Full Report

Trade Facilitation Measures in Greater Mekong Sub-region Countries and Their Impacts on Trade and Sustainable Development of Northern Thailand

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EXECUTIVE SUMMARY

This study explores special features of Thailand's trade facilitation performance at cross-border trade with its neighbouring Greater Mekong Subregion (GMS) countries and seeks to identify the area in which trade facilitation measures have the potential to encourage traders to encourage trade and development of Northern Thailand. The analysis is based on regional level study on trade facilitation performance that influences sustainable development of Northern Thailand by conducting surveys from business perspectives at four provinces: Chiang Rai, Nongkai, Mukdahan and Maesod. In addition, the effects of Thailand's trade with GMS countries on trade and development are also investigated in the context of spillover effects on Northern Thailand applying recent development in econometric modeling.

The trade facilitation performance of Northern Thailand from business perspective seeks to examine the major components of trade facilitation such as (i) trade and custom legislation (ii) trade documentation and procedure, (iii) custom clearance procedure, (iv) trade and custom enforcement practices from safety, health, environment aspects (v) use of information and communication technology use of various ICT enable techniques and automated trade system and (vi) trade infrastructure development for lowering trade transaction cost.

Major findings are summarized as follows: the Average time taken for outward trade at Chiang Rai was lower than those of Mukdahan, Nongkai. The time required for inward trade transactions at airport stated less than 1 hour in Chiang Rai, while there were no airport in Mukdahan and Nongkai. On cost efficiency, 33% of respondents in Chiang Rai expressed of respondent showed efficiency of bank. With respect to domestic transport, 46% of respondent reported that it was cost efficiency in Chiang Rai and 6.67% of respondents indicated efficiency in foreign transport services. The 20% of respondents mentioned that EDI was also used in transport services provider followed by banks and airport. The existence of 1-10% physical inspection was reported by 33.3% of interviewees (trade forwarders) in Chiang Rai and 2.94% of interviewees in Nongkai. In contrast, 10% of interviewees stated that about 1-10% of Customs physical inspection was reported by interviewees. Most exporters used more than 50% of their goods from Chiang Rai through ports (33.3%) and road frontier (20%). Exporters from Mukdahan and Chiang Rai also have arranged transportation arrangements in exporting products to their customers. In Mukdahan they arranged 10% to 20% of their transportation arrangement. In contrast, 2.9 % of exporters and from Nongkai offered transportation arrangements.

Almost all traders in Mukdahan, 60% in Chiang Rai and 38% in Nongkai seek the required information at CCI. Based on the survey results, use of ROO were 46.6% in Chiang Rai, 30% in Mukdahan and 29% in Nongkai. With respect to export refund in association with ROO, 50% of interviewees stated as 'good' in Mukdahan. The 26.6% used 'full container load' in Mukdahan, while this ratio of such usage indicated 26.6% in Chiang Rai. Container clearance system at Customs were rated as 'good' (50% in Mukdahan and 33% in Chiang Rai). In Nongkai 38% reported that this system was 'very good'. With respect to custom clearance, valuation, description and ROO, 20% of interviewees in Chiang Rai reported problems, while the ratio accounted for 2.9% in Nongkai. The value of use of shipment covering more than 50 million include 60% traders in Chiang Rai and 10% in Mukdahan. With respect to 'TEU handled more than 40 tons' showed 10% in Mukdahan and 6.67% in Chiang Rai.

On use of vehicle in operation, '1-4 vehicle' range indicated 26.6%, while '9-12' vehicle indicated 6.67% in Chiang Rai. Use of containerized "inward trading" with 5 million was 10% in Mukdahan and 20% in Chiang Rai. The over all assessment on Custom efficiency was rated as 'good' (20%) , 'very good' (10%) and 'normal' (20%) in Mukdahan, while in Chiang Rai it was rated as 'good' (26.6%) and 'normal' (33.3%). SME's evaluation on Customs in Nongkai indicated 'very bad' (2.94) and other SME did not express their evaluation on customs.

With respect to cost efficiency in Mukdahan, the rating scores of cost efficiency were same as With operation efficiency, in comparison, 2.9% of participating SME reported as 'normal', while 46.6% and 30% reported as normal and good respectively in Chiang Rai. An average time for release of vehicle at land frontier, 40% of respondents from SME reported that it was less than 30 minutes and 10% stated that it took 1 to 2 hours in Mukdahan. The time requirement was higher in Chiang Rai and 46.6% stated that it took 1 to 2 hours at Custom stationed at the land frontier.

Similarly the average time for release of vehicle at port, 40% of respondents from SME reported that it was less than 30 minutes and 10% stated that it took 1 to 2 hours in Mukdahan. Time requirement is higher in Chiang Rai and 46.6% of respondent stated that it took 1 to 2 hours at the customs stationed at the port while 6.6% of respondents described that more than 4 hrs at Chiang Rai Port.

In addition, surveys also cover the current trade facilitation performance from the institutional perspectives and examines the trade facilitation services of five institutions: (i) Port Authority; (ii) Airport; (iii) Border-Crossing (Road Authority). (iv) Customs; (v) Pre-shipment Inspection Agency (PSI); (vi) Commercial Bank; Foreign Exchange

Control Department at Bank; (vii) Chamber of Commerce and Industry; and (viii) Department of Trade & Industry.

The average time required for export of general merchandise was less than 1 hour and same time was required for imports through above 3 provinces. Similarly, the corresponding time for road borne and airfreight were also less than 1 hour. The average time for export and import of taxable goods were also same as other traded goods. Time requirement in these areas can be regarded as statics, due to the occurrence of incomplete documentation in the trade documents used.

The Department also used Direct data exchange, United Nations, Electronic Data Interchange For Administration, Commerce and Transport (UN/ EDIFACT) messages and The Automated System for Customs Data (ASYCUDA) under UNCTAD system satisfactorily. The selection of delegates to World Customs Organization (WCO) technical committees were undertaken by the Head Quarters.

The Customs at above mentioned provinces also Implemented the GATT valuation code and implemented the WCO harmonized system. They applied Transports Internationaux Routiers /International Road Transport (TIR) and Automotive Technician Accreditation (ATA) procedures and the advanced ruling in trade. The proportion of inspected conventional consignments exceeded 80% at Mukdaham, less that 20% each in Nongkai and Chiang Rai. Proportion of inspected containers under the Department of Customs in each province under study indicated more than 80%.

The quality of cooperation with container inspection at border crossing was rated as 'normal' in Mukdahan, 'excellent' in Nongkai and 'good' in Chiang Rai. Customs also controls other such phytosanitary or security. There exists co-operation between export and import Customs services. The average time from arrival to departure was 1 to 2 hrs in Nongkai but it was less than half an hour and communication facilities are available sufficiently with reliable electricity supply.

The number of signatures required for trade documentation at Customs indicate as 'many' in Nongkai and '5' in Mukdahan and '2' in Chiang Rai. Proportion of inspected invoices were more thatn 80% in each Customs at the three Provinces. In addition, proportion of inspected, certificates of origin in Mukdahan and Chiang Rai indicated more than 80% each, while it was less than 20 in Nongkai. Proportion of inspected certificates of way-bills was about 20 % each in each province. The percent of dispute were also less than 20% in each province. There did not exist the experience of pilferage and loss of general goods.

There were three Pre-shipment Inspection (PSI) agencies each in Mukdhan and Nongkai under survey and their performances are reported in Table 3.3. Most PIS conducted the pre-shipment Inspections on about 1 to 4 consignments and one PSI conducted more than 12 consignments per month. The value of a consignment showed about 500,000 Baht. The average time taken to issue a PSI report was less than half an hour. The inflammable goods and living animals are excluded from the PSI. Portion of physically inspected PSI showed about less than 20% . Most PSI followed the instruction and standards.

Average time required for handling general export cargo was 3 days and average time of general import cargo was 1 day. The average roll-on roll-of was also 1 day. Main cause of customs delay was not related to the following cases: (i) banking requirement, (ii) late arrival, (iii) pre-shipment, (iv) unavailability of connecting transport. But the delay was due to lack of network and electricity. It required a standard shipping note or EDI and port operate under efficient procedures moving goods and vehicles. Port had data exchange with Department of Customs and a Customs operation at the port. However, Port did not have a consultative committee.

Port can allow size of boat loads 200-300 tons and can support almost 9 boats. Port also can serve the stop boat overlap about 2-3 boats if there are many cargo ship request. The quality of co-operation with Department of Customs and the quality of co-operation with other control agencies were rated as good. Finally, the capacity building requirements can be drawn.

Applying the instrumental variables (IV) models, our results suggest that trade cost, the domestic credits of home and host countries and FDI inflow strongly affect trade flows of GMS countries. Some other interaction effects are also insignificant. In addition, engagements in RTA and GMS development programmes have had larger positive effects on trade flows of GMS economies.

First, this research provides evidence on the effects of trade cost in the context of location distance, domestic credit of GMS countries on bilateral trade. Finally, it seeks to model the effect of monetary and fiscal variables on bilateral trade flows applying the instrumental variable (IV) model in performing the sensitivity test of the dynamic model of bilateral trade with panel data. The capacity building on trade facilitation efforts are also highlighted in this report.

ABSTRACT

Since Northern Thailand is strategically located at the area sharing border with Cambodia, Lao PDR, Myanmar and Vietnam, trade primarily constitutes as an engine of growth. This study examines trade facilitation performance of Northern Thailand based on the business perspective and institutional development framework at regional level and draw implications for trade and sustainable development. Major trade facilitation measures are investigated based on the World Bank's survey instruments and the indicators are developed. The comparative study on trade facilitation among four provinces of Northern Thailand allows us to draw capacity building program for strengthening institutional capacity to meet the business expectation. The findings also highlight the potential measures to encourage traders' competitiveness through trade efficiency gain that can be obtained under effective trade facilitation measures.

Trade infrastructure analysis on other GMS countries is performed to highlight the critical need of regional cooperation in trade infrastructure development. Finally, the effects of trade facilitation measures on trade and development of Thailand is explained applying instrumental variable models with bilateral trade flows of Thailand and it's other GMS countries. The result suggests the evidence on the effects of trade cost in the context of location distance and domestic credit of GMS countries on bilateral trade.

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CHAPTER 1

INTRODUCTION

The relationships between trade facilitation, trade flows, and capacity building effort for trade related institutions are complex and demanding in both empirical studies and operational best practices given location and infrastructures. The proposed research seeks to estimate the relationship between trade facilitation and border trade flows at Northern Thailand and its neighboring Greater Mekong Sub region (GMS) countries. Cambodia, Lao PDR, Myanmar, Viet Nam and Yunnan Province of China.

The trade facilitation has been analyzed based on four broadly defied categories: port efficiency, customs environment, regulatory environment, and service sector infrastructure in line with World Trade Organization (WTO) Articles. In addition, the previous studies have shown that a country's trade will change not only through its own trade facilitation reforms, but also the reforms of its trading partners. Thus, trade facility infrastructure and performance of Thailand and Cambodia, Lao PDR, Myanmar and Viet Nam are investigated in this research.

1.1 Scope and Method of the Study

The proposed research centers on the public policy in international trade and services, (1) trade facilitation opportunities of SME and (2) Organizations, in particular, port efficiency, customs environment, business regulatory environment, and service sector infrastructure such as telecommunication, banking and logistics, which are being influenced the border trade of Northern Thailand and (3) trade facilitation performance of Cambodia, Lao PDR, Myanmar and Viet Nam.

1.2 Objectives

Major objectives of the research are as follows:

(i) To investigate macroeconomic impacts of trade policies, regulations and the welfare implications of Thailand;

(ii) To examine the effect of trade facilitation in the context of trade efficiency, reducing non-tariff barriers (NTB) and growth;

(iii) To investigate the factors determining trade flows at these trade-locations focusing on the quantitative and qualitative assessments, and

(iv) To enhance linkages between trade and capacity building policies in trade facilitation at regional levels.

1.3 The Research Problems

The research problems in this study are identified as follows:

(i) To make a comparative study of the trade facilitation practices employed in the trade between Northern Thailand and other GMS countries based on Thailand's experience.

(ii) To examine the simultaneous impact of trade facilitation measure on trade flow and enterprise development in Northern Thailand.

(iii) To identify the magnitude and direction of the trade facilitation efforts and investigate their impacts on the capacity building in Northern Thailand.

(iv) To identify the best practices in trade facilitation efforts for enhancing trade flow among these countries.

Moreover, differences in the relative magnitude of trade facilitation activities on trade against the trading partners, could point to negotiating and capacity building strategies. The emphasis will be made on the impact of these facilitation measures on the trade and sustainable development of Northern Thailand by examining the trade facilitations efforts employed in the border trade at Mae Sai, Chiang Saen, Mae Sod,

Nongkai and Mukdahan as case studies. The benchmarking a country's condition in these four areas with respect to the widely accepted Asian or global average and best practice yields criterion for capacity building and policy attention.

1.4 Methodology

(i) The methodologies includes the World Bank's Trade and Transport Facilitation: Methodology Audit, Analysis and Remedial Action, (2007);

(ii) Econometric Modeling of Bilateral Trade Flow of Greater Mekong Sub-region Countries;

In establishing trade facilitation measures, this research applies the World Bank methodology and framework of trade facilitation. However, since this study emphasizes on trade facilitation measures at specific trade locations in Thailand, the broaden set of categories will be applied in designing the survey.

1.5 Literature Review

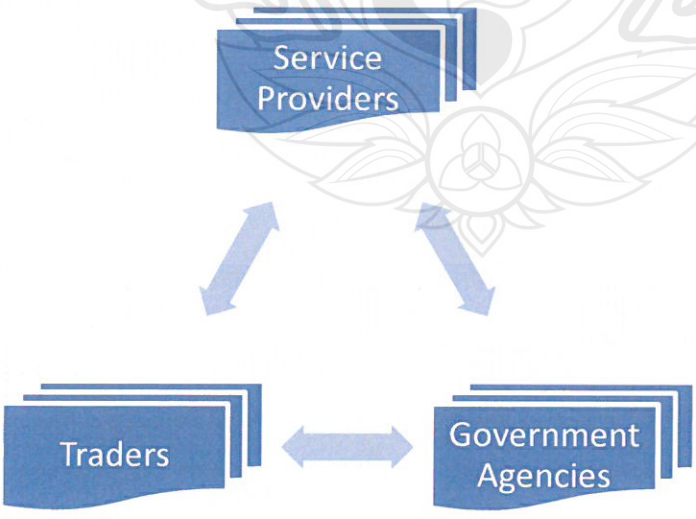
The empirical research on trade facilitation can be found in the recent studies of Wilson, Mann, and Otsuki (2004) (henceforth WMO), WMO (2001) and Asia Pacific (APEC) Foundation of Canada (1999). WMO(2003) use cross-country survey data on the business and policy in each APEC member to construct numerical measures of trade facilitation for port efficiency, customs environment, regulatory environment and, e-business usage. They find that the elasticity of increased port efficiency of importing countries is larger than the elasticity of improved customs environment or superior service sector infrastructure.

The results of these studies suggest large gains from trade facilitation efforts by investigating various scenarios such as (i) the effect of 3 percent reduction in landed costs on to intra-APEC merchandise trade, (ii) the effect of 1 percent reduction in import prices for the industrial countries and the newly industrializing countries of Korea, Chinese

Taipei and Singapore, and (iii) the effect of a 2 percent reduction for the other developing countries yields on APEC merchandise trade maritime.

Other studies employ more specific categories of trade facilitation effort or a more limited country set. Hertel, Walmsley and Itakura (2001) find that greater standards harmonization for e-business and automating customs procedures between Japan and Singapore encourage trade flows in the countries under study as well as their trade flows with the rest of the world. Hummels (2001) finds that saving shipping time in part due to a faster customs clearance is worth 0.5 percentage point reduction of ad-valorem tariff. Fink, Mattoo, and Neagu (2002a) examine the effect of anticompetitive practices in port services and other transport services on unit shipping cost. Freund and Weinhold (2000) find that a 10 percent increase in the relative number of web hosts in one country would have increased trade flows by one percent in 1998 and 1999. Fink, Mattoo, and Neagu (2002b) find that a 10 percent decrease in the bilateral price of phone calls is associated with an 8 percent increase in bilateral trade. The frame-work of trade facilitation is depicted below.

Figure 1.1 Key Stakeholders in Trade Facilitation



With regard to trade facilitation framewok and tool, the United Nations, Economic and Social Commission for Asia and the Pacific-UNESCAP, (2004) develops "ESCAP Trade facilitation Framework" A Gilding Tool. This framework has been developed to guide Government in addressing issues related to trade facilitation. It reflects

Trade and custom laws and regulations;

(i) Trade documentation;

(ii) Customs clearance procedure;

(iii) Trade and customs enforcement; and

(iv) The use of ICT for trade facilitation.

One of Asian Development Bank studies, in particular, that of the study of Roland-Holst, Verbiest and Zhai (2005) highlights the important of trade of Cambodia, Laos, PDR, Myanmar and Vietnam as a growth-bridge between China and India, in which Thailand can extend the market share by enhancing her competitiveness through enhancing trade facilitation measures. Shepherd and Wilson (2008) investigates trade facilitation in ASEAN member countries focusing on measuring progress and assessing priorities. The multi-dimensional nature of trade facilitation policies are focused based on 4 main areas: port infrastructure, air transport infrastructure, services and customs administration. Using a gravity modeling approach, they find the substantial gains from tariff cuts and trade facilitations. Stone, Susan and Anna Strutt, (2009) examine transport infrastructure and trade facilitation in the Greater Mekong Sub-region based on Economic Corridors in GMS applying - Global Trade Analysis Project (GTAP) methodology. It finds the positive impact of transport facilitation on trade flows of GMS.

1.6 The Costs and Benefits of Trade Facilitation

It has been widely recognized the existence of benefits of trade facilitation and these can be summarized as follows:[1]

a) Change of Attitude and Institutional Reorganization,

b) Automation and Computerization Costs, and

c) Loss of Revenue from Customs.

Benefits of Trade Facilitation

The benefits of trade facilitation accrue to both the government and the traders. The United Nations Economic Commission for Europe has summarized in the context of government benefits and trader benefits as follows:

Government Benefits

- Increased effectiveness of control methods
- More effective and efficient deployment of resources
- Correct revenue yields
- Improved trader compliance
- Accelerated economic development
- Encouragement of foreign investment

Trader Benefits

- Cutting costs and reducing delays,
- Faster Customs clearance and release through predictable official intervention,
- Simple commercial framework for doing both domestic and international trade, and
- Enhanced competitiveness.

The presentation of this report is as follows: Chapter 1 identifies the scope and method of study, objectives and the research problems. The results of trade facilitation of small and medium enterprises (SME) survey results are discussed in Chapter 2, which

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[1] Source: United Nations Economic Commission for Europe (UNECE), "Trade Facilitation: An Introduction to the Basic Concepts and Benefits".

covers the SME surveys conducted in Chiang Rai, Mukdahan and Nongkai. The silence features of trade facilitation performances in GMS are analyzed in Chapter 5, which were prepared in the trade facilitation in the wider context. Chapter 6 concludes.

Table 2 ASEAN Cost of Doing Business Indicators

Country	Ease in Doing Business	Cost of Doing Business Indicators								
		Starting Business	Getting Permits	Registration	Taxes	Trading Across	Investor Protection	Credit	Contract	Closing Business
Brunei	79	135	43	115	22	40	117	129	158	46
Cambodia	133	175	149	115	66	118	82	53	142	152
Indonesia	128	166	75	98	131	37	49	129	144	148
Lao PDR	163	81	87	74	126	160	184	167	114	185
Malaysia	12	54	96	33	15	11	4	1	33	49
Myanmar	na	na	na	na	na	na	na	na	na	na
Philippines	138	161	100	122	143	53	128	129	111	165
Thailand	18	85	16	26	96	20	13	70	23	58
Singapore	1	4	2	36	5	1	2	12	12	2
Viet Nam	99	108	28	48	138	74	169	40	44	149
ASEAN	**85.7**	**107.7**	**66.2**	**74.1**	**82.4**	**57.1**	**83.1**	**81.1**	**86.8**	**106.0**
Brazil	130	121	131	109	156	123	82	104	116	143
Russian Federation	112	101	178	46	64	162	117	104	11	53
India	132	173	182	94	152	127	49	23	184	116
China	91	151	181	44	122	68	100	70	19	82

Source: World Bank, *Doing Business 2013*

The current status of the project is that Component 1 was completed in February 2011and Component 2 commenced in November 2011. Myanmar, Lao PDR and Cambodia are still at the very early stage of both customs modernization and the implementation of the NSW and thus they cannot meet the 2012 target.

CHAPTER 2
TRADE FACILITATION INDUSTRY SURVEY AND RESULTS

Trade facilitation in a narrow context indicates the logistics of moving goods through ports or more efficiently moving trade documentation in the cross-border trade. In contrast, the trade facilitation in broader context encompasses the environment in which trade transactions take place, transparency and professionalism of customs and regulatory environments, as well as harmonization of standards and conformance to international or regional regulations.

Trade Facilitation Focus Areas

Trade facilitation focus areas can be summarized as follows:

Border management

- improvement in border management in the context of Customs, product standard, tax, rules of origin

Trade infrastructure

- key trade related infrastructure, E-commerce, Internet, multimodal facilities, facilities at land frontier, port and airport

Logistics services

- multimodal facilities, trade forwarders

Regional trade facilitation

- transit management

Indicators

- performance monitoring and evaluation indicators: data on time, cost, and efficiency

Action plan

- trade facilitation efforts, comprehensive action plan, capacity building programs

2.1 Trade Facilitation Performance of SME in Northern Thailand

Survey Design and Instruments

Trade forwarder, Agent, Broker, Multimodal Transport Enterprise;
Export Enterprise;
Import Enterprise;
Export- Import Enterprise;
Shipping Line and Ships Agent;
Road Carrier/Enterprise;
Airline Carrier's Agent/Enterprise; and
EXPRESS Carriers' Agent/Enterprise.

In particular, port efficiency is designed to measure the quality of infrastructure of maritime and air ports. Customs environment is designed to measure direct customs costs as well as administrative transparency of customs and border crossings. Regulatory environment is used to measure the economy's approach to regulations. Analysis on Service sector infrastructure is designed to measure the extent to which an economy has the necessary domestic infrastructure such as telecommunications, financial intermediaries, and logistics companies.

The empirical research on this areas asserts that the port efficiency measure has been constructed in accordance with General Agreement on Tariff and Trade (GATT) article V: freedom of transit. Customs environment consists of components that have their basis in the GATT article VIII to minimize impediments to trade due to customs procedures. Regulatory environment issues are contained in GATT article X which discusses Publication and Administration of Trade Regulations.

In brief, the empirical estimation of trade facilitation measures comprises two main areas: "border" elements, such as port efficiency and customs administration, and "inside the border" elements, such as domestic regulatory environment and the infrastructure to enable e-business usage. Selected studies on estimates of trade transaction costs can be found in ADB-UNESCAP (2009).

The main objective of trade facilitation is to minimize the transaction costs and complexity of international trade for businesses, while maintaining efficient and effective

levels of government control. Trade facilitation does not only benefit traders. In fact, ongoing research shows that welfare gains from the streamlining of trade procedures may exceed gains from trade liberalization.

Average gains from trade facilitation in the Asia-Pacific region account for at least 0.26 per cent of real GDP, while the gains from trade liberalization account for only 0.14 per cent of real GDP. It is generally agreed that trade facilitation does not include tariff negotiation or the development of physical infrastructure for trade, such as the transport infrastructure. Trade facilitation is often referred to as the "plumbing of international trade" and focuses on the efficient implementation of trade rules and regulations. In its most narrow context, trade facilitation may be defined as the systematic rationalization of procedures and documentation for international trade. In its wider context, it covers all the regulatory measures that affect the flow of imports and exports, including, but not limited to:

• Customs control measures to obtain compliance with Customs laws and regulations,

• Technical regulations to ensure that goods meet the mandatory standards specified in national laws and regulations,

• Veterinary inspections of animals and animal products and phytosanitary inspections of plants and plant products to prevent the spread of pests and diseases and protect animal and human life, and

• Other quality control inspections to ensure that the goods correspond the minimum international and national standards.

Trade Development Strategy

Trade facilitation is widely used in overall trade development strategy whose purpose is to develop and expand sustainable trade flows to support the country's economic development. Thus trade facilitation should be designed to contribute effectively to the overall trade development strategy by optimizing the use of the trade infrastructure and complementing the trade promotion efforts by enhancing country's efficient trading network. It can also contribute the development and management of trade relations through more transparent trade regulations and procedures in consistent with international conventions and standards.

Survey Design and Instruments-SME

Survey instruments for SME are summarized in the following.

1 Customs' Operational Efficiency
2 The Average Times Taken to Clear Company's Goods: Outward
3 The Average Times Taken to Clear Company's Goods: Inwards
4 Impression of the Cost Efficiency in Trade Facilitation
5 Main Uses of Automation -Internal Office Systems and Services to Clients
6 Import Permit Dealing of Government Agencies
7 Means of transport used, and proportions
8 Exporters' Performance in relation to their main products and major markets
9 Business Approach in Seeking Official, Commercial Information Needed for Import
10 Difficulties in Complying with Rule of Origin
11 Importers Performance
12 Use of Container
13 Carriers: Shipping Line and Ships' Agents
14 Volume of Cargo handle Annually at Inward and Outward Road Carriers
15 Main Countries of Origin and Destination
16 Experience of Customs Efficiency, Cost and Security Standards
17 Average Time for Release of the Vehicle and Load by Customs (i) at land frontier, (ii) at ports, (iii) use of inland container terminal, dry port, and
18 Use of Automated Transport Functions in relation to (i) type of automated transport, (ii) function of EDI, source and availability of information on Customs, (ii) means of communication and (v) difficulty of use of these mediums.

Survey instruments – Institutions

The survey instruments – Institutions are provided below.

1 value of general merchandise import and export handled annually

2 TEUs are handled

3 co-operative arrangement,

4 the average dwell time, in the port, at a) export and b) import for a) general cargo, b) containers and c) roll-on/roll-off vehicles

5 the main causes of undue delays

6 use of equivalent EDI message,

7 use of well-publicised account of the procedures

8 port procedures for a) containerised or b) general cargo

9 exchanging, electronically

10 composition and scope of provided services facilities

11 responsibility in respect of cargo on premises

12 Customs officers staff and normal working hours

13 the proportion of consignments - by a) traders in person, b) agents , c) carriers - for example truck drivers or shipboard staff?

14 the quality of co-operation between Customs and other control
other controls, such as phytosanitary or security checks? If not how, in terms of efficiency and effectiveness are such formalities

15 main Customs procedures managed within Customs offices, or are declarants obliged

16 number of signatures required by Customs in clearing goods through the port

17 computer and associated equipment is used by port management

18 users able to communicate directly, computer-to-computer, with the port

19 Are any EDI messages, proportion of declarations for which supporting documents -invoices, certificates of origin, way-bills, bills of lading etc. -

20 consignments/containers that are physically inspected

21 the quality and nature of container inspection

22 the of procedural difficulties and disputes, and

23 goods and vehicles delayed due to differences to resolve for onward movement

24 the experience of pilferage and loss -good, bad average -for a) general merchandise and b) containerised cargo while still in Customs custody

25 labour relations have any large influence on the efficiency

26 Are you a member of a trade association or Chamber of Commerce

Airport

1 orders of magnitude for annual value (ascertained from Customs declarations) and tonnage for a) import, b) export and c) transit consignments

2 the average times, at import, from unloading to for onward movement, in respect of a) conventional airfreight, b) express cargo, and c) transit consignments

3 Customs officers work at the airport

4 the normal hours/days of attendance by Customs

5 proportion of consignments -in very general terms -are presented by a) consignors/consignees in person, b) agents, including express operators and forwarders and c) carriers - for example truck drivers, airlines

6 the quality of co-operation between Customs and other control agencies

7 Customs entrusted with other controls, such as phytosanitary or security checks

8 Are Customs entrusted with immigration checks co-operation with Customs

9 the principal security regulations applied air cargo

10 What computer and associated equipment is available

11 the quality of any software used for processing Customs

13 To what extent are traders/agents/carriers able to communicate directly,

14 use of EDI messages based on the international UN EDIFACT standards

15 the rough proportion of declarations for which Customs

16 the rough proportion of consignments physically inspected?

17 the incidence of procedural difficulties and disputes, and what are the principal causes - classification, value, loss, damage, suspicion of contraband etc.

18 goods and vehicles delayed while

19 the experience of pilferage and loss -good, bad average -for goods while on airport premises

20 an airport development plan

Border Crossing Points

1 magnitude for the volume of goods carried by a) conventional road vehicles, b) trucks and trailers for container movements, c) roll-on/roll-off units?

2 the relative importance of transit consignments and imports for home consumption?

3 use of TIR and ATA Carnets handled annually?

4 the average delay times - from arrival to departure - at the border?

5 the number of Customs officers employed

6 the quality of co-operation between Customs and other control agencies

co-operation, at the border, between adjacent export and import Customs services

7 the Customs procedure

8 number of signatures are required in the entire process of Customs clearance

9 well-publicised account of the procedures necessary to move goods

10 the computer and associated equipment is availability, main applications?

11 What communication facilities are available to a) Customs, b) drivers and c) agents

12 How is the post equipped to for working in likely extremes of temperature

13 electricity supply availability

14 proportion of declarations for which supporting documents -invoices, certificates of origin, etc.

15 What is the rough proportion of consignments/ containers that are physically inspected?

16 Are additional formalities for driver-accompanied vehicles, including road-worthiness and weight certificates,

17 secondary requirements contribute to the total processing time

20 the quality and nature of container inspection?

21 the incidence of procedural difficulties and disputes, and what are the main causes - classification, value, suspicion of contraband etc.

22 Are goods and vehicles delayed

23 the experience of pilferage and loss - good, bad average -for consignments

Commercial Banks

1 the approximate a) number b) value of documentary credits on a) export b) import consignments, handled by you annually

2 the normal method of payment for your customers at .

3 use of ICC Standard Rules for Documentary Credits

4 the difficulties in managing exchange requirements.

6 significant dealings with Customs; purposes, and management

7 What proportion of initial applications for payment under a documentary credit

8 letters of indemnity to cover late arrival of documents

9 receive of documents from overseas correspondent banks

10 experience in delays in receipt of such documents

11 exchange any import or export data electronically

Exchange Control Authorities

1 the main objectives of current exchange controls in relation to international trade and transport

2 controls applied in practice - by a single national agency, through a number of offices in commercial centres, through commercial banks.

3 consultation in trade, transport and banking interest

4 the role of Customs in applying your controls

5 available set of exchange control regulations, notification system to traders and banks

6 infringements handled/ settled

7 a dispute affect on the movement of the goods

8 documentary requirements include negotiable bills of lading for maritime shipments

9 relations with pre-shipment inspection agencies

Customs

1 Volume of export, import and transit operations are handled annually

2 What is the total value of consignments covered by these declarations

3 proportion of government revenue is represented by Customs duties/taxes on international consignments

4 the total number of staff employed in the service

5 the average time from submission of the import entry to release of goods a) conventional general merchandise b) containerised cargo and c) roll-on/roll-off vehicles at a) export and b) import?

6 the corresponding times for roadborne consignments at main land frontier posts at a) export b) imports?

7 the corresponding times for conventional airfreight mo vements of a) documents b) non-dutiable and de minimis and c) dutiable, goods, the corresponding times for express consignments

8 these release times unsatisfactory and the main causes

9 procedures and documentation to give "release" of goods from physical controls from those for "clearance" of the transaction

10 paper forms aligned on the UN standard documentary system?

11 use of UN/EDIFACT messages

12 use of ASYCUDA or any other proprietary Customs system

13 WCO technical committees

14 disputes are lodged with/recorded by Customs annually

15 generally available Customs Code, public notices of changes and interpretations

16 post-entry audits

17 use of GATT Valuation Code and b) the WCO Harmonised System?

18 use of TIR and ATA procedures?

19 What services/facilities do you provide

20 the proportion of a) conventional consignments b) containers are inspected at import

21 selectting procedure for inspection

23 binding advance rulings on a) classification b) value

24 challenges to Customs decisions

25 Customs agents licensing

26 a training school

27 Customs functions currently handled by private agencies

28 normal working hours.

29 Do you have a publicly available, regularly up-dated Strategic Plan

30 Memoranda of Understanding arrangements with traders

Pre-shipment Inspection (PSI) Agency

1 the value of the consignments covered by these Reports

2 the average time taken to issue a Report

3 the minimum value under which PSI

4 the proportion of consignments inspection

5 charge and secure payment for these inspections

6 the basis of your central, contractual remuneration

7 Use of any risk-assessment techniques to reduce the incidence of physical inspection and methods

8 training services to the Customs

9 exchange data electronically

10 use of a) the Internet b) satellite communication and purposes

Chamber of Commerce

1 the size of your membership and basis of membership: statutory or on a voluntary basis

2 advice to exporters and importers on National and foreign Customs requirements Foreign standards, dangerous goods regulations etc; Payment systems

3 specialist committees for questions related to- Customs; Commercial banking; Transport; Communications; Electronic commerce

5 contact with The National Committee of the International Chamber of Commerce (ICC), The World Chambers Federation, The UNCTAD/WTO, Foreign Chambers, regional inter-governmental bodies e.g. APEC, MERCOSUR, EU

6 issue of Certificates of Origin and system, basis of certification

7 the ATA carnet system

? formal consultative arrangements with Customs

9 consult/collaborate with other national business organisations

Department of Trade/Industry

1 the main items making up a) exports b) imports in a recent typical year

2 existing departmental machinery for dealing with such trade facilitation tasks as the simplification and standardisation of documents and formalities, and the revision of the national regulatory framework affecting goods in international movement

3 current WTO enquiries into the nature and needs of international trade facilitation

4 offer rapid, efficient Customs clearance of goods as an inducement to overseas companies considering direct inward investment

5 consultation with small and medium sized companies on the extent to which their overseas trading performance and prospects are affected by Customs and other import/export formalities

6 The operation of payment systems, including, particularly, documentary credits

7 participation in regional activities -for example ASEAN, APEC

8 containerised through transport services and roll-on/roll-off road services

9 electronic commerce practices and technology

10 a national standards institution

2.2 Trade Facilitation of SME: Survey Results

The interviews with selected SME in relation to Trade Forwarder, Agent, Broker, Multimodal Transport Operator were conducted in Mukdahan, Nongkai and Chiang Rai to investigate the performance of trade forwarders towards number of export and import consignments handled and services provided at the above mentioned 3 provinces in trading with neighboring GMS countries. The results are summarized as follows:

Table 2.1 Forwarders: Agent, Broker, Multimodal Transport Operator
(Percent)

		Mukdahan	Nongkai	Chiang Rai
	Number of clients served for exports	30.00	-	-
	Number of clients served for inports	10.00	-	-
1	**Consignments handle daily under each head**			
	Less than 1 consignment	-	-	26.67
	1 – 4 consignments	-	-	6.67
	5-8 consignments	10.00	-	0.00
	9 – 12 consignments	-	-	6.67
	More than 12 consignments	20.00	100.00	60.00
2	**Services offered to clients**			
	contract negotiation	20.00	50.00	
	logistics	10.00	-	-
	multimodal transport as principal	10.00	-	-
	multimodal transport as agent	30.00	-	-
	express delivery	-	-	-
	payment arrangement with banks	10.00	-	-
	customs release and clearance as agent	20.00	-	-
	customs release and clearance as licensed broker	20.00	-	-
	customs disputes, exchange controls or other	-	50.00	-
	Regulatory constraints on the range of business activities	-	-	-

Source: Compilation of Author based on Survey data.
Note: Percent indicates survey response rate which is calculated for each province separately.

1 Trade Forwarder, Agent, Broker, Multimodal Transport Operator

In Mukdaham, number of client served for exporters was about 30% exporters while 10% showed importers. All trade forwarders undertook more than 12 consignments per month. Number of consignments handled and services provided by SME accounted for 20% in Mukdahan, while it was 60% in Chiang Rai. With respect to services offered to clients from GMS by Thai trade forwarders, 10% were 'multimodal transport principal providers', while 30% were 'multimodal transport agent'. The 40% of respondents served as Customs release and 10% of interviewees worked as clearances agents and 20% of them were logistics agents in Mukdahan. In Nongkai, 50% of interviewees served as

contract negotiation and custom dispute 50%. Such information was not available for Chiang Rai. The detailed can be seen in Table 2.1

Table 2.2 Customs Operational Efficiency at Departments

(Percent)

		Mukdhan	Nongkai	Chiang Rai
1	**Ports**			
	Likert Scale 1	-	-	-
	2	-	-	-
	3	-	5.88	46.7
	4	-	-	33.3
	5	10.00	-	13.3
2	**Airports**	-	-	-
	Likert Scale 1	-	-	-
	2	-	2.94	
	3	-	-	-
	4	-	-	-
	5	10.00	-	-
3	**Road Frontier**		-	-
	Likert Scale 1	-	-	-
	2	-	-	-
	3	10.00	5.88	33.3
	4	10.00	-	13.3
	5	10.00	-	13.3
4	**Inland container depots**			
	Likert Scale 1	-	-	-
	2	-	2.94	
	3	10.00	-	-
	4	-	-	-
	5	10.00	-	-

Source: *Ibid.*

Five Likert Scales were used in this survey, where scales 1: Very bad, 2: Bad, 3: Normal, 4: Good, and 5: Very Good.

2 Customs' Operational Efficiency

The Department of Customs operates at various location such as : ports, airport, road frontier and inland container deports. The operational efficiency of Customs were asked in the interviewees. About 10% of respondents (SME trade forwarders) indicated the customs efficiency in that custom efficiency was very good (Likert scale 5)[2] in Mukdahan. The 15% of respondents in Nongkia and 47% in Chiang Rai reported that custom effieicnt was 'normal' (Likert scale 3). See Table 2.2.

3 The Average Times Taken to Clear Company's Goods: Outward

The time taken for outward trade at various ports: Mukdahan, Nongkai and Chiang Rai are provided in Table 2.3. The average time required to conduct trade at the Port indicated about 1 to 2 hours each in Nongkai and Chiang Rai. In contrast, the time required for inward trade transactions at airport stated less than 1 hour in Chiang Rai, while there are no airport in Mukdahan and Nongkai. At the inland container depots and ports in Nongkai and Chiang Rai, the time required was 1 to 2 hours respectively. At Chiang Rai Port, the time required was 1 to 2 hours.

4 The Average Times Taken to Clear Company's Goods: Inwards

The time taken for inward trade at various ports at Mukdhan, Nongkai and Chiang Rai are provided in Table 2.4. The average time required for Ports indicated about 1 to 2 hours in Nongkai and Chiang Rai. However, 13% of respondents stated that time requirement in Chiang Rai indicated 2 to 3 hours and 3 to 4 hours respectively. However, the time required for inward trade transactions at airport stated about 2-3 hours in Nongkai given information. At the inland container depots and ports in Nongkai and Chiang Rai, the time required was 1 to 2 hours respectively. At the Inland container Depot in Nongkai and Chiang Rai, the time required was 1 to 2 hours respectively.

5 Impression of the Cost Efficiency in Trade Facilitation

Cost efficiency is analysed based on fees charged by (i) domestic bank and foreign bank, (ii) multimodal especially container, (iii) port and airport facilities and (iv) existence of efficiency of domestic bank, while 2.9% of respondents showed efficiency of

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[2] Five Likert scales: 1 to 5 are used in this survey, where Likert scales 1: very bad, 2: bad, 3: normal, 4: good, and 5: very good.

Table 2.3 The Average Times Taken to Clear Company's Goods (Percent)

		Mukdahan	Nongkai	Chiang Rai
	A) Outwards at			
1	**Ports**			
	Less than 30 Min	-	-	6.67
	1 – 2 Hours	-	2.94	53.33
	2 – 3 Hours	-	-	13.33
	more than 4 Hours	-	-	13.33
2	**Airport**			
	Less than 30 Min	-	2.94	-
3	**Road Frontier**			
	Less than 30 Min	30.00	2.94	-
	1 – 2 Hours	-	-	40
	2 – 3 Hours	-	-	6.67
	more than 4 Hours	-	-	-
4	**Inland container depots**			
	Less than 30 Min	-	-	-
	1 – 2 Hours	10.00	2.94	
	2 – 3 Hours	-	-	-
	more than 4 Hours	-	-	-
	B) Inwards at	-	-	
5	**Ports**	-	-	
	Less than 30 Min	-	-	-
	1 – 2 Hours	-	100.0	33.33
	2 – 3 Hours	-	-	13.33
	more than 4 Hours	-	-	13.33
6	**Airport**		-	
	2 – 3 Hours	-	100.0	
	more than 4 Hours	-	-	
7	**Road Frontier**			
	Less than 30 Min	20.00	-	-
	1 – 2 Hours	10.00	100.00	33.33
	2 – 3 Hours	-	-	6.67
	more than 4 Hours	-	-	6.67
8	**Inland container depots**	-		
	Less than 30 Min	-	-	
	1 – 2 Hours	10.00	100.0	

Source: *Ibid.*

Table 2.4 Impression of the Cost Efficiency

		Mukdahan	Nongkai	Chiang Rai
1	Domestic Banks	-	-	33.33
	Foreign Bank	-	2.94	-
2	impression of the cost/efficiency of domestic/foreign transport services			
	Domestic transport services	-	2.94	46.67
	Foreign transport services because Impression of the cost/efficiency of multimodal-especially container movement	-	-	6.67
	a) into the country			
	b) within the country	-	-	-
	c) out of the country	-	-	-
3	**Impression on the cost/efficiency of port and airport facilities**			
	Port	-	-	80
	Airport facilities	-	-	6.67
4	**difficulty in obtaining official and/or commercial information necessary**			
	for your transaction			
	Yes	10	-	13.33
	No	20	5.88	86.67

Source: *Ibid.*

accessibility of the required information for traders. In Chiang Rai 33% expressed the foreign bank. With respect to domestic transport 46% of respondent reported that it was cost efficiency in Chiang Rai and 6.67% indicated efficiency in foreign transport services. With respect to efficiency in mode of transport, 80% showed efficiency of port, while 6.7% indicated efficiency of airport facilities.

6 Main Uses of Automation -Internal Office Systems and Services to Clients

Main uses of automation -Internal office systems and services to clients are examined on the basic of use of automation, EDI, email, satellite communications and inspection services. In servicing customers, EDI systems were used in customs and ports as provided by 60% of respondents. The 20% of interviewees mentioned that EDI was

Table 2.5 Main Uses of Automation -Internal Office Systems, Services to Clients
(Percent)

		Mukdahan	Nongkai	Chiang Rai
	Use of Electronic interchange			
1	Customs	20	2.94	60
	Transport providers	20		20
	Ports	-	-	60
	Airports	-	-	6.67
	Banks,	-	-	13.33
	Exchange controls	-	-	-
	others	-	-	6.67
	please specify	-	-	-
2	**Use of a) the Internet, b) EDI, c) e-mail, satellite communications**			
	the Internet	30	5.88	100
	EDI	10	0.00	-
	e-mail	30	5.88	100
	satellite communications	20	5.88	-
	Use any of the FIATA standard transport document			
	Yes	10	5.88	-
	No	20	-	-
3	**Proportion of your inward consignments is subject to physical inspection by Customs**			
	0%	-	0	66.7
	1 – 10%	-	2.94	33.33
	11 – 20%	-	-	-
	21 – 30%	-	-	-
	31 – 40%	10	-	-
	more than 40%	20	2.94	-
4	**subject to inspection by other control agencies**			
	Yes	20	2.94	6.67
	No	10	2.94	93.33
	Deal with customs disputes by			
	Officer	10	-	-
	Principals	20	5.88	-
5	**frequency of disputes as normal or excessive**		-	
	Normal	30	0.0	-
	Excessive	-	-	-

Source: *Ibid.*

that also used in transport services provider followed by banks and airport. The 33% reported they used FIATA standard transport document. With respect to proportion of custom physical inspection, 66% replied that no physical inspections was made in Chiang Rai. The existence of 1-10% physical inspection was reported by 33.3% of interviewers (trade forwarders) in Chiang Rai and 2.94% of interviewees in Nongkai. In contrast, 10% of interviewees stated that about 1-10% Customs physical inspection was reported by interviewers. The dispute settlement was normal as mentioned by 30% in Mukdahan. The detailed survey results are reported in Table 2.6.

7 Import Permit Dealing of Government Agencies

The evaluation results on 'Import Permit Dealing of Government Agencies' such as livestock, agriculture and forest department were provided in Table 2.7 which indicated as 'normal'. There exists difficulty in transit operation with respect to 'bond' reported by about 6% of interviewees in Nongkai and Mukdahan. There existed some difficulty with respect to transit documentation in Chiang Rai as reported by about 6% of interviewees.

8 Means of Transport Used, and Proportions

Most exporters used more than 50% of their goods from Chiang Rai through ports (33.3%) and road frontier (20%). Use of airport indicated about 6.7% as mentioned in Table 2.9. In Nongkai, exporters used more than 50% of their goods using inland container (47.06%) and airport (26.4%) respectively. In comparison, exporters from Mukdahan used more than 50% of their goods via road frontier (60%) and inland container deport (3%) in Nongkai (10%).

9 Exporters' Performance

Exporters' performance in relation to their main products, major markets and trade facilitation activities undertaken through Mukdahan, Nonkai and Chiang Rai are depicted in Table 2.8. Food indicated major export from Chiang Rai to China, while consumer goods are major exports form Mukdahan and Nongkai . Exporters from Mukdahan and Chiang Rai also have arranged transportation arrangements in exporting products to their customers in Mukdahan arranged 10% to 20% had their transportation arrangement. In contrast, 2.9 % of exporters and from Nongkai offered transportation arrangements.

9 Business Approach in Seeking Official, Commercial Information Needed for Import

Table 2.6 Means of Transport Used, and Proportions (Percent)

		Mukdahan	Nongkai	Chiang Rai
	international transport			
1	**Ports**			
	Less than 10 %			
	10 – 20 %	-	2.94	-
	20 – 30 %	-	-	6.67
	30 – 40 %	-	-	6.67
	40 - 50 %	-	-	26.67
	More than 50%	-	-	33.33
2	**Airports**			
	Less than 10 %	-		-
	10 – 20 %	-	2.94	-
	20 – 30 %	-	14.71	-
	30 – 40 %	-	0.00	-
	40 - 50 %	-	0.00	6.67
	More than 50%	-	26.47	-
3	**Road Frontier**			
	Less than 10 %	10		-
	10 – 20 %	0	-	13.33
	20 – 30 %	0	-	20.00
	30 – 40 %	0	-	13.33
	40 - 50 %	60	-	20.00
	More than 50%	10	-	6.67
4	**Rail Frontier**			
	Less than 10 %			
	10 – 20 %	-	-	-
	20 – 30 %	-	-	-
	30 – 40 %	-	-	-
	40 - 50 %	-	-	-
	More than 50%	-	-	-
5	**Inland Container Depots**			
	Less than 10 %	10	-	-
	10 – 20 %	-	-	-
	20 – 30 %	-	8.82	-
	30 – 40 %	10	8.82	-
	40 - 50 %	-	47.06	
	More than 50%	-		

Source: *Ibid.*

Table 2.7 Use of Container

		Mukdahan	Nongkai	Chiang Rai
1	Mainly in group age or full container loads			
	group age	80.00	2.94	33.33
	full container loads	20.00	-	26.67
	full container loads receive annually		14.71	
	Less than 1 consignment	-		
	1 – 4 consignments	-		13.33
	5-8 consignments	-	-	-
	9 – 12 consignments	-	-	6.67
	More than 12 consignments	10.00	11.76	6.67
2	If you use documentary credits what is your impression of their cost/efficiency?			
	Cleared through Customs			
	Likert Scale 1	-	2.94	-
	2	-	-	-
	3	-	-	26.67
	4	50.00	11.76	33.33
	5	40.00	11.76	-
	Opened and emptied		2.94	
	Likert Scale 1	-	-	-
	2	-	-	-
	3	-	-	26.67
	4	50.00	-	33.33
	5	40.00	38.24	-
3	Regular, significant difficulties in Customs clearance in respect of, for example, valuation, description, origin, guarantees, new security requirements, Exchange control			
	Yes,		2.94	20.00
	If so what sort	-	11.76	
	No	100.00	2.94	46.67

Source: *Ibid.*

Cont.

4	Proportion of import consignments are submitted by Customs to Documentary inspection Physical inspection			
		10.00	2.94	-
	1 – 10%	70.00	17.65	6.67
	11-20%			
	21 – 30%	10.00	-	-
	31 – 40%	-	-	26.67
	more than 40%	10.00	-	6.67
5	**View of the efficiency of any physical inspections**		5.88	
	Yes, ? If so what is your impression of their cost/efficiency	-	23.53	6.67
	No	-	5.88	60.00
	Likert Scale 1	-		
	2	-	5.88	
	3	20.00	0.00	
	4	70.00	32.35	
	5	10.00	2.94	
	Direct contacts with ports and airports of entry			
	Yes	10.00	5.88	
	If so , what is your impression of their cost/efficiency	-		
	No	80.00	8.82	
6	Proportion of imports enters the country by road or rail			
	Less than 10 %	-	20.59	-
	10 – 20 %	10.00		6.67
	20 – 30 %	-	20.59	20.00
	30 – 40 %	20.00	14.71	-
	40 -50%	60.00		26.67
	more than 50%	10.00		6.67

Source: *Ibid.*

Most traders about 100% in Mukdahan, 60% in Chiang Rai and 38% in Nongkai seek the required information at CCI. They found less problems in this regard. About 50% to 60% of business in Mukdahan and Chiang Rai used automation in business. The use of automation in business in Nongkai showed 8.8%. Use of inland bonded facilities were higher in Chiang Rai (53.3% of respondents). Membership in CCI was viewed as benefits to business as shown in Table 2.9.

11 Difficulties in Complying with Agencies

Four types of problems faced by SME and trade facilitation activities are identified in this survey: customs formality and exchange control, concern in relation to port, airport and shipment, availability of commercial information, and communication problems. In Chiang Rai, these problems are less prevailed compared to Nongkai and Mukdhan. Major problem at Chiang Rai reflected communication problem (60%). The details can be found in Table 2.10.

11(a) Chamber of Commerce

Business consultation and contact are discussed below. Most traders approached CCI, comprising the 77% of traders in Mukdahan, 41% in Nongkai and 33.3% in Chiang Rai. Means of communication indicated telephone (60% in Mukdahan), internet (73% in Chiang Rai) and EDI (66.6%) in Chiang Rai.

11(b) Rule of Origin

With respect to rule of origin (ROO), this research examines use of ROO that engaged in SME, their experience in use of ROO, and use of document, status of admission regime, and temporary admission regime are investigated. Based on the survey results, use of ROO were 46.6% in Chiang Rai, 30% in Mukdahan and 29& in Nongkia. With respect to export refund in association with ROO, 50% of interviewees stated as 'good' in Mukdhan. It was 17.6% in Nongkai and 6.67% in Chiang Rai. See Appendix Table 3(c).

12 Importers Performance

Main import items were food (60% in Chiang Rai), consumer good 60% in Mukdahan) and 8.8% (consumer goods in Nongkai). The 60% of interviewers indicated that imported goods were more than 50 million, while 50% reported that the importers

Table 2.8 Business Approach in Seeking Official/Commercial Information Needed for Import

		Mukdahan	Nongkai	Chiang Rai
1	**Customs Chamber of Commerce Trade association**	100.00	38.24	60.00
	Other (Private data)	-	-	13.33
2	**Problems in obtaining such information.**			
	Yes	10.00	35.29	6.67
	If so what sort of information and what sort of problems?			
	No	90.00	20.59	60
3	**Communication problems within the country. If so, of what sort**			
	Yes	10.00	11.76	-
	If so, of what sort?			
	No	90.00	-	60.00
4	**Use automation in own business**			
	Yes	60.00	8.82	53.33
	No	30.00	26.47	13.33
5	**Use external road carriers or in-house transport services**			
	Yes	100.00	-	33.33
	No	-	-	26.67
	external	90.00	2.94	-
	In house	20.00	23.53	-
	Experience of Customs in dealing with such special procedures as temporary importation, transit and ATA carnets			
	Likert Scale 1	-	-	-
	2	-	20.59	-
	3	20.00	11.76	13.33
	4	60.00		20.00
	5	0.00	14.71	-
6	**Use inland bonded facilities**			
	Yes	-	-	53.33
	No	100.00	-	13.33
7	**Member of trade association and/or Chamber of Commerce and**			

Source: *Ibid.*

Cont.

	or Chamber of Commerce . if so, in what respect do you find your membership most beneficial?			
	Yes	60.00	17.65	20.00
	Shipping Organization	-	-	6.67
	Chamber of Trade	-	-	-
	if so, in what respect do you find your membership most beneficial?			
	No	40.00		26.67

imported 10 mil annually. In Mukdahan, 20.5% of importers imported about one million annually as shown in Appendix Table 4.

13 Use of Container

The 26.6% of respondents used 'full container load' in Mukdahan, while this ratio of such usage indicated 26.6% in Chiang Rai. Container clearance system at Customs were rated as 'good' (50% in Mukdahan and 33% in Chiang Rai). In Nongkai 38% reported that this system is very good. With respect to custom clearance, valuation, description and ROO, 20% of interviewees reported problems in Chiang Rai, while the ratio accounted for 2.9% in Nongkai. However, they did not face any problems in using containers in Mukdahan. In view of efficiency of physical inspection, it was rated as good (70% in Mukdahan), while it was 32.3% in Nongkai. The 40% to 50% of good are exported by road or rail by 60% of interviewees in Mukdahan and 26.6% in Chiang Rai. See Table 2.10(d).

14 Carriers: Shipping Line and Ships' Agents

The performance of shipping line and shipping agent are reported in Table 2.15. The value of 'use of shipment covering more than 50 million' included 60% traders in Chiang Rai and 10% in Mukdahan. With respect to 'TEU handled more than 40 tons' showed 10% in Mukdahan and 6.67% in Chiang Rai.

15 Volume of Cargo handle Annually at Inward and Outward Road Carriers

The 93.3 % of good at Chiang Rai were based on products of Thailand, while 73% were from China and 10% from Mukdahan. Internal door to door services were provided in Chiang Rai. The standard bill of loading was used in operation. The 66% of respondents reported that there exists serious delay. The 60% of respondents reported that cargo damage was in most cases, less than 10% . EDI was mostly used in Chiang Rai. Use of internet was 86% in Chiang Rai.

With respect to use of vehicle in operation, '1-4 vehicle' range indicated 26.6%, while '9-12 vehicle indicated 6.67% in Chiang Rai. Use of containerized "inward trading" with 5 million was 10% in Mukdahan and 20% in Chiang Rai. Number of containerized in inward trade which reached 10 to 50 millions at Chiang Rai showed 20%. With respect to outward containerized trade transactions of the SME which traded more than 50 mil reflected 26.6% in Chiang Rai, while the ratio was 20% in Mukdhan. The detailed can be seen in Appendix Table 2.

16 Main Countries of Origin and Destination

The direction of trade of Mukdhan reflected Lao PDR (50%), China (30%), Viet Nam (20%), Malaysia (10%), Hong Kong (10%) and Singapore (10 %). Trade from Nongkai indicated Chiang Rai (2.29%) and Hong Kong (2.94%). Main trading partners of traders in Chiang Rai showed China (33.3%), Lao PDR (13.3%) and Viet Nam (33.3%). Internal door to door services were provided in Chiang Rai (13.3%). TIR and ATA serviced used in Nongkai was 2.9%.

17 Experience of Customs Efficiency, Cost and Security Standards

The SME's experiences in relation to operation efficiency in dealing with Department of Customs at land frontier and ports were depisctted in this section. The over all assessment on Custom efficiency was rated as good (20%) , very good (10%) and normal (20%) in Mukdahan, while in Chiang Rai ithese were rated as 'good' (26.6%) and 'normal' (33.3%). SME's evaluation on Customs in Nongkai indicated very bad (2.94) and other SME did not express their evaluation on customs.

With respect to cost efficiency in Mukdahan, the rating scores of cost efficiency were same as operation efficiency, in comparison, 2.9% of participating SME reported as 'normal', while 46.6% and 30% reported as normal and good respectively in Chiang Rai. Similarly, operation efficiency and cost efficiency of customs for "Inward goods movement" as well as "outward movement" are reported in Table 2.14.

18 Average Time for Release of the Vehicle and Load by Customs

This section discusses, the average time for release of the vehicle and load by the Department of Customs, Customs under four cases as follows:

(i) average time for release of vehicle at land frontier,

(ii) average time for release of vehicle at ports,

(iii) use of inland container terminal, dry port, and

(iv) experience with custom port linked to a particular country.

An average time for release of vehicle at land frontier, 40% of respondents from SME reported that it was less than 30 minutes and 10% stated that it took 1 to 2 hours in Mukdahan. The time requirement was higher in Chiang Rai and 46.6% stated that it took 1 to 2 hours at Custom stationed at the land frontier.

Similarly the average time for release of vehicle at port, 40% of respondents from SME reported that it was less than 30 minutes and 10% stated that it took 1 to 2 hours in Mukdahan. Time requirement is higher in Chiang Rai and 46.6% of respondents stated that it took 1 to 2 hours at the customs stationed at the port while 6.6% of respondents described that more than 4 hours at Chiang Rai Port.

In the next section, time efficiency is compared among various Thai ports conducting trade China, Lao PDR, and Myanmar based on various activities at port such as custom, immigration, control agencies, vehicle requirement and photosanitary inspection. Thai port handling trade with China has more time efficient compared to the Thai port Lao PDR. No port exist that directly links to perform trade with Myanmar and Cambodia and Viet Nam.

19 Use of Automated Transport Functions

Functions of Automated Transport are examined this section on (i) type of Automated Transport, (ii) function of EDI, source and availability of information on Customs, (ii) means of communication and (v) difficulty of use of these mediums. The respondents reported that Automated Transport functions are available at the road frontier and rail in Mukdahan. Such automated function at the inland container deport was used in Nongkai, while automated transport system was used at Chiang Rai Port. Department of Customs provided most information and Provincial Office of Ministry of Commerce indicated second provider of trade related information. With respect to difficulty in use of communication method, about 50% in Mukdahan and 53% in Chiang Rai reported that no problem exists. Similarly, difficulties in transit-transport in respect of (i) designated routes, (ii) customs escort, (iii) bonds and (iv) documentation are examined and the results are reported in Table 2.20. About 30% of respondent reported that no problem existed in Mukdahan, in comparison, 46.6% to 50% respondent did not find the problems.

Table 2.9
Experience of their Efficiency, Cost and Security Standards

		Mukdahan	Nongkai	Chiang Rai
1	**Efficiency**			
	Likert Scale 1	-	2.94	-
	2	-	-	6.67
	3	20.00	-	33.33
	4	10.00	-	26.67
	5	20.00		-
	Cost			
	Likert Scale 1	-	-	-
	2	-	-	-
	3	20.00	2.94	46.67
	4	10.00	-	20.00
	5	20.00	-	-
	Security standards			
	Likert Scale 1	-	-	-
	2	-	-	13.33
	3	20.00	-	26.67
	4	10.00	-	26.67
	5	20.00	-	-
2	**Experience of your national Customs at a) land frontiers and b) ports for inward movements land frontiers**			
	Likert Scale 1	-	-	-
	2	-	2.94	-
	3	20.00	-	26.67
	4	10.00	-	6.67
	5	20.00	-	-
	Ports			
	Likert Scale 1	-	-	-
	2	-	-	-
	3	20.00	-	26.67
	4	0.00	-	6.67
	5	20.00	-	-

Cont.

	Outward movements			
	land frontiers			
	Likert Scale 1	-	-	-
	2	-	2.94	-
	3	20.00	-	20.00
	4	-	-	20.00
	5	30.00		-
	Ports		-	
	Likert Scale 1	-	-	-
	2	-	-	-
	3	20.00	-	26.67
	4	-	-	13.33
	5	10.00	-	-

Source: *Ibid.*

In conclusion the regulatory requirements (e.g., customs formalities, technical regulations and sanitary standards) that retard the trade flows are regarded as technical trade barriers and they contribute to increasing trade transaction costs. Thus the results attempts to indentify the area in which the trade facilitation is needed at national level as well as regional level as an opportunity take an initiative in GMS trade.

This chapter provides information on current performance of trade facilitation in Northern Thailand focusing on simplifying and reducing documentation requirements and formalities; lowering the levels of fees and charges for importation and exportation; expediting the release and clearance of goods from customs custody; enhancing transparency and predictability of trade-related regulations and fees. Improving border agency coordination will lower both direct trade transaction costs arising from compliance with trade-related regulations and the payment of fees and charges, and indirect costs arising from waiting times at the border and lack of predictability of the trading environment. These measures can lower the incidence of corruption and significantly enhance the efficiency of controls at the border through risk management techniques and enhanced regional border coordination. In addition complementary measures — such as assistance to help traders understand and comply with existing trade regulations through targeted information material and training and efficient support services would further enhance trade.

CHAPTER 3

TRADE FACILITATION INSTITUTIONS AND TRADE FACILITATION PERFORMANCE IN NORTHERN THAILAND

3.1 Role of Trade Facilitation Organizations in Trade Facilitation

Facilitation Organizations in Trade Facilitation play a leading role in trade efficiency and cost effectiveness. It can support the business need for timely publication of trade regulations and procedure and increased transparency in the administration of trade transactions; simplification of trade procedure and document; standard and related conformity assessment procedures; the efficiency of trade-related infrastructure and tackling transit trade facilitation.

3.2 Trade Facilitation Infrastructure and Performance Survey and Results

This study examines the contribution of trade facilitation organizations and their effects in trade efficiency and effectiveness in performing Thailand's trade with its neighboring GMS countries. This study evaluates trade facilitation performance of the following organization in accordance with UNCTAD Guidelines as follows:

1. Department of Customs;
2. Border-Crossing (Road Authority);
3. Pre-shipment Inspection Agency (PSI);
4. Port Authority and Airport; and
5. Department of Trade & Industry;

3.3 Trade Facilitation Performance: Customs

The organizational aspects of efficiency of Department of Customs are analysised in this chapter. In terms of quantity of both export and import Chiang Rai constitute the

largest trading post among 3 provinces followed by Mukdahan and Nongkai. Export value through Chiang Rai estimated 359 43 million Baht, while that of value of import indicted 4209.46 million baht. The contribution of Department of Customs, Chiang Rai showed less than 20%. Manpower used at this department was less than 20% of staff at the Head Quarters of the Department of Customs. There existed goods in transit only at Mukdahan.

The average time required for export of general merchandise was less than 1 hour and same time was required for imports through above 3 provinces. Similarly, the corresponding time for road borne and airfreight were also less than 1 hour. The average time for export and import of taxable goods were also same as other traded goods. Time requirement in these areas can be regarded as statics, due to the occurrence of incomplete documentation in the trade documents used.

Separate release of control of goods was found and paper aligned on the UN standard documentary system. The Department also used Direct data exchange, United Nations, Electronic Data Interchange For Administration, Commerce and Transport (UN/ EDIFACT) messages and The Automated System for Customs Data (ASYCUDA) under UNCTAD system satisfactorily. The selection of delegates to World Customs Organization (WCO) technical committees were undertaken by the Head Quarters. The disputes in trade were largely due to illegal drug and trade. Department of Customs used an updated and generally available Customs Code, circulated public notices of changes and interpretations and carried out post-entry audits.

The Customs at above mentioned provinces also Implemented the GATT valuation code and implemented the WCO harmonized system. They applied Transports Internationaux Routiers /International Road Transport (TIR) and Automotive Technician Accreditation (ATA) procedures and the advanced ruling in trade. The proportion of inspected conventional consignments exceeded 80% at Mukdaham, less that 20% each in Nongkai and Chiang Rai. Proportion of inspected containers under the Department of Customs in each province under study indicated more than 80%.

There was no offer to the private to perform function of Department of Customs except Information and Communication Technology (ICT). But Customs agents are granted licenses. They operated under normal working hour and used regularly up-dated Strategic Plan.

Table 3.1a Trade Facilitation Performance: Customs

	Mukdahan	Nongkai	Chiang Rai
1 Quantity of export invoice	341,427,027	1,492	1,492.00
2 Value of export (million baht)	20268	359	359.42
3 Quantity of import invoice	20,268	19,803	19,803.00
4 Value of import (million baht)	2,777	4,209	4,209.46
5 Quantity of transit invoice	2,980	-	
6 Promotion of government revenue by customs	Less 20%	Less 20%	Less 20%
7. Number of staff in service	Less 20%	Less 20%	Less 20%
7.1 Average time of export general merchandise	Less 1 hour	Less 1 hour	Less 1 hour
7.2 Average time of import general merchandise	Less 1 hour	Less 1 hour	Less 1 hour
7.3 Average time of export container	Less 1 hour	Less 1 hour	Less 1 hour
7.4 Average time of import container	Less 1 hour	Less 1 hour	Less 1 hour
8.1 The corresponding times of road borne export	Less 1 hour	Less 1 hour	Less 1 hour
8.2 The corresponding times of road borne import	Less 1 hour	Less 1 hour	Less 1 hour
9.1 Corresponding times for airfreight of documents	No	Less 1 hour	Less 1 hour
9.2 Corresponding times for airfreight of non-tax	No	Less 1 hour	Less 1 hour
9.3 Corresponding times for airfreight of tax-goods	No	Less 1 hour	Less 1 hour
10 Corresponding times for express consignments	Less 1 hour		
11 The times in 5-8 static or decreasing			Static
12 Consider unsatisfied of release time		Static	

Source: Compilation of Author based on Survey data.

Table 3.1b Trade Facilitation Performance: Customs

	Mukdahan	Nongkai	Chiang Rai
13 What do you see as the main causes?		incomplete documents	
14 Separate release of control goods	Yes	Yes	Yes
15 Paper aligned on the UN standard documentary system		Yes	Yes
15.1 Use computers and purpose	Yes	For e-commerce	For e-commerce
15.2 Direct data exchange	No	With ministry of finance	With ministry of finance
15.3 Use of UN-EDI Fact (UN-EDIFACT) messages			satisfy with post-implementation support and technological top-up
15.4 Use ASYCUDA or any other roprietary Customs system / and atisfaction	Yes	satisfy with post-implementation support and technological top-up	Yes and satisfy with post-implementation support and technological top-up
16.1. Send delegates to WCO technical committees	Select by customs	Select by customs	Select by customs
17 How many disputes and what are main differences	follow rules	206 The most is drugs and illegal	The most is drugs and illegal
18 An up to date, generally available Customs Code	Yes	Yes	Yes
19 Do you circulate public notices of changes and interpretations?	Yes		
20.1 Carry out post-entry audits	Yes	Yes	
20.2 Responsibility	office to recheck	Customs officer	Customs officer
21 Customs/Trade Consultative Committee	Yes	Yes	
22.1. Implement the GATT Valuation Code	Yes	Yes	Yes
22.2 Implement The WCO Harmonized System	Yes	Yes	Yes

Source: *Ibid.*

Table 3.1c Trade Facilitation Performance: Customs

	Mukdahan	Nongkai	Chiang Rai
22.3 Do you operate TIR and ATA procedure?			
23 Facilities for other government departments	data exchange	No	No
24.. What services/facilities do you require	No	Airport with no payment	Airport with no payment
25.. Proportion of inspected conventional consignments	More than 80%	Less than 20%	Less than 20%
25.2 Proportion of inspected containers	More than 80%	More than 80%	More than 80%
2. Where do you normally inspect containers	customs office	At border	At border
27 How do you select for inspection		Follow profile from risk management	Follow profile from risk management
2. What are the main features of such inspection		Products from China and Healthcare products	Products from China and Healthcare products
29.. Issue binding advance rulings		Classification and value	Classification and value
3. Can challenges with outside		Yes	Yes
3. Are Customs agents licensed		Yes	Yes
3. Do they have a monopoly		No	No
33.1 Do you have a training school and what subject	to use their right in FTA of ASEAN	For e-commerce	For e-commerce
34 Similar facilities to agents	Yes	Yes	Yes
35.1 Are any Customs functions currently handled by private agencies	NO	Information technology functions	Information technology functions
36 Normal working hour	8 hours	8 hours	8 hours
37.1 Available outside working hours	as required	Yes with no compensation	Yes with no compensation
38 Regularly up-dated Strategic Plan	Yes	Yes	Yes
39.1 Memoranda of Understanding arrangements with traders	in the website of the office	Yes and satisfied	Yes and satisfied
40 How do you collect, check and record payments of duties and taxes		Collect both documents and in computer by GF system	Collect both documents and in computer by GF system

Source: *Ibid.*

3.4 Trade Facilitation: Border Crossing Points

The statistics on volume (ton) using conventional road vehicles were not available, however, the volume (ton)- Trucks and trailers for container during survey period in Nongkai indicated more than 200 per day. Most proportion of trade were for domestic consumption rather than re-export or transit.

The quality of cooperation with container inspection was rated as 'normal' in Mukdahan, 'excellent' in Nongkai and 'good' in Chiang Rai. Customs also controls other such phytosanitary or security. There exists co-operation between export and import Customs services. The average time from arrival to departure was 1 to 2 hrs in Nongkai but it was less than half an hour and communication facilities are available sufficiently with reliable electricity supply.

The number of signatures required for trade documentation at Customs indicate as 'many' in Nongkai and '5' in Mukdahan and '2' in Chiang Rai. Proportion of inspected invoices were more thatn 80% in each Customs at the three Provinces. In addition, proportion of inspected, certificates of origin in Mukdahan and Chiang Rai indicated more than 80% each, while it was less than 20 in Nongkai. Proportion of inspected certificates of way-bills was about 20 % each in each province. The percent of dispute were also less than 20% in each province. There did not exist the experience of pilferage and loss of general goods.

Table 3.2 Trade Facilitation: Border Crossing Points

	Mukdahan	Nongkai	Chiang Rai
The volume (ton)-Conventional road vehicles-2009			
The volume (ton)-Conventional road vehicles-2010	-	200 per day	-
The volume (ton)- Trucks and trailers for container-2009	-	200 per day	-
The volume (ton)- Trucks and trailers for container-2010	-	200 per day	-
The volume (ton)- roll-on/roll-off units-2009	-	-	-
The volume (ton)- roll-on/roll-off units-2010	-	-	-
1. Propotion of domestic consumption and transition		NA	Domestic consumption 100%
2. The number and value of TIR and ATA Carnets handled annually		NA	-
3. Average delay times from arrival to departure		1-2 hour	Less than 1 hour
4. The number of Customs officers	50	yes, in some occasions	3
5. Working hours			12 hours No
What provisions are made for extended working?		6.00 -22.00	
6. The customary overtime rates	yes	Yes	No
7.1. The quality of cooperation with others	Normal	Excellent	Good
7.2. The quality of cooperation with container inspection	Very Good	Excellent	Good
8. Customs controls other such pho-tosanitary or security	Yes	Yes	Yes
9. Any co-operation between export and import Customs services	Yes	Yes	Yes
10. How does it work in practice	monthly meeting between Thai and Laos officers	collect tax	Meeting

Cont.

	Mukdahan	Nongkai	Chiang Rai
Obliged to take documents from one officer to another for several separate checks	no		
11. How many signatures are required	5	many	2
12.1. Recheck document from in and out		Yes	Yes
12.2. How			
Efficient procedures moving goods and vehicles	Yes	Yes	Internet Audit
13.1. Computer and associated equipment is available	yes	to release goods	For communicati on & fomalities
14.1. Communication facilities are available	Customs	Customs	Customs
How is the post equipped to for working in likely extremes of temperature?	NO	Yes, during working hours	
15. Reliable electricity supply	NO	Yes	Yes
16.1. Proportion of inspected, invoices	More than 80%	> 80%	More than 80%
16.2. Proportion of inspected, certificates of origin	More than 80%	< 20%	More than 80%
16.3. Proportion of inspected, certificates of way-bills	More than 80%	< 20%	More than 80%
Proportion of consignments that physically inspected	Less than 20 %	< 20%	
17. Facilities are available for non-intrusive examination	NO	No	Yes
Are additional formalities for driver carried out simultaneously with controls on the goods, or seperately	yes		
How much does it contribute to the total processing time?		10mins	
18. Percentage of disputes	< 20%	< 20%	Less than 20%
19. The main causes	Others	Classify	Complained
20. Are goods and vehicles delayed	Yes	No	No
21.1. The experience of pilferage and loss, general goods	NO	No	No
21.2. The experience of pilferage and loss, other goods	No	No	No

Source: *Ibid.*

3.5 Pre-shipment Inspection Agency (PSI)

There were three Pre-shipment Inspection (PSI) agencies each in Mukdhan and Nongkai under survey and their performances are reported in Table 3.3. Most PIS conducted the pre-shipment Inspections on about 1 to 4 consignments and one PSI conducted more than 12 consignments per month. The value of a consignment covered about 500,000 Baht. The average time taken to issue a PSI report was less than half an hour. The inflammable goods and living animals are excluded from the PSI. Portion of physically inspected PSI showed about less than 20% . Most PSI followed the instruction and standards.

Table 3. 3a Trade Facilitation: PSI

	Nongkai			Mukdahna		
	SME 1	SME 2	SME 3	SME 1	SME 2	SME 3
1. How many Reports of Findings do you issue annually?					1	
Less than 1 consignment	1	-	-	-	-	1
1 – 4 consignments	-	-	-	-	-	-
5-8 consignments	-	-	-	-	-	-
9 – 12 consignments	-	-	1	-	-	-
More than 12 consignments	-	-				-
What is the value of the consignments covered by these Reports?		-				
Less than 50,000 Bath						1
50,000 – 100,000 Bath						
100,000 – 200,000 Bath						
200,000 – 300,000 Bath						
300,000 – 400,000 Bath						
400,000 – 500,000 Bath				1	1	
More than 500,000 Bath		1	1			
What is the average time taken to issue a Report?					1	1
Less than 1 Hour		1				
1 – 2 Hours						
2 – 3 Hours						
more than 4 Hours			1	living animals and films	no	no
What goods are excluded from PSI?		inflamable goods and living things	No		check all goods	no
What is the minimum value under which PSI does not apply?		can not estimate	still need a random check			

Source: *Ibid.*

Table 3. 3b Trade Facilitation: PSI

		SME 1	SME 2	SME 3	SME 1	SME 2	SME 3
	What is the minimum value under which PSI does not apply?		can not estimate	still need a random check			
	What proportions of consignments are physically inspected?				1	1	1
	Less than 20 %		1	1			
	21 – 40 %						
	41 – 60 %						
	61 – 80 %						
	More than 80%	1			no	follow department standards	unlimited
	What basis do you charge and secure payment for these inspections?	100 baht/1 certificate for export. 1 certificate can certifies more than 100 producst	government pays for them	no basis		monthly paid	no
	What is the basis of your central, contractual remuneration?	yearly payment	mont hly payment	m onthly payment			
	Do you apply/are you planning to apply, any risk-assessment techniques to reduce the incidence of physical inspection? If so, on what broad lines and by what methods?				1	1	1
	Yes	1	1	1	random check	follow normal standards	follow department standards

Source: *Ibid.*

Table 3. 3c Trade Facilitation: PSI

	SME 1	SME 2	SME 3	SME 1	SME 2	SME 3
If so with whom?	The Office of Agriculture regulations	Ministry of Industry, commerce, agriculture, food and drug administration, department of fisheries	customs	1		
No						
Do you use a) the Internet b) satellite communication? If so, for what purposes?					1	1
The internet	1	1	1			
Satellite communication					exchange data	issue documents
If so, for what purposes?	data exchange, report, get assignment from central government	to assign work or distribute documents	to facilitate transaction			

Source: *Ibid.*

3.6 Trade Facilitation Performance: Port

Trade facilitation of Port is examined in this section based on Chiang Rai Port since there were no ports in Mukdahan and Nongkai. Volume of exports and imports in 2010 were 42,424 ton and 43,835 ton respectively. Value of exports and imports were Baht 1,800.63 million and Baht 567.13 million. Major trading countries from this port indicated China, Lao PDR and Myanmar.

Average time required for handling general export cargo was 3 days and average time of general import cargo was 1 day. The average roll-on roll-of was also 1 day. Main cause of customs delay was not related to the following cases: (i) banking requirement, (ii) late arrival, (iii) pre-shipment, (iv) unavailability of connecting transport. But the delay was due to lack of network and electricity. It required a standard shipping note or EDI and port operate under efficient procedures moving goods and vehicles. Port had data exchange with Department of Customs and a Customs operation at the port. However, Port did not have a consultative committee.

Port can allow size of boat loads 200-300 tons and can support almost 9 boats. Port also can serve the stop boat overlap about 2-3 boats if there are many cargo ship request. It uses labor-saving machines. Number of Customs Officer at the port included 25 and worked 10 hours daily and no side-payment was required. Proportions of consignments carriers constituted 21-40% and that of proportions of consignments, agent shoewed 41-60%. The quality of co-operation with Department of Customs and the quality of co-operation with other control agencies were rated as good.

The quality of co-operation with transportation and the quality of co-operation with container inspection were also rated as 'best'. Customs entrusted with other controls, such as phytosanitary security and number of signatures required for processing indicated 3. With respect to computer and associated equipment, CCTV & OA systems for security was in palce. Type of connection from this port to the required trade destinations was direct connection based on international standards.

The proportion of declarations for each (i) invoice, (ii) way-bill and (iii) bill of loading was 80% roughly and proportion of declarations for certificates of origin also indicated more than 80%. Portion of dispute at the port was about 21-40% due to miss-match between invoices and goods received at the port. There were cases in which goods and vehicles were delayed. Port can handle international consignments.

3. 7 Department of Trade and Industry

The Department of Trade and Industry operates under full acquisition of machinery equipment for processing general trade document including electronic commerce (E Commerce) in three provinces. But it does not have machinery and equipment for publication of regulation. The Department of Trade and Industry applied the WTO needs of international trade facilitation in these all provinces. The Department at Mukdahan and Chiang Rai could also promote overseas companies. But, the department did not monitor and review the operation of payment systems.

The Department of Trade and Industry at provincial level did not engage directly in regional cooperation such as ASEAN and APEC. It was also lack of conducting studies on the need for safe, timely and reliable delivery services at provincial levels. The traders were able to use postal as well as carrier freely and to full effective.

The evident suggested that traders were also able to use containerized services freely and to full effectively in Mukdahan and Chiang Rai. Traders in Mukdahan were able to use roll-on/roll off freely and effectively. They can use E-commerce and information and communication technology. In Mukdahan and Chiang Rai, there were national standards institutions and thus provided advice to exporters on the foreign standard.

CHAPTER 4
THE INTERGRATED TRADE FACILITATION INFRASTRUCTURE AND PERFORMANCE IN GMS: SURVEY RESULTS

Trade Facilitation Infrastructure and Performance in GMS, in particular, Cambodia, Lao PDR, Myanmar, Viet Nam are analysed in this section in the context of indicators and parameters set out under ASEAN Economic Community (AEC) Blueprints, that enable to examine in a wider context. Surveys were conducted in these countries in collaboration with research team members from these countries[3]. The surveys covered ASEAN priority integration sectors: (i) IT services, (ii) healthcare, (iii) wood-base product, (iv) automatic, (v) rubber-based product, (vi) textile and apparel, (vii) agro-based product, (viii) fisheries, (ix) banking, (x) insurance (xi) business services, (xii) transport services, (xiii) tourism, and others.

The focus areas under the integrated trade facilitations assessment to promote integrated trade facilitation efforts of these countries are summarized as follows:

A1 Single market and production bases

1. Free flow of Trade

Trade Facilitation Measures(advance ruling, ROO, customs integration, single windows)

2. Non-Tariff Barriers

A2 Free Flow of Services

B1. Competition and Regulations

B2. Consumer Protection

B3. Intellectual Property Rights (IRP)

B4. Utilities and Infrastructure facilities

B5. Level of Use of IT and E-Commerce in business

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[3] The surveys were undertaken in CLMV in collaboration with country researchers: Mr. Kim Soben, Lecturer, Royal University of Agriculture, Cambodia; Mr. Saithong Phommavong, Research and Graduate Division, Faculty of Social Sciences, National University of Laos, Vientiane, Lao PDR; Mr. Aung Kyaw Oo, Researcher, Union of Myanmar Federation of Chamber of Commerce and Industry, Yangon, Myanmar; Ms. Mai Thuy Duong, Academic Coordinator, Clevelearn Vietnam, Hanoi, Viet Nam. The author would like to express sincere thanks to them for their kind efforts and exchange of views. The remaining errors are sole responsibility of the author.

These parameters and indicators aim to capture various aspects of trade facilitations focusing on port efficiency for each country, port facilities and inland waterways air transport, customs environment for each country, non-trade barriers, irregular extra payments and bribes, regulatory environment, transparency of government policy, service sector infrastructure for each, speed and cost of internet access, effect of internet on business, within each of the trade facilitation categories, the correlation of the inputs suggesting robustness of the survey results.

The AEC strategies are divided into four main groups comprising AEC strategies from A to D where the sub-elements are also tabulated in detail. The survey results for Cambodia, Lao PDR, Myanmar and Viet Nam are provided in the light of average scores and 'standard deviation' of the scores of each element. With respect to 'single market and production' strategies, the strategies or elements are divided into seven components: A1 to A5. 'free flow of trade' category is divided into three main elements, viz. trade facilitation measures, and elimination of tariff and non-tariff barriers in which high scores for 'trade facilitation' indicate higher performance in this area; in contrast, high scores for non-tariff measures exhibit higher degree of completion of removal of trade barriers.

In estimating the scores for some elements, the secondary data are used in some cases. In particular, in assessing the performance on 'elimination of tariffs' the likert scales are based on the level (%) of completion of tariff elimination in each ASEAN member in the Common Effective Preferential Tariff (CEPT) package in 2007.

With respect to 'trade facilitation measures', 'trade and customs procedures are publicly available and easily accessible, and an effective ruling system in place' are highly appreciated by the business community. Meanwhile, the area of improvement in this strategy set, the effectiveness of ROO', 'computerization and automation of customs and trade procedure', 'submission of required trade documentation to trade and customs authority' can be regarded as the HRD and industrial capacity building requirements components in line with AEC blueprint.

Thus a lower score is obtained in this category because of interior assessment and not performance of the whole process. Similar reasoning also applies to the AEC element, B5: 'taxation policy' in which the score for 'double taxation has not been imposed on enterprises' has given completion date of 2010.

4.1 An Assessment of Cambodia's Trade Facilitation Performance

In analyzing the trade facilitation performance Cambodia receives a higher score in 'free flow of services' because public sector contracts can be freely negotiated internationally and foreign investment is allowed in banking, telecommunications, and the business services sector. Lower scores can be found under the enhanced participation in supply change, taxation policy and SME development. The reason for this is that Cambodia scores very badly in 'liberalization in financial services', 'the enterprise environment', and 'social inclusion'. Cambodia consistently receives the lowest scores in almost all elements under 'level of use of ICT and e-commerce in business'.

Table 4.1 compares the scores across all activities under the AEC blueprint. Cambodia receives low marks of close to five or above in the elements of the use of ICT, and e-commerce. More surprisingly, the high scores can be found in the elements of free flow of services, investment incentives, transfer and repatriation of capital, banking and financial services, ease of immigration laws and labour relations. Cambodia receives intermediate scores of between five and six in these elements: regional transit systems, computerization and automation in customs and trade procedures, raw material availability, postal, and telephone services. It is interesting to note the relatively low scores of less than four for submission of document for approval, 'stock market providing adequate capital', regulatory burdens and modernizing social protection.

Table 4.1 also exhibits the differences in the performance of Cambodia. The largest differences can be found between A1 and D1, in particular, the areas of the enterprise environment, network industries, financial services. Within the elements of the enterprise environment, the difference regarding R&D in business are particularly severe. Another large difference is in the use ICT in business. In contrast, B2 and B3 are quite similar in their AEC scores.

Table 4.1 Trade Facilitation Infrastructure and Performance in Cambodia

	Elements of AEC	Average scores	Standard Deviation
	Single market and production bases		
A1	**Free flow of Trade**		
	1. Trade Facilitation Measures(advance ruling, ROO, customs integration, single windows)		
	a) Trade and customs procedures and regulations are publicly available and easily accessible	6.00	2.85
	b) An effective advance ruling system in customs is in place	6.46	2.69
	c) An effective advance ruling system in 'rule of origin'(ROO) of products is in place	5.46	2.17
	d) A regional transit system is in place	5.08	1.83
	e) Computerization and automation of customs and trade procedures have noticeably reduced time of clearance	5.62	2.98
	f) Submission of required trade documentation to trade/customs authorities for approval is easy	4.08	2.39
	2. Non-Tariff Barriers		
	a) Administrative price fixing of import prices and/or export price are prevalent	5.83	2.94
	b) Advance payment requirements such as payment for import transactions, import deposits, advance custom duties are prevalent	5.42	2.57
	c) Technical regulations for imports, product characteristics requirements, labeling requirements do not deter trade	6.75	1.86
	d) Laboratory testing, inspection and quarantine requirements do not deter trade	5.73	2.32
	e) Pre-shipment inspection and special customs formalities do not deter trade	5.91	2.66
B1	**7. Competition and Regulations**		
	a) The legal and regulatory framework encourages your enterprise to compete	5.67	2.60
	b) Competition legislation is efficient in preventing unfair competition	7.75	2.92
B2	**8. Consumer Protection**		
	a) Consumer protection is in place and effective	4.0	0.31
	b) Customer satisfaction is primary objective in companies	5.0	0.40
	c) Information sharing and exchange are publicly available and easily accessible	5.0	0.28

Cont.

Source: Compilation of Author based on Survey data.

Cont.

	Elements of AEC	Average scores	S.D.
B3	**9. Intellectual Property Rights (IRP)**		
	a) IRP is in place and effective		
	b) The existence of IRP regulation in your country is important for business.	5.66 4.64	.48 .51
	c) IRP encourages foreign direct investment	-	
B4	**10. Utilities and Infrastructure**		
	How would you rate the overall quality and efficiency of following public agencies or services		
	a) Roads Department/Public Works	5.85	2.03
	b) Postal Service/Agency	5.31	2.01
	c) The Telephone Service/Agency	6.31	2.72
	d) The Electric Power Company	6.00	2.08
	e) Water/Sewerage Service	5.85	0.987
	f) Water transportation (harbors, canals, etc.)	4.38	1.75
	g) Energy infrastructure is adequate and efficient	4.46	1.50
	h) The quality of health services and hospitals is high	-	-
B5	**12. Level of Use of IT and E-Commerce in business**		
	a) Advertising	1.00	0.000
	b) E-mail for business contacts	1.00	0.000
	c) To submit trade documents to government/trade organizations	1.17	0389
	d) On-line trade in goods	1.30	0.483
	e) E-learning	1.18	0.405
	f) E-Government	1.75	0.463
	g) IT applications (Website/software development)	1.33	0.492

Source: *Ibid.*

4.2 An Assessment of Lao PDR's Trade Facilitation Performance

In examining trade facilitation performance, Lao PDR achieves higher scores in the areas of free flow of trade, free flow of services, free flow of investment and investment protection , free flow of capital, free flow of skilled labor, labor market conditions and regulations and competition law. Low scores are also obtained in the areas of use of ICT, E-commerce in business, productivity and efficiency in priority integration sectors and IRP.

Table 4.2 shows that in all elements, except intellectual property rights (IPR), taxation policy, and level of use of IT, E-commerce in business are the well-performing in Lao PDR. The largest deficiencies are found with regard to taxation policy, level of use of IT and E-commerce in business and SME development.

Table 4.2 Trade Facilitation Infrastructure and Performance in Lao PDR

	Elements of AEC	Average scores	S.D.
	Single market and production bases		
A1	**Free flow of Trade**		
	1. Trade Facilitation Measures(advance ruling, ROO, customs integration, single windows)		
	a) Trade and customs procedures and regulations are publicly available and easily accessible	6.27	2.57
	b) An effective advance ruling system in customs is in place	7.05	2.54
	c) An effective advance ruling system in 'rule of origin'(ROO) of products is in place	6.74	2.43
	d) A regional transit system is in place	6.33	2.68
	e) Computerization and automation of customs and trade procedures have noticeably reduced time of clearance	5.87	2.67
	f) Submission of required trade documentation to trade/customs authorities for approval is easy	6.12	2.79
	2. Non-Tariff Barriers		
	a) Administrative price fixing of import prices and/or export price are prevalent	6.37	2.51
	b) Advance payment requirements such as payment for import transactions, import deposits, advance custom duties are prevalent	6.19	2.69
	c) Technical regulations for imports, product characteristics requirements, labeling requirements do not deter trade	6.17	2.62
	d) Laboratory testing, inspection and quarantine requirements do not deter trade	6.46	2.56
	e) Pre-shipment inspection and special customs formalities do not deter trade	9.27	3.07
B1	**7. Competition and Regulations**		
	a) The legal and regulatory framework encourages your enterprise to compete	6.85	2.732
	b) Competition legislation is efficient in preventing unfair competition	7.14	2.695
B2	**8. Consumer Protection**		
	a) Consumer protection is in place and effective	5.80	-
	b) Customer satisfaction is primary objective in companies	7.77	-
	c) Information sharing and exchange are publicly available and easily accessible	-	-

Source: *Ibid.*

Cont.

	Elements of AEC	Average scores	S.D.
B3	**9. Intellectual Property Rights (IRP)**		
	a) IRP is in place and effective	4.00	-
	b) The existence of IRP regulation in your country is important for business.	5.00	-
	c) IRP encourages foreign direct investment	5.00	-
B4	**10. Utilities and Infrastructure**		
	How would you rate the overall quality and efficiency of following public agencies or services		
	a) Roads Department/Public Works	5.94	2.23
	b) Postal Service/Agency	6.34	2.49
	c) The Telephone Service/Agency	7.17	2.57
	d) The Electric Power Company	7.17	2.66
	e) Water/Sewerage Service	6.13	2.47
	f) Water transportation (harbors, canals, etc.)	5.70	2.47
	g) Energy infrastructure is adequate and efficient	6.37	2.76
	h) The quality of health services and hospitals is high		
B6	**12. Level of Use of IT, E-Commerce in Business**		
	a) Advertising	1.14	.669
	b) E-mail for business contacts	1.31	1.06
	c) To submit trade documents to government/trade organizations	1.16	.532
	d) On-line trade in goods	1.60	.693
	e) E-learning	1.57	.501
	f) E-Government	1.68	.474
	g) IT applications (Website/software development)	1.47	.504

Source: *Ibid.*

4.3 An Assessment of Myanmar's Trade Facilitation Performance

The survey results for Myanmar are presented in Table 4.3 as average scores and 'standard deviation' of scores for each element. In trade facilitation performance perspectives, Myanmar receives higher scores in the areas of free flow of trade, free flow of services, free flow of investment and investment protection, free flow of skilled labor, labor market conditions and regulations, and competition law. Low scores are also obtained in the areas of free flow of capital, level of use of ICT, e-commerce in business and productivity and efficiency in priority integration sectors.

As can be seen in Table 4.3, the best-performing areas of Myanmar indicate 'free flow of trade, free flow of services and investment, while the moderate development areas comprise competition and regulations, SME development, and taxation. In comparison,

the weakest characteristics of the scores in Myanmar show utilities and infrastructures, level of use of IT, E-commerce in business, and IPR.

Table 4.3 Trade Facilitation Infrastructure and Performance in Myanmar

	Elements of AEC	Average scores	S.D.
A1	**Single market and production bases** **Free flow of Trade** **1. Trade Facilitation Measures**(advance ruling, ROO, customs integration, single windows)		
	a) Trade and customs procedures and regulations are publicly available and easily accessible	4.20	2.117
	b) An effective advance ruling system in customs is in place	3.69	2.494
	c) An effective advance ruling system in 'rule of origin'(ROO) of products is in place	5.23	2.810
	d) A regional transit system is in place	3.35	2.057
	e) Computerization and automation of customs and trade procedures have noticeably reduced time of clearance	3.44	1.563
	f) Submission of required trade documentation to trade/customs authorities for approval is easy	3.04	1.882
	2. Non-Tariff Barriers		
	a) Administrative price fixing of import prices and/or export price are prevalent	4.00	2.084
	b) Advance payment requirements such as payment for import transactions, import deposits, advance custom duties are prevalent	3.83	2.060
	c) Technical regulations for imports, product characteristics requirements, labeling requirements do not deter trade	5.13	1.989
	d) Laboratory testing, inspection and quarantine requirements do not deter trade	3.05	2.345
	e) Pre-shipment inspection and special customs formalities do not deter trade	2.70	2.366
B1	**7. Competition and Regulations**		
	a) The legal and regulatory framework encourages your enterprise to compete	3.60	2.555
	b) Competition legislation is efficient in preventing unfair competition	5.37	2.845
	c) Product and service legislation does not deter business activity	5.00	-
B2	**8. Consumer Protection**		
	a) Consumer protection is in place and effective	2.71	2.138
	b) Customer satisfaction is primary objective in companies	5.0	0.22
	c) Information sharing and exchange are publicly available and easily accessible	5.0	0.22

Source: *Ibid.*

Cont.

	Elements of AEC	Average scores	S.D.
B3	**9. Intellectual Property Rights (IRP)**		
	a) IRP is in place and effective	4.75	2.964
	b) The existence of IRP regulation in your country is important for business.	3.00	1.927
	c) IRP encourages foreign direct investment	3.78	2.438
B4	**10. Utilities and Infrastructure**		
	How would you rate the overall quality and efficiency of following public agencies or services		
	a) Roads Department/Public Works	4.22	1.954
	b) Postal Service/Agency	3.96	1.551
	c) The Telephone Service/Agency	3.89	1.856
	d) The Electric Power Company	3.56	1.532
	e) Water/Sewerage Service	3.88	1.562
	f) Water transportation (harbors, canals, etc.)	4.72	2.119
	g) Energy infrastructure is adequate and efficient	3.95	1.870
	h) The quality of health services and hospitals is high	-	-
B5	**12. Level of Use of IT, E-Commerce in Business**		
	a) Advertising	1.22	0.428
	b) E-mail for business contacts	1.05	0.229
	c) To submit trade documents to government/trade organizations	1.41	0.507
	d) On-line trade in goods	1.53	0.516
	e) E-learning	1.64	0.497
	f) E-Government	1.73	0.458
	g) IT applications (Website/software development)	1.40	0.507

Source: *Ibid.*

4.4 An Assessment of Viet Nam's Trade Facilitation Performance

The survey results for Viet Nam are provided in the light of average scores and 'standard deviation' of the scores of each element. Higher scores can be found in the areas of free flow of trade, free flow of services, free flow of investment and investment protection, free flow of capital, free flow of skilled labor, labor market conditions and regulations competition and regulations. Low scores are also obtained in the areas of automotives and business services.

Table 4.4 has the relative weakness in AEC elements B6. Viet Nam performs well in ate area of free flow of services and investments, free flow of skilled labor, labor market conditions and regulations, competitiveness in food, agriculture and forestry, consumer protection and enhanced participation in supply change. The relatively weak elements

show free flow of trade, free flow of capital, level of use of IT, E-commerce in business, and competition and regulations, which can be supplemented by the deliberate initiatives to achieve the AEC objectives.

Table 4.4 Trade Facilitation Infrastructure and Performance in Vietnam

	Elements of AEC	Average scores	S.D.
A1	**Single market and production bases** **Free flow of Trade** **1. Trade Facilitation Measures**(advance ruling, ROO, customs integration, single windows)		
	a) Trade and customs procedures and regulations are publicly available and easily accessible	6.28	1.247
	b) An effective advance ruling system in customs is in place	5.56	1.49
	c) An effective advance ruling system in 'rule of origin'(ROO) of products is in place	4.74	1.50
	d) A regional transit system is in place	4.69	1.45
	e) Computerization and automation of customs and trade procedures have noticeably reduced time of clearance	2.72	1.20
	f) Submission of required trade documentation to trade/customs authorities for approval is easy	- 6.42	- 1.35
	2. Non-Tariff Barriers		
	a) Administrative price fixing of import prices and/or export price are prevalent	6.17	1.867
	b) Advance payment requirements such as payment for import transactions, import deposits, advance custom duties are prevalent	5.43	1.254
	c) Technical regulations for imports, product characteristics requirements, labeling requirements do not deter trade	6.18	1.377
	d) Laboratory testing, inspection and quarantine requirements do not deter trade	6.07	1.466
	e) Pre-shipment inspection and special customs formalities do not deter trade	5.76	1.534

Source: *Ibid.*

Cont.

	Elements of AEC	Average scores	S.D.
B1	**7. Competition and Regulations**		
	a) The legal and regulatory framework encourages your enterprise to compete	5.13	1.433
	b) Competition legislation is efficient in preventing unfair competition	5.60	1.633
	c) Product and service legislation does not deter business activity	4.80	1.580
B2	**8. Consumer Protection**		
	a) Consumer protection is in place and effective	-	-
	b) Customer satisfaction is primary objective in companies	4.95	1.268
	c) Information sharing and exchange are publicly available and easily accessible	7.38	1.459
B3	**9. Intellectual Property Rights (IRP)**		
	a) IRP is in place and effective	5.45	1.245
	b) The existence of IRP regulation in your country is important for business.	5.84	1.358
	c) IRP encourages foreign direct investment	5.75	1.377
B4	**10. Utilities and Infrastructure**		
	Rate the overall quality and efficiency of following public agencies or services		
	a) Roads Department/Public Works	3.79	1.583
	b) Postal Service/Agency	6.22	1.416
	c) The Telephone Service/Agency	7.43	1.220
	d) The Electric Power Company	5.64	1.613
	e) Water/Sewerage Service	4.78	1.629
	f) Water transportation (harbors, canals, etc.)	6.71	1.347
	g) Energy infrastructure is adequate and efficient	4.25	1.860
	h) The quality of health services and hospitals is high	-	-
B5	**12. Level of Use of IT, E-Commerce in Business**		
	a) Advertising	1.40	1.192
	b) E-mail for business contacts	1.10	.300
	c) To submit trade documents to government/trade organizations	1.16	.369
	d) On-line trade in goods	1.48	.505
	e) E-learning	1.56	.504
	f) E-Government	1.55	.522
	g) IT applications (Website/software development)	1.50	.577

Source: *Ibid.*

4.5 Findings on the Trade Facilitation Performance in CLMV

The survey results reveal that in pursuing 'single market and production base' CLMV receive a higher score in category A2: 'Free flow of services', free flow of skilled labor, labour market conditions and regulations, and competition law are rated above average. It is because public sector contracts can be freely negotiated internationally and foreign investment is allowed in banking, telecommunications, and the business services sector. The survey results reveal that the firms' trade with intra-ASEAN receives low scores.

Preliminary investigation in CLMV indicates that the critical requirement is not so much of the absence of policies and institutions but deficiencies in policy coordination and implementation through accountability, transparency and consistency of the relevant public and private sectors.

However, the survey data have limitations. They reflect that qualitative assessments on performance are difficult to quantify in some cases. Quantification is necessary to aggregate scores over different strategies and countries and to compare scores between different elements of the survey. Furthermore, in constructing trade facilitation scores, the quantitative measures builds on the assumption that senior executives, interviewed in different countries have, reasonably similar views on good and poor conditions of institutions and market environments. Finally, the survey sample aims at being indicative rather than representative, because of the existence of differences in limited sample size that calls for some caution in interpretation. The results also point out that the deviation of individual responses from a country's means are typically quite small, which points to the reliability of the survey responses.

However, the results are useful for focusing on discussion on critical strength and weakness in each group of AEC elements in each country. The impact of the proposed policy or strategy is based on the other clusters of elements and it would be more effective if it were supplemented by initiatives to address some of the unattended structural weakness. Finally the results also highlight how CLMV can exercise the effective policy leverages to influence the overall policy framework relative to each element.

This study also investigates the major problems faced by the business environment and other information for enhancing regional integration activities such as the requirements for regional production and distribution networks, existing firms' trade other ASEAN countries in the region; environmental costs; the current status of backward and forward linkages in the firms under study and supply chain management practices.

CHAPTER 5
EFFECT OF TRADE FACILITATION IN GMS TRADE AND SUSTAINABLE DEVELOPMENT

5.1 Indicators of Trade Facilitations in GMS

In this chapter the quantitative aspects of trade facilitation are investigated to measures of trade facilitation. Trade facilitation infrastructure are designed to measure the extent to which an economy has the necessary domestic infrastructure (such as telecommunications, financial intermediaries, and logistics firms) and is using networked information to improve efficiency and to transform activities to enhance economic activity.

The present research builds on the WMO methodology and categories of trade facilitation. However, because this paper broadens the set of countries for analysis, the cross-country survey data on business and policy climate that are used to construct the four indicators for each country are somewhat different from the data used to construct the indicators in WMO. The empirical research on trade facilitation can be found in the recent studies of Wilson, Mann, and Otsuki (2004) (henceforth WMO), WMO (2001)

Greater Mekong Sub-region (GMS) countries have pursued their trade and financial liberalization since late 1990 in line with the General Agreement on Trade in Services (GATS), under the World Trade Organization (WTO). Trade openness and financial openness have increased substantially in these countries in line with globalization over the last decade; however, this process has been interrupted by the current economics crisis.

The recent economic crisis has affected GMS economies significantly through several mechanisms: trade and finance, regional production, tourism and employment. This study centers primarily on channels of contagion: finance and trade based on selected indicators of macroeconomic development and external shock, and modeling the effects of trade-finance on trade flows of GMS countries. The former comprises three main sectors: external, financial, and domestic and real sectors, while the latter constructs a variant of trade facilitation model influencing trade flows in the time of economic crisis. The effects of financial liberalization on trade flows of GMS countries are examined using dynamic gravity models of trade with panel data, in which policy variables viz.

domestic credits, inflows of foreign direct investment (FDI), and participations in regional trade agreements (RTA) under the Association of Southeast Asian Nations (ASEAN) and GMS development programme are incorporated in the context of trade-led recovery.

The objectives of the study are as follows: (i) to examine the effects of trade cost in terms of location distance between two trading countries on their bilateral trade flows, exchange rates, inflation rates, and FDI inflows; (ii) to explore the effects of trade facilitation in the form of domestic credit, FDI, the effects of regional integration and participation in GMS development programmes on trade flows; and (iii) to investigate the effects of macroeconomic policies of GMS counties on their bilateral trade flows.

The report is structured as follows. Section 5.2 reviews briefly the related literature, Section 5.3 analyses the current changes in merchandise and service trade patterns based on three types indicators of macroeconomic development and external shock performance indicators; Section 5.4 examines the effect of internal and external financial resources and macroeconomic variables on the bilateral trade flows of these countries by applying dynamic gravity model of bilateral trade. The sensibility test of the model is performed in the context of trade-led recovery by introducing monetary and fiscal policy variables as the instruments in instrumental variable (IV) model. Section 5.5 constructs a dynamic model for robustness of estimation, while the resultes are discussed in Section 5.6 by drawing with policy implications.

5.2 A Brief Literature Review

The present research is primarily based on trade facilitation c studies of Wilson, Mann, and Otsuki (2004) (henceforth WMO), WMO (2001) and Asia Pacific (APEC) Foundation of Canada (1999). Manova (2006) develops a theoretical model with credit-constrained heterogeneous firms, countries at different levels of financial development, and sectors of varying financial vulnerability. This study also examines empirically the effects of credits on volumes of exports, export diversification and turnover in product mix of exports. Estimation for the models is undertaken using the 'two-stage estimation' procedure of Helpman, Melitz and Rubinstein (2008), hereafter HMR with robustness tests. Recent developments in the study of the effects of financial institutions on bilateral trade flows can be found in Maova (2006), which sheds light in the empirical evidence in the role of credit constraints in developed countries' export growth, its contribution to comparative advantages of firms and export diversification.

The list of literature on the gravity model is long and expanding rapidly. A full list of is beyond the scope of this paper. The theoretical basis of the model was developed by

Anderson and Wincoop (2003). Helpman, Melitz and Rubinstin (2008) developed a theory that incorporates zero and non-zero trade between two countries accounting for firm heterogeneity, trade asymmetries and trade cost.

It has been widely accept that financial liberalization has resulted in increases in foreign assets, domestic credits, and FDI due to increases in numbers of domestic and foreign banks in the economy and improvement in efficiency of the banking system. This section presents information on the nature of economic crisis and policy initiatives, which serve as motivation for this empirical analysis.

5.3 Effects of Trade Facilitation on Bilateral Trade Flows of GMS Economies

The effects of current economic crisis on trade and financial sectors of GMS countries are analysed in this section focusing on selected indicators of macroeconomic development and external, financial, and real sectors. In addition, GMS countries' dependency on the U.S., EU and intra-ASEAN trade are taken into account.

5.3.1 Impact on Merchandise Trade

Merchandise trade flows in GMS countries have been contracting rapidly since the end of 2008, affecting an increasing number of sectors. Tables 1 and 2 provides quarterly and yearly data of selected indicators of external, financial, and domestic and real sectors based on data availability. Figure 1 illustrates the declines of growth rates of export and import of GMS from Quarter 3, 2008 to Quarter 4, 2008. The exports of Cambodia, and Thailand declined substantially more than 20 per cent, in comparison, the growth rates of export of Myanmar, Viet Nam and China decreased by 11 per cent, 13 per cent and 6 per cent respectively in Quarter 4, 2008.

Cambodia's total exports to GDP ratio has increased from 39.5 per cent in 2001 to 47.3 per cent of GDP in 2007. Her total imports/GDP ratio increased from 52.6% in 2001 to 62.8 per cent in 2007. The economy is one of the fastest growing in ASEAN. Cambodia's intra-ASEAN trade reached at 19.1 per cent of her total exports in 2006. Cambodia's major export partners in 2007 were the U.S (59.5% of total exports) followed by Germany (7.5%), UK(4.7%), Canada (4.7%), Hong Kong (2.9%), Japan (2.9%), Viet Nam (2.3%) and Spain (2.9%). In contrast, her major import partners in 2007 constituted Thailand (27.5% of total imports), followed by China (16.9), Hong Kong (12%), Singapore (8.9%), Korea (3.2%) Malaysia (2.7%), Indonesia (1.8%) and France (0.92%),

Japan (1.6%), Germany (1.3%), Australia (1.2%), Korea (1.3%), France (0.6%), and Hong Kong (0.7%).

Lao PDR's exports in intra-ASEAN trade accounted for 18.2 per cent of her total exports in 2001 and increased to 35 per cent in 2007. Lao PDR's major export partners in 2007 indicate Thailand (36.4% of total exports), Viet Nam (11%), France (2.2%), China (6.3%), Germany (3.6%), Malaysia (2.5%), Belgium (0.9%) and the Netherlands (0.9%), UK (0.5%) and Italy (0.6%). In contrast, her top ten major import partners in 2007 were Thailand (70.6%), China (3.6%), Viet Nam (5.5%), Singapore

Myanmar's intra-ASEAN trade accounted for 59 per cent of her total exports in 2006. Myanmar's major export partners in 2007 show Thailand (44.7% of total exports) followed by India (14.1%), China (6.9%), Japan(5.6)%), Germany (2.3%), Malaysia (2.6%), UK(1.1%) and Singapore (1.2%), Korea(2.1%). In contrast, her major import partners in 2007 indicated China (35.9), Thailand (20.5%), Singapore (16.8%), Korea (2.1%). In contrast, her top ten major import partners in 2007 indicated China (35.9), Thailand (20.5%), Singapore (16.8%), Korea (2.7%), India (3.5%), Japan (3.5%), Indonesia (2.4%), Hong Kong (1.2%), Germany (1.1%).

Viet Nam's total exports to GDP ratio has increased from 44.2 per cent in 2001 to 78.6 percent of GDP in 2007. Her total imports/GDP ratio increased from 56.9 per cent in 2001 to 92.7 per cent in 2007. Major trading countries are the U.S (22.8% of total exports), Japan (11.4%), Australia (7.5%), China (6.3%), Singapore (4.3%), Germany (5.1%), UK (3.4%), Malaysia (3.6%), Thailand (2.2%) and France (2.1%). Major importing countries of Viet Nam indicates: China (20.4% of total imports), Singapore (11.8%), Japan (9.6%), Korea (7.7%), Thailand (6.9%), Malaysia (4.1%), Hong Kong (3.9%), the U.S. (3.4%), Germany (3.4%), and Indonesia (3.1%). Viet Nam's trade with intra-ASEAN accounted for 24.2 per cent of total exports, in contrast, her trade with extra-ASEAN reached to 83.2 per cent of her total imports in 2007.

Table 5.1 Effects of Economic Crisis on Exchange Rates, Growth Rates of Exports and Imports, Money Supply, and Inflation of GMS Economies

Country	2008				2009
	Q1	Q2	Q3	Q4	Q1
Cambodia					
1.Real Exchange Rate	3,324.6	3,077.3	3,074.4	3,108.3	3,260.4
2. Export Growth (%)	-	-11.64	39.07	-22.27	n.a
3. Import Growth (%)	-	13.08	-6.11	-7.11	n.a
4. M2 Multiplier	1.79	1.67	1.55	1.57	1.57
5. Inflation rate (%)	-	13.1	1.8	-4.7	-4.8
Lao PDR					
1.Real Exchange Rate	8,180.6	7,977.7	7,764.8	7,721.6	n.a
2. Export Growth (%)	-	-4.57	37.60	-21.49	n.a
3. Import Growth (%)	-	19.89	-9.99	-5.94	n.a
4. M2 Multiplier	2.77	2.40	2.55	2.42	n.a
5. Inflation rate (%)	-	4.4	39.1	-22.3	4.3
Myanmar					
1.Real Exchange Rate	2.99	2.85	2.87	2.77	2.92
2. Export Growth (%)	-	32.97	-8.50	-10.20	n.a
3. Import Growth (%)	-	0.49	20.88	-14.70	n.a
4. M2 Multiplier	1.23	1.24	1.26	1.36	n.a
5. Inflation rate (%)		7.9	5.3	1.8	-2.5
Thailand					
1.Real Exchange Rate	30.95	32.29	33.23	34.33	34.96
2. Export Growth (%)	-	4.36	9.44	-21.28	n.a
3. Import Growth (%)	-	0.78	13.03	-20.45	n.a
4. M2 Multiplier	9.12	9.13	9.33	8.56	9.39
5. Inflation rate (%)	-	4.3	-0.2	-3.5	-0.6
Viet Nam					
1.Real Exchange Rate	13,241.1	12,845.5	12,382.2	12,397.5	12,291.1
2. Export Growth (%)	-	3.56	16.39	-12.50	n.a
3. Import Growth (%)	-	6.73	-9.72	-1.60	n.a
4. M2 Multiplier	3.96	4.23	4.15	3.99	3.95
5. Inflation rate (%)	-	9.0	5.0	-0.3	0.3
China, PRC					
1.Real Exchange Rate	7.0	6.9	6.8	6.8	6.8
2. Export Growth (%)	-	8.98	7.74	-5.54	n.a
3. Import Growth (%)	-	14.37	7.29	-6.05	n.a
4. M2 Multiplier	4.06	3.84	3.86	3.68	4.27
5. Inflation rate (%)	8.0	7.8	5.3	2.5	-0.6

Source: (1) Author's own calculations based on IMF, IFS.
Available at http://www.imfstatistics.org/imf/

The direction of trade of these countries, in particular trade dependence of GMS on the U.S or EU markets are also subject to the possibility of impacts of economic crises. The exports of GMS countries except Cambodia and China are less dependent on the U.S compared with their exports to the intra-ASEAN implying that their trade patterns are less affected by the current financial crisis.

5.3.2 Composition of Exports and Imports of Services of GMS Countries

The composition of overall regional service imports and exports is shown in Table 2. Between 2000 and 2007, import of services by the GMS was dominated by transportation, other business services, and travel. The size of transportation service imports is mainly the result of shipping and air transportation support services provided by overseas air and shipping lines associated with moving cargo and passengers in the region.

The fastest growing GMS service exports in the period 2000-2007 were transport and tourism. In the same period, the fastest growing GMS service imports were financial services and insurance services, computer and information services and other business services. The export concentration of these GMS countries may shift from low to high value; high growth sectors include communications, transportation, finance, information technology, construction and professional business services in line with liberalization in service sectors.

Service exports from the GMS are generally concentrated in low-margin, labour intensive industries such as tourism, transportation and telephone call centres. One of the distinguishing features of trade in services is that they are more affected by non-tariff barriers and regulatory measures.

Table 5.2
Selected Indicators of External, Financial, and Domestic and Real Sectors

Indicator	CAM	LAO	MYA	THA	VNM	CHN
2007						
External Sector						
1. Current account/GDP	122.15	53.01	22.82	102.83	274.90	68.98
2. Financial account/GDP	22.04	13.03	n.a.	18.08	34.11	29.72
Financial Sector						
3. FDI Inflow (U.S $	867.29	323.50	427.70	9,575.35	6,739.00	83,521.00
4. Domestic Credit/GDP	14.73	134.18	50.23	236.48	204.97	163.84
5. Foreign Asset/ GDP	27.96	160.57	0.16	65.09	71.30	60.21
Domestic and Real						
6. Inflation Rate	7.67	4.52	35.03	2.24	8.30	3.26
7. GDP Growth Rate	10.20	8.00	5.46	4.75	8.27	11.40
2001						
External Sector						
1. Current Account/GDP	87.21	30.68	28.19	60.06	135.14	26.92
2. Financial account/GDP	10.09	1.94	1.58	1.35	10.20	4.59
Financial Sector						
3. FDI Inflow(U.S $Mil.)	149.40	23.90	192.00	5,061.00	1,300.27	46,877.59
4. Domestic Credit/GDP	6.62	261.03	103.95	195.66	81.74	124.65
5. Foreign Asset/ GDP	18.49	253.75	0.36	37.24	24.28	18.35
Domestic and Real						
6. Inflation Rate (%)	-0.60	7.81	21.10	1.63	-0.43	0.30
7. GDP Growth Rate (%)	8.15	5.74	11.34	2.17	6.89	8.30

Source: Author's own calculations based on IMF's IFS. Available at http://www.imfstatistics.org/imf/.

In order to maximize the benefits to be gained from liberalization of trade in services, progressive liberalization is needed for the GMS to diversify service exports beyond these traditional sectors. The ability to achieve export competitiveness in these sectors also provides infrastructure to support efficient domestic production of both goods and services within these economies.

5.3.3 Effects on Foreign Direct Investment

The evidence suggests that the global crisis is having a negative impact on international investment. FDI flows in GMS countries have been the most significantly affected. The consequences of the crisis have been rapidly expanding rapidly to FDI in other activities mainly as a result of protracted and deepening problems affecting financial institutions and the liquidity crisis in financial markets.

Table 5.2 indicates total FDI inflows of GMS countries for the years 2001 and 2007. FDI inflows in 2007 increased 3 times in Cambodia followed by 4 time in Lao PDR, 8 times in Myanmar, 4 times in Thailand, and 8 times in Viet Nam compared with FDI inflows in these countries in 2000. Similarly, foreign assets also increased by 2 times in Thailand, and 11 times in Viet Nam. In comparison, domestic credits in real terms have increased about 2 times each in Cambodia, Lao PDR and China followed by Myanmar (4 times), Viet Nam (6 times) and China (3 times) during the period under study.

5.3.4 Currency Depreciations

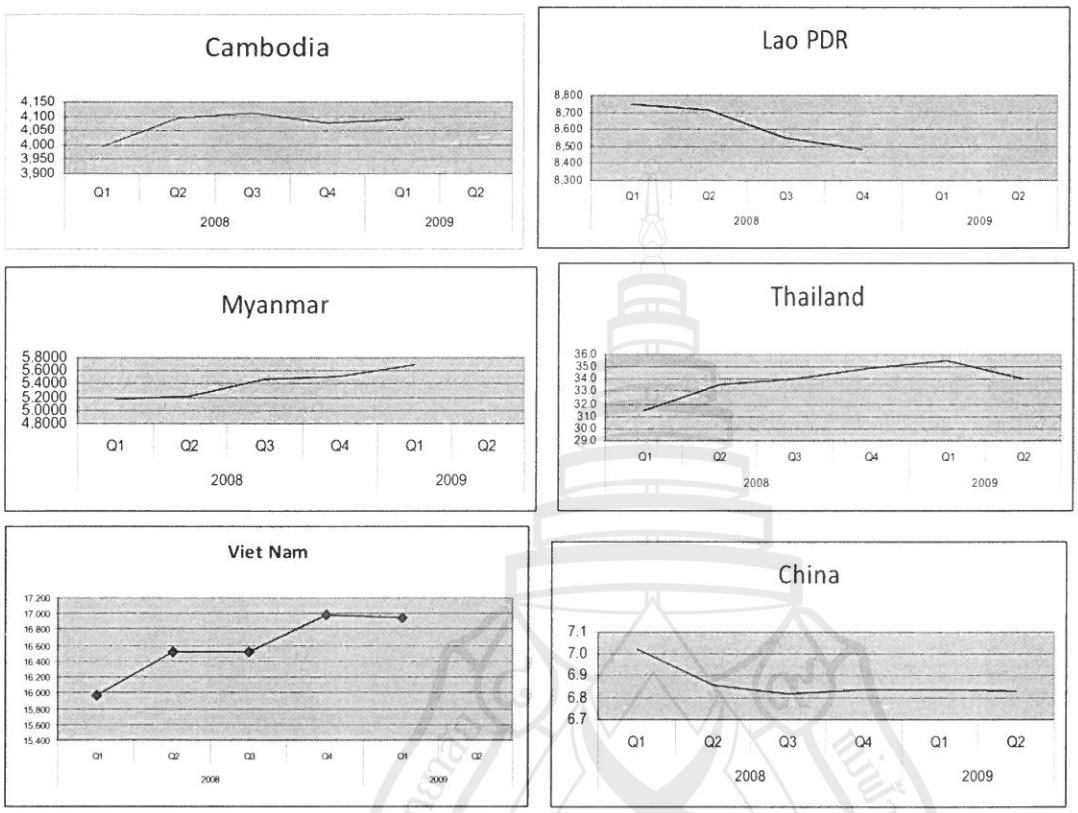
The last quarter of 2008 and the first months of 2009 show that currencies of GMS countries have depreciated vis-à-vis the U.S. dollar. Movements in currency markets, whether managed or influenced by market conditions, can have a strong impact on export competitiveness. Although most currencies have depreciated against the U.S. dollar in the crisis, the extent of depreciation has been quite different across countries.

Table 5.1 reports the extent of devaluation between Quarter 3, 2008 and Quarter 1, 2009. The GMS currencies have all been affected in different scales: the Real (Cambodia) appreciated by 4.8 per cent, Kip (Lao PDR), the Kyat (Myanmar), the Yuan (China) and Baht(Thailand) each depreciated by 0.56 per cent, 1.8 per cent and 08. 5 per cent and 0.02 per cent respectively. The exchange rate movements are likely to alter international competitiveness of GMS economies and trade share in the market. The money supply M2 multiplier to reserve ratio captures to what extent the liabilities of the banking system are backed by international reserves.

While the financial effects on GMS result in the GMS countries' devaluations, GMS trade balances with major trade partners have started to deteriorate in the fourth quarter of 2008. The export and import prices of primary goods declined in 2008 due to a decline in world demand. As shown in Table 5.2, it has affected different GMS countries in different ways.

Figure 5.1 Real Exchange Rates of GMS Economies: Q1 2008 - Q1 2009

(Local currency per unit of U.S Dollar)



5. 4 Modeling the Economic Effects of Trade Facilitation on Bilateral Trade Flows in GMS

This study seeks to analyse the effects of trade-finance on trade flows of GMS countries by constructing dynamic gravity model of trade influencing trade flows in a time of economic crisis.

5.4.1 Specification of the Model

Trade Policy modeling is conducted in this section by applying a panel model to provide empirical evidence on the effects of domestic credit, foreign assets and FDI on trade flows in the presence of financial liberalization. Other policy variables: money multiplier and share of government expenditure in GDP are also incorporated in the model in the context of 'trade-led recovery' through trade-finance scenario. The estimation is performed applying a two-stage estimation method of HMR(2008, p. 455).

In accordance with this method, we first estimate a Probit model shown by Equation 1. The dependent variable Y_{ij} indicates binary variable in that the value of 1 is assigned for Y_{ij} if there exists trade between two countries and zero otherwise. The independent variables include exporter, importer, exporter-year, importer-year, year-dummies and other interaction terms as mentioned in Equation 1. Using the Probit model, the predictions for probabilities of export of a country i to country j, i.e., Log $\hat{Y}_{ijt}$ are made. Probit model of bilateral trade is provided in Equation 1.

$$\text{Log } Y_{ijt} = \Pr (T_i = 1 \mid \text{observed variables}) \quad \ldots\ldots\ldots\ldots (1)$$

In the second stage, the 'predicted probabilities' of trade flow: Log $\hat{Y}_{ijt}$ is used as dependent variable and fully parameterized trade flow model shown by Equation 2 is estimated. In other words, the estimations of Equation 2 are made in the context of seven cases based on Baltagi et al (2003, p. 393). In addition, the second-stage equation can also be estimated in two forms: random effect model (REM) and fixed effect model (FEM).

Baltagi et al (2003, p. 396) argue that it is important to control all interaction effects in gravity models based on importer, exporter and time effects. Thus the present study incorporate these effects in the model. The gravity model of trade flow in panel form, comprising main and interaction effects, can be expressed as follows:

$$\text{Log } \hat{Y}_{ijt} = \alpha_{ij1} + \alpha_{ij2} + \alpha_{ij3} + \delta_{i1} + \gamma i_t + \omega_{j1} + \beta_{11} \log \text{CrDR}_{it} + \beta_{21} \log \text{CrDR}_{jt} + \beta_{31} \log \text{GDP}_{it} + \beta_{41} \log \text{GDP}_{jt} + \beta_{51} \log \text{PGDP}_{it} + \beta_{61} \log \text{PGDP}_{jt} + \beta_{71} \log \text{CPI}_{it} + \beta_{81} \log \text{CPI}_{jt} + \beta_{91} \text{FDI}_i + \beta_{10\,1} \log D_{ijt} + \beta_{11\,1} \log \text{ASEAN}_{it} + \beta_{12\,1} \log \text{GMS}_{it} + \varepsilon_{ijt} \quad \ldots\ldots \quad \ldots\ldots (2)$$

where $\text{Log } \hat{Y}_{ijt}$ denotes the log of predicted probabilities of bilateral export of country i to country j at year t. including GDP_i: GDP of country i; GDP_j: GDP of country j; $PGDP_i$: per capita GDP of country i; $PGDP_j$: per capita GDP of country j; FDI_i: foreign direct investment of country i; D_{ijt} : distance between countries i and j, $CrDR_i$ and $CrDR_j$: real credit/GDP ratio of countries i and j; CPI_i and CPI_j : consumer price indices of countries i and j; and ε_{ijt} : random error term. The terms δ_{i1} , γi_t and ω_{j1} are fixed exporter, importer and time effects, which are referred to as 'main effects'. α_{1ij} is a country-pair effect, i.e., an interaction effect between unobserved an exporter and characteristics, α_{2it} show exporter specific time-variant effects and α_{jt3} indicates importer specific time-variant effects.

The gravity model also allows us to estimate the effect of economic integration on bilateral trade of these countries. These effects have been captured in our model by introducing dummy variables in the model. Each dummy takes the value of 1 for an observation from which the two countries are members of ASEAN and zero otherwise. In addition, GMS countries have implemented a series of development projects from the regional cooperation programs of international organizations, in particular, the Asian Development Bank is a major contributor of financial resources for these programs. To capture the effects of participation in GMS programs, GMS dummies are also included in the model. Dummy variables for participation under GMS development program is augmented in the model. Value 1 is set for countries participating under GMS development program and 0 otherwise.

The panel data which comprises the cross-section data of 21 countries (six GMS countries and their fifteen major trading partners) for the period 2000 to 2007 are used to establish the model parameters. The data sources include the *Direction of Trade Statistics* for bilateral trade flow, The IMF, International Financial Statistical Statistics (IFS), for domestic credit, foreign assets, current account credit, government expenditure, money M2, monetary base, consumer price index (CPI) and GDP constant prices. The real exchange rate is obtained from a nominal exchange rate (domestic currency per unit of U.S dollar) adjusted for relative consumers prices (IFS line 64). M2 multiplier is

calculated as the ratio of M2 (IFS lines 34 plus 35) to money (IFS line 14). Real domestic credit/GDP is calculated as the ratio of domestic credit to CPI (IFS line 52) divided by GDP at constant price (IFS line 64).

In explaining, the effect of liberalization on bilateral exports, seven cases viz., Case 1: benchmark case; Case 2: time effect; Case 3: exporter-importer effect; Case 4: exporter-effect; and Case 5: importer effects; Case 6: exporter-time effect; and Case 7: importer-time effects are undertaken. The results of FRM and REM under these seven cases are provided in Tables 3 and 4 respectively.

Unobserved, time-constant variables are often known as unobserved effects comprising fixed effects and random effect in a panel data analysis. "fixed effects is often superior to pooled OLS or random effect for application where participation in a (grant) program is determined by program attributes that also affect Y_{it} (dependent variable)." (Greene, p. 279).

"As in any other context of that uses statistical inference, it is possible to set a statistical rejection of REM with the differences between the REM and FEM estimates being practically small". (Greene, p. 291). The Hausman test is also performed to check whether the REM is more efficient than FEM. Tables 3 and 4 report the estimated coefficients for above mentioned seven cases.

5.5 Dynamic Model Specification

To account for AR(1) autocorrelation within panels as well as heteroskedasticity or cross-sectional correlation across panels, a dynamic model is constructed in this section. The panel corrected standard errors (PCSE) adjusted for AR1 in the model can be expressed in Equation 3 based on Baltagi (2005, p. 135-158).

$$\begin{aligned}\text{Log } \hat{Y}_{ijt} = {} & \alpha_{ij1} + \alpha_{ij2} + \alpha_{ij3} + \delta_{i1} + \gamma i_t + \omega_{j1} + \beta_0 \text{Log } \hat{Y}_{ij\,t-1} + \beta_{11} \log \text{CrDR}_{it} + \\ & \beta_{21} \log \text{CrDR}_{jt} + \beta_{31} \log \text{GDP}_{it} + \beta_{41} \log \text{GDP}_{jt} + \beta_{51} \log \text{PGDP}_{it} + \\ & \beta_{61} \log \text{PGDP}_{jt} + \beta_{71} \log \text{CPI}_{it} + \beta_{81} \log \text{CPI}_{jt} + \beta_{91} \text{FDI}_i + \beta_{10\,1} \log D_{ijt} + \\ & \beta_{11\,1} \log \text{ASEAN}_{it} + \beta_{12\,1} \log \text{GMS}_{it} + \varepsilon_{ijt} \qquad \text{..... (3)}\end{aligned}$$

where $i = 1\ldots, N, t = 1, \ldots..T$; β_0 is a scalar, and it is assumed that $u_{i\,t}$ follow a one-way error component model.

$$u_{i\,t} = \mu_i + v_{it}$$

where $\mu_i \sim IID(0, \sigma^2)$ and v_{it} $IID(0, \sigma^2)$ independent of each other and among themselves. The regression results under FEM and RFM using STATA software are reported in Tables 5.5 and 5.6 respectively.

5.6 Results of the Analysis

The Probit model is estimated in the first stage, whichprovides the marginal effects of each variables as mentioned in Table 5.3. In the second stage, seven cases are estimated in the form of dynamic gravity models. First we run the complete model for each case. Next, the insignificant variables including home, host, home-year, host-year, and year dummies have been dropped and the models are re-estimated and reported in Tables 3 through 6. The coefficient on the lagged exports is always statistically significant at one-per cent significant level. The results under static gravity model are not reported in this report.

Several features are worth noting as mentioned in dynamic gravity models. First the sign and magnitude of the coefficient of explanatory variables are as expected and coefficient are statistically significant in most cases: financial liberalization variables are positively associated with trade flows, where as ASEAN and GMS dummies are positively related to the bilateral flow.

Second, exporters' domestic credit ($CrDR_j$) is likely to increase trade flow by about 1 per cent and 0.44 per cent respectively. Third, most importantly the estimates of credit of not only exporter but also credit of importer affect the bilateral trade flow. The effect of FDI suggest a substantial positive impact on trade flow of these countries. On average, a 1 per cent reduction in the FDI_i would increase trade volumes a little more than 4.1 per cent.

Table 4 reports estimates of the parameters under REM when the domestic credit and FDI are use for liberalization measures. The results suggest that in most cases, 1 per cent increase in exporter's domestic credit, results in a 0.44% increase in bilateral trade flows, in comparison, 1 per cent increase in importer's credit, results in a 0.13% increase in bilateral trade flows while other factors remain constant. Similarly a 1 per cent increase in FDI results in a 1.2% (Case 2) increase in trade flows under the *ceteris paribus* assumption. The coefficient of GMS dummies are significant at 1 percent level in all cases. We find that these interaction effects are statically significant at 95 %. Estimates are White-robust to heteroskedasticity.

Table 5.3 Dynamic Gravity Models: Fixed Effects

Dependent variable: $\log Y_{ijt}$

Explanatory Variable	Case I	Case 2	Case 3	Case 4	Case 5	Case 6	Case7
Constant	-7.6090	-7.8405	-6.5056	-6.3479	-6.5519	-7.4277	-6.3678
	(1.1032)	(0.8868)	(1.1160)	(0.9872)	(0.9114)	(1.0274)	(1.1814)
$\log Y_{ijt-1}$	0.4108	0.3104	0.5542	0.4699	0.4732	0.4105	0.5525
	(0.0571)	(0.0580)	(0.0555)	(0.0568)	(0.0564)	(0.0570)	(0.0558)
log $CrDR_i$	0.4409	0.5411	0.1023	0.1325	0.1285	0.4397	0.1042
	(0.0652)	(0.0788)	(0.0317)	(0.0403)	(0.0396)	(0.0650)	(0.0322)
log $CrDR_j$	0.1418	0.1449	0.0752	0.0652	0.1092	0.1138	0.0519
	(0.0926)	(0.0872)	(0.0746)	(0.1242)	(0.0939)	(0.0694)	(0.0987)
log PGDPi			0.0987	0.1553	0.1525		0.1000
			(0.0643)	(0.0811)	(0.0808)		(0.0645)
log PGDPj	1.9398	1.9780	1.6564	1.5968	1.6265	1.9082	1.6321
	(0.2751)	(0.2195)	(0.2834)	(0.2307)	(0.2237)	(0.2657)	(0.2919)
log FDI_{ir}	0.1340	0.1060	0.0769	0.0518	0.0487	0.1350	0.0782
	(0.0277)	(0.0294)	(0.0283)	(0.0330)	(0.0324)	(0.0275)	(0.0286)
exporter2	-0.4855	-0.6199				-0.4823	
	(0.0831)	(0.1009)				(0.0827)	
exporter3	-0.2865	-0.3816		-0.0431		-0.2854	
	(0.0573)	(0.0698)		(0.0794)		(0.0571)	
Importer 2	-0.0268						
	(0.0587)						
Yr2001			0.1096				0.1094
			(0.0275)				(0.0276)
Yr2002	-0.1797		-0.0980			-0.1797	-0.0979
	(0.0223)		(0.0263)			(0.0223)	(0.0264)
Yr2003	-0.0879					-0.0878	
	(0.0260)					(0.0259)	
Yr2004	-0.0741		0.0277			-0.0733	0.0281
	(0.0278)		(0.0240)			(0.0277)	(0.0240)
Yr2005	0.0363		0.1337			0.0372	0.1342
	(0.0291)		(0.0253)			(0.0290)	(0.0254)
Yr2006	-0.0935		-0.0116			-0.0920	-0.0105
	(0.0302)		(0.0290)			(0.0300)	(0.0292)
Yr2007	-0.1530		-0.0394			-0.1509	-0.0382
	(0.0353)		(0.0329)			(0.0350)	(0.0331)
Observation		231	231	231	231	231	231
R^2 within	0.7716	0.6163	0.7318	0.5518	0.5512	0.7714	0.7319
R^2 between	0.5471	0.5445	0.5623	0.5649	0.5588	0.5487	0.5639
R^2 overall	0.4671	0.4491	0.4846	0.4701	0.4638	0.4690	0.4865
F test	49.23	48.41	46.83	37.11	43.39	53.21	43.06
ρ	0.9974	0.9958	0.9959	0.9926	0.9931	0.9973	0.9957

Figures in parenthesis are panel connected standard errors (PCSE) of estimates

Table 5.4 Dynamic Gravity Models: Random Effects

Dependent variable: $\log Y_{ijt}$

Explanatory Variable	Case I	Case 2	Case 3	Case 4	Case 5	Case 6	Case7
Constant	-6.0865	-3.0766	-1.6197	-7.3651	-0.7889	-1.4822	-4.9864
	(0.8858)	(0.5252)	(0.3901)	(1.1084)	(0.2784)	(0.3398)	(0.8376)
$\log Y_{ijt-1}$	0.4353	0.6835	0.7717	0.4940	0.7237	0.7393	0.5854
	(0.0565)	(0.0456)	(0.0382)	(0.0556)	(0.0452)	(0.0390)	(0.0542)
log $CrDR_i$	0.4421	0.2323	0.0885	0.1264	0.1560	0.2840	0.0994
	(0.0654)	(0.0850)	(0.0333)	(0.0400)	(0.0443)	(0.0694)	(0.0320)
log $CrDR_j$	0.1259			0.0462			
	(0.0930)			(0.1242)			
log CPI			0.6297			0.6257	
			(0.1717)			(0.1683)	
log PGDPi		1.0220	0.1166	0.1661	0.2350		0.1120
		(0.1891)	(0.0677)	(0.0811)	(0.0905)		(0.0645)
log PGDPj	1.9553	0.0525	0.0228	1.6167	0.0445	0.0305	1.6274
	(0.2743)	(0.0150)	(0.0118)	(0.2298)	(0.0153)	(0.0118)	(0.2786)
log FDI_{ir}	0.1305	0.0226	0.0580	0.0464	0.0567	0.0864	0.0741
	(0.0279)	(0.0359)	(0.0298)	(0.0330)	(0.0347)	(0.0302)	(0.0285)
log $ASEAN_i$				2.2366			
				(0.3337)			
log GMS_i				0.8496			
				(0.2289)			
exporter2	-0.4998	0.3978				-0.3247	
	(0.0833)	(0.1628)				(0.0897)	
exporter3	-0.2972	0.4810				-0.2117	
	(0.0573)	(0.1381)				(0.0629)	
Yr2001			0.0650			0.0307	0.1231
			(0.0298)			(0.0309)	(0.0316)
Yr2002	-0.1800		-0.1395			-0.1550	-0.0854
	(0.0225)		(0.0281)			(0.0281)	(0.0297)
Yr2003	-0.0839		0.0063			-0.0001	0.0177
	(0.0261)		(0.0279)			(0.0277)	(0.0290)
Yr2004	-0.0704		0.0533			0.0432	0.0459
	(0.0280)		(0.0277)			(0.0277)	(0.0278)
Yr2005	0.0387		0.1648			0.1593	0.1500
	(0.0294)		(0.0260)			(0.0256)	(0.0254)
Yr2006	-0.0950						
	(0.0304)						
Yr2007	-0.1501		-0.0033			-0.0161	-0.0215
	(0.0356)		(0.0262)			(0.0263)	(0.0251)
importer1	1.1135						0.8063
	(0.2096)						(0.1374)

Table 5.4 (Continued)

importer2	0.5384			-0.4080			0.4761
	(0.1033)			(0.1704)			(0.1033)
importer3	0.6172			-0.3901			0.4932
	(0.1286)			(0.1219)			(0.1096)
importer12	-2.0510			0.5346			-1.7505
	(0.3029)			(0.0875)			(0.3166)
importer14	-2.8924			-0.1711			-2.4502
	(0.4101)			(0.0405)			(0.4262)
importer16	-2.7828			-0.0628			-2.3406
	(0.4031)			(0.0427)			(0.4143)
importer17	-3.0782			-0.3045			-2.5820
	(0.4449)			(0.0620)			(0.4556)
importer18	-3.1005			-0.1632			-2.3117
	(0.5329)			(0.3674)			(0.4101)
importer19	-2.3975			0.2502			-2.0242
	(0.3462)			(0.0572)			(0.3580)
importer 20	0.3479			2.5056			0.2466
	(0.0674)			(0.3755)			(0.0453)
importer21	-2.7006						-2.2922
	(0.3959)						(0.4111)
Observation	231	231	231	231	231	231	231
R^2 within	0.7694	0.5153	0.6984	0.5487	0.4370	0.7196	0.7291
R^2 between	0.9798	0.9776	0.9914	0.9695	0.9609	0.9911	0.9718
R^2 overall	0.9118	0.7940	0.8785	0.8282	0.7677	0.8839	0.8963
X^2 test	7.09	113.36	38.46	4.82	84.87	73.33	1.01
ρ	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figures in parenthesis indicates PCSE

Note: Exporters: 1: Cambodia, 2: Lao PDR, 3: Myanmar, 4: Thailand, 5: Viet Nam, 6: China.
Importers: 1: Malaysia, 2: Indonesia, 3: Philippines, 4: Singapore, 5: Hong Kong, 6: Korea, 7: Japan, 8: USA, 9: UK, 10: Canada, 11: Switzerland, 12: Australia, 13: New Zealand, 14: India, and 15: Germany.

Note also that inclusion of D_{ij}, CPI_i , CPI_j and population of these countries could not make the results are significant at 95 per cent. The largest increases in trade are associated with actions to improve the FDI_i and active participation in GMS programs and ASEAN integration. The coefficient of lagged exports is statistically significant at one-per cent level and confirming that a dynamic specification of gravity is valid. This model allows us whether the time-series correlation could be due to misspecification of dynamics. In contrast to the corresponding static specification, in which time-variables involve the persistent effects.

5.7 Sensibility Analysis

The analysis in this section is motivated by the policies being pursued currently by Asian counties in general, to enhance the resiliency through rebalancing the source of growth. The present research seeks to examine the effects of such policy stance on bilateral trade flow of GMS countries by applying selected monetary and fiscal variables as instruments in the instrumental variable (IV) model.

The sensibility test is performed in this section using a money multiplier and government expenditure/GDP ratios as instruments in the Institutional variable (IV) model. To test for the hypothesis: no correlation exists between the instruments for domestic credit variable and the error term of the trade equation, the Sargan-Hansen J test is also performed using generalized method of moments (GMM).

In both cases: non linear least squares (NLS) model and IV model, very similar results have been obtained as mentioned in Tables 5.4 through 5.8.

The domestic credit may be caused by shocks that also causes trade flows to shrink; that is, the estimated gravity model with panel data reported in the previous section may be biased because trade and domestic credit are simultaneously determined by other factors that have been omitted from the statistical analysis. To examine whether the simultaneity problem exists in our estimated panel model, sensibility analysis is performed in this section using the IV model in estimating the dynamic gravity equation with panel data. Two variables are used as instrumental variables as follows: (i) the M2 money multiplier and (ii) government budget expenditure as per cent of GDP. The rationale of inclusion of these variables is that trade flow was facilitated by high ratio of government expenditure, M2 multiplier

Table 5.5 Dynamic Gravity Models (IV Method): Fixed Effects

Dependent variable: log Y_{ijt}

Explanatory Variable	Case I	Case 2	Case 3	Case 4	Case 5	Case 6	Case7
Constant	-8.3159	-7.1974	-6.1976	-5.8969	-6.1582	-8.0874	-6.1165
	(3.0045)	(1.1270)	(1.1290)	(1.0268)	(0.8986)	(2.9599)	(1.1951)
log Y_{ijt-1}	0.4206	0.3829	0.5562	0.4228	0.4454	0.4205	0.5552
	(0.0590)	(0.0654)	(0.0556)	(0.1070)	(0.0974)	(0.0589)	(0.0560)
log $CrDR_i$	0.3755	0.2931	0.0724	0.0693	0.0693	0.3779	0.0735
	(0.1929)	(0.1079)	(0.0338)	(0.1256)	(0.0795)	(0.1925)	(0.0343)
log $CrDR_j$	0.1360	0.1128	0.0658	0.0693	0.1118	0.1090	0.0524
	(0.0934)	(0.0900)	(0.0749)	(0.1256)	(0.1224)	(0.0700)	(0.0989)
log PGDPi	0.2221	0.0159	0.0463			0.1944	0.0471
	(1.4671)	(0.2564)	(0.0675)			(1.4638)	(0.0678)
log PGDPj	1.9163	1.7854	1.6333	1.5956	1.6446	1.8856	1.6193
	(0.2783)	(0.3493)	(0.2842)	(0.2544)	(0.2287)	(0.2688)	(0.2925)
log FDI_{ir}	0.1289	0.0945	0.0831	0.1074	0.0895	0.1301	0.0839
	(0.0333)	(0.0344)	(0.0284)	(0.0734)	(0.0636)	(0.0332)	(0.0287)
exporter 1	0.2571	0.3011				0.2769	
	(1.2015)	(0.2478)				(1.1989)	
exporter 3	0.1704	0.1305				0.1700	
	(0.0847)	(0.0517)				(0.0845)	
Yr2001			0.0792				0.0789
			(0.0300)				(0.0301)
Yr2002	-0.1890		-0.1294			-0.1882	-0.1296
	(0.0481)		(0.0285)			(0.0480)	(0.0285)
Yr2003	-0.1035		-0.0307			-0.1018	-0.0309
	(0.0912)		(0.0240)			(0.0910)	(0.0241)
Yr2004	-0.0929					-0.0899	
	(0.1237)					(0.1234)	
Yr2005	0.0099		0.1061			0.0139	0.1062
	(0.1688)		(0.0240)			(0.1684)	(0.0241)
Yr2006	-0.1276		-0.0389			-0.1222	-0.0385
	(0.2095)		(0.0277)			(0.2089)	(0.0279)
Yr2007	-0.1891		-0.0657			-0.1826	-0.0652
	(0.2403)		(0.0313)			(0.2396)	(0.0314)
importer 2	-0.0257			-0.0583			-0.0130
	(0.0589)			(0.1184)			(0.0630)
Observation	231	231	231	231	231	231	231
R^2 within	0.7707	0.5983	0.7306	0.5408	0.5434	0.7750	0.7307
R^2 between	0.5479	0.5510	0.5632	0.5607	0.5544	0.5495	0.5651
R^2 overall	0.4682	0.4565	0.4862	0.4688	0.4613	0.4702	0.4884
ρ	0.9973	0.9946	0.9957	0.9925	0.9931	0.9972	0.9956

Figures in parenthesis indicates PCSE

Table 5.6 Dynamic Gravity Models (IV Method): Random Effects

Dependent variable: log Y_{ijt}

Explanatory Variable	Case I	Case 2	Case 3	Case 4	Case 5	Case 6	Case7
Constant	-6.4973	-2.2969	-1.5512	-4.6282	-0.1445	-0.5800	-4.8240
	(0.9237)	(0.4641)	(0.3987)	(0.8435)	(0.1739)	(0.1901)	(0.8471)
log Y_{ijt-1}	0.4416	0.7119	0.7716	0.4396	0.6830	0.7806	0.5878
	(0.0578)	(0.0470)	(0.0382)	(0.1019)	(0.0718)	(0.0389)	(0.0543)
log $CrDR_i$	0.4224	0.0478	0.0755	0.0874	0.0837	0.2850	0.0712
	(0.0755)	(0.1059)	(0.0355)	(0.0850)	(0.0817)	(0.0815)	(0.0341)
log $CrDR_j$	0.1220			0.0448			
	(0.0933)			(0.1267)			
log PGDPi		1.0385	0.0934				0.0624
		(0.1912)	(0.0711)				(0.0678)
log PGDPj	1.9418	0.0455	0.0228	1.6085	0.0542	0.0292	1.6204
	(0.2756)	(0.0153)	(0.0118)	(0.2589)	(0.0202)	(0.0124)	(0.2792)
log FDI_{ir}	0.1293	0.1237	0.0670	0.1127	0.1345	0.0866	0.0794
	(0.0280)	(0.0365)	(0.0300)	(0.0747)	(0.0656)	(0.0311)	(0.0287)
log GMS_i				0.4190			
				(0.1169)			
exporter 1	0.4755	-0.6386				0.3270	
	(0.0955)	(0.1834)				(0.1046)	
exporter 3	0.1938	0.0033				0.1116	
	(0.0369)	(0.0510)				(0.0391)	
Yr2001			0.0675			-0.0242	0.1415
			(0.0335)			(0.0300)	(0.0364)
Yr2002	-0.1815		-0.1376			-0.1948	-0.0681
	(0.0227)		(0.0320)			(0.0300)	(0.0347)
Yr2003	-0.0852		0.0081			-0.0184	0.0356
	(0.0262)		(0.0318)			(0.0321)	(0.0333)
Yr2004	-0.0707		0.0562			0.0340	0.0663
	(0.0280)		(0.0314)			(0.0323)	(0.0316)
Yr2005	0.0381		0.1677			0.1582	0.1704
	(0.0294)		(0.0287)			(0.0293)	(0.0281)
Yr2006	-0.0965		0.0029			0.0035	0.0203
	(0.0305)		(0.0262)			(0.0269)	(0.0251)
Yr2007	-0.1501						
	(0.0356)						
importer1	1.1027			0.4068			0.8033
	(0.2107)			(0.1776)			(0.1377)
importer2	0.5357						0.4719
	(0.1034)						(0.1035)
importer3	0.6134			0.0103			0.4946
	(0.1289)			(0.0860)			(0.1098)

Table 5.6 (Continued)

importer12	-2.0383			-1.6799			-1.7431
	(0.3039)			(0.2980)			(0.3172)
importer14	-2.8739			-2.3899			-2.4398
	(0.4118)			(0.3913)			(0.4271)
importer16	-2.7654			-2.2761			-2.3308
	(0.4047)			(0.3910)			(0.4151)
importer17	-3.0578			-2.5167			-2.5710
	(0.4467)			(0.4305)			(0.4565)
importer18	-3.0715			-2.3729			-2.3020
	(0.5359)			(0.5852)			(0.4109)
importer19	-2.3820			-1.9675			-2.0157
	(0.3476)			(0.3346)			(0.3587)
importer 20	0.3443			0.2691			0.2456
	(0.0678)			(0.0816)			(0.0454)
importer21	-2.6836			-2.2093			-2.2825
	(0.3973)			(0.3876)			(0.4119)
Observation	231	231	231	231	231	231	231
R^2 within	0.7693	0.4952	0.6981	0.5381	0.4300	0.7028	0.7280
R^2 between	0.9792	0.9722	0.9912	0.9518	0.9436	0.9755	0.9705
R^2 overall	0.9118	0.7897	0.8784	0.8225	0.7587	0.8765	0.8959
X^2 test	6.74	48.12	33.78	1.44	68.47	82.17	20.45
Hansen-J		10.521	29.21	23.9	35.5	2.196	32.06
ρ	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figures in parenthesis indicates PCSE

and current account/GDP ratio. The use of these instruments is justify on the basis that countries with higher ratio will encourage the trade flow. To test for the existence of endogeneity in regression due to the treatment of endogenous regressors as exogenous ones, LM test is conducted and these result are reported in Tables 4.5 and 4.6.

The results under IV model are reported in Tables 4.5 and 4.6. As can be seen in these tables, positive effects of domestic credit on trade flows remain significant in both fixed and random effect models indicating that simultaneity bias is not responsible for positive effects of domestic credit on trade flows derived from our gravity model with panel data. Table 5 reports that trade flows is expected to increases by 0.37 percent due to a 1 per cent increase in domestic credit of exporter.

The coefficient on the lagged exports is always statistically significant at one-per cent significant level. The GMM estimator offers Hansen J test by using 'xtivreg2' in STATA command and it provides efficient result in terms of standard errors compared to respective static dynamic models. The reported Hansen J statistics is robust to first-order autocorrelation and heteroskedasticity.

Our findings are as follows: both main and time effects are significant at conventional levels. The model indicates certain positive impact of domestic credits and GDP of both exporter and importer, and FDI on bilateral trade. Some other interaction effects are insignificant. The liberalization in banking sector will increase credit and hence bilateral trade. In other words, it can largely be obtained through progressive liberalization by implementing the legislative, regulatory and institutional framework of the financial sectors.

Strategic intervention by governments is also required to provide new directions in order to achieve the stability. At the international level, restoring trade finance and mitigating the risk of impact on other informal sectors. It is important to closely coordinate trade infrastructure, and institutional and regulatory reforms in time of crisis, which indicates opportunities for the GMS to prepare for greater participation in regional production and trade networks. Aid for trade into the development of trade service infrastructure is especially important in building domestic capacity to enhance efficiency and cost effectiveness.

The mobilization of private and public sector funds for investment in production, trade-facilitating infrastructure, development-oriented reforms of trade policies and regulations, and export promotion, are among the key steps required for these purposes. Channeling of resources from production sectors to service trade sectors is worthwhile in a time of crisis. The opening up of GMS economies by maintaining investment in services

sectors would encourage trade as an engine to ameliorate the effects of a crisis. The development of capacity to engage in services trade more effectively will also improve the resilience of economies against external shocks in the future.

A key question for policymakers is how trade performance can be increased rebalancing internal and external financial resources in a strategic way. Our analysis provides three major strategic policies: (i) the trade cost, (ii) domestic credits of both exporters and importers influence bilateral trade; (iii) FDI inflow can be improved by pursuing financial liberalization policies, i.e. by lowering restrictions, enhancing regulatory regimes and promoting competition policy in line with a country-specific analysis; (iv) domestic credit and (v) enhanced trade and investment activities in regional integration programs under ASEAN and regional cooperation, such as GMS development program, and others bilateral and/or multilateral ones.

Two conclusions emerge regarding trade and investment policy options of the GMS. First, the recovery of GMS trade depends on the availability of finance to expend production of tradable goods, i.e. trade finance and second, trade infrastructure finance to improve productivity and competitiveness in a time of economic crisis is more relevant.

The limitation of the study is that in analyzing the impact of economic crisis on trade liberalization in services in GMS, bilateral trade flows between two countries are used in the context of both static and dynamic gravity models because bilateral service-trade data are not available.

In conclusion, this paper provides a number of issues in pursing sound trade-cost policies in support of progressive liberalization. This paper provides an empirical investigation on the effects of trade cost in relation to trade facilitation, domestic credit, and FDI, on bilateral trade flows of GMS economies by applying a gravity model of trade flow with panel data. The results suggest a significant positive impact of domestic credits, foreign assets and FDI on bilateral trade flows in GMS countries. In addition, other external financial resources such as FDI, GMS development programmes and ASEAN integration factor also contributed significant positive effects on bilateral trade flows of GMS economies for the period 2000-2007.

The estimates under IV model also support the positive relationship between domestic credit and bilateral trade flows of GMS economies in the context of trade-finance framework.

The effects of regional trade agreements and the effects of GMS corporation programs on bilateral trade of these countries also contribute significantly trade flow. In this respect, dummy variable variables for ASEAN membership and the countries

benefiting from engagement in GMS cooperation are included GMS dummies in our trade model. The inclusion of these dummies enables us to improve efficiency of regression in the context of reduction in 'rho' value in estimating regression.

Macro economic indicators are also incorporated in the standard gravity model with panel data under the study and our results suggest a significant contribution of these indicators on trade flows. Finally, the policy implication of the study is that in monitoring the impact of the crisis on trade and development, a new consensus on sound and suitable strategies at the national, regional and global level is required to encourages inclusive growth which benefits all sectors.

In conclusion, the recent economic crisis has affected GMS economies significantly through several mechanisms: prolonged decline in trade, foreign investment, regional production, hotel, and tourism and employment. It has also retarded progressive trade and financial liberalization in GMS economies. In turn, economic growth of these countries will decline in the short term. On the basis of the results, the following three policy implications can be drawn up as follows:

(i) Domestic credit, FDI, participation in regional integration and collaboration activities under ASEAN and GMS have affected relatively bilateral trade flows of GSM countries.

(ii) The use of macroeconomic variables: money multiplier and CPI as policy instruments may result in positive effects on trade flows of these countries.

(iii) The provisions of domestic and or foreign financial resources become critical trade facilitation factors because of capital drying up during the current economic crisis.

CHAPTER 6
CONCLUSION

This study explores special features of Thailand's trade facilitation performance at cross-border trade with its neighbouring Greater Mekong Subregion (GMS countries) and seeks to identify the area in which trade facilitation measures have the potential to encourage traders to encourage trade and development of Northern Thailand. The analysis is based on regional level study on trade facilitation performance that influences sustainable development of Northern Thailand by conducting surveys from business perspectives at four provinces: Chiang Rai, Nongkai, Mukdahan and Maesod. In addition, the effects of Thailand's trade with GMS countries on trade and development are also investigated in the context of spillover effects on Northern Thailand applying recent development in econometric modeling.

The trade facilitation performance of Northern Thailand from business perspective seeks to examine the major components of trade facilitation such as (i) trade and custom legislation (ii) trade documentation and procedure, (iii) custom clearance procedure, (iv) trade and custom enforcement practices from safety, health, environment aspects (v) use of information and communication technology use of various ICT enable techniques and automated trade system and (vi) trade infrastructure development for lowering trade transaction cost.

6.1 Findings of the Study

The literature on the empirical studies trade facilitation indicates empirical analyses at the country level such as the issue between two nations or a group of nations. The present research attempts the case of regional trade facilitation measures within a country, in particular, Thailand and its other GMS countries. Thus it enables to consider the trade facilitation issues at both national and regional, in particular, GMS levels. Thus the methodological approaches employed in this study can be replicated in other GMS countries in the future.

This research first explored extensively trade facilitation practices and performance and need for further development in three provinces based on qualitative and quantitative approaches. It enables us to establish trade facilitation indicators at provincial levels. These indicators are summarized in this section. The Average time taken for

outward trade at Chiang Rai was lower than those of Mukdahan, Nongkai. The time required for inward trade transactions at airport stated less than 1 hour in Chiang Rai, while there are no airports in Mukdahan and Nongkai. The average required for Ports indicated about 1 to 2 hours in Nongkai and Chiang Rai. However, 13% of respondent stated that time requirement in Mukdahan indicated 2 to 3 hours and 3 to 4 hours respectively.

Cost efficiency are analysed based on fees charged by (i) domestic bank and foreign bank, (ii) multimodal especially container, (iii) port and airport facilities and (iv) accessibility of the required information for traders. In Chiang Rai 33% of interviewees expressed the existence cost efficiency of domestic bank, while 2.9% of respondents showed efficiency of foreign bank. With respect to domestic transport 46% of respondents reported that it was cost efficiency in Chiang Rai and 6.67% indicated efficiency in foreign transport services

Main uses of automation -Internal office systems and services to clients are examined on the basic of use of automation, EDI, email, satellite communications and inspection services. In servicing customers, EDI systems were used in customs and ports as provided by 60% of respondents. The 20% of respondents mentioned that EDI was also used in transport services provider followed by banks and airport.

The existence of 1-10% physical inspection was reported by 33.3% of interviewers (trade forwarders) in Chiang Rai and 2.94% of interviewees in Nongkai. In contrast, 10% of interviewees stated that about 1-10% Customs physical inspection was reported by interviewees.

Most exporters used more than 50% of their goods from Chiang Rai through ports (33.3%) and road frontier (20%). Use of airport indicated about 6.7%. In Nongkai, exporters used more than 50% of their goods using inland container (47.06%) and airport (26.4%) respectively. In comparison, exporters from Mukdahan used more than 50% of their goods via road frontier (60%) and inland container deport (3%) in Nongkai (10%).

Exporters from Mukdahan and Chiang Rai also have arranged transportation arrangements in exporting products to their customers in Mukdahan arranged 10% to 20% had their transportation arrangement. In contrast, 2.9 % of exporters and from Nongkai offered transportation arrangements.

Most traders about 100% of respondents in Mukdahan, 60% in Chiang Rai and 38% in Nongkai seek the required information at CCI. They found less problems in this regard. About 50% Four types of problems faced by SME and trade facilitation activities are identified in this survey: customs formality and exchange control, concern in relation

to port, airport and shipment, availability of commercial information, and communication problems. In Chiang Rai, these problems are less prevailed compared to Nongkai and Mukdhan. Major problem at Chiang Rai .

Based on the survey results, use of ROO were 46.6% of respondents under survey in Chiang Rai, 30% in Mukdahan and 29& in Nongkia. With respect to export refund in association with ROO, 50% of interviewers stated as 'good' in Mukdahan.

Main import items were food (60% in Chiang Rai), consumer good 60% in Mukdahan) and 8.8% (consumer goods in Nongkai). The 60% of interviewers indicated that imported goods were more than 50 millions, while 50% reported that the importers imported 10 mil annually. In Mukdahan, 20.5% of importers imported about one million.

The 26.6% of interviewees used 'full container load' in Mukdahan, while this ratio of such usage indicated 26.6% in Chiang Rai. Container clearance system at Customs were rated as 'good' (50% in Mukdahan and 33% in Chiang Rai). In Nongkai 38% reported that this system is very good. With respect to custom clearance, valuation, description and ROO, 20% of interviewees reported problems in Chiang Rai, while the ratio accounted for 2.9% in Nongkai. However, they did not face any problems in using containers in Mukdahan. In view of efficiency of physical inspection, it was rated as good (70% in Mukdahan), while it was 32.3% in Nongkai. The 40% to 50% of good are exported by road or rail by 60% of interviewees in Mukdahan and 26.6% in Chiang Rai. See Table 2.10(d).

The value of 'use of shipment covering more than 50 million' included 60% traders in Chiang Rai and 10% in Mukdahan. With respect to 'TEU handled more than 40 tons' showed 10% in Mukdahan and 6.67% in Chiang Rai. The 93.3 % of good at Chiang Rai were based on products of Thailand, while 73% were from China and 10% from Mukdahan. Internal door to door services were provided in Chiang Rai. The standard bill of loading was used in operation. The 66% of respondents reported that there exists serious delay. The 60% of respondents reported that cargo damage was in most cases, less than 10% . EDI was mostly used in Chiang Rai. Use of internet was 86% in Chiang Rai.

With respect to use of vehicle in operation, '1-4 vehicle' range indicated 26.6%, while '9-12 vehicle indicated 6.67% in Chiang Rai. Use of containerized "inward trading" with 5 million was 10% in Mukdahan and 20% in Chiang Rai.

The direction of trade of Mukdhan reflected Lao PDR (50%), China (30%), Viet Nam (20%), Malaysia (10%), Hong Kong (10%) and Singapore (10 %). Trade from Nongkai indicated Chiang Rai (2.29%) and Hong Kong (2.94%). Main trading partners of traders in Chiang Rai showed China (33.3%), Lao PDR (13.3%) and Viet Nam (33.3%).

Internal door to door services were provided in Chiang Rai (13.3%). TIR and ATA serviced used in Nongkai was 2.9%.

The SME's experiences in relation to operation efficiency in dealing with Department of Customs at land frontier and ports were depisctted in this section. The over all assessment on Custom efficiency was rated as 'good' (20%) , 'very good' (10%) and 'normal' (20%) in Mukdahan, while in Chiang Rai it was rated as 'good' (26.6%) and 'normal' (33.3%). SME's evaluation on Customs in Nongkai indicated 'very bad' (2.94) and other SME did not express their evaluation on customs.

With respect to cost efficiency in Mukdahan, the rating scores of cost efficiency were same as With operation efficiency, in comparison, 2.9% of participating SME reported as 'normal', while 46.6% and 30% reported as normal and good respectively in Chiang Rai. An average time for release of vehicle at land frontier, 40% of respondents from SME reported that it was less than 30 minutes and 10% stated that it took 1 to 2 hours in Mukdahan. The time requirement was higher in Chiang Rai and 46.6% stated that it took 1 to 2 hours at Custom stationed at the land frontier.

Similarly the average time for release of vehicle at port, 40% of respondents from SME reported that it was less than 30 minutes and 10% stated that it took 1 to 2 hours in Mukdahan. Time requirement is higher in Chiang Rai and 46.6% of respondent stated that it took 1 to 2 hours at the customs stationed at the port while 6.6% of respondents described that more than 4 hrs at the Port in Chiang Rai.

Secondly, surveys also cover the current trade facilitation performance from the institutional perspectives and examines the trade facilitation services of five institutions: (i) Port Authority; (ii) Airport; (iii) Border-Crossing (Road Authority). (iv) Customs; (v) Pre-shipment Inspection Agency (PSI); (vi) Commercial Bank; Foreign Exchange Control Department at Bank; (vii) Chamber of Commerce and Industry; and (viii) Department of Trade & Industry.

The average time required for export of general merchandise was less than 1 hour and same time was required for imports through above 3 provinces. Similarly, the corresponding time for road borne and airfreight were also less than 1 hour. The average time for export and import of taxable goods were also same as other traded goods. Time requirement in these areas can be regarded as statics, due to the occurrence of incomplete documentation in the trade documents used.

The Department also used Direct data exchange, United Nations, Electronic Data Interchange For Administration, Commerce and Transport (UN/ EDIFACT) messages and The Automated System for Customs Data (ASYCUDA) under UNCTAD system

satisfactorily. The selection of delegates to World Customs Organization (WCO) technical committees were undertaken by the Head Quarters.

The Customs at above mentioned provinces also Implemented the GATT valuation code and implemented the WCO harmonized system. They applied Transports Internationaux Routiers /International Road Transport (TIR) and Automotive Technician Accreditation (ATA) procedures and the advanced ruling in trade. The proportion of inspected conventional consignments exceeded 80% at Mukdaham, less that 20% each in Nongkai and Chiang Rai. Proportion of inspected containers under the Department of Customs in each province under study indicated more than 80%.

The quality of cooperation with container inspection at border crossing was rated as 'normal' in Mukdahan, 'excellent' in Nongkai and 'good' in Chiang Rai. Customs also controls other such phytosanitary or security. There exists co-operation between export and import Customs services. The average time from arrival to departure was 1 to 2 hrs in Nongkai but it was less than half an hour and communication facilities are available sufficiently with reliable electricity supply.

The number of signatures required for trade documentation at Customs indicate as 'many' in Nongkai and '5' in Mukdahan and '2' in Chiang Rai. Proportion of inspected invoices were more thatn 80% in each Customs at the three Provinces. In addition, proportion of inspected, certificates of origin in Mukdahan and Chiang Rai indicated more than 80% each, while it was less than 20 in Nongkai. Proportion of inspected certificates of way-bills was about 20 % each in each province. The percent of dispute were also less than 20% in each province. There did not exist the experience of pilferage and loss of general goods.

There were three Pre-shipment Inspection (PSI) agencies each in Mukdhan and Nongkai under survey and their performances are reported in Table 3.3. Most PIS conducted the pre-shipment Inspections on about 1 to 4 consignments and one PSI conducted more than 12 consignments per month. The value of a consignment showed about 500,000 Baht. The average time taken to issue a PSI report was less than half an hour. The inflammable goods and living animals are excluded from the PSI. Portion of physically inspected PSI showed about less than 20% . Most PSI followed the instruction and standards.

Average time required for handling general export cargo was 3 days and average time of general import cargo was 1 day. The average roll-on roll-of was also 1 day. Main cause of customs delay was not related to the following cases: (i) banking requirement, (ii) late arrival, (iii) pre-shipment, (iv) unavailability of connecting transport. But the

delay was due to lack of network and electricity. It required a standard shipping note or EDI and port operate under efficient procedures moving goods and vehicles. Port had data exchange with Department of Customs and a Customs operation at the port. However, Port did not have a consultative committee.

Port can allow size of boat loads 200-300 tons and can support almost 9 boats. Port also can serve the stop boat overlap about 2-3 boats if there are many cargo ship request. The quality of co-operation with Department of Customs and the quality of co-operation with other control agencies were rated as good. Finally, the capacity building requirements can be drawn.

Thirdly, this research regional aspect of trade facilitation performances of CLMV are examined in the framework of AEC to capture regional aspects of trade facilitation that would enhance Thailand's comparative advantage and competitiveness.

Preliminary investigation in CLMV indicates that it needed policy coordination and implementation through accountability, transparency and consistency of the relevant public and private sectors within country and across countries. However, the survey data have limitations. They reflect that qualitative assessments on AEC performance are difficult to quantify in some cases. Finally, the survey sample aims at being indicative rather than representative, because of the existence of differences in limited sample size that calls for some caution in interpretation. However, the results are useful for focusing on discussion on critical strength and weakness in each group of AEC elements in each country. Finally the results also highlight how CLMV can exercise the effective policy leverages to influence the overall policy framework relative to each element.

This study also investigates the major problems faced by the business environment and other information for enhancing regional integration activities such as the requirements for regional production and distribution networks, existing firms' trade other ASEAN countries in the region; environmental costs; the current status of backward and forward linkages in the firms under study and supply chain management practices.

6.2 Summary of Recommendations

(i) To further improve and streamline bureaucratic procedures for trade

(ii) To facilitate forward linkage industries relating to distribution, logistics, marketing and financing for future industries

(iii) To promote further FDI in specific industries to engage in ASEAN production and distribution networks

(iv) To encourage use of ICT in both government and private sectors for effective

participation process in business and administrative measures

(x) To explore the transfer of technology to assist in exploring comparatively competitive industries under AEC

(xiii) To investigate the area in which effective trade facilitations are needed to enhance competitiveness of domestic firms as well as being conducive in attracting foreign direct investment.

This paper provides an empirical investigation on the effects of trade cost domestic credit, and FDI, on bilateral trade flows of GMS economies by applying a gravity model of trade flow with panel data. The results suggest a significant positive impact of domestic credits, foreign assets and FDI on bilateral trade flows in GMS countries. In addition, other external financial resources such as FDI, GMS development programmes and ASEAN integration factor also contributed significant positive effects on bilateral trade flows of GMS economies for the period 2000-2007.

The estimates under IV model also support the positive relationship between domestic credit and bilateral trade flows of GMS economies in the context of trade-finance framework.

The effects of regional trade agreements and the effects of GMS corporation programs on bilateral trade of these countries also contribute significantly trade flow. In this respect, dummy variable variables for ASEAN membership and the countries benefiting from engagement in GMS cooperation are included GMS dummies in our trade model. Finally, the policy implication of the study is that in monitoring the impact of the crisis on trade and development, a new consensus on sound and suitable strategies at the national, regional and global level is required to encourages inclusive growth which benefits all sectors.

On the basis of the results, the following three policy implications can be drawn up as follows:

- Domestic credit, FDI, participation in regional integration and collaboration activities under ASEAN and GMS have affected relatively bilateral trade flows of GSM countries.
- The use of macroeconomic variables as policy instruments may result in positive effects on trade flows of these countries.
- The provisions of domestic and or foreign financial resources become critical trade facilitation issues because of capital drying up during the current economic crisis.

6.3 Recommendations on Capacity Building in the Trade Facilitation

- identify issues affecting the cost and efficiency of their country's international trade;
- develop measures to reduce the cost and improve the efficiency of international trade;
- assist in the implementation of time and cost effectiveness measures;
- provide a national focal point for the collection and dissemination of information on best practices in international trade facilitation; and
- participate in international efforts to improve trade facilitation and efficiency.

The present research establishes the comparison of trade facilitation assessment indicators influencing trade efficiency and competitiveness for each trade location under study. It also highlights the required intervention in the framework of trade facilitation capacity building efforts in the weak areas found under this study.

The research findings also contributing to the following areas:

(a) highlighting regional consequences of trade facilitation in the trade flow and enterprises development;

(b) identifying the most significant factors influencing the trade flow among countries under study;

(c) enhancing regional competitiveness, specialization, movement of natural person;

(d) establishing the best practice and capacity building policies and strategies to reduce NTB and to foster trade and growth.

This research also provide insightful information on trade and investment in infrastructure and capacity building focus to the following organizations Department of Industry, Department of Trade Promotion, Department of Transport, Department of Trade and Industry.

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Appendix Tables

Appendix Table 1 Import Permit Dealing of Government Agencies

‘;		Mukdahan	Nongkai	Chiang Rai
1	**Experience of dealing with each of them**			
	Food and Drug Administration			
	Likert Scale 1	-	-	-
	2	-	-	-
	3	10	-	13.33
	4	-	-	13.33
	5	-	-	6.67
2	**Department of Livestock Development**			
	Likert Scale 1	-	-	-
	2	-	-	-
	3	-	-	13.33
	4	-	-	20.00
	5	-	-	6.67
3	**Department of Foreign Trade**			
	Likert Scale 1	-	-	0
	2	-	-	0
	3	-	-	6.67
	4	10	0	13.33
	5	-	-	-
4	**Customs**			
	Likert Scale 1	-	-	-
	2	-	-	-
	3	-	-	-
	4	10	-	-
	5	10	-	-
5	**Department of Agriculture**			
	Likert Scale 1	-	-	-
	2	-	-	-
	3	10	-	-
	4	-	5.88	-
	5	-	-	-
6	**Royal forest department**	-	-	-
	Likert Scale 1	-	-	-
	2	-	-	-
	3	-	-	-
	4	10	2.94	-
	5	-	-	-

Cont.

7	**Others**	-		
	Likert Scale 1	-		-
	2	-	-	-
	3	-	2.94	33.33
	4	-		6.67
	5	-	-	-
8	**Transit operations particularly difficult in respect of a) bonds, b) carnets, c) documentation**			
	Bonds			
	Yes	-	5.88	6.67
	No	20	-	86.67
	Camets			
	Yes	-		-
	No	10		93.33
	Documentation			
	Yes	-	5.88	20.00
	No	20	14.71	73.33

Source: Compilation of Author based on survey data.

Appendix Table 2 Exporters' Performance

		Mukdahan	Nongkai	Chiang Rai
1	**Main export items**			
	Food	10	-	66.67
	Electronic	10	-	26.67
	Consumption Good	20	14.71	26.67
	20-30%	-	8.82	-
	30-40%	-	2.94	-
	40-50%	20	5.88	-
	More than 50%	-	-	
3	**Principal markets**			
	China	10	32.35	53.33
	Lao PDR	70	50.00	26.67
	Myanmar	-	29.41	6.67
	Vietnam	20	-	26.67
	Other	-	47.06	-
	Use of one or several forwarders		-	-
	Yes	40	14.71	-
	If yes, Number of forwarders	100		-
	No	30	32.35	-
4	**Responsible for any transport arrangements**			
	Yes	60	5.88	46.67
	No	20	2.94	40.00
5	**Proportions of shipments containerized**			
	Less than 10 %			
	10 – 20 %	30	2.94	-
	20 – 30 %	20	-	-
	30 – 40 %	10	2.94	-
	40 - 50 %	10	8.82	6.67
	More than 50%	10	0.00	60.00

Source: *Ibid.*

Appendix Table 3(a) Difficulties in Complying with Agencies Customs formalities

		Mukdahan	Nongkai	Chiang Rai
1	**Customs formalities Or Exchange controls**			
	Yes, with Customs formalities	10.00	2.94	6.67
	Yes, with Exchange controls	-	44.12	-
	No	70.00	8.82	80.00
2	**Concerned directly with ports/airports of shipment**			
	If so what is your impression of their cost/efficiency?			
	Yes	-	-	40.00
	what is your impression?	-	52.94	
	No	40.00	0.00	46.67
3	**Difficulty in obtaining official and/or commercial information needed in your**			
	transactions. If so under what heads		2.94	
	Yes	-	0.00	20.00
	if so under what heads	-	55.88	
	no	70.00	23.53	66.67
	If a pre-shipment inspection is in force what are its main components?			
4	**Communication problems within, or to and from, your country**			
	Yes	20.00	35.29	60.00
	if so under what heads			
	No	60.00	17.65	6.67

Source: *Ibid.*

Appendix Table 3(b) Chamber of Commerce

		Mukdahan	Nongkai	Chiang Rai
1	**If you have queries on official requirements, at home or abroad, do you go to Chamber of Commerce**			
	Association			
	Yes	70.00	41.18	33.33
	No	10.00	23.53	53.33
	Do you participate in any official export promotion activities?		8.82	
	Yes	50.00	-	
	If so, which and how useful are they?			
	No	20.00	14.71	
2	**Main uses of computer systems**			
	Customs	50.00	2.94	60.00
	Transport providers	50.00	23.53	13.33
	Ports	-	-	40.00
	Airports,	-	44.12	13.33
	Banks	30.00	5.88	13.33
	Exchange controls	10.00	29.41	-
	others	-	-	-
	Please specify	-	8.82	
3	**Main means of communication**			
	telephone	60.00		-
	express delivery	10.00	2.94	-
	the Internet	20.00	-	73.33
	EDI	10.00	55.88	-
	e-mail	40.00		66.67
	satellite communications	20.00	8.82	-
4	**Difficulties in using any of these communication methods. If so, in what respects?**			
	Yes	10.00	8.82	6.67
	if so what respect?			
	no	70.00	11.76	80.00
5	**Proportion of export consignments are subject to physical inspection by Customs**			
		10.00		53.33

Cont.

	1 – 10%	20.00	14.71	33.33
	11 – 20%	10.00	38.24	-
	21 – 30%	10.00		-
	31 – 40%	-	-	-
	more than 40%	30.00	-	-
	Inspected by other control agencies	-		
	yes	20.00	5.88	6.67
	no	50.00	38.24	80.00
6	**Agent deal with Customs disputes**			
	yes	50.00	23.53	26.67
	no	10.00	35.29	53.33
	You	40.00	-	
	Your agent	10.00	-	

Source: *Ibid.*

Appendix 3c: Rule of origin

		Mukdhan	Nongkai	Chiang Rai
1	**Frequent recourse to Certificates of Origin**			
	yes	30.00	29.41	46.67
	no	50.00	-	33.33
2	**experience of the issue and use documents**			
	Likert Scale 1	0.00	-	-
	2	0.00	-	-
	3	30.00		13.33
	4	10.00	14.71	33.33
	5	0.00	17.65	6.67
3	**experience of drawback, export refund, temporary admission regimes**			
	Drawback			
	Likert Scale 1	0.00	-	-
	2	0.00	-	-
	3	0.00	11.76	13.33
	4	50.00	17.65	-
	5	0.00	2.94	-
4	**Export refund**			
	Likert Scale 1	-	-	-
	2	-	-	-
	3	-	8.82	6.67
	4	50.00	17.65	6.67
	5	-	2.94	-
5	**Temporary admission regimes**			
	Likert Scale 1	-	-	-
	2	-	-	-
	3	10.00		6.67
	4	40.00	2.94	6.67
	5	-	2.94	-

Source: *Ibid.*

Appendix Table 4 Importers' Performance

		Mukdahan	Nongkai	Chiang Rai
1	**Main import items**			
	Food	-	2.94	60.00
	Electronic	30.00	-	13.33
	Consumption Good	60.00	8.82	20.00
	Industry input	30.00	5.88	6.67
	Alcohol		2.94	-
	jungle products	-	2.94	6.67
	Others	10.00	8.82	
2	**Annual overall value and volume of import operations**			
	Less than 100,000 Baht	-	8.82	
	100,000 – 500,000 Baht	-	8.82	-
	500,001 – 1,000,000 Baht	-	20.59	-
	1.1 - 5.0 Million Baht	20.00	-	6.67
	5.1 - 10.0 Million Baht	50.00	-	-
	10.1 - 50.1 Million Baht	20.00	5.88	-
	More than 50.1 Mil Baht	10.00	8.82	60.00
3	**Principal source countries**			
	China	80.00		60.00
	Lao,PDR	50.00	26.47	13.33
	Myanmar	-	2.94	6.67
	(Vietnam)	30.00	5.88	
	Other	-	14.71	-
4	**Use one or several import agents/Customs brokers**			
	One	20.00	2.94	46.67
	More than one	80.00	2.94	20.00
	Number of agent	200.00	-	
5	**Proportion of imports, by value are containerised**			
	Less than 10 %	40.00	14.71	-
	10 – 20 %	20.00		-
	20 – 30 %	20.00	23.53	-
	30 – 40 %	10.00	14.71	-
	40 - 50%	-		20.00
	More than 50%	10.00	5.88	33.33

Appendix Table 5
Main Countries (a) Origin and b) Destination

		Mukdahan	Nongkai	Chiang Rai
1	Origin Export			
	Thailand	50.00	-	66.67
	Destination export		-	
	China	30.00	2.94	33.33
	Lao PDR	50.00	-	13.33
	Vietnam	20.00	-	33.33
	Malaysia	10.00	-	-
	Hong Kong	10.00	2.94	-
	Singapore	10.00	-	-
	Other	-	-	-
2	**International door-to-door services**			
	Yes	-	-	13.33
	No	50.00	-	53.33
	Do you operate TIR and/or ATA procedures?			
	Yes	-	2.94	
	If so, are there any special difficulties?			
	No	50.00	-	
3	Main custom of entry and exit			
	Mai Sai	-	2.94	26.67
	Chiang San	-	-	33.33
	Klong Toey	-	-	26.67
	Chiang Kong	-		26.67
	Nakorn Panom	10.00	-	
	Ubonrachatani	10.00	2.94	
	Mukdahan	50.00	-	
	Nong Kai	10.00	-	
	Bueng Gan (บึงกาฬ)	10.00	-	
	Bangkok	20.00		

Source: *Ibid.*

Appendix Table 6 Functions of Automated Transport

	Mukdahan	Nongkai	Chiang Rai
Ports			
Airports	-	-	-
Road frontiers	40.00	-	-
Rail frontiers	0.00	2.94	-
inland container depots	-	-	-
Electronic exchange data with other business and official entities. If so, which?			
Yes	30.00	-	13.33
If so, which?	0.00	-	
No	20.00	2.94	53.33
Receive adequate, timely information of changes in Customs and other official			
requirements			
Yes	50.00	2.94	33.33
No	-	2.94	33.33
Sources of information on Customs and other procedures in foreign countries			
Internet data	-	-	-
customs Thailand	30.00	2.94	13.33
Provincial office of Ministry of Commerce	10.00	-	40.00
Thai gov. office in foreign country	10.00	-	-
Chamber of commerce	10.00	-	-
Main office of the company	10.00	-	
Main means of communication - post, telephone			
Internet			
post	10.00	-	-
express carrier	-	-	20.00
ship's bag	-		-
fax	10.00	-	-
EDI	-	-	13.33
Internet	20.00		-
PPR	30.00	-	53.33
Difficulties in using these methods			
Yes	-		6.67
If so, in what respects?	-		
No	50.00		53.33

Cont.

In transit operations do you have particular difficulty in respect of a) designated routes, b)			
Customs escorts, c) bonds and d) documentation?			
Designated routes			
Yes	-	-	20
No	30.00	-	46.67
Customs escorts		-	
Yes	-	-	13.33
No	30.00	-	53.33
Bonds		-	
Yes	-	-	6.67
No	30.00	-	60
Documentation		-	
Yes	-	-	20
No	30.00	-	46.67

Source: *Ibid.*

Appendix Table 7 Carriers: Shipping Line and Ships' Agents (Percent)

		Mukdahan	Nongkai	Chiang Rai
1	Inward			
	Less than 100,000 Baht	-	-	-
	100,000 – 500,000 Baht	-	-	-
	500,001 – 1,000,000 Baht	-	-	-
	1.1 - 5.0 Million Baht	-	-	6.67
	5.1 - 10.0 Million Baht	-	-	-
	10.1 - 50.1 Million Baht	-	-	-
	More than 50.1 Mil Baht	10.00	-	60
	Outward			
	Less than 100,000 Baht	-	-	-
	100,000 – 500,000 Baht	-	-	-
	500,001 – 1,000,000 Baht	-	-	-
	1.1 - 5.0 Million Baht	-	-	-
	5.1 - 10.0 Million Baht	-	-	13.33
	10.1 - 50.1 Million Baht	10.00	-	6.67
	More than 50.1 Mil Baht	-	-	53.33
2	**TEUs handle**			
	Inward			
	Less than 10 tons	-	-	13.33
	11 – 20 tons	-	-	33.33
	20 – 30 tons	-	-	13.33
	More than 40 Tons	10.00	-	6.67
	Outward annually	-	-	
	Less than 10 tons	-	-	13.33
	11 – 20 tons	-	-	53.33
	20 – 30 tons	-		13.33
	More than 40 Tons	10.00	-	-
3	**Main countries of a) origin and b) destination**			
	Origin Export		-	
	Thailand	10.00		93.33
	Destination export		-	
	China	10.00	-	73.33
	other	-		20.00
	Lao PDR	-		13.33
4	**Operate international door-to-door services**			
	Yes	-	-	6.67
	No	10.00		86.67

Source: *Ibid.*

5	**Use/issue IMO standard manifests and/or International Chamber of Commerce**		-	
	Standard bills of Loading and/or non-negotiable sea waybills?		-	
	Yes	10.00	-	20
	No	-	-	73.33
6	**Move manifest information**			
	Post	-	-	60
	Express carrier	-		6.67
	Ship's bag,	-		13.33
	Fax	-	-	60.00
	EDI	-	-	-
	Internet	10.00	-	66.67
7	**Experience serious delays or obstacles of operations? If so, under what functional**			
	heads			
	Yes	-	-	66.67
	If so, under what functional heads	-	-	
	No	10.00	-	26.67
8	**Experience serious delays by importers in presenting bills of lading. If so, do you know why?**			
	Yes	-	-	-
	If so, do you know why?	-	-	
	No	10.00	-	86.67
9	**Cargo loss/damage percentage in national ports**			
	Less than 10 %	10.00		60.00
	10 – 20 %	-		13.33
	20 – 30 %	-	-	6.67
	30 – 40 %	-	-	6.67
	More than 50%	-	-	6.67
10	**Automated internal operations and communications between head office and branches. If so, under what functional heads?**		-	
	Yes	-	-	6.67
	If so, under what functional heads?	-	-	
	No	10.00		86.67
	Exchange data electronically with Customs. If so what is your experience of the efficiency?			
	Yes	10.00	-	
	If so, what is your experience of the efficiency?	-	-	

11	**Do you exchange data electronically with other entities - customers, banks, ports.? If so,**		-	
	which?			
	Yes	10.00	-	60
	If so, which?	-	-	
	No	-	-	33.33
12	**Impression of the efficiency of a) ports b) Customs**		-	
	Ports		-	
	Likert Scale 1	-		-
	2	-	-	6.67
	3	-	-	53.33
	4	-	-	26.67
	5	10.00	-	6.67
	Customs		-	
	Likert Scale 1	-	-	-
	2	-	-	-
	3	-	-	33.33
	4	-	-	53.33
	5	10.00	-	6.67
14	**Operate inland container collection and delivery services. If not, why?**		-	
	Yes	10.00	-	40
	No	-	-	53.33
	If not, why?	-	-	
15	**Use a) the Internet b) satellite communication**			
	the Internet	10.00	-	86.67
	satellite communication	-	-	-
	If so for what purposes?	-	-	

Source: *Ibid.*

Appendix Table 8 Volume of Cargo Handle a) Inward and b) Outward annually Road Carrier

		Mukdahan	Nongkai	Chiang Rai
1	**Vehicles use in operation**			
	Less than 1 vehicle	-	-	20.00
	1 – 4 vehicles	-	-	26.67
	5 - 8 vehicles	-	-	6.67
	9 – 12 vehicles	-	-	6.67
	More than 12 vehicles	50.00	-	-
2	**Annual volume of a) containerized and b) non-containerized cargo a) inward and outward**			
(a)	Inward			
(i)	Containerized			
	Less than 100,000 Baht	-	-	-
	100,000 – 500,000 Baht	-	-	-
	500,001 – 1,000,000 Baht	-		-
	1.1 - 5.0 Million Baht	20.00	-	-
	5.1 - 10.0 Million Baht	-	-	13.33
	10.1 - 50.1 Million Baht	10.00	-	-
	More than 50.1 Mil Baht	10.00	-	20.00
(ii)	non-containerized			
	Less than 100,000 Baht	-	-	-
	100,000 – 500,000 Baht	-	-	-
	500,001 – 1,000,000 Baht	10.00		-
	1.1 - 5.0 Million Baht	10.00		-
	5.1 - 10.0 Million Baht	10.00	-	13.33
	10.1 - 50.1 Million Baht	10.00	-	-
	More than 50.1 Mil Baht	-	-	20.00
(b)	Outward			
(i)	Containerized			
	Less than 100,000 Baht	-	-	-
	100,000 – 500,000 Baht	-	-	-
	500,001 – 1,000,000 Baht	-	-	-
	1.1 - 5.0 Million Baht	10.00	-	-
	5.1 - 10.0 Million Baht	-	-	6.67

Source: *Ibid.*

Cont.

	10.1 - 50.1 Million Baht	10.00	-	-
	More than 50.1 Mil Baht	20.00	-	26.67
	non-containerized		-	
	Less than 100,000 Baht	-	-	-
	100,000 – 500,000 Baht	-	-	-
	500,001 – 1,000,000 Baht	-	-	-
	1.1 - 5.0 Million Baht	20.00	-	-
	5.1 - 10.0 Million Baht	10.00	-	13.33
	10.1 - 50.1 Million Baht	10.00	-	13.33
	More than 50.1 Mil Baht	-	2.94	13.33
3	**Proportion of these movements overall operations**		-	
	Less than 10 %	-	-	13.33
	10 – 20 %	-	-	-
	20 – 30 %	10.00		6.67
	30 – 40 %	10.00	2.94	-
	40 - 50 %	20.00	-	20.00
	More than 50%	-	-	20.00

Source: *Ibid.*

Appendix Table 9
Average time for Release of the Vehicle and Load by Customs

		Mukdahan	Nongkai	Chiang Rai
1	**Land frontiers**			
	Less than 30 Min	40.00	-	-
	1 – 2 Hours	10.00	-	46.67
	2 – 3 Hours	-	-	-
	more than 4 Hours	-	-	6.67
2	**Ports**			
	Less than 30 Min	10.00	-	-
	1 – 2 Hours	10.00	-	46.67
	2 – 3 Hours	-	-	-
	more than 4 Hours	-	2.94	6.67
3	**Use of inland container terminals/dry ports. If so, what is your experience of**			
	cost/efficiency?	-	-	
	Yes	10.00	-	53.33
	if so, are there any special difficulties?	-	-	
	No	40.00	-	6.67
4	**In which foreign country do you experience most difficulties with Customs and/or other**			
	control agencies - immigration, vehicle requirements, phytosanitary inspection?			
	China		-	
	Customs	10.00	-	20.00
	immigration	10.00	-	-
	control agencies	10.00	-	-
	vehicle requirements	10.00	-	-
	Phytosanitary inspection	10.00	-	-
	Laos		-	
	Customs	10.00	-	26.67
	immigration	20.00	-	6.67
	control agencies	10.00	-	6.67
	vehicle requirements	20.00	-	-
	Phytosanitary inspection	10.00	-	-

Cont.

	Myanmar		-	
	Customs	-	-	6.67
	immigration	-	-	6.67
	control agencies	-	-	6.67
	vehicle requirements	-	-	-
	Phytosanitary inspection	-	2.94	-
	Other		-	
	Customs	10.00	-	6.67
	immigration	10.00	-	-
	control agencies	10.00	-	-
	vehicle requirements	10.00	2.94	-
	Photosanitary inspection	10.00	-	

Source: *Ibid.*

Bibliography

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