1. Introduction

1.1 Background

Small and Medium-Sized Enterprises (SMEs) play an important role in the economic and development of most countries. SMEs collectively account for a significant, often a major, share of employment and Gross Domestic Products (GDP) in most developing countries including the Greater Mekong Sub-region (GMS). The large numbers and economic importance of SMEs mean that they cannot be ignored in formulating development policy (Asian Development Bank , 2006[1]). The sector has actively contributed to the stable development of the economy, maximizing resources for the nation's development investment and promoting employment creation. For example, apart from being a dynamic sector in the economy, SMEs in Vietnam play an important role in narrowing the development gap among localities, between urban and rural areas, and preserve craft sectors where a large-scale industrial production is inefficient (Cuong[2], 2007). According to the General Statistics Office, the number of registered enterprises in Vietnam reached about 300,000 by the end of 2007 and 97 percent were SMEs. The total number of enterprises is to be increased to 500,000 by 2010.

Recently there has been an increased interest in SMEs promotion and development in most countries and international agencies, e.g. ADB, NGO, etc. In a transition economy such as Vietnam, SMEs and private enterprises are considered the mainstay of reform to a market economy and sustainable economic growth. The Socio-Economic Development Plan (SEDP) of the Government of Vietnam for 2006–2010 emphasizes the importance of private sector development for economic growth, creation of employment, income and fiscal revenue generation, and poverty reduction. In line with this, the Government of Vietnam launched its first SME Development Plan 2006-2010 aimed at the "creation of a sound policy, legal, and institutional environment that ensures fair and healthy competition for SMEs and service providers from all sectors of the economy"[3].

Dutta (2008) found some of the economic characteristics of SME in the Greater Mekong Sub-region (GMS) that data and information on the SME sector are not up to date. Data on the sectoral and industrial composition of SMEs, SME inputs and turnovers, and the contribution SMEs to income, employment and exports are in shortage. He also added some available information and data which showed that SMEs in the GMS countries are "massive" in terms of number in most countries; SMEs account for the large bulk (more than 90 percent) of the number of all private-sector firms within GMS countries and employ an overwhelming proportion (75-90 percent) of the domestic workforce, especially young persons and women.

[1] ADB (2006). Best Practice Notes on SMEs Support. Best Practice Notes, introduction page.
[2] Nguyen Hoa Cuong (2007). Donors Coordination in SME Development in Vietnam. Economic Policy Debate, page 26.
[3] Socialist Republic of Viet Nam. *Decision: Approval of the 5 Year SME Development Plan 2006-–2010.* Hanoi

According to Asian Development Bank (ADB), the GMS Cross Border Transport Agreement (CBTA) is a multilateral instrument that covers all the relevant aspects of cross-border transport facilitation which includes: single-stop/single-window customs inspection; cross-border movement of persons (i.e., visas for persons engaged in transport operations); transit traffic regimes, including exemptions from physical customs inspection, bond deposit, escort, and agriculture and veterinary inspection; requirements that road vehicles will have to meet certain standards to be eligible for cross-border traffic, exchange of commercial traffic rights; and infrastructure, including road and bridge design standards, road signs, and signals. CBTA is supposed to benefit the growth of SMEs at the crossing points of GMS countries; therefore, it is important to study how infrastructure improvement and CBTA impact SMEs development at a micro level.

As a major cross border point for trade and tourism, Youyiguan-Huu Nghi cross-border point has been included as part of the CBTA framework by the Chinese government, particularly the Guangxi provincial government. A memorandum for the inclusion of the Nanning-Hanoi Corridor and Youyiguan-Huu Nghi Border Crossing Point in the CBTA was signed between China and Vietnam on 30 March, 2008. Located at the center of North-South Economic Corridor (NSEC, Nanning-Hanoi) of the GMS, Youyiguan-Huu Nghi cross-border point is one of the major Class I land ports between China and Vietnam. Since SMEs which participate in global value chains can specialize in supplying specific product components, acquire better technologies and skills, and enhance competitiveness in the international market, therefore, enabling small- and medium-sized enterprises at the border cities of GMS countries will contribute significantly to the GMS development and cooperation.

1.2 Research Objectives

The research assesses the SMEs development at the border city of Langson border city of Vietnam. The research objectives include:

- To profile the characteristics of SMEs at the cross border city Langson;
- To study the impacts of CBTA and infrastructure improvement in promoting SMEs development at Langson border city; and
- To examine the SME owners' perceptions on CBTA, infrastructure improvements, economic corridors and economic zones in Langson province.

1.3 Study Site: Langson border city of Vietnam

Langson City is the capital of Langson province, Vietnam (see table 14). Langson is located in the Northwest border region, endowed with favorable natural conditions and have a convenient transport network, which is an important point for economic exchange in the North of Vietnam. The local GDP growth rate from 2001- 2005 was 14.35% per year on average. Despite being a mountainous province, Langson is 154 km from Hanoi and located adjacent to the pivotal economic triangle including Hanoi- Haiphong and Quangninh. The local transportation system

is favorable for promoting trade and tourism. Langson is both the focal point of the trans-Viet National Road No.1A [4] and the province crossed by the Road No 4B, No 4A, No 1B, and No 3B. In addition, the international direct train linking Vietnam with China and the countries in East Europe passes through Langson. The province includes two international frontiers passes namely Huunghi and Dongdang, two national frontiers passes named Chi Ma and Binh Nghi, and seven borders' markets, which is convenient for trading activities, importing and exporting goods and boosting tourism services.

However, Langson is still a poor province in the north of Vietnam with slow and unstable economic growth. Production remains small- scaled and not competitive. Agro-forestry has major impact on the economy. Technical facilities are poor and backward, infrastructure system faces many limitations and is not synchronous to attract outside investments. Furthermore, the general education standard of the locals is low due to the inhabitation of many ethnic groups. It lacks of skilled workers, and technicians and local-based enterprises fail to respond to the market demands. Such restrictions may be major barriers, which inhibit Langson's immediate application of scientific- technological advances and infrastructure improvements with the aim of achieving major socio- economic goals.

2. Literature Review

2.1 CBTA, Infrastructures and SMEs in the GMS countries

The CBTA ratification has been agreed by all six GMS member countries in December 2003. Thanks to the close cooperation between China and the other GMS countries, the annexes and protocols of "The Agreement on Cross-Border Transportation of People and Goods in the GMS" (CBTA for short) have been fully signed, the domestic acceptance procedures for all the 17 annexes and 3 protocols of CBTA have been fulfilled, and China and Vietnam have signed a memorandum for the Inclusion of the Nanning-Hanoi Corridor and Youyiguan-Huu Nghi Border Crossing Point in March, 2008. Full implementation of the Agreement and its annexes and protocols is expected by 2010.

The development of the East-West Economic Corridor (EWEC) promotes trade, investment, tourism, and movement of goods and people of border cities (Mekong Institute, 2007). The development of the CBTA in the GMS aimed to encourage a seamless flow of goods and services across border cities in the regions (Mekong Institute, 2008). The initiatives of the GMS CBTA include a single stop window custom inspection, the cross border movement person, transit traffic regimes including the exemption from physical customs and veterinary inspection, requirements that road vehicle to meet eligible border crossings regulations, the exchange of commercial traffic rights, and infrastructure improvement including road, bridge, road sign, and signals.

[4] 1A Highway: This is Trans-Vietnam route departing from Youyiguan (Friendship Gate) and running through LangSon province to Hanoi

In the case of Vietnam, it is found that considerable progress has been made by the Government to ratify the various annexes and protocols of the GMS CBTA. However, several problems are yet to be resolved including the upgrading of technical, complementary infrastructures, increased participation by the private sector and inter-departmental cooperation among various domestic agencies. In addition, the GMS CBTA has conflicts with Vietnamese domestic laws and regulations, and relevant commitments (GMS Regional Policy Dialogue, Mekong Institute, 2008).

According to a research by Guangxi Department of Commerce, some existing barriers and problems of trade facilitation and investment between Guangxi and Vietnam have been identified. For example, local regulation for coordinating different departments involving in the single stop inspection has not been drawn out by the Guangxi provincial government; cross border transport is likely to face higher risk as international insurance is lagging in the GMS framework, and some conflicts exist on custom laws between China and Vietnam (Guangxi Participation in Trade Facilitation and Investment in the GMS, 2006).

In terms of SMEs in the GMS countries, Dutta (2008) indicated that SMEs can be found in virtually every field of socio-economic activities and services - in both urban and peri-urban areas, and across domestic provinces and regions within GMS. SMEs cater largely for the local markets. A small number of them have been highly successful in their outward orientation - as direct exporters, or as suppliers to domestic exporters. Majority of SMEs are labor-intensive and/or engaged with simple technologies, including processing and manufacturing activities. Most SMEs are owned and operated by the entrepreneurs and members of their extended families. The entrepreneurs themselves tend to play a crucial role in the success or failure of the SMEs concerned. Women entrepreneurs have an important presence in the SME sector.

2.2 Overview on Langson SMEs

According to Decree 90/2001/ND-CP dated 23rd November 2001 on SME promotion, SMEs in Vietnam is defined as "independent business entity which registered by current legislations, whose registered capital does not exceed 10 billion VND or who average annual work force does not exceed 300". Hence, the criteria for being a SME include having less than 10 billion VND in registered capital (about 650,000 USD), or having less than 300 labors. These criteria are generally simple and easy to achieve.

SMEs play an important role in promoting Langson 's provincial economy, creating a variety of enterprises and attracting 8,000 labors from the province. Langson SMEs are mainly in trade and services in small and medium scale. According to Langson Department of Planning and Investment, there were 300 enterprises (including 115 limited liability companies, 62 private enterprises, 117 joint stock companies) from 2001-2006 and nearly 3,000 households registered for business. Until September 2008, the number of registered enterprises in Langson had reached 818 registered enterprises (including 361 limited liability companies, 221 private enterprises, and 236 joint stock companies) with a capital of 2,000 billion VND.

Recently it is analyzed that only 15 percent of enterprises are running effectively, 45 percent of enterprises are working under the medium level of efficiency and the remaining 40 percent are loss-making enterprises[5]. In order to actively support the SMEs, Langson is implementing the SME promotion programs as well as training programs on management skills, accounting skills, etc. in order to encourage SMEs contributing to social development and creating more jobs. For example, the implementation of the CBTA initiatives is supposed to facilitate cross-border movement of goods and people and promote the economic development in GMS including SME business.

The import- export turnover of the SMEs in the first ten month of 2008 reached 1,273 USD million (export turnover: 228 USD million, import turnover: 1,045 USD million), increased by 67.5 % comparing to 2007, and accounted for majority of the total import- export turnover of the Northern border provinces with the Chinese market. Exports like star aniseeds, anise essential oil, pine resin, pine tar, bamboo boards and cashew nuts which have been considered as the provincial strengths and are locally exploited by provincial enterprises, make up 10- 13% of the commodity export turnover in the provincial territory. To overcome the obstacles of changes in import- export management mechanisms, the province has been proactive in organizing meetings and negotiations to discuss the measures for removing various obstacles. Under the policy of the two nations, the authorities of the two regions have offered favorable conditions for trading and ex-importing commodities among them. Consequently, export turnover has increased over the years. For example, the Langson import-export turnover in the period of the ten months of 2008 reached US 1.273 million, including US 228 million of export and US 1.045 million of import (increased by 67.5% in comparison with that of the same period of 2007 and attained 116% of the year target[6]). The annual earnings from export-import turnover earned by the northern border provinces include 25% of the country's export turnover from the Chinese market in which export-import turnover via Langson border gates accounts for 60% of the northern border provinces[7].

3. Research Methods

3.1 Sample size

According to Langson Department of Planning and Investment, there are 800 enterprises as of September 2008 (including 361 limited liability companies, 221 private enterprises, 236 joint stock companies) with a capital of 2,000 billion VND. Pre-testing of the questionnaire was conducted with a random sample of 10 SMEs in Langson province. After getting feedback to improve the content, clarity and the layout of the questionnaire; it was revised by the researchers

[5] http://baolangson.com.vn/channel.aspx?Code=NEWS&NewsID=4162&c=2
[6] http://baolangson.com.vn/channel.aspx?Code=NEWS&NewsID=3452&c=2
[7] http://www.baolangson.com.vn/channel.aspx?Code=NEWS&NewsID=1938&c=2

in the midterm training in Mekong Institute. As a result, 136 SMEs operating at Langson border city were interviewed with consideration on the time and budget constraint.

3.2 Theoretical Framework

This study examines whether infrastructure & utilities; CBTA, the economic zone and the economic corridor (independent variables) may cause changes in SMEs revenue (dependent variable).

3.3 Data collection

Secondary data on Langson SMEs was collected from Langson Department of Planning and Investment and Langson Department of Customs.

A survey questionnaire was used to collect our primary data. The survey questionnaire was collected in three stages:

First, the questionnaire was designed based on previous research and findings. Following with a focus group and pilot test to remove ambiguities in the questionnaire.

The second stage involved implementation of the questionnaire through face to face interview. Interviews were conducted with relevant parties, managers or supervisors from SMEs in Langson Province (especially at the border area), members of Langson Department of Planning and Investment, and other departments in the province. The questionnaires were personally administered by the researchers and include questions and observation on information about the impacts of CBTA and infrastructures on SMEs development, the characteristics of Langson SMEs, and SME owners' perceptions on CBTA and infrastructures improvement.

The last stage involved data analysis and report writing. Secondary research and literature review such as relevant literature, discussion papers, SMEs documents, Ministry of Planning and Investment (MPI) documents and related documents were used to supplement our findings

3.4 Research Methodology

The data from the questionnaire was analyzed using the SPSS software version 15. To answer the first and the third research objectives, descriptive analysis, such as percentage, frequency and mean were applied to analyze the results.

The second objective is to test the relationship between the dependent variable (changes in SMEs' revenue) and independents variables (Infrastructure and CBTA). The ordinal logistic regression is used to answer the second research objective. The correlation matrix is generated

in order to check the correlation among the independent variables. If there is a high correlation among the independent variables, they will be grouped into one factor or construct by applying Factor Analysis and Reliability.

Factor Analysis

Factor analysis has two primary functions in data analysis. One is to identify the underlying constructs in the data and another is to reduce a large number of correlated variables into a more manageable set (Aaker, Kumar, Day, & Lawley, 2005). Factor analysis was used in our study to reduce the number of variables to a more manageable set (Aaker et al., 2005). According to Aaker et al. (2005), by reducing the number of correlated variables, factor analysis attempts to retain as much of the information as possible and make the remaining variables meaningful and easy to work with.

Principle component factor analysis was conducted on the infrastructure and CBTA items that were compiled from the information gathered in the pilot test and from the literature review. Hair et al. (2006) also suggests that factor loadings greater than ±0.45 were considered more practically significant for studies with sample size less than 150 (see Table 1). Therefore, in our study, ±0.45 was used as the cut-off point for factor loadings since our sample size is less than 150.

VARIMAX rotation considered the factor loadings ±0.45 for all 15 variables practically significant. Twelve variables were extracted from the data set after using Varimax rotation method. This method produced a factor structure that satisfied the factor analysis assumptions and more closely represented the factors derived from the literature review and pilot test. The 12 variables had loadings of 0.45 or greater (see Table 2 for the variable loadings). The items used to measure each factor were then tested for reliability. The Cronbach's Coefficient Alpha was used to calculate the reliability of each item with value of 0.60 as the cut-off point. The value of 0.60 or more generally indicates satisfactory internal consistency reliability in exploratory studies (Hair, Bush & Ortinau, 2000).

Reliability Test

The reliability test of the factor measures are shown in table 2. Each factor was subsequently named in accordance to the construct that they represent. The 12 factors were indentified as 3 constructs as follows:

F1 = (inspection+ network+ cost +competition + movement)
F2 = (water +telecommunication+ electricity + banking)
F3 = (road + transport + number of SMEs)

Empirical Model

Many dependent variables of interest will have more than two possible categories. These categories might be unordered (doesn't move, moves South, moves East) or ordered (high, medium, low; favors more immigration, thinks the level of immigration is about right, favors less immigration). For example, SME business revenue could increase, remain the same, or decrease in the last 12 months. Ordered logit models can be used in such case. Our reduced form model is given as follows:

$$SMEREV = f(F1, F2, F3\ \varepsilon) \quad (1)$$

Where

SMEREV	=	Changes in SMEs revenue based on the question "Has your business revenue increased, remained constant or decreased in the last 12 months?"
F1 (+)	=	Inspection, Network, Cost, Competition, Movement
F2 (+)	=	Water, Telecommunication, Electricity, Banking
F3 (+)	=	Road, Transport, Number of SMEs
ε	=	error term

4. Results and Discussions

4.1 Profile of respondents

Table 3 presents the profile of the respondents. Of the 136 SME respondents, 50.7 percent are male, while 49.3 percent are female. Majority of the SME respondents (37.5%) belongs to the 36-45 age group, follows by 35.3 percent in the 25-35 age group, 15.4 percent n the 25 age group, 10.3 percent in the 46-55 age group, and only 1.5 percent of the respondents are in the 56-65 age group.

Most of the SME respondents (73.5 %) are married, 23.5 percent are single, 2.2 percent are divorced and 0.7 percent are widow.

Regarding the education level, 37.5 percent of the SME respondents obtained high school level, followed by 21.3 percent with some college education and 18.4 percent attained a bachelor degree. The rest includes the following: primary school (5.9 percent), middle school (8.8 percent), vocational (8.1) while there is no SME respondent attained postgraduate degree level.

In terms of revenue over the past 12 months, majority of the SMEs respondents (58.8%) revealed that they earned less than USD 5,000. A total of 33.1 % of the respondents earned between USD 5,001- 15,000, while only a small percentage earned more than USD 15,000.

4.2 Characteristics of SMEs in Langson province

The average number of staff hired by the SMEs are 5.14. This indicates that majority of the SME respondents belong to the very small enterprises. The SMEs are classified as follows: 81.6% in trading, followed by 14.7 percent in services, and manufacturing, constructions and others (2.2%, 0.7%, and 0.7% respectively). Therefore, majority of the SMEs are involved in services and trading businesses. Some SME respondents explained that Vietnamese like to purchase Chinese products at Langson market because they are much cheaper and with the opening of tourism between Hanoi (Vietnam)-Guilin-Nanjing (Quangxi, China), there are more tourists stopping by and shopping at the border markets. In terms of ownership, most of the SMEs (58.1 %) are privately owned, 37.5 percent family-owned while only 3.7 percent is partnership and 0.7 percent is state- owned. Regarding the capital source of the SMEs, majority of the SMEs obtained capital from personal funds/savings (80.9 %), and the rest (19.1 %) are loans from family members and banks (See Table 4).

In terms of the characteristics of Langson SME businesses, most Langson customers are from Vietnam (99.3%). Majority of the goods are from China (84.6%) and the rest (15.4%) are from Vietnam and Laos. In terms of the frequency in ordering goods, most of the SMEs respondents say they usually order goods once to thrice in the past 12 months. They order their goods using telephone call (51.5 %) and individual contact (37.3 %) are popular. (See Table 5)

Table 6 shows the cross border transportation in Langson. Most of the SMEs respondents said their goods are delivered/ transferred by road. They reported that it is convenient for them to get Chinese goods and reduces times to cross the border checkpoints. In addition, 69 percent of the respondents say that the length of crossing the border is between 10 to 30 minutes. Most of them (97.4%) said there are no additional charges (besides the visa fee) for crossing the border. They reported that it is more convenient to get to Quangxi (China) because they can use the travel paper (instead of passport) to get to Pingxiang which is issued annually by the Provincial Government. When addressing the obstacles faced at the crossing border checkpoint, a large percentage of the SME respondents said the immigration officers are unfriendly (57.1%) and the custom rules, laws, regulations, etc. are inconsistent (35.7%). From the SMEs respondents' point of view, the cost for visa /custom fee is not a problem when crossing the border.

4.3 Impacts of Infrastructures and CBTA on SME development

The data in Table 7 shows our ordinal logit model fits the data well. The model Chi-square is 5.58 with 3 degree of freedom. The null hypothesis is the location variables are zero. Based on the observed significant level, the null hypothesis is rejected. The test of parallelism checks the assumption that coefficient are the same for all three categories (see Table 8). The goodness of fit in Table 9 is not significant. According to Table 10, the Cox and Snall's R-Square shows that about 10.2 percent of SMEs revenue can be explained by dependent variables. Table 11 shows

the statistic result from the ordinal regression. The estimates labelled Threshold are the intercept equivalent terms. The estimates labeled Location as the coefficient of independent variable. The third column shows the estimate coefficient of each variable. From the observed significant level in Table 11, no independent variables are correlated to changes in SMEs revenues since the significant level larger than 0.05.

Since our ordered logistic regression results show no significant relationship between Infrastructure and CBTA on SME's revenue, we applied the cross tabulation analysis and the results are shown in Table 10. The Chi-square test and Symmetric Measures of the variables are concluded as follows. According to the Pearson Chi-square results, asymmetric significant level of perception on electricity, hospital, banking, cost, competition, movement, inspection and network variables are larger than 0.05. These variables do not influence changes in SMEs revenues. Road, transportation and number of SMEs do influence changes in SMEs revenues, the significant level of Gamma, Kendal test is lower than 0.05. Therefore, it is concluded that the road, transportation and competition (number of SMEs) have positive influence on changes in SMEs' revenue.

4.4 SME owners' perception on CBTA, infrastructures and Economic zones

Regarding the SME owners' perceptions of CBTA, infrastructures and Economic zones, 32.4 percent of the respondents have heard of the economic zones. Similarly, only 34.6 % of the respondents have heard of economic corridor and 31.6 % of CBTA (for CBTA, the source of information mainly comes from media (40.9%), such as TV, radio, newspaper, magazines, etc., from friends (29.5%) and from government (25%)) (see Table 13). Most of the SMEs respondents are not aware of CBTA because it is a technical term which is not easily understood by the SME respondents and there is lack of communications on the CBTA to local people and private enterprises.

Majority of the SME respondents agreed that the infrastructure improvement will create more jobs in both cities and promote the development of private sector; CBTA implementation will increase the number of SMEs between two cities and also increase the number of migrant workers; the economic zone will result in higher output, employment and standard of living of the local people (access to larger pool of supplies) and also establish close ties between all businesses. The SMEs respondents perceive that CBTA would yield positive benefits to their business and the development of economic corridor and economic zones also facilitate their growth.

5. Conclusions

Our findings showed that majority of SMEs in Langson border city are very small enterprises and mainly operates in the trading and services sector. Most of the products for their business are imported from China. The research also found that the limited access to financial sources and lack of management skills and marketing knowledge are the major constraints confronting the SMEs in Langson province. These problems are similar to the findings of previous studies. For example, Dutta (2008) found that growth of the SME business are restricted due to lack of capital, lack of knowledge on application of appropriate pricing for the goods and services produced, lack of knowledge on the market segment and competition as well as the range and types of products that are in demand. Also, Jingjai (2007) pointed out that GMS SMEs are in severe need of access to finance. One of the most important problems confronting SMEs is the difficulty of borrowing money from banks to finance their operations[8]. In addition, Aung (2008) commented that most SMEs do not have the ability to obtain and process strategic information that can link them to global market opportunities and the main reason is that many SMEs do not have the know-how and financial resources to acquire and manage these critical inputs[9].

The ordered logistic regression results show no significant relationship between Infrastructure and CBTA on SME's revenue, the insignificant result is due to low respond rate on the question regarding CBTA. However, when applying cross tabulation analysis and correlation matrix, our results shows road, transportation and number of SMEs do influence changes in SMEs revenues.

Majority of the SME respondents agreed that improvement in infrastructure will create more jobs in both cities, enhance the development of SMEs and facilitate the SME business; CBTA implementation will also increase the number of SMEs between two cities and the business in general, and the economic zones will increase the standard of living of the local people. The main problems confronting the respondents when crossing the border gate are not the expensive custom fee or the length of crossing but the attitudes of custom officers. Most of the SMEs have limited knowledge on the GMS CBTA and economic corridors because of their lack of information and wide media communication of Governments at all level.

[8] http://72.14.235.132/search?q=cache:fZPyKh7N0i8J:www.gmsbizforum.com/dmdocuments/Manila.pdf+pdf,+Jingjai,+access+to+f inance&hl=vi&ct=clnk&cd=1&gl=vn

[9] http://www.gmsbizforum.com/index.php?option=com_content&task=view&id=309&Itemid=59

6. Recommendation/ Policy Implication

The results of this study are useful for policy makers to improve SMEs development at the cross border city.

- Update information on SMEs of the cluster border cities in GMS in general and SMEs growth in Langson border city in particular. Common trends, contentious issues and difficulties related to SMEs at the border cities of the GMS should be synthesized and reported to decision makers in order to improve SMEs development and enhance SMEs competiveness.
- Our research results show that majority of the SMEs at the border city of Langson are not aware of CBTA. In order to enhance the perception on CBTA, it is recommended that the stakeholders at all level should strengthen communication and promote the CBTA widely to the local people and the SMEs owners at the border cities.
- To achieve better growth of SMEs in Langson, it is crucial to further improve the infrastructures, such as roads, storm drainage systems, telecommunication system, pipe water supply, electricity supply, and banking system which facilitate the development of SMEs. Furthermore, it is important for the provincial government to strengthen the construction of economic corridor and economic zones since they have positive impacts and benefits on SMEs development.

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Appendix

Table 1: Guidelines for identifying significance factor loadings based on sample size (Hair et al., 2006, p. 128)

Factor Loading	Sample Size Needed for Significance [a]
0.30	350
0.35	250
0.40	200
0.45	150
0.50	120
0.55	100
0.60	85
0.65	70
0.70	60
0.75	50

[a] Significance is based on a 0.05 significance level (□), a power level of 80 percent, and standard error assumed to be twice those of conventional correlation coefficients.

Table 2: Reliability and Rotation Loading

Constructs	Items	Reliability Test	Rotation Loading
F1	Inspection	Cronbach Alpha	0.843
	Network	= 0.679	0.671
	Cost		0.652
	Competition		0.545
	Movement		0.530
F2	Water	Cronbach Alpha	0.741
	Telecommunication	= 0.661	0.731
	Electricity		0.669
	Banking		0.564
F3	Road	Cronbach Alpha	0.766
	Transport	= 0.656	0.702
	SME		0.739

Table 3: Profile of respondents

Gender		**Marital status**	
Male	50.7	Single	23.5
Female	49.3	Married	73.5
		Divorce	2.2
		Window	0.7
Age		**Education**	
Below 25	15.4	Primary	5.9
25- 35	35.3	Middle school	8.8
36- 45	37.5	High school	37.5
46-55	10.3	Vocational	8.1
56- 65	1.5	Some college	21.3
Above 65	0	Bachelor degree	18.4
		Postgraduate degree	0
Revenue		**Revenue change**	
Less than USD 5,000	58.8	Decreased	31.6
Between USD 5,001-10,000	33.1	Constant	45.6
Between USD 10,001-15,000	2.2	Increased	22.8
Between USD 15,001-20,000	2.9		
More than USD 20,000	2.9		

Table 4: Types of SMEs in Langson

Staff		**Ownership**		
Mean	5.14	Private own		58.1
Minimum	1	Partnership		3.7
Maximum	140	State owned		0.7
		Family owned		37.5
		Foreign		0
Type		**Capital**	**%**	Others
Service	14.7	Loans from banks	28.7	71.3
Trading	81.6	Personal funds, savings	80.9	19.1
Manufacturing	2.2	Family members	45.6	54.5
Agriculture	0	Loans from micro-credit institutions	2.2	97.8
Construction	0.7			
Others	0.7			

Table 5: Characteristics of Langson SMEs' business

Customer		**Frequency ordering goods**		
China	0.7	One time		35.3
Vietnam	99.3	Two times		33.1
		Three times		14.7
		More than three times		16.9
Origin of goods		**How to order**	**%**	Others
China	84.6	Call	51.5	48.5
Others	15.4	Email	7.6	92.4
Vietnam	43.4	Individual	37.3	62.7
Others	56.6	Supply contract	16.9	83.1

Table 6: Border Transportation of SMEs in Langson province

Transportation		**Fee**		
Road	99.3	None		97.4
Others	0.7	Others		2.6
Length to cross the border		**Problems faced**		Others
Less than 10 mn	14.3	Expensive	0	100
10-30 mn	69.0	Unfriendly	57.1	42.9
Over 31 mn	14.3	Inconsistency	35.7	64.3

Table 7: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	85.236			
Final	80.406	4.830	3	.185

Link function: Logit.

Table 8: Test of Parallel Lines (c)

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	80.406			
General	74.833(a)	5.572(b)	3	.134

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a The log-likelihood value cannot be further increased after maximum number of step-halving.
b The Chi-Square statistic is computed based on the log-likelihood value of the last iteration of the general model. Validity of the test is uncertain.
c Link function: Logit.

Table 9: Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	85.212	81	.353
Deviance	80.406	81	.498

Link function: Logit.

Table 10: Pseudo R-Square

Cox and Snell	.102
Nagelkerke	.120
McFadden	.057

Link function: Logit.

Table 11: Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Upper Bound	Lower Bound
Threshold	[revenue2 = 1]	.659	3.363	.038	1	.845	-5.932	7.251
	[revenue2 = 2]	2.766	3.390	.666	1	.415	-3.879	9.411
Location	U1	.168	.578	.084	1	.772	-.965	1.300
	U2	-.896	.642	1.950	1	.163	-2.154	.362
	U3	.967	.510	3.590	1	.058	-.033	1.967

Link function: Logit.

Table 12: Cross Tabulation Analysis

ROAD

			chg rev			Total
			decreased	constant	increased	decreased
Road	very poor	Count	1	0	0	1
		% within road	100.0%	.0%	.0%	100.0%
		% within chg rev	2.3%	.0%	.0%	.7%
	poor	Count	3	4	0	7
		% within road	42.9%	57.1%	.0%	100.0%
		% within chg rev	7.0%	6.5%	.0%	5.1%
	fair	Count	15	18	7	40
		% within road	37.5%	45.0%	17.5%	100.0%
		% within chg rev	34.9%	29.0%	22.6%	29.4%
	good	Count	19	29	18	66
		% within road	28.8%	43.9%	27.3%	100.0%
		% within chg rev	44.2%	46.8%	58.1%	48.5%
	very good	Count	5	11	6	22
		% within road	22.7%	50.0%	27.3%	100.0%
		% within chg rev	11.6%	17.7%	19.4%	16.2%
Total		Count	43	62	31	136
		% within road	31.6%	45.6%	22.8%	100.0%
		% within chg rev	100.0%	100.0%	100.0%	100.0%

TRANSPORTATION

			chg rev			Total
			decreased	constant	increased	decreased
transport	poor	Count	4	5	0	9
		% within transport	44.4%	55.6%	.0%	100.0%
		% within chg rev	9.3%	8.1%	.0%	6.6%
	fair	Count	11	15	5	31
		% within transport	35.5%	48.4%	16.1%	100.0%
		% within chg rev	25.6%	24.2%	16.1%	22.8%
	good	Count	20	29	20	69
		% within transport	29.0%	42.0%	29.0%	100.0%
		% within chg rev	46.5%	46.8%	64.5%	50.7%
	very good	Count	8	13	6	27
		% within transport	29.6%	48.1%	22.2%	100.0%
		% within chg rev	18.6%	21.0%	19.4%	19.9%
Total		Count	43	62	31	136
		% within transport	31.6%	45.6%	22.8%	100.0%
		% within chg rev	100.0%	100.0%	100.0%	100.0%

SMEs

			chg rev			Total
			decreased	constant	increased	decreased
sme	disagree	Count	2	0	0	2
		% within sme	100.0%	.0%	.0%	100.0%
		% within chg rev	8.3%	.0%	.0%	4.4%
	neutral	Count	7	5	1	13
		% within sme	53.8%	38.5%	7.7%	100.0%
		% within chg rev	29.2%	31.3%	20.0%	28.9%
	agree	Count	13	9	2	24
		% within sme	54.2%	37.5%	8.3%	100.0%
		% within chg rev	54.2%	56.3%	40.0%	53.3%
	strongly agree	Count	2	1	2	5
		% within sme	40.0%	20.0%	40.0%	100.0%
		% within chg rev	8.3%	6.3%	40.0%	11.1%
	not applicable	Count	0	1	0	1
		% within sme	.0%	100.0%	.0%	100.0%
		% within chg rev	.0%	6.3%	.0%	2.2%
Total		Count	24	16	5	45
		% within sme	53.3%	35.6%	11.1%	100.0%
		% within chg rev	100.0%	100.0%	100.0%	100.0%

Table 13: Perceptions of SMEs owners on CBTA, infrastructure, economic corridors and economic zones

Heard of Economic zones	%	Heard of Economic corridor	%
Yes	32.4	Yes	34.6
No	67.6	No	64.5
		Benefit	68.1
		Non-benefit	21.3
Heard of CBTA	%	Sources of information- CBTA	%
Yes	31.6	Government	25.0
No	68.4	Media	40.9
		Friends	29.5
		Internet	2.3
		Others	2.3

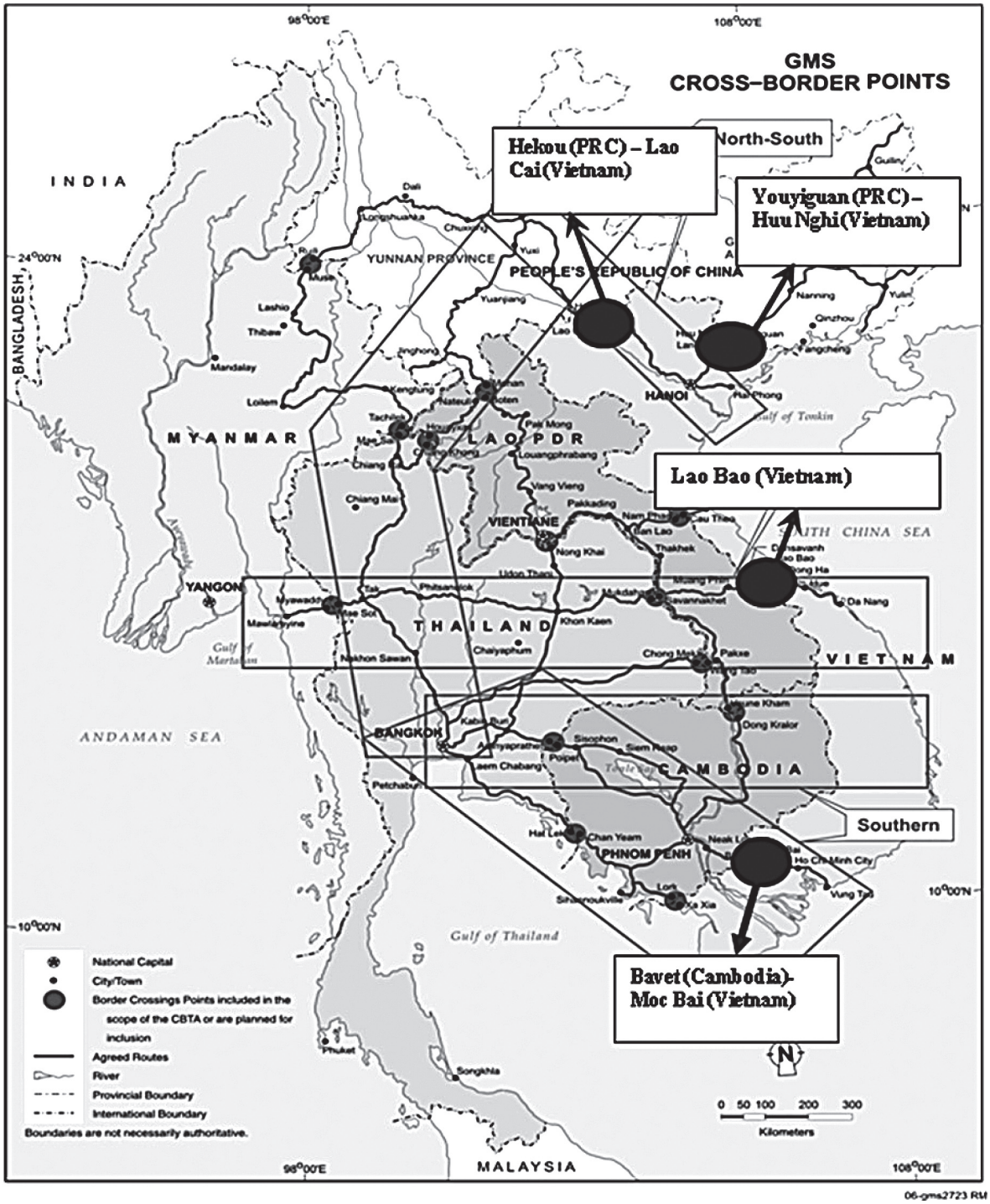
QUESTION 15	Very poor	Poor	Fair	Good	Very good	Not Applicable
Overall perceptions of the working conditions of the existing infrastructures and utilities						
1. The roads and bridges condition in the city	0.7	5.1	29.4	48.5	16.2	0
2. The public transport in the city	0	6.6	22.8	50.7	19.9	0
3. Electricity supplied	0	2.2	12.5	47.1	38.2	0
4. Piped water supplied	0.7	4.4	20.6	41.9	32.4	0
5.The telecommunication system (including internet)	0	5.9	22.1	43.4	28.7	0
6. Solid waste disposal systems	2.2	5.1	23.5	16.9	6.6	45.6
7. Storm drainage systems	0.7	18.4	50.0	19.9	4.4	6.6
8. Public and private hospitals	1.5	8.1	41.7	34.6	14.7	0
9.Banking system (includes ATM, foreign exchange, etc)	0	0	14.7	41.9	42.6	0.7

	Strongly Disagree		Neutral		Strongly Agree	Not Applicable
Overall perceptions of the improvement of infrastructure						
1. Increase the flows of freights and passengers between the two cities	0.7	2.9	25.0	46.3	21.3	3.7
2. Enhance the development of SME businesses	0	0	31.6	41.2	19.1	4.4
3. Creates more jobs in both cities	0	4.4	19.9	41.9	25.0	8.8
4. Improve the standard of living of the people of both cities	0.7	4.4	32.4	36.0	15.4	11.0
6. Promote private sector development between both cities	0	2.9	13.2	42.6	33.8	7.4
7. Strengthening of business network between both cities	0	2.2	25.7	41.2	20.6	10.3
8. Reduce transport costs of exports and imports	0.7	4.4	16.2	38.2	26.5	14.0
9. Faster border crossing times between both cities	0.7	1.5	7.4	34.6	41.2	14.7

Question 21	Strongly Disagree		Neutral		Strongly Agree	Not Applicable
Impact of the CBTA in promoting SME development in your city						
1. The number of small and medium enterprises/ businesses will increase in each city	0	4.4	28.9	53.3	11.1	2.2
2. The transport costs of exports and imports of goods and services will decrease for each city	0	6.7	33.3	44.4	15.6	0
3. There will be an increase in competition among the businesses across both cities	0	2.2	4.4	44.4	48.9	0
4. There will be an increase in migrant workers in each city	2.2	17.8	48.9	22.2	6.7	2.2
5. Exemptions from physical customs inspection and agriculture and veterinary inspection between both cities will decrease costs for goods to cross the border	0	6.7	17.8	46.7	24.4	4.4
6. Strengthening of business network between both cities	0	0	31.1	55.6	11.1	2.2

Economic zones	%	Others
Result in higher output, employment and standard of living of the local people	79.5	20.5
Forge closer ties between all businesses	45.5	54.5
Increase in foreign direct investment	36.4	63.6
Technology transfer	20.5	79.5
Increase in income generation of tourism related businesses (hotel, motel, etc)	22.7	77.3
Upgrading skills of local workers	34.1	65.9
Increase in female employment	18.2	81.8
Access to a larger pool of suppliers	59.1	40.9

Table 14: Map of Langson border city in GMS (crossing point: Huu Nghi) Nghi)



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ABOUT MEKONG INSTITUTE

Mekong Institute is an Inter-Governmental Organization (IGO) operating in the Greater Mekong Sub-region (GMS). Since its inception in 1996, MI has been serving the Human Resource Development (HRD) needs of the GMS. Situated in the heart of the GMS at the campus of Khon Kaen University in Northeastern Thailand, MI works with the governments of Cambodia, China, Lao PDR, Myanmar, Thailand, and Vietnam to provide capacity building activities for government officials, members of private enterprises, and civil society involved in the development of the sub-region.

As an IGO, the Mekong Institute promotes regional development, cooperation, and integration through its human resource development programs, GMS-focused researches, and policy consultations.