided the product is eventually reexported from Cambodia or Laos to Thailand (BMR, ESB and other areas) and abroad (including Vietnam) through the distribution centers in the Study Area. (Fig.2.4 and Fig.2.5)

(d) III-B-made products may also be sold in Laos and Cambodia if certain local content provisions are met.

(e) The program provides for streamlined customs procedures for issuing work permits to Thai personnel and to facilitate the flows of materials and finished products across the Thai-Indochina border.

(f) Thai Customs charges import duty only on the values added to the materials while in Laos or Cambodia. Essentially, the value added is labor cost in Indochina countries.

(6) Benefits of III-B program

(a) The program provides an opportunity to Thai investors such as labor intensive industries in particular, who seek the optimum place to compete in the domestic and world markets in terms of prices. (In general, all the products are exported.)

(b) Since raw materials and intermediated goods can be provided from the Study Area (Thai side), the investment of the related industries and a wide range of trading activities will increase in the Study Area.

(c) In the construction stage of the factories in III-B program, the construction materials, construction machinery and skilled labor can be provided from Thai side.

(d) Thai enterprises established under the program can give employment opportunities to Indochina people that will turn contribute to increasing their purchasing power for Thai products.

Also, this program can bring the benefits such as (i) foreign currency and (ii) opportunity of employment to Indochina countries.

(7) Key for implementation

Institutional development

For implementation, the institutional development between Thailand and Laos, and between Thailand and Cambodia is essential. Also, it is important to understand the mutual benefits through this program among the concerned countries.

For the Thai side, the amendment of the Controlling Importation and Exportation Goods Act, the Export Standard Act, the Customs Law, the Customs Tariff Decree and other relevant laws and regulations is needed.

Although the Lao government has lifted controls by the central authorities on domestic and foreign trade in line with New Economic Management policy, they still need many amendments in laws on foreign investment promotion, ownership, contractual obligation, labour and so forth for this program to be realized. Since manufacturing industries, in which the Laotian government is interested, are export-oriented labour intensive light industries like textile and other consumer goods, the basic concept of the In-Bond program would be attractive for them.
The Cambodian government only recently made a transition to a free-marketing economy. Although the national assembly adopted a string of financial and investment laws in April 1992, taxes on imports are still widely dodged through smuggling. Therefore, it may take time to start the development of this program with Cambodia.

Other factors

Beside the development of institutional mechanism, it is essential to develop infrastructure in the Study Area and Indochina countries and to foster skillful workers in Indochina countries. Some proposals and measures related to these requirements except the development of infrastructure in Indochina countries are described in other sector reports of the Study.

Tables

Table 1.1 Number of Business Establishments and Employment in the Study Area in 1988

Province	Business Establishments Numbers	Business Establishments (%)	Employment Numbers	Employment (%)	Average number of employment
Nakon Ratchasima	36,805	26.7	106,762	26.1	2.9
Buri Ram	17,624	12.8	49,855	12.2	2.8
Surin	16,456	12.0	48,908	11.9	3.0
Si Sa Ket	15,090	11.0	48,496	11.8	3.2
Ubon Ratchathani	25,488	18.5	73,551	18.0	2.9
Mukudahan	3,540	2.6	11,306	2.8	3.2
Yasothon	6,134	4.5	31,236	7.6	5.1
Prachin Buri	12,861	9.3	31,100	7.6	2.4
Nakhon Nayok	3,606	2.6	8,239	2.0	2.3
Study Area Total	137,604	100.0	409,453	100.0	3.0
Whole Kingdom	948,328	-	3,126,436	-	3.3
Share of Study Area (%)	14.51	-	13.10	-	-

Source: Preliminary Report of the 1988 Census of Business Trade and Services, NSO, 1989
Note: Figures are business establishments in wholesale, retail, restaurants, and other personel services.

Table 1.2 Commodity Flow from the Study Area to Bangkok in 1989

Commodity	To Bangkok Volume(ton)	% of Total Volume(ton)	% in total volume of Bangkok from whole kingdom
Rice	532,974	39.09	14.84
Sand & Gravel	52,832	3.87	0.21
Cement & Products	8,112	0.59	0.44
Steel	18,434	1.35	8.51
Other Construction	5,122	0.38	0.99
Timber	65,702	4.82	7.61
Firewood	7,280	0.53	3.83
Petroleum Products	364	0.03	0.48
Minerals	0	0.00	0.00
Vegitable & Fruit	57,148	4.19	6.57
Tapioca	110,578	8.11	20.81
Maize	104,780	7.69	26.99
Suger	22,568	1.66	1.73
Beans	8,242	0.60	5.42
Jute & Products	46,046	3.38	64.61
Beverages	12,948	0.95	13.61
Processed Foods	186,784	13.70	22.33
Animals	23,322	1.71	12.16
Fish	1,066	0.08	0.25
Fertilizer & Feeds	19,604	1.44	3.83
Personal Effects	26,416	1.94	6.29
Other Manufactures	30,420	2.23	8.50
All Others	22,672	1.66	3.81
Total	1,363,414	100.00	3.48

Source: Commodity Flow Survey 1989, LTD, Ministry of Transport and Communication

Table 1.3 Commodity Flow from Bangkok to the Study Area in 1989

Commodity	From Bangkok Volume(ton)	% of Total Volume(ton)	% in total volume from Bangkok to whole kingdom
Rice	7,072	0.52	5.03
Sand & Gravel	832	0.06	1.63
Cement & Products	36,738	2.70	7.62
Steel	41,340	3.04	8.99
Other Construction	10,036	0.74	11.25
Timber	20,436	1.50	7.95
Firewood	572	0.04	1.77
Petroleum Products	383,604	28.17	16.31
Minerals	2,756	0.20	6.94
Vegitable & Fruit	16,146	1.19	10.96
Tapioca	2,002	0.15	10.53
Maize	1,924	0.14	11.18
Suger	1,144	0.08	8.29
Beans	2,366	0.17	22.98
Jute & Products	4,394	0.32	22.35
Beverages	36,166	2.66	8.32
Processed Foods	12,272	0.90	9.54
Animals	8,554	0.63	37.18
Fish	7,332	0.54	17.00
Fertilizer & Feeds	298,870	21.95	16.93
Personal Effects	27,352	2.01	9.11
Other Manufactures	361,140	26.52	11.27
All Others	78,572	5.77	12.21
Total	1,361,620	100.00	12.76

Source: Commodity Flow Survey 1989, LTD, Ministry of Transport and Communication

Table 1.4 Commodity Flow by Province in the Study Area

Unit: ton

	Commodity Flow To BKK	(%)	Commodity Flow From BKK	(%)
Nakhon Ratchasima	650,884	47.74	685,646	50.36
Buri Ram	120,614	8.85	113,646	8.35
Surin	92,014	6.75	76,180	5.59
Si Sa Ket	58,890	4.32	59,280	4.35
Ubon Ratchathani	128,388	9.42	130,156	9.56
Mukdahan	25,584	1.88	27,144	1.99
Yasothon	23,270	1.71	29,796	2.19
Prachin Buri	137,774	10.11	143,884	10.57
Nakhon Nayok	125,996	9.24	95,888	7.04
Study Area Total	1,363,414	100.00	1,361,620	100.00

Source: Commodity Flow Survey 1989, LTD, Ministry of Transport and Communication

Table 1.5 Share of Commodity flow of Nakon Ratchasima in the Study Area

Unit: ton

Major commodities to Bangkok	from the Study Area Total	From Nakon Ratchasima	Share (%) in Nakon Ratchasima
Rice	532,974	156,884	29.44
Processed Food	186,784	158,366	84.79
Tapioca	110,578	87,152	78.81
Maize	104,780	65,650	62.66
Vegetable and fruits	57,148	20,176	35.30
Jute products	46,046	44,174	95.93
Major commodities from Bangkok	**To the Study Area total**	**To Nakon Ratchasima**	**Share (%) in Nakon Ratchasima**
Petroleum product	383,604	241,462	62.95
Fertilizer & feeds	298,870	113,802	38.08
Other manufactures	361,140	164,528	45.56

Source: Commodity Flow Survey 1989, LTD, Ministry of Transport and Communication

Table 1.6 Distribution of Origins of Commodities in Each Province by Region

Unit : Percentage

Province	Study Area	BMR	North	Northeast	East	Central	West	South	Others
Nakon Ratchasima	33.7	43.5	3.3	2.2	9.8	2.2	5.4	0.0	0.0
Buri Ram	37.3	45.1	0.0	2.0	2.0	2.0	5.9	5.9	0.0
Surin	43.6	51.3	5.1	0.0	0.0	0.0	0.0	0.0	0.0
Si Sa Ket	52.9	19.6	2.0	19.6	2.0	0.0	2.0	0.0	2.0
Ubon Ratchathani	60.3	27.6	1.9	9.6	0.6	0.0	0.0	0.0	0.0
Mukdahan	24.1	27.8	0.0	7.6	0.0	1.3	0.0	0.0	39.2
Prachin Buri	26.1	35.4	1.2	14.9	10.6	0.6	0.0	0.0	11.2
Nakon Nayok	24.3	62.2	0.0	0.0	5.4	2.7	0.0	0.0	5.4
Total	38.7	35.7	1.7	8.7	4.7	0.9	1.4	0.5	7.8

Source : Distribution Survey

Note: (1) Northeast and East regions here do not include provinces in the Study Area.

(2) Others are Laos and/or Cambodia.

Table 1.7 Market Destination of the Factories' Products in the Study Area

Description	Nakon Ratchasima		Ubon, Yasothorn and Buriram		Surin		Prachin Buri		Total	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
(1) Sold 100% within the province	30	30.0	2	13.3	6	33.3	0	0.0	38	26.8
(2) Sold 100% within the region	14	14.0	1	6.7	2	11.1	0	0.0	17	12.0
(3) Sold 100% to Bangkok	6	6.0	2	13.3	2	11.1	3	33.3	13	9.2
(4) Sold 100% to Export market	7	7.0	2	13.3	2	11.1	4	44.4	15	10.6
(5) Sold 100% to other factories in Bangkok and central areas	2	2.0	0	0.0	0	0.0	0	0.0	2	1.4
(6) Sold 100% to other regions	5	5.0	1	6.7	0	0.0	0	0.0	6	4.2
(7) Combined market of the destination above	36	36.0	7	46.7	6	33.3	2	22.2	51	35.9
TOTAL	100	100.0	15	100.0	18	100.0	9	100.0	142	100.0

Source: Socio-Economic Survey

Table 1.8 Sources/Origins of Raw Materials

Sources/origins of raw materials	Nakon Ratchasima		Ubon, Yasothorn and Buriram		Surin		Prachin Buri		Total	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
(1) Acquired in the local area	83	83.0	11	73.3	16	88.9	9	100.0	119	83.8
(2) Acquired from Bangkok	3	3.0	2	13.3	1	5.6	0	0.0	6	4.2
(3) Imports	9	9.0	1	6.7	1	5.6	0	0.0	11	7.7
(4) Acquired from the combined sources above	5	5.0	1	6.7	0	0.0	0	0.0	6	4.2
TOTAL	100	100.0	15	100.0	18	100.0	9	100.0	142	100.0

Source: Socio-Economic Survey

Table 1.9 Type of Raw Materials Used in the Production

Type of raw materials	Nakon Ratchasima		Ubon, Yasothorn and Buriram		Surin		Prachin Buri		Total	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
(1) Agricultural products	54	54.0	9	60.0	12	66.7	7	77.8	82	57.7
(2) Intermediate goods	4	4.0	2	13.3	4	22.2	0	0.0	10	7.0
(3) Components/parts	21	21.0	3	20.0	0	0.0	0	0.0	24	16.9
(4) Semi-finished products	16	16.0	0	0.0	2	11.1	2	22.2	20	14.1
(5) Others	2	2.0	1	6.7	0	0.0	0	0.0	3	2.1
(6) Not available	3	3.0	0	0.0	0	0.0	0	0.0	3	2.1
TOTAL	100	100.0	15	100.0	18	100.0	9	100.0	142	100.0

Source: Socio-Economic Survey

Table 1.10 Distribution of Sample on Type of Business Activities by Province (for Traders)

No.	Amphoe	Province	TYPE OF BUSINESS														Total	
			wholesaler	%	retailer	%	both W&R	%	middleman	%	warehouse/ storage	%	others	%	no answer	%		%
1	Muang Si Sa Ket	Si Sa Ket	1	4.5	15	68.2	6.0	27.3	-	-	-	-	-	-	-	-	22	3.8
2	Kantharalak	Si Sa Ket	-	-	13	65.0	5.0	25.0	1	5.0	1	5.0	-	-	-	-	20	3.4
	Sub-total	Si Sa Ket	1	2.4	28	66.7	11.0	26.2	1	2.4	1	2.4	-	-	-	-	42	7.2
3	Muang Surin	Surin	1	5.6	15	83.3	1.0	5.6	1	5.6	-	-	-	-	-	-	18	3.1
4	Prasat	Surin	-	-	16	100.0	-	-	-	-	-	-	-	-	-	-	16	2.8
	Sub-total	Surin	1	2.9	31	91.2	1	2.9	1	2.9	-	-	-	-	-	-	34	5.9
5	Muang Nakhon Ratchasima	Nakon Ratchasima	6	7.1	23	27.4	55	65.5	-	-	-	-	-	-	-	-	84	14.5
6	Muang Buri Ram	Buri Ram	-	-	8	66.7	3	25.0	1	8.3	-	-	-	-	-	-	12	2.1
7	Nang Rong	Buri Ram	-	-	16	84.2	3	15.8	-	-	-	-	-	-	-	-	19	3.3
8	Prakhon Chai	Buri Ram	1	7.7	9	69.2	1	7.7	2	15.4	-	-	-	-	-	-	13	2.2
	Sub-total	Buri Ram	1	2.3	33	75.0	7	15.9	3	6.8	-	-	-	-	-	-	44	7.6
9	Muang Ubon Ratchathani	Ubon Ratchathani	-	-	13	76.5	3	17.6	1	5.9	-	-	-	-	-	-	17	2.9
10	Khemarat	Ubon Ratchathani	1	4.2	21	87.5	1	4.2	-	-	-	-	1	4.2	-	-	24	4.1
11	Phibun Mangsahan	Ubon Ratchathani	1	4.8	17	81.0	3	14.3	-	-	-	-	-	-	-	-	21	3.6
12	Warin Chamrap	Ubon Ratchathani	2	7.7	14	53.8	7	26.9	3	11.5	-	-	-	-	-	-	26	4.5
13	Amnat Charoen	Ubon Ratchathani	5	13.5	25	67.6	7	18.9	-	-	-	-	-	-	-	-	37	6.4
14	Sirinthon	Ubon Ratchathani	-	-	3	37.5	5	62.5	-	-	-	-	-	-	-	-	8	1.4
	Sub-total	Ubon Ratchathani	9	6.8	93	69.9	26	19.5	4	3.0	-	-	1	4.2	-	-	133	22.9
15	Muang Mukdahan	Mukdahan	-	-	35	47.3	31	41.9	2	2.7	1	1.4	5	6.8	-	-	74	12.8
16	Muang Prachin Buri	Prachin Buri	1	4.8	19	90.5	1	4.8	-	-	-	-	-	-	-	-	21	3.6
17	Kabin Buri	Prachin Buri	-	-	27	81.8	5	15.2	1	3.0	-	-	-	-	-	-	33	5.7
18	Sa Kaeo	Prachin Buri	-	-	26	96.3	1	3.7	-	-	-	-	-	-	-	-	27	4.7
19	Aranyaprathet	Prachin Buri	-	-	44	83.0	9	17.0	-	-	-	-	-	-	-	-	53	9.1
	Sub-total	Prachin Buri	1	0.7	116	86.6	16	11.9	1	0.7	-	-	-	-	-	-	134	23.1
20	Muang Nakhon Nayok	Nakhon Nayok	1	2.9	33	94.3	1	2.9	-	-	-	-	-	-	-	-	35	6.0
	Total		20	3.4	392	67.6	148	25.5	12	2.1	2	0.3	6	1.0	-	-	580	100.0

Source: Distribution Survey

Table 1.11 Distribution of Sample on Commodities Transacted by Province (for Traders)

No.	Amphoe	Province	TYPE OF COMMODITIES: rice		construction material		fuel & mineral resource		vegetable & fruit		tapioca		sugar		processed food		animal & fish		fertilizer & animal food		house applicance		Other		no answer		Total	
				%		%		%		%		%		%		%		%		%		%		%		%		%
1	Muang Si Sa Ket	Si Sa Ket	2	9.1	2	9.1	-	-	6	27.3	-	-	1	4.5	3	13.6	2	9.1	1	4.5	2	9.1	3	13.6	-	-	22	3.8
2	Kantharalak	Si Sa Ket	4	20.0	2	10.0	-	-	1	5.0	-	-	-	-	4	20.0	-	-	2	10.0	3	15.0	4	20.0	-	-	20	3.4
	Sub-total	Si Sa Ket	6	14.3	4	9.5	-	-	7	16.7	-	-	1	2.4	7	16.7	2	4.8	3	7.1	5	11.9	7	16.7	-	-	42	7.2
3	Muang Surin	Surin	4	22.2	3	16.7	-	-	-	-	-	-	-	-	-	-	-	-	1	5.6	7	38.9	3	16.7	-	-	18	3.1
4	Prasat	Surin	-	-	1	6.3	-	-	2	12.5	-	-	1	6.3	5	31.3	-	-	-	-	6	37.5	1	6.3	-	-	16	2.8
	Sub-total	Surin	4	11.8	4	11.8	-	-	2	5.9	-	-	1	2.9	5	14.7	-	-	1	2.9	13	38.2	4	11.8	-	-	34	5.9
5	Muang Nakhon Ratchasima	Nakon Ratchasima	1	1.2	7	8.3	-	-	23	27.4	-	-	-	-	17	20.2	10	11.9	4	4.8	19	22.6	3	3.6	-	-	84	14.5
6	Muang Buri Ram	Buri Ram	1	8.3	1	8.3	-	-	1	8.3	-	-	-	-	-	-	-	-	1	8.3	6	50.0	1	8.3	1	8.3	12	2.1
7	Nang Rong	Buri Ram	2	10.5	2	10.5	-	-	1	5.3	-	-	-	-	3	15.8	1	5.3	1	5.3	6	31.6	3	15.8	-	-	19	3.3
8	Prakhon Chai	Buri Ram	6	46.2	1	7.7	-	-	1	7.7	-	-	-	-	-	-	-	-	1	7.7	4	30.8	-	-	-	-	13	2.2
	Sub-total	Buri Ram	9	20.5	4	9.1	-	-	3	6.8	-	-	-	-	3	6.8	1	2.3	3	6.8	16	36.4	4	9.1	1	2.3	44	7.6
9	Muang Ubon Ratchathani	Ubon Ratchathani	1	5.9	1	5.9	-	-	1	5.9	-	-	-	-	3	17.6	2	11.8	1	5.9	7	41.2	1	5.9	-	-	17	2.9
10	Khemarat	Ubon Ratchathani	3	12.5	3	12.5	-	-	3	12.5	-	-	2	8.3	4	16.7	-	-	1	4.2	7	29.2	1	4.2	-	-	24	4.1
11	Phibun Mangsahan	Ubon Ratchathani	1	4.8	-	-	-	-	5	23.8	-	-	-	-	1	4.8	-	-	1	4.8	12	57.1	1	4.8	-	-	21	3.6
12	Warin Chamrap	Ubon Ratchathani	5	19.2	-	-	-	-	5	19.2	-	-	1	3.8	4	15.4	4	15.4	2	7.7	4	15.4	1	3.8	-	-	26	4.5
13	Amnat Charoen	Ubon Ratchathani	6	16.2	6	16.2	-	-	2	5.4	-	-	-	-	4	10.8	-	-	3	8.1	16	43.2	-	-	-	-	37	6.4
14	Sirinthon	Ubon Ratchathani	-	-	-	-	-	-	2	25.0	-	-	-	-	1	12.5	-	-	-	-	3	37.5	2	25.0	-	-	8	1.4
	Sub-total	Ubon Ratchathani	16	12.0	10	7.5	-	-	18	13.5	-	-	3	2.3	17	12.8	6	4.5	8	6.0	49	36.8	6	4.5	-	-	133	22.9
15	Muang Mukdahan	Mukdahan	5	6.8	7	9.5	2	2.7	5	6.8	1	1.4	1	1.4	4	5.4	5	6.8	1	1.4	40	54.1	3	4.1	-	-	74	12.8
16	Muang Prachin Buri	Prachin Buri	5	23.8	5	23.8	-	-	-	-	-	-	-	-	-	-	2	9.5	2	9.5	6	28.6	1	4.8	-	-	21	3.6
17	Kabin Buri	Prachin Buri	2	6.1	4	12.1	-	-	6	18.2	-	-	1	3.0	6	18.2	3	9.1	2	6.1	5	15.2	4	12.1	-	-	33	5.7
18	Sa Kaeo	Prachin Buri	3	11.1	6	22.2	-	-	2	7.4	-	-	-	-	1	3.7	1	3.7	2	7.4	12	44.4	-	-	-	-	27	4.7
19	Aranyaprathet	Prachin Buri	3	5.7	4	7.5	2	3.8	4	7.5	-	-	-	-	2	3.8	1	1.9	1	1.9	35	66.0	1	1.9	-	-	53	9.1
	Sub-total	Prachin Buri	13	9.7	19	14.2	2	1.5	12	9.0	-	-	1	0.7	9	6.7	7	5.2	7	5.2	58	43.3	6	4.5	-	-	134	23.1
20	Muang Nakhon Nayok	Nakhon Nayok	3	8.6	4	11.4	-	-	6	17.1	-	-	-	-	3	8.6	3	8.6	-	-	14	40.0	2	5.7	-	-	35	6.0
	Total		57	9.8	59	10.2	4	0.7	76	13.1	1	0.2	7	1.2	65	11.2	34	5.9	27	4.7	214	36.9	35	6.0	1	0.2	580	100.0

Source: Distribution Survey

Table 1.12 Marketing Problems Encountered by the Firms in the Study Area

(Plural Answers)

Problems	Number	(%)
(1) High freight rate	22	12.3
(2) Shortage of truck in services	8	4.5
(3) Inconvinience in transportation	11	6.1
(4) Small number of buyers	28	15.6
(5) High competition (among many manufacturers)	81	45.3
(6) Cannot compete with manufacturers in Bangkok	15	8.4
(7) Pressed by distributors for low prices	9	5.0
(8) Others	5	2.8
TOTAL	179	100.0

Source: Socio-Economic Survey

Table 1.13 Distribution of Sample on Major Problems by Province (for Traders)

No.	Province	Problem No. 1		2		3		4		5		6		7		8		9		10		11		12		13		no answer		Total	
			%		%		%		%		%		%		%		%		%		%		%		%		%		%		%
1	Si Sa Ket	-	-	-	-	-	-	4	9.5	1	2.4	-	-	-	-	-	-	1	2.4	-	-	4	9.5	-	-	3	7.1	29	69.0	42	7.1
2	Surin	-	-	-	-	-	-	1	2.9	4	11.8	-	-	1	2.9	1	2.9	2	5.9	-	-	1	2.9	-	-	3	8.8	21	61.8	34	5.8
3	Nakon Ratchasima	1	1.2	-	-	3	3.6	2	2.4	2	2.4	6	7.1	-	-	-	-	-	-	-	-	-	-	-	-	1	1.2	69	82.1	84	14.2
4	Buri Ram	1	2.3	1	2.3	-	-	5	11.4	1	2.3	3	6.8	4	9.1	-	-	3	6.8	-	-	1	2.3	-	-	-	-	25	56.8	44	7.4
5	Ubon Ratchathani	1	0.7	4	2.9	1	0.7	13	9.4	18	13.0	6	4.3	2	1.4	2	1.4	5	3.6	4	2.9	12	8.7	2	1.4	3	2.2	65	47.1	138	23.4
6	Mukdahan	2	2.7	1	1.4	2	2.7	14	18.9	2	2.7	5	6.8	2	2.7	-	-	-	-	3	4.1	5	6.8	2	2.7	5	6.8	31	41.9	74	12.5
7	Prachin Buri	1	0.7	-	-	8	5.8	11	8.0	8	5.8	7	5.1	5	3.6	2	1.4	2	1.4	1	0.7	4	2.9	-	-	2	1.4	87	63.0	138	23.4
8	Nakhon Nayok	1	2.7	-	-	-	-	-	-	-	-	1	2.7	1	2.7	-	-	2	5.4	-	-	1	2.7	-	-	2	5.4	29	78.4	37	6.3
	Total (1)	7	1.2	6	1.0	14	2.4	50	8.5	36	6.1	28	4.7	15	2.5	5	0.8	15	2.5	8	1.4	28	4.7	4	0.7	19	3.2	356	60.2	591	100.0
	Total (2)	7	3.0	6	2.6	14	6.0	50	21.3	36	15.3	28	11.9	15	6.4	5	2.1	15	6.4	8	3.4	28	11.9	4	1.7	19	8.1	-	-	235	100.0

Source: Distribution Survey

Remarks:

Problem No.	Items	Descriptions
1	Labor Shortage	lack of skill labor
2	Financial Constraints	lack of capital, high interest rate
3	Tax Problems	duplicated taxes, unfamiliar to value added tax, high and uncertain tax rate
4	Strong Competition	price competition, many traders, uncertain prices, low profit
5	High Costs	high initial cost (raw material, etc.), high investment cost
6	Depressed Economy	small amount of trades
7	Quality of Goods	defects, low quality
8	Insufficient Infrastructure	lack of infrastructure
9	Transportation Problems	long distance, lack of truck, high transportation cost
10	Government Constraints	inconvenience caused by government precedure, seizure
11	Shortage of Goods	under supply, lack of raw material, seasonal availability
12	Space/Site Constraints	land owned by government, narrow space
13	Others	safety, unfair trade, etc.

Table 1.14 Distribution of Sample on Major Problems by Province (for Trucking Companies)

No.	Province	Problem No. 1		2		3		4		5		6		7		8		9		10		11		12		13		no answer		Total	
			%		%		%		%		%		%		%		%		%		%		%		%		%		%		%
1	Si Sa Ket	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	14.3	-	-	-	-	1	14.3	1	14.3	4	57.1	7	6.8
2	Surin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	20.0	-	-	-	-	-	-	8	80.0	10	9.7
3	Nakon Ratchasima	3	17.6	-	-	-	-	-	-	4	23.5	-	-	-	-	-	-	-	-	1	5.9	-	-	-	-	3	17.6	6	35.3	17	16.5
4	Buri Ram	1	14.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	85.7	7	6.8
5	Ubon Ratchathani	-	-	-	-	-	-	2	6.9	3	10.3	-	-	4	13.8	-	-	-	-	3	10.3	1	3.4	-	-	2	6.9	14	48.3	29	28.2
6	Mukdahan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	100.0	-	-	2	1.9
7	Prachin Buri	-	-	1	3.6	-	-	1	3.6	1	3.6	-	-	-	-	-	-	3	10.7	1	3.6	-	-	-	-	1	3.6	20	71.4	28	27.2
8	Nakhon Nayok	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	100.0	3	2.9
	Total (1)	4	3.9	1	1.0	-	-	3	2.9	8	7.8	-	-	4	3.9	-	-	4	3.9	7	6.8	1	1.0	1	1.0	9	8.7	61	59.2	103	100.0
	Total (2)	4	9.5	1	2.4	-	-	3	7.1	8	19.0	-	-	4	9.5	-	-	4	9.5	7	16.7	1	2.4	1	2.4	9	21.4	-	-	42	100.0

Source: Distribution Survey

Remarks :

Problem No.	Items	Problem Description
1	Labor Shortage	lack of labor
2	Financial Constraints	lack of capital, high interest rate
3	Tax Problems	none
4	Strong Competition	uncertain prices
5	High Costs	high operating cost
6	Depressed Economy	none
7	Quality of Goods	uncertain quality
8	Insufficient Infrastructure	none
9	Transportation Problems	lack of truck, over loading
10	Government Constraints	inconvenience caused by police
11	Shortage of Goods	lack of goods
12	Space/Site Constraints	narrow space, loading and unloading difficulty
13	Others	monopoly deal, damage, etc.

Table 2.1 Change of Exports Structure in Thailand

Unit: million baht

	Agriculture Products		Manufacture Products		Other Products		Total Exports
	Value	(%)	Value	(%)	Value	(%)	Value
1980	64,737	48.6	40,910	30.7	27,550	20.7	133,197
1983	71,583	48.9	58,272	39.8	16,617	11.3	146,472
1986	89,558	38.4	119,508	51.2	24,317	10.4	233,383
1987	96,326	32.1	172,788	57.6	30,739	10.3	299,853
1988	122,497	30.4	243,280	60.3	37,792	9.4	403,570
1989	145,481	28.2	333,929	64.7	36,905	7.1	516,315
1990	131,011	22.2	419,270	71.1	39,531	6.7	589,813
1991	149,527	20.6	521,198	71.8	54,724	7.5	725,449

Source: Trade Statistics and Economic Indicators of Thailand 1991

Table 2.2 Change of Imports Structure in Thailand

Unit: million baht

	1983		1986		1990		1991	
1 Fuel lubricants	57,468	24.3	32,671	13.5	79,556	9.3	89,310	9.3
2 Capital goods	70,200	29.7	78,677	32.6	334,319	39.2	383,056	39.9
3 Intermediate Goods & raw materials	67,353	28.5	85,537	35.4	288,795	33.9	330,455	34.4
- for consumer goods	45,445	19.2	62,690	26.0	195,571	22.9	232,598	24.2
- for capital goods	21,908	9.3	22,848	9.5	93,224	10.9	97,857	10.2
4 Consumer Goods	20,222	8.5	22,423	9.3	73,412	8.6	85,579	8.9
- Non-durable	10,527	4.4	11,243	4.7	28,138	3.3	32,585	3.4
- Durable	9,695	4.1	11,180	4.6	45,274	5.3	52,995	5.5
5 Vehicle and Parts	11,730	5.0	9,150	3.8	55,722	6.5	47,289	4.9
6 Others	9,637	4.1	12,900	5.3	21,178	2.5	23,719	2.5
Total Imports	236,609	100.0	241,358	100.0	852,982	100.0	959,408	100.0

Source: Trade Statistics and Economic Indicators of Thailand 1990 and 1991

Table 2.3 Trade Volume with Indochina Countries

Unit: million baht

	1982	1985	1988	1989	1990	1991
Trade volume						
Laos	816.4	566.2	1,868.7	2,928.5	2,817.5	3,159.3
Vietnam	34.7	24.8	350.2	1,595.1	2,866.9	3,538.7
Cambodia	36.1	10.2	14.4	91.7	318.3	413.4
Total	887.2	601.2	2,233.3	4,615.3	6,002.7	7,111.5
Export						
Laos	777.7	534.2	1,300.7	1,642.5	1,683.2	1,958.8
Vietnam	15.5	8.8	118.6	416.5	466.8	568.6
Cambodia	36.1	10.1	13.9	2.4	21.8	118.2
Total	829.3	553.1	1,433.2	2,061.4	2,171.8	2,645.5
Import						
Laos	38.7	31.9	568.0	1,286.0	1,134.3	1,200.6
Vietnam	19.2	16.0	231.6	1,178.6	2,400.1	2,970.1
Cambodia	0.1	0.1	0.5	89.3	296.5	295.2
Total	58.0	48.0	800.1	2,553.9	3,830.9	4,465.9
Trade Balance						
Laos	739.0	502.3	732.7	356.5	548.9	758.2
Vietnam	-3.7	-7.2	-113.0	-762.1	-1,933.3	-2,401.5
Cambodia	36.0	10.0	13.4	-86.9	-274.7	-177.0
Total	771.3	505.1	633.1	-492.5	-1,659.1	-1,820.4
Share of Total Trade Volume in the Kingdom (%)						
Laos	0.23	0.13	0.20	0.25	0.20	0.19
Vietnam	0.01	0.01	0.04	0.14	0.20	0.21
Cambodia	0.01	0.00	0.00	0.01	0.02	0.02
Total	0.25	0.14	0.24	0.39	0.42	0.42

Sources: Customs Office Department, Ministry of Finance
Department of Business Economics, Ministry of Commerce

Table 2.4 Thailand's Trade with Laos in 1990-1991 by Major Commodity

Imports	1991 Value (1000 baht)	1991 Share (%)	1991 % of each Commodity in Kingdom	1990 Value (1000 baht)	1990 Share (%)	1990 % of each Commodity in Kingdom
1 Wood, lumber, cork, pulp, waste-paper	1,002,405	83.49	4.76	737,440	65.01	4.16
2 Other metals, waste and scrap	95,124	7.92	0.44	222,415	19.61	0.86
3 Animal and vegetable crude matrials	46,624	3.88	0.39	51,520	4.54	0.52
4 Wood products	33,142	2.76	3.67	10,858	0.96	1.44
5 Iron and steel	7,391	0.62	0.01	72,132	6.36	0.11
6 Non-electrical machinery and parts	2,189	0.18	0.00	3,464	0.31	0.00
7 Crude minerals	1,283	0.11	0.03	8	0.00	0.00
8 Buses and trucks	842	0.07	0.01	2,184	0.19	0.05
9 Coffee, tea and spices	314	0.03	0.06	-	-	-
10 Metal manufactures	224	0.02	0.00	61	0.01	0.00
11 Parts and accessories	168	0.01	0.00	1,961	0.17	0.00
12 Textile fibers	137	0.01	0.00	38	0.00	0.00
13 Tubes and pipes	115	0.01	0.00	-	-	-
14 Jewelry including silver bars	98	0.01	0.00	-	-	-
15 Fruits and vegetables	90	0.01	0.00	9	0.00	0.00
Others	10,432	0.87	-	32,172	2.84	-
Total	1,200,578	100.00	0.13	1,134,262	100.00	0.13

Exports	1991 Value (1000 baht)	1991 Share (%)	1991 % of each Commodity in Kingdom	1990 Value (1000 baht)	1990 Share (%)	1990 % of each Commodity in Kingdom
1 Rice	156,818	8.01	0.51	32,978	1.96	0.12
2 Motercycles	149,499	7.63	49.08	100,809	5.99	50.68
3 Chemical products	64,434	3.29	1.57	76,444	4.54	3.35
4 Milk and cream	58,611	2.99	18.95	51,312	3.05	17.35
5 Cane sugar	58,529	2.99	0.40	27,057	1.61	0.15
6 Rubber products	56,028	2.86	0.78	25,608	1.52	0.39
7 Fan	53,256	2.72	2.10	46,478	2.76	1.75
8 Wheat products	48,563	2.48	3.00	39,569	2.35	3.50
9 Synthetic filament yarn and sewing thread	37,449	1.91	1.10	19,027	1.13	0.89
10 Bicycles	37,179	1.90	5.34	31,692	1.88	5.15
11 Woven fabrics	35,239	1.80	0.23	34,532	2.05	0.27
12 Refrigerators and parts thereof	34,218	1.75	1.84	24,538	1.46	3.51
13 Preparations of a kind for animal feeding	31,928	1.63	0.70	18,423	1.09	0.53
14 Garments	28,957	1.48	0.03	38,739	2.30	0.06
15 Footwears and parts thereof	28,738	1.47	0.12	31,451	1.87	0.16
Others	1,079,323	55.10	-	1,084,538	64.43	-
Total	1,958,769	100.00	0.27	1,683,195	100.00	0.29

Source: Department of Business Economics, Ministry of Commerce

Table 2.5 Thailand's Trade with Vietnam in 1990-1991 by Major Commodity

Imports	1991 Value (1000 baht)	1991 Share (%)	1991 % of each Commodity in Kingdom	1990 Value (1000 baht)	1990 Share (%)	1990 % of each Commodity in Kingdom
1 Wood, lumber, cork, pulp, waste paper	2,119,895	71.37	10.07	1,225,152	51.05	6.90
2 Animal and vegetable crude materials	345,918	11.65	2.89	415,014	17.29	4.19
3 Iron and steel	218,348	7.35	0.31	502,653	20.94	0.77
4 Fish and preparations	88,970	3.00	0.34	96,156	4.01	0.49
5 Other metals, waste and scrap	76,385	2.57	0.35	59,676	2.49	0.24
6 Textile fibers	36,764	1.24	0.19	11,002	0.46	0.07
7 Coke, briquettes etc.	20,433	0.69	2.57	27,786	1.16	4.30
8 Textile yarn and thread	17,285	0.58	0.36	6,225	0.26	0.12
9 Leather and leather products	15,438	0.52	0.32	20,361	0.85	0.49
10 Paper and paperboard	11,753	0.40	0.11	21,393	0.89	0.24
11 Non-electrical machinery and parts	5,701	0.19	0.00	362	0.02	0.00
12 Metal manufactures	3,587	0.12	0.02	1,511	0.06	0.01
13 Wood products	2,590	0.09	0.29	2,294	0.10	0.30
14 Crude minerals	1,372	0.05	0.03	64	0.00	0.00
15 Chemicals	1,038	0.03	0.00	627	0.03	0.00
Others	4,653	0.16	-	9,832	0.41	-
Total	2,970,130	100.00	0.31	2,400,108	100.00	0.28

Exports	1991 Value (1000 baht)	1991 Share (%)	1991 % of each Commodity in Kingdom	1990 Value (1000 baht)	1990 Share (%)	1990 % of each Commodity in Kingdom
1 Cane sugar	102,141	17.96	0.69	175,610	37.62	0.99
2 Motercycles	39,553	6.96	12.99	4,279	0.92	2.15
3 Chemical products	31,034	5.46	0.75	51,852	11.11	2.27
4 Polymers of styrenes or vinyl chloride	30,034	5.28	2.66	59,615	12.77	5.47
5 Woven fabrics	27,048	4.76	0.18	7,071	1.51	0.06
6 Rubber	20,877	3.67	0.08	-	-	-
7 Pipe and pipe fittings of iron or steel	14,723	2.59	0.40	15	0.00	0.00
8 Plastic products	14,488	2.55	0.14	18,511	3.97	0.23
9 Radio receivers, television and parts	9,763	1.72	0.07	7,443	1.59	0.09
10 Wheat products	9,119	1.60	0.56	870	0.19	0.08
11 Refrigerators and parts thereof	6,365	1.12	0.34	717	0.15	0.10
12 Aluminium structures and parts	5,512	0.97	0.25	543	0.12	0.03
13 Furniture and parts thereof	5,085	0.89	0.05	1,191	0.26	0.02
14 Gypsum	4,709	0.83	0.31	4,224	0.90	0.32
15 Household textile	4,093	0.72	0.15	138	0.03	0.01
Others	244,042	42.92	-	134,729	28.86	-
Total	568,586	100.00	0.08	466,808	100.00	0.08

Source: Department of Business Economics, Ministry of Commerce

Table 2.6 Thailand's Trade with Cambodia in 1990-1991 by Major Commodity

Imports	1991 Value (1000 baht)	1991 Share (%)	1991 % of each Commodity in Kingdom	1990 Value (1000 baht)	1990 Share (%)	1990 % of each Commodity in Kingdom
1 Wood, lumber, cork, pulp, waste paper	277,138	93.88	1.32	94,935	32.02	0.53
2 Other metals, waste and scrap	9,389	3.18	0.04	166,491	56.16	0.66
3 Animal and vegetable crude materials	8,073	2.73	0.07	31,758	10.71	0.32
4 Chemicals	530	0.18	0.00	-	-	-
5 Fabrics	39	0.01	0.00	-	-	-
6 Wood products	-	-	-	1,047	0.35	0.14
7 Fish and preparations	-	-	-	883	0.30	0.00
8 Furniture	-	-	-	665	0.22	0.19
9 Paper and paperboard	-	-	-	175	0.06	0.00
10 Class and other mineral manufactures	-	-	-	80	0.03	0.00
11 Household goods	-	-	-	49	0.02	0.00
12 Construction material	-	-	-	29	0.01	0.01
13 Coffee, tea and spices	-	-	-	20	0.01	0.00
14 Toilet and cleaning articles	-	-	-	10	0.00	0.00
15 Metal manufactures	-	-	-	1	0.00	0.00
Others	-	-	-	331	0.11	-
Total	295,197	100.00	0.03	296,474	100.00	0.03

Exports	1991 Value (1000 baht)	1991 Share (%)	1991 % of each Commodity in Kingdom	1990 Value (1000 baht)	1990 Share (%)	1990 % of each Commodity in Kingdom
1 Rice	32,961	27.89	0.11	6,138	28.22	0.02
2 Cane sugar	6,008	5.08	0.04	-	-	-
3 Furniture and parts thereof	5,152	4.36	0.05	1	0.00	0.00
4 Instruments & appliances for medical use	3,297	2.79	0.30	215	0.99	0.03
5 Pharmaceutical products	3,287	2.78	0.41	267	1.23	0.04
6 Plastic products	2,545	2.15	0.02	174	0.80	0.00
7 Ceramic products	1,480	1.25	0.03	14	0.06	0.00
8 Air conditioning machines and parts	1,328	1.12	0.03	-	-	-
9 Household textile	1,256	1.06	0.05	-	-	-
10 Moter vehicles, parts and accessories	934	0.79	0.02	-	-	-
11 Motorcycles	777	0.66	0.26	-	-	-
12 Rubber products	749	0.63	0.01	53	0.24	0.00
13 Electric motors and generators	747	0.63	0.03	-	-	-
14 Lamps	724	0.61	0.10	-	-	-
15 Spirituous beverages	696	0.59	0.37	-	-	-
Others	56,249	47.59	-	14,888	68.45	-
Total	118,190	100.00	0.02	21,750	100.00	0.00

Source: Department of Business Economics, Ministry of Commerce

Table 2.7 Imports and Exports Volume in Major Trading Points along the Borders with Laos and Cambodia

1991 Unit: 1000 Baht

Name of port	Imports from Laos	Exports to Laos	Total from/to Laos	Imports from Vietnam	Exports to Vietnam	Total from/to Vietnam	Imports from Cambodia	Exports to Cambodia	Total from/to Cambodia	Grand Total
Chiang Khong	721	42,435	43,156	0	0	0	0	0	0	43,156
Chiang Saen	28,119	980	29,099	0	0	0	0	0	0	29,099
Nong Khai	386,390	1,025,736	1,412,126	570	0	570	0	0	0	1,412,696
Nakhon Phanom	248,562	15,285	263,848	11,142	0	11,142	0	0	0	274,989
Mukdahan	374,279	134,465	508,743	291,796	0	291,796	0	0	0	800,539
Khemmarat	3,375	8,760	12,135	51	0	51	0	0	0	12,186
Chong Mek	138,749	94,350	233,099	8,690	0	8,690	0	0	0	241,789
Poipet	0		0	0	0	0	0	9,947	9,947	9,947
Khong Yai	0		0	0	0	0	0	0	0	0
Total	1,180,195	1,322,011	2,502,206	312,248	0	312,248	0	9,947	9,947	2,824,401
Study Area Total	516,402	237,575	753,978	300,537	0	300,537	0	9,947	9,947	1,064,461
Other ports	20,405	636,789	657,194	2,657,852	568,600	3,226,452	295,200	108,253	403,453	4,287,099
Grand Total	1,200,600	1,958,800	3,159,400	2,970,100	568,600	3,538,700	295,200	118,200	413,400	7,111,500
Study Area (%)	**43.01**	**12.13**	**23.86**	**10.12**	**0.00**	**8.49**	**0.00**	**8.42**	**2.41**	**14.97**

1990 Unit: 1000 Baht

Name of port	Imports from Laos	Exports to Laos	Total from/to Laos	Imports from Vietnam	Exports to Vietnam	Total from/to Vietnam	Imports from Cambodia	Exports to Cambodia	Total from/to Cambodia	Grand Total
Chiang Khong	28,615	71,409	100,024	0	0	0	0	0	0	100,024
Chiang Saen	1,305	1,074	2,379	0	0	0	0	0	0	2,379
Nong Khai	432,789	797,799	1,230,589	0	0	0	0	0	0	1,230,589
Nakhon Phanom	141,985	25,283	167,268	0	0	0	0	0	0	167,268
Mukdahan	433,253	154,888	588,141	300,560	0	300,560	0	0	0	888,702
Khemmarat	63	1,778	1,841	0	0	0	0	0	0	1,841
Chong Mek	90,715	110,827	201,542	0	0	0	0	0	0	201,542
Poipet	0	0	0	0	0	0	0	0	0	0
Khong Yai	0	0	0	2,011	0	2,011	171,832	0	171,832	173,843
Total	1,128,726	1,163,059	2,291,785	302,571	0	302,571	171,832	0	171,832	2,766,188
Study Area Total	524,031	267,494	791,525	300,560	0	300,560	0	0	0	1,092,085
Other ports	5,536	520,136	525,672	2,097,537	466,808	2,564,345	124,642	21,750	146,392	3,236,409
Grand Total	1,134,262	1,683,195	2,817,457	2,400,108	466,808	2,866,916	296,474	21,750	318,224	6,002,597
Study Area (%)	**46.20**	**15.89**	**28.09**	**12.52**	**0.00**	**10.48**	**0.00**	**0.00**	**0.00**	**18.19**

1989 Unit: 1000 Baht

Name of port	Imports from Laos	Exports to Laos	Total from/to Laos	Imports from Vietnam	Exports to Vietnam	Total from/to Vietnam	Imports from Cambodia	Exports to Cambodia	Total from/to Cambodia	Grand Total
Chiang Khong	16,059	50,765	66,825	0	0	0	0	0	0	66,825
Chiang Saen	0	0	0	0	0	0	0	0	0	0
Nong Khai	344,646	700,744	1,045,390	228	0	228	0	0	0	1,045,618
Nakhon Phanom	59,084	52,949	112,033	0	0	0	0	0	0	112,033
Mukdahan	620,033	309,674	929,707	13,282	0	13,282	0	0	0	942,989
Khemmarat	0	0	0	0	0	0	0	0	0	0
Chong Mek	85,671	185,803	271,474	0	0	0	0	0	0	271,474
Poipet	0	0	0	0	0	0	0	0	0	0
Khong Yai	0	0	0	3,291	0	3,291	63,179	1,851	65,030	68,322
Total	1,125,492	1,299,936	2,425,428	16,802	0	16,802	63,179	1,851	65,030	2,507,261
Study Area Total	705,704	495,477	1,201,181	13,282	0	13,282	0	0	0	1,214,463
Other ports	160,554	342,598	503,152	1,161,838	416,547	1,578,385	26,148	564	26,712	2,108,248
Grand Total	1,286,046	1,642,534	2,928,580	1,178,640	416,547	1,595,187	89,327	2,415	91,742	4,615,509
Study Area (%)	**54.87**	**30.17**	**41.02**	**1.13**	**0.00**	**0.83**	**0.00**	**0.00**	**0.00**	**26.31**

Source : Trade Statistics Center, Department of Business Economics, Ministry of Commerce

Notes: (1) Poipet is the trading point at Aranyaprathet

(2) Grand total in this table only shows the total volume of transaction with Indochina Countries. Trade volume with other countries is not included.

Table 2.8 Imports and Exports Volume in Major Trading Points along the Borders with Laos and Cambodia

1991 — Unit: 1000 Kg

Name of port	Imports from Laos	Exports to Laos	Total from/to Laos	Imports from Vietnam	Exports to Vietnam	Total from/to Vietnam	Imports from Cambodia	Exports to Cambodia	Total from/to Cambodia	Grand Total
Chiang Khong	2,692	2,668	5,361	0	0	0	0	0	0	5,361
Chiang Saen	209	77	286	0	0	0	0	0	0	286
Nong Khai	59,843	62,344	122,187	41	0	41	0	0	0	122,228
Nakhon Phanom	37,635	299	37,935	1,765	0	1,765	0	0	0	39,700
Mukdahan	65,779	8,467	74,247	47,783	0	47,783	0	0	0	122,029
Khemmarat	290	190	480	0	0	0	0	0	0	480
Chong Mek	34,674	4,529	39,203	1,412	0	1,412	0	0	0	40,616
Poipet	0	0	0	0	0	0	0	21	21	21
Khong Yai	0	0	0	0	0	0	0	0	0	0
Total	201,123	78,575	279,697	51,001	0	51,001	0	21	21	330,720
Study Area Total	100,743	13,186	113,930	49,195	0	49,195	0	21	21	163,146

1990 — Unit: 1000 Kg

Name of port	Imports from Laos	Exports to Laos	Total from/to Laos	Imports from Vietnam	Exports to Vietnam	Total from/to Vietnam	Imports from Cambodia	Exports to Cambodia	Total from/to Cambodia	Grand Total
Chiang Khong	1,755	2,733	4,488	0	0	0	0	0	0	4,488
Chiang Saen	360	30	390	0	0	0	0	0	0	390
Nong Khai	66,764	62,767	129,531	0	0	0	0	0	0	129,531
Nakhon Phanom	24,118	1,011	25,129	0	0	0	0	0	0	25,129
Mukdahan	74,612	8,786	83,398	49,669	0	49,669	0	0	0	133,067
Khemmarat	12	35	47	0	0	0	0	0	0	47
Chong Mek	21,646	9,215	30,861	0	0	0	0	0	0	30,861
Poipet	0	0	0	0	0	0	0	0	0	0
Khong Yai	0	0	0	49	0	49	25,511	0	25,511	25,560
Total	189,266	84,578	273,843	49,717	0	49,717	25,511	0	25,511	349,072
Study Area Total	96,269	18,037	114,306	49,669	0	49,669	0	0	0	163,975

1989 — Unit: 1000 Kg

Name of port	Imports from Laos	Exports to Laos	Total from/to Laos	Imports from Vietnam	Exports to Vietnam	Total from/to Vietnam	Imports from Cambodia	Exports to Cambodia	Total from/to Cambodia	Grand Total
Chiang Khong	4,770	1,594	6,364	0	0	0	0	0	0	6,364
Chiang Saen	0	0	0	0	0	0	0	0	0	0
Nong Khai	47,281	51,780	99,062	8	0	8	0	0	0	99,070
Nakhon Phanom	14,683	713	15,396	0	0	0	0	0	0	15,396
Mukdahan	96,111	12,266	108,377	2,254	0	2,254	0	0	0	110,631
Khemmarat	0	0	0	0	0	0	0	0	0	0
Chong Mek	18,095	26,694	44,789	0	0	0	0	0	0	44,789
Poipet	0	0	0	0	0	0	0	0	0	0
Khong Yai	0	0	0	95	0	95	9,073	15	9,088	9,184
Total	180,941	93,047	273,988	2,357	0	2,357	9,073	15	9,088	285,433
Study Area Total	114,206	38,960	153,166	2,254	0	2,254	0	0	0	155,420

Source: Trade Statistics Center, Department of Business Economics, Ministry of Commerce

Notes: (1) Poipet is the trading point at Aranyaprathet.

(2) Grand total only shows the total volume of transactions with three Indochina countries. Trade volume with other countries is not included.

Table 2.9 Distribution of Sample on Type of Currency for Trading by Province (for Traders)

No.	Province	Type of Currency for Trading												Total	
		Baht only		Kip only		Baht & Dollar		Baht & Kip		Baht & Riel		no answer			
			%		%		%		%		%		%		%
1	Si Sa Ket	27	100.0	-	-	-	-	-	-	-	-	-	-	27	5.5
2	Surin	30	96.8	-	-	-	-	-	-	-	-	1	3.2	31	6.3
3	Nakon Ratchasima	84	100.0	-	-	-	-	-	-	-	-	-	-	84	17.1
4	Buri Ram	34	100.0	-	-	-	-	-	-	-	-	-	-	34	6.9
5	Ubon Ratchathani	132	97.1	1	0.7	-	-	3	2.2	-	-	-	-	136	27.6
6	Mukdahan	41	93.2	-	-	3	6.8	-	-	-	-	-	-	44	8.9
7	Prachin Buri	107	96.4	-	-	-	-	-	-	4	3.6	-	-	111	22.6
8	Nakhon Nayok	25	100.0	-	-	-	-	-	-	-	-	-	-	25	5.1
	Total	480	97.6	1	0.2	3	0.6	3	0.6	4	0.8	1	0.2	492	100.0

Source: Border Trade Survey

Note: Kip is the currency for Laos and Riel is for Cambodia.

Table 2.10 Distribution of Sample on Reason for Visiting (for Consumers)

Reson for visiting	Total	%
tour	192	35.0
live near the market/convinient	321	58.5
business	28	5.1
other reason	6	1.1
no answer	2	0.4
Total	549	100.0

Source: Border Trade Survey

Table 2.11 Distribution of Sample on Major Problems (for Consumers)

(Plural answers)

Problem	Descriptions	Total (1)		Total (2)	
			%		%
Strong Competition	uncertain prices	1	0.2	1	0.6
High Costs	expensive goods	82	14.5	82	52.2
Quality of Goods	imitation, low quality	4	0.7	4	2.5
Insufficient Infrastructure	lack of common utilities such as toilet, etc.	9	1.6	9	5.7
Transportation Problems	poor traffic management, insufficient bus service	13	2.3	13	8.3
Government Constraints	inconvenience caused by police	1	0.2	1	0.6
Shortage of Goods	lack of goods	5	0.9	5	3.2
Space/Site Constraints	narrow space, dirty, lack of residential space	36	6.4	36	22.9
Others	broker, illegal guide, cheating, etc.	6	1.1	6	3.8
no answer		409	72.3	-	-
Total		566	100.0	157	100.0

Source: Border Trade Survey

Table 2.12 Distribution of Sample on Potential and Future of Border Trade by Province (for Traders)

No.	Province	Potential Description										Total	
		Increase		Decrease		Constant		Unstable		no answer			
			%		%		%		%		%		%
1	Si Sa Ket	6	22.2	2	7.4	1	3.7	3	11.1	15	55.6	27	5.5
2	Surin	6	19.4	1	3.2	-	-	4	12.9	20	64.5	31	6.3
3	Nakon Ratchasima	-	-	-	-	-	-	2	2.4	82	97.6	84	17.1
4	Buri Ram	6	17.6	2	5.9	-	-	8	23.5	18	52.9	34	6.9
5	Ubon Ratchathani	38	27.9	2	1.5	-	-	21	15.4	75	55.1	136	27.6
6	Mukdahan	28	63.6	5	11.4	-	-	1	2.3	10	22.7	44	8.9
7	Prachin Buri	13	11.7	4	3.6	2	1.8	12	10.8	80	72.1	111	22.6
8	Nakhon Nayok	2	8.0	-	-	-	-	-	-	23	92.0	25	5.1
	Total (1)	99	20.1	16	3.3	3	0.6	51	10.4	323	65.7	492	100.0
	Total (2)	99	58.6	16	7.5	3	1.8	51	30.2	-	-	169	100.0

Source: Border Trade Survey

Table 2.13 Approved Foreign Investmnet by the Laotion Government

(1) Approved Foreign Investment by Industry

Sector	Number	(%)	US$million	(%)
Agribusiness	13	5.8	29.4	7.5
Textiles and garments	39	17.3	26.7	6.8
Wood processing	19	8.4	19.9	5.1
Other manufacturing	48	21.3	39.9	10.2
Mining	12	5.3	64.2	16.4
Import/export	42	18.7	20.1	5.1
Hotels, tourism, restaurants	22	9.8	106.3	27.1
Banking and Insurance	3	1.3	11.0	2.8
Consulting firms	15	6.7	0.8	0.2
Construction	4	1.8	12.8	3.3
Transportation	7	3.1	60.9	15.5
Communication	1	0.4	0.5	0.1
Total	225	100.0	392.5	100.0

(2) Approved Foreign Investmnet by Country

Country	Number	(%)	US$million	(%)
Thailand	93	40.1	138.0	39.7
France	18	7.8	14.3	4.1
Taiwan	14	6.0	18.8	5.4
USA	13	5.6	72.0	20.7
Hong Kong	12	5.2	23.0	6.6
Australia	12	5.2	17.4	5.0
China	11	4.7	18.7	5.4
Russia	11	4.7	16.8	4.8
Japan	7	3.0	3.3	1.0
UK	6	2.6	11.9	3.4
Others	35	15.1	13.1	3.8
Total	232	100.0	347.3	100.0

Source: Foreign Investment Management Committee (FIMC) of Laos

Notes: (1) Data for September 1988 - June 1992

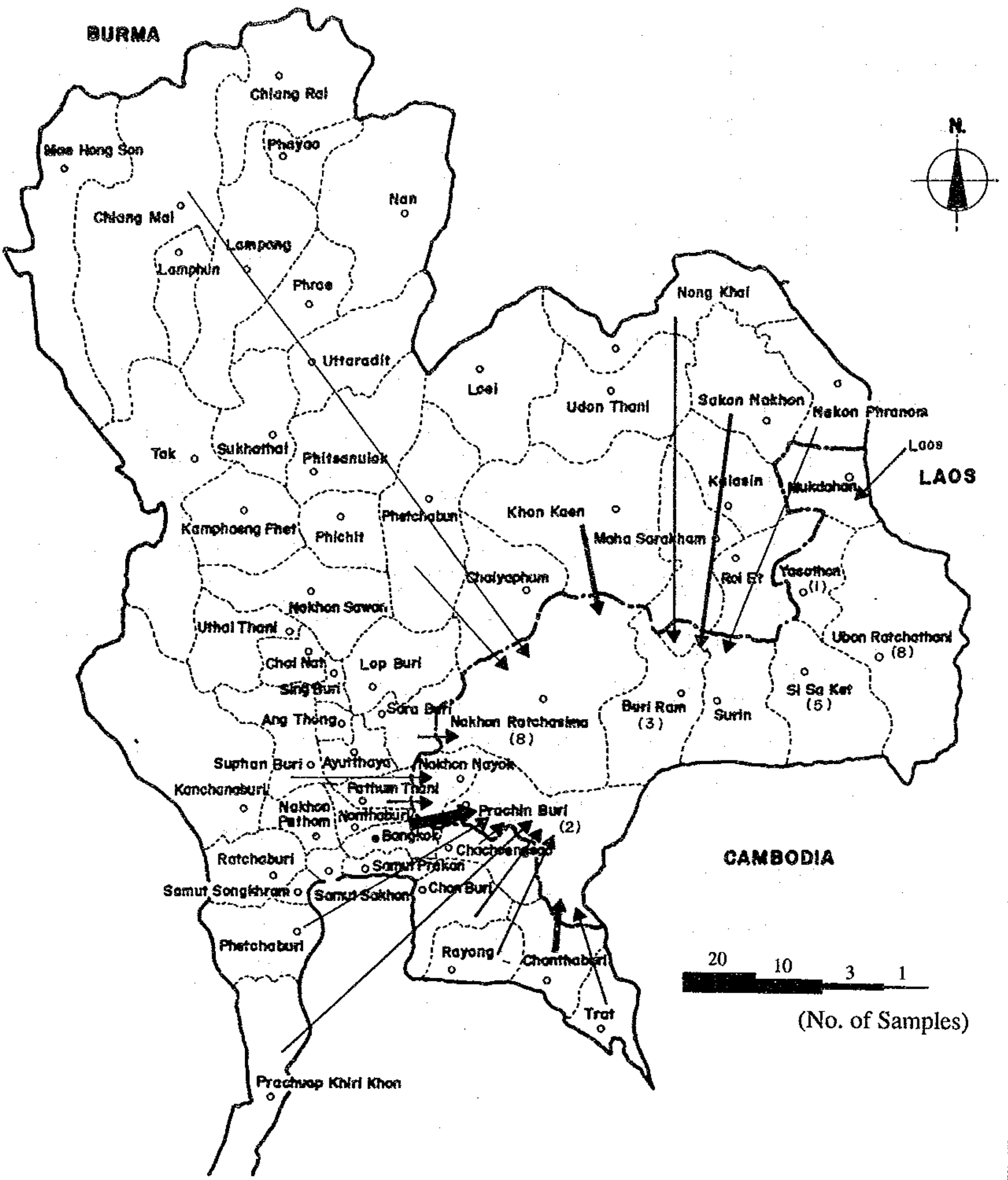
(2) The total number of projects by country is larger than by industry because some cases are joint ventures.

(3) The total investment by country is smaller than by industry because it does not include the Laotian capital.

Figures

NOTE : Numbers in parenthesis show sample size from the respective province to the Study Area. Arrows show the flow and sample size from the respective province to the Study Area

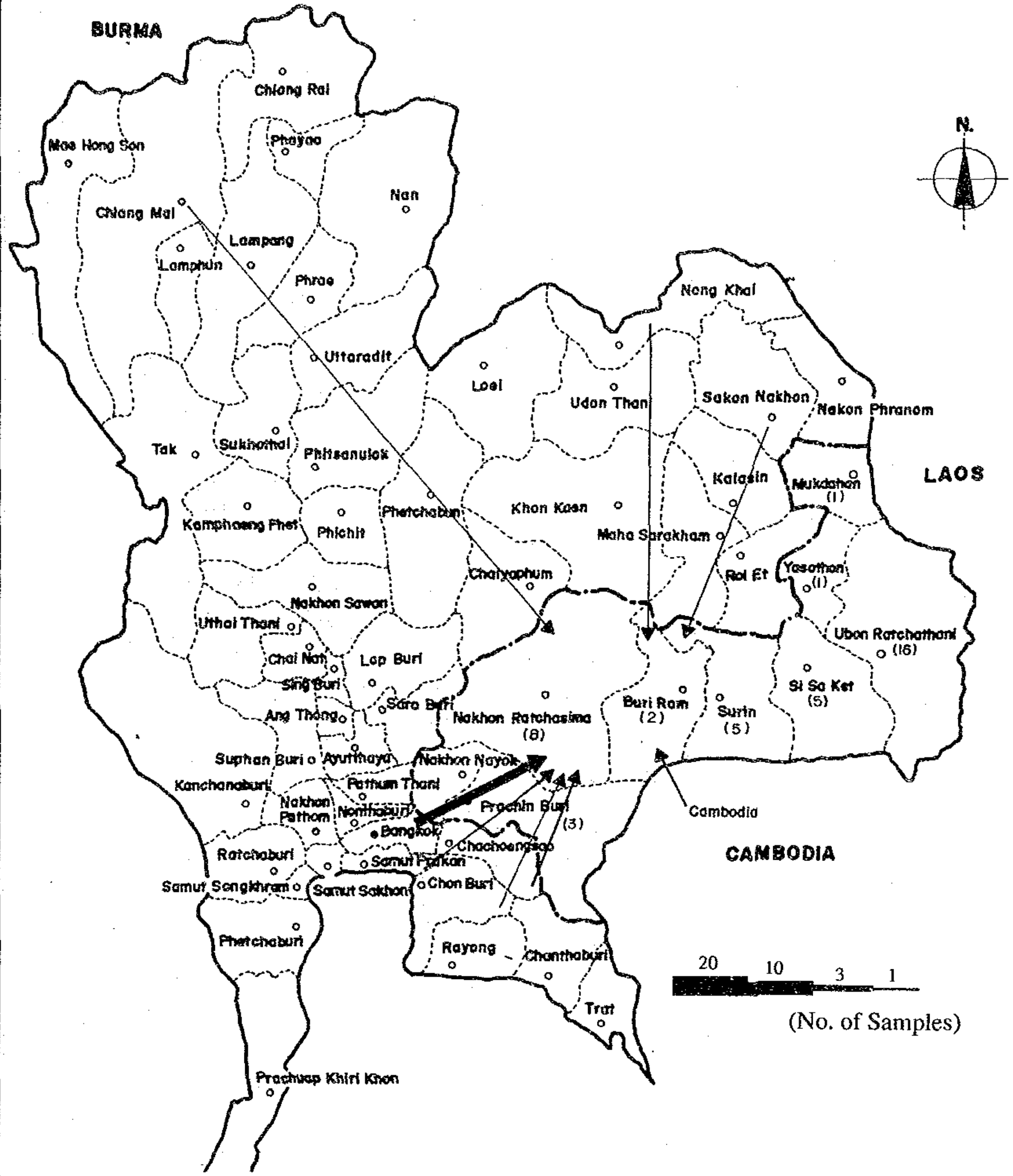
Figure 1.1 Distribution of the Origin of the Commodities, Home Appliance	
The Study on the Regional Development Plan for the Lower Northeast and the Upper East Regions in the Kingdom of Thailand	



NOTE : Numbers in parenthesis show sample size from the respective province to the Study Area. Arrows show the flow and sample size from the respective province to the Study Area

Figure 1.2 Distribution of the Origin of the Commodities, Vegetables and Fruits

The Study on the Regional Development Plan
for the Lower Northeast and the Upper East Regions
in the Kingdom of Thailand



NOTE ; Numbers in parenthesis show sample size from the respective province to the Study Area. Arrows show the flow and sample size from the respective province to the Study Area

Figure 1.3 Distribution of the Origin of the Commodities, Processed Food

The Study on the Regional Development Plan for the Lower Northeast and the Upper East Regions in the Kingdom of Thailand

NOTE : Numbers in parenthesis show sample size from the respective province to the Study Area. Arrows show the flow and sample size from the respective province to the Study Area

Figure 1.4 Distribution of the Origin of the Commodities, Animal and Fish

The Study on the Regional Development Plan for the Lower Northeast and the Upper East Regions in the Kingdom of Thailand

NOTE : Numbers in parenthesis show sample size from the respective province to the Study Area. Arrows show the flow and sample size from the respective province to the Study Area

Figure 1.5 Distribution of the Origin of the Commodities, Construction Material

The Study on the Regional Development Plan for the Lower Northeast and the Upper East Regions in the Kingdom of Thailand

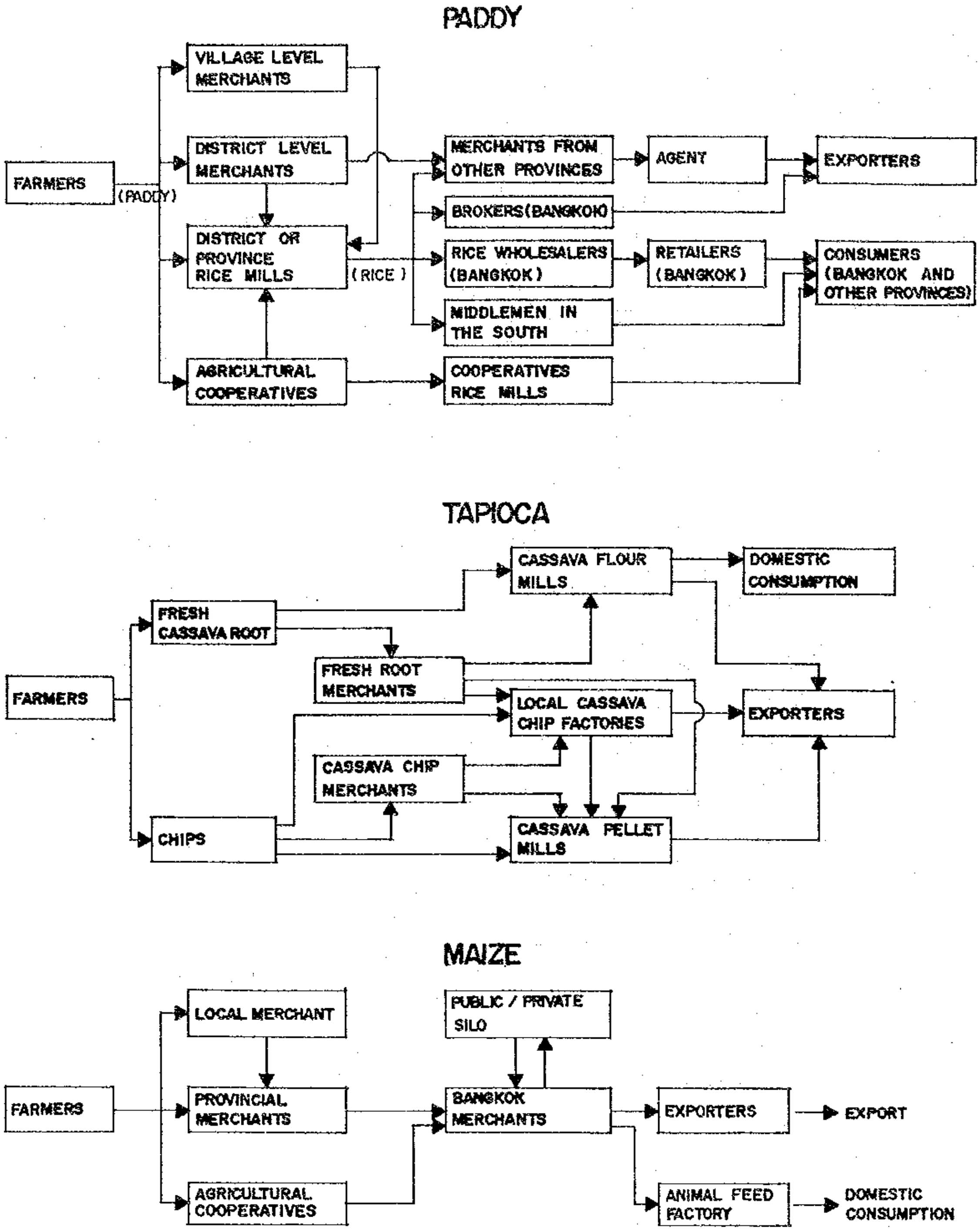


Figure I.6

Marketing Channels of Paddy, Tapioca and Maize

The Study on the Regional Development Plan for the Lower Northeast and the Upper East Regions in the Kingdom of Thailand

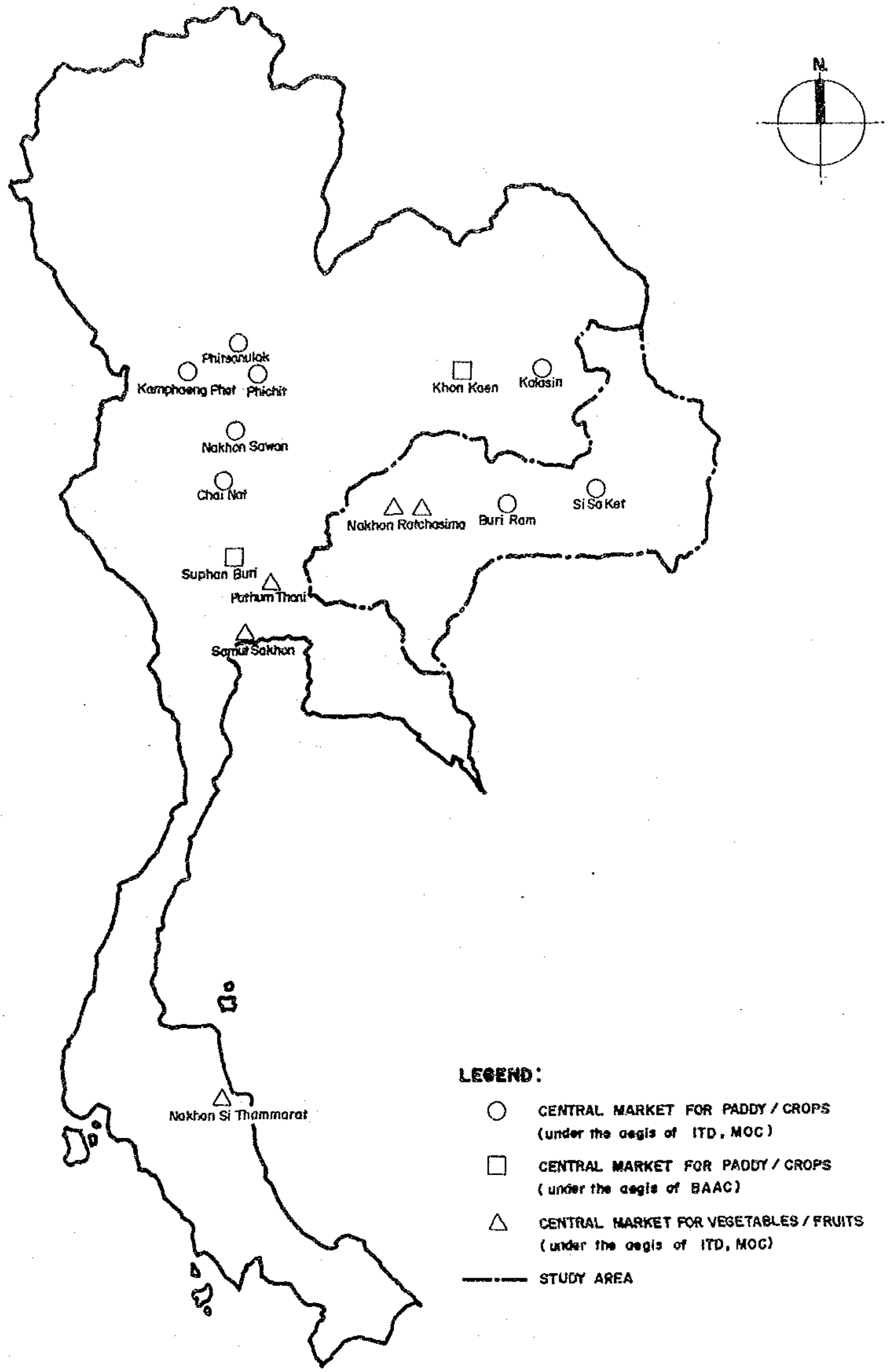


Figure 1.7

Location of Agricultural Central Commodity Markets

The Study on the Regional Development Plan for the Lower Northeast and the Upper East Regions in the Kingdom of Thailand

Note: Trading area is defined as the place where buyers (retailers and consumers) come from.

Figure 1.8
Trading Area of a Central Commodity Market for Vegetables and Fruits in Nakhon Ratchasima

The Study on the Regional Development Plan for the Lower Northeast and the Upper East Regions in the Kingdom of Thailand