

# Chapter 5

## **Constraints on SMEs in Cambodia and their Participation in Production Networks**

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## CHAPTER 5

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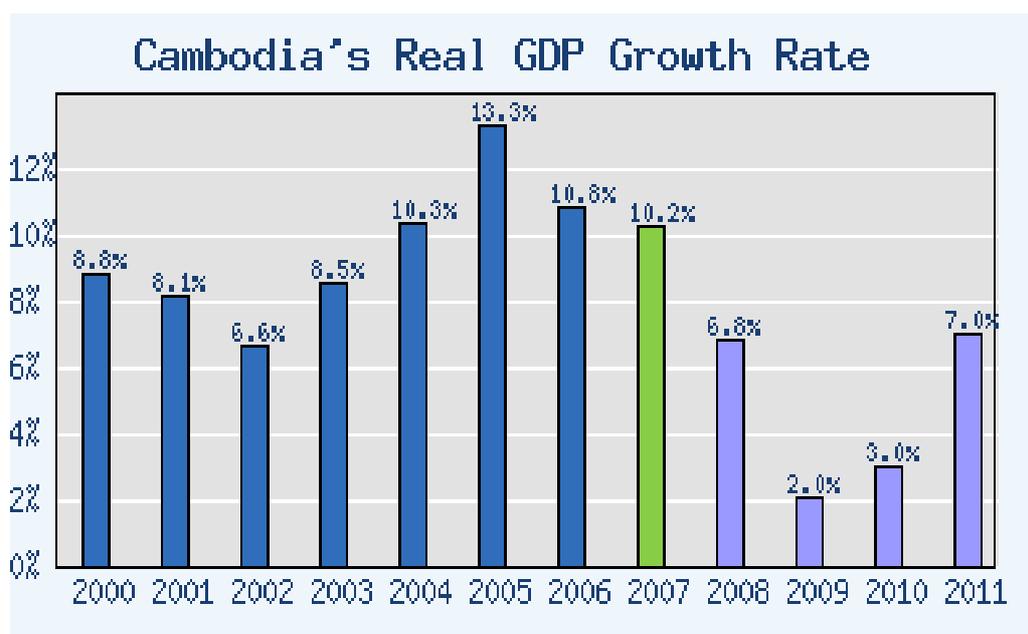
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*SMEs have played a significant role in Cambodian economic development, especially in the context of the global economic crisis. Regional integration in Southeast and East Asia has created both opportunities and challenges for Cambodia's SMEs. Their limited capacity for business expansion and integration in production networks restrain Cambodia SMEs from making use of regional integration. There are certain different characteristics for those SMEs that participate in production networks from those which do not, such as their higher productivity, business capability and innovation. Most surveyed SMEs are operating under severe internal constraints. Though SMEs receive some assistance, they still need support in the fields of "Business linkages and networking" and "Financing". Since access to financing is consistently viewed as one of the biggest constraints faced by SMEs, specialized SME banks, which are very common in the region, should be established, or a loan or mortgage guarantee from the government as practiced in Indonesia should be considered. An SME Development Fund and SME Business Development Services (BDS) could be another option to iron out these constraints.*

## 1. Introduction

The Cambodian economy has strongly integrated itself within the regional and global economies after it became a full member of ASEAN in 1999 and the WTO (World Trade Organization) in 2004. Regionalization and globalization have assisted Cambodian economic development through export led growth in economic structure and tourism services. The Cambodian economy has performed well in the last decade in which the real annual GDP growth was at an average of 9.5 percent. However, the global economic crisis has contracted the Cambodian economy in all sectors at different levels. The most affected industries are the textile and tourism industries.

**Figure 1**



Source: Ministry of Economy and Finance, <http://www.mef.gov.kh/>.

The global economic crisis has had an adverse impact on the Cambodian economy since the end of 2008. The GDP contracted to 6.8 percent in 2008 and was estimated to plunge further to 2 percent in 2009. The international institutions estimated that Cambodian GDP growth could be lower than the government's calculation. The International Monetary Fund (IMF), for instance, predicted - 2.75% growth, World Bank forecasted - 1% growth, and the Economic Intelligence Unit estimated -3% growths in 2009, (UNDP, 2009). Although there

are differences or gaps in estimating the drop in GDP, there are significant clues which lead us to believe that the Cambodian economy is facing huge challenges ahead.

The garment sector, which accounts for approximately 12 percent of GDP, is the main income generator for Cambodian labor forces. The sector employs 4 percent of the Cambodian labor force of whom 90 percent are women. The remittances from factory workers help to reduce poverty in rural areas. Textile exports account for 72 percent of Cambodia's total merchandise exports. The sector has been strongly affected by the global economic downturn due to the fact that approximately 90 percent of investment capital comes from overseas and the main textiles markets are the United States and Europe. The garment export market grew only 2 percent in 2008 and is expected to decline in 2009 and 2010. According to forecasts made by the Asian Development Bank (ADB) and the IMF, the garment industry will fall to -5% in 2009. In the first five months of 2009, garment exports dropped 27 per cent. As result of the global economic crisis and lack of demand, 50 factories were closed. Consequently, approximately 60, 000 of 400, 000 garment workers have lost their jobs since September 2008, World Bank (2010).

**Table 1. Markets for Cambodian Garments**

Market	Value in 2007 (US\$'000)	Share of total in 2007 (%)	Value in 2008 (US\$'000)	Share of total in 2008 (%)
Total	1,899	100	2,001	100
USA	1,359	72	1,405	70
EU	391	21	404.5	20
Canada	100.5	5	130.6	6.5
Japan	7	0.4	7.9	0.4
Rest of world	42.6	2	53.09	2.7

*Source:* Ministry of Commerce

Short term contracts (normally less than three months) have been used by the factory owners and managers to deal with the fluctuating and decreasing demand since the crisis took place. This management policy has adversely impacted on the livelihoods of the workers. The decrease in production resulted in less working and overtime hours and also caused the average wage of the workers to decline further. After suspending and closing their operations, many of the factory employers were no longer responsible for the laid-off employees.

Agriculture, which contributes about 32 percent of GDP is also faced with some challenges due to low growth forecasts. In 2009, the estimated growth is 5-6% (by ADB) and 1.5% by the IMF. The impact of this has been felt mainly in the form of lower prices and revenues. Agricultural production is expanding but the price is decreasing. These impacts on the family incomes of farmers due to increased costs of agricultural commodities and materials used for farming, such as, fertilizers, fuels and labor, and the low price of their harvested products and limited markets. In addition, the production of industrial crops is decreasing due to the decreasing material demand from factories.

The tourism sector is faced with difficulties given that the number of international tourist arrivals to Cambodia has dropped below expectation. In 2008, Cambodia received only 2.1 million tourists; 2.3% lower than the target set by the Royal Government. In 2009, it is estimated that the industry will drop to -2% (forecast by ADB) and -6% (forecast made by IMF). The number of entrance tickets sold at the Angkor Temple complex dropped remarkably in early 2009. In the first three months of 2009, the number had dropped to -22.38 percent compared with the same period in the previous year. Several hotels and restaurants were closed down in Siem Reap town.

The construction sector, which contributes 7 percent of GDP, has been shrinking due to the lack of investment and also due to construction projects that were suspended. It is estimated that in 2009 the sector will have negative growth: -1.5% (by ADB) and -2% (by IMF). The price of real estate has decreased continuously since the end of 2008.

Overall, Cambodia's economic performance had been going quite smoothly during the last decade except in 2009 in which the global financial and economic crisis reduced Cambodian growth to the lowest level it had ever experienced during the last 15 years.

The current economic situation places more emphasis on the role of Small and Medium Enterprises (SME)s in sustainable economic development. Even during an economic crisis, SMEs can operate normally with less impact from the crisis than is experienced by larger firms. Moreover, the SMEs are confronted with increasing challenges resulting from East Asian regionalism, especially fierce competition from stronger industries of other ASEAN member countries such as, China, Japan, and South Korea. It also vividly reflects the lack of export capacity of Cambodian SMEs to the region. Therefore, it has become necessary for the Royal Government of Cambodia and Cambodia's SMEs to identify the constraints which they have been facing so as to minimize undesirable outcomes of East Asian regional integration and find ways to benefit from the integration through promoting exports.

To achieve this end, this report will shed light on the current situation of SMEs in Cambodia (definitions and characteristics), the existing literature on the subject will be referred to in order to construct a conceptual framework and to allow space for academic contributions, and ultimately examine the challenges and constraints faced by SMEs. Several ways to assist SMEs to integrate into the regional production networks and markets will be determined.

## **2. Literature Review on SME studies in Cambodia**

SMEs play a crucial role in the economic development of Cambodia. Even so, research related to SMEs is limited, especially research concerning the constraints with which the SMEs are faced in the context of regionalism. For instance, Shariff and Peou (2008) did their research on a subject related to SMEs in Cambodia, but the study focused only on the relationship between entrepreneurial values, firm financing and management, and the growth performance of SMEs. Specifically, the research concluded that the growth performance of the SMEs is subject to the ability of entrepreneurs in creating and aligning the company. Harner (2003) also conducted his own study on SMEs in Cambodia. However, his research is limited to the barriers that prevent SMEs from receiving financial assistance from the banks. Harner identified six constraints which the banks in Cambodia face and which therefore cause difficulties in lending money to SMEs (1) perception that the current legal system of Cambodia is not able to protect the interests of the banks; (2) high funding costs; (3) the lack of access by the banks to long-term capital; (4) inability to track information on loan applicants; (5) the need to meet the National Bank of Cambodia's high liquidity ratio; and (6) lack of ability to assess, and manage, risks pertaining to term loans.

In addition to the research done by Shariff, Peou, and Harner, Meas Wat Ho (2006) directed his research onto the role of Cambodia's SMEs in the private sector, and the economic development following the government's adoption of an economic liberalization policy in the early 1990s, which concludes that the labor intensive nature of SMEs helps to shift the structure of employment in the rural areas. The study also suggested that the products of SMEs could not compete in international markets due to their low quality. While this research, one way or another, attempted to identify the challenges that Cambodia's SMEs

face, due to the opening of its markets, the examples chosen in the studies were limited to rice milling SMEs only.

Baily (2007) also did a study of Cambodia's SMEs in an attempt to discover the major constraints which the domestic SMEs face, and identified three barriers to SME development in Cambodia. These are the weak regulatory and legal framework of the government, limited SME access to finance, and a shortage of SME-supporting activities. This paper will fill the gap caused by the limitation of past research in the field of SMEs, especially research which attempts to discover the constraints viewed from a regional integration perspective.

### 3. General Characteristics of Cambodia's SMEs

As of March 2009, there were 376,761 enterprises in Cambodia 93% of which were small and Medium Enterprises.<sup>1</sup> According to a survey conducted by the National Institute of Statistics (NIS) in 2000, almost 80% of Cambodian SMEs were engaged in the food, beverages, and tobacco sectors.<sup>2</sup> 13% of the SMEs were small-scale garment and textile, machinery, and non-metallic operations, and 7% were furniture manufacturers. Noticeably, the data from the Ministry of Industry, Mines, and Energy of Cambodia in 2005 also gave a similar result. Specifically, slightly more than 80% of Cambodian SMEs were involved in food, beverages and tobacco as shown in Table 1 below:

**Table 2. Characteristics of SMEs in Cambodia**

Enterprises Types	2000	2001	2002	2003	2004	2005
Food, beverages and tobacco	20,152	21,871	21,568	20,869	22,712	23,343
Textile wearing apparel leather	366	2,382	1,417	1,406	1,672	1,662
Wood Products including furniture	869	141	13	13	16	-
Paper products printing publishing	24	23	15	21	25	31
Chemicals petroleum coal plastics	297	277	275	96	120	153
Non-metallic mineral products	666	721	757	681	680	718
Fabricated metal products	1,824	1,454	1,899	1,850	2,239	2,222
Other manufacturing	1,208	1,286	976	1,049	667	618
Total	25,406	28,155	26,920	25,985	28,131	28,747

<sup>1</sup> Visal, "Cambodia has more than 300,000 Enterprises and More Than 1.4 Million Workers," *The Raksmei Kampuchia*, Vol.17, Issue. 5070, December 11<sup>th</sup>, 2009.

<sup>2</sup> Baily, Peter, "Cambodian Small and Medium Sized Enterprises: Constraints, Policies, Proposals for Their Development," ERIA Research Report, 2007, [http://www.eria.org/research/images/pdf/PDF%20No.5/No,5-1-Cambodian.pdf] (accessed 15 November 2009)

Source: Cambodian Ministry of Industry Mines and Energy, Cambodian National Institute of Statistics Yearbook 2006.

#### 4. Definition of SMEs and the Survey Sample

The definition of Small and Medium Enterprises varies from one country to another because of differences in the size of capital, labor forces, and contexts of countries.

For Cambodia, before 2005, the definition of SMEs varied. For instance, the National Institute of Statistics (NIS) stated that enterprises could be considered as small when the number of employees was less than 10. When the number was 11 or more, they would be regarded as large. Further, SMEs that employed between 11 and 100 employees would be classed as medium.<sup>3</sup> In contrast, the Ministry of Industry, Mines, and Energy held the opinion that small enterprises were those with less than 50 staff members.

In order to avoid double standards in the definition of SMEs, the Government of Cambodia SME Sub-committee, in July 2005, suggested that enterprises be classified as follows:

**Table 3. Definitions of SMEs in Cambodia**

	Number of Employees	Financial Determined by Assets excluding land (USD)
Micro	Less than 11	50,000
Small	11-50	50,000-250,000
Medium	51-100	250,000-500,000
Large	Over 100	Over 500,000

Source: Royal Government of Cambodia Sub-committee on SMEs (2005).

For data collection in this study, standard questionnaires were distributed to the representatives of SMEs in Phnom Penh, the capital city of Cambodia. The data collection had two phases: first we invited about 60 SMEs to attend a workshop on SMEs and East Asian Regional Integration held on October 5, 2009 with presentations made by experts in the field of SMEs and Regional Integration. During the workshop, the participants received explanations about the objectives of the research, some concepts regarding the roles of SMEs

<sup>3</sup> Baily, Peter, "Cambodian Small and Medium Sized Enterprises: Constraints, Policies, Proposals for Their Development," ERIA Research Report, 2007, [<http://www.eria.org/research/images/pdf/PDF%20No.5/No,5-1-Cambodian.pdf>] (accessed 15 November 2009)

and regional integration in East Asia, and the challenges and opportunities deriving from regional integration. In addition to the explanation and clarifications, the questionnaires were distributed to the participants. As a result, 51 questionnaires were completed. For the second phase of data collection, face-to-face interviews were carried out at the SME locations, by three research assistants. Another 60 SMEs were chosen randomly for the second phase of data collection.

In total, there were 111 completed questionnaires. For the purpose of this study, the definition of SMEs is different from the standard definition of the Cambodian government. SMEs here are those that employ not more than 200 employees. In this survey, the firms with more than 200 workers are dropped from the sample, and there are 99 SMEs remaining as presented in Table 4. Most of the sample SMEs has staff numbers from 6 to 49, which accounts for 90% of the total SMEs. It means that SMEs in Cambodia are relatively small in terms of their staffing. 14% of the sampled SMEs are in the Garments sector, 20% in Parts, Components, and automotive products, and the rest are “Others”.

**Table 4. Sample of the Surveyed SMEs by Type and Size**

Type	Number of Employees				Total	% of Total
	1 – 5	6 - 49	50 - 99	100 - 199		
Garments	1	13	0	0	14	14.1%
Automotive Parts, and Components,	1	19	0	0	20	20.2%
Others	3	57	2	3	65	65.7%
Total	5	89	2	3	99	
% of Total	5.05%	89.90%	2.02%	3.03%		100%

*Source:* ERIA – SME Survey 2009.

## 5. Analysis of the Survey Results

### 5.1. Characteristics of the Surveyed SMEs

Table 5 shows a summary of the surveyed SMEs. The average ages of the SMEs are 5.4 years for garments, 6.3 for automotive parts and components, and 9.3 for others. Most SMEs in the sample are domestically owned, accounting for 99% of the total. Only one SME, in the “others” category, is foreign-owned.

The average sales growth in 2007 was about 12% for all industries, but the growth in 2008 slowed down, reflecting a lower GDP growth compared with 2007. For both 2007 and

2008, most SMEs reported a profit of about 20%. Only 1 SME in the survey reported exporting about 20% of its products abroad. All the rest sell their products domestically.

Raw materials/intermediate input is the biggest part of the sampled firms' cost, accounting for more than 60% of total cost, followed by other costs, averaging about 13% for garments, 12% for automotive parts and components, and 18% for others. The share of labor cost averages about 16% for garments, 9% for automotive parts and components, and 12% for others. Utilities cost averages of about 10% for garments, 7% for automotive parts and components, and 9% for others. Only one SME in the Garment industry reported an interest payment (of about 10% of total cost), and 10 SMEs in others paid an average of 6.4% of total cost.

**Table 5. Characteristics of the Surveyed SMEs**

Characteristics	Garments			Automotive parts and components			Others		
	N	Mean	S.D	N	Mean	S.D	N	Mean	S.D
Age (year)	14	5.4	1.6	20	6.3	3.3	65	9.3	5.0
Ownership (%)									
Domestic	14	100.0	0.0	20	100.0	0.0	64	99.8	1.3
Foreign	0	.	.	0	.	.	1	100.0	.
Sales (% growth)									
2007	14	12.3	3.5	20	11.3	2.7	63	12.9	8.2
2008	14	-0.8	19.2	20	-1.2	16.4	65	-2.9	20.2
Profit (%)									
2007	13	23.2	9.0	20	19.3	5.6	64	20.5	8.6
2008	13	23.5	9.7	20	19.0	6.7	64	19.5	8.3
Cost Structure 2008 (%)									
Labor	14	15.8	4.2	20	9.2	3.1	65	12.3	4.4
Raw Materials	14	60.1	4.0	20	71.7	7.7	65	59.9	7.4
Utilities	14	10.4	3.2	20	7.4	2.0	65	8.9	5.4
Interest	1	10.0	.	0	.	.	10	6.4	3.5
Other costs	14	13.1	6.5	20	11.8	6.9	65	17.9	8.9
Employees by Education (%)									
Tertiary	0	.	.	5	24.0	26.1	37	19.5	9.9
Vocational	14	92.9	4.7	20	69.3	19.6	65	57.8	18.0
High school or less	11	9.1	3.0	17	30.9	12.0	61	33.4	16.6
Source of Working Capital (%)									
Retained Earning	14	45.4	13.7	19	27.1	14.7	65	37.0	15.7
Bank	1	40.0	.	1	20.0	.	12	20.4	13.2
Other Financial Institutions	0	.	.	0	.	.	3	36.7	37.9
Others	14	51.8	12.0	20	73.3	14.4	64	58.5	15.0
Average Cost of Borrowing (%)	1	10.0	.	0	.	.	12	7.8	2.9
Sale Destination (%)									
Domestic	14	100.0	0.0	20	100.0	0.0	65	99.7	2.5
Export	0	.	.	0	.	.	1	20.0	.

Source: ERIA – SMEs Survey 2009.

In terms of the education level of the employees, the majority of the workers within the garment sector have some vocational training as well as high school or lesser education. For SMEs in automotive parts and components, 24% of their employees have a tertiary education,

and for the others category, 19% possess a tertiary education, while the rest of their employees have some vocational training as well as a high school or lesser education.

The surveyed SMEs reported that internal financing is the main source of their financing. The majority of their working capital finance comes from retained earnings and other sources (e.g. family). Out of the total 99 SMEs, 17 reported borrowing from banks and other financial institutions for their working capital.

## 5.2. Business Capability and Innovation of the Surveyed SMEs

When asked questions which reflected their business capability and innovation performance in the past 3 years, none of the SMEs in garments and automotive parts and components have met international standards (e.g. ISO) compared with about 23% of SMEs in others. There are no SMEs in garments and only 2 in automotive parts and components that have applied information and communication technology (ICT) compared with about 63% in others. About half of the SMEs in garments, and automotive parts and components, participate in business networks and trade fairs, compared with 94% in others.

**Table 6. Business Capability and Innovation of the Surveyed SMEs**

Business Capability and Innovation	Garments		Automotive parts and components		Others	
	N	% of total	N	% of total	N	% of total
Meeting international standards (ISO)	0	0.0	0	0.0	15	23.1
Introducing ICT	0	0.0	2	10.0	41	63.1
Establishing new divisions or plant	1	7.1	7	35.0	15	23.1
Participation in business network, trade fairs	7	50.0	10	50.0	61	93.8
New machines or facilities	13	92.9	19	95.0	42	64.6
Improving existing machines	14	100.0	19	95.0	57	87.7
Introducing new ideas	12	85.7	7	35.0	58	89.2
Introducing new products into new markets	3	21.4	5	25.0	46	70.8
Introducing new products using new technology	2	14.3	3	15.0	43	66.2

Source: ERIA – SMEs Survey 2009.

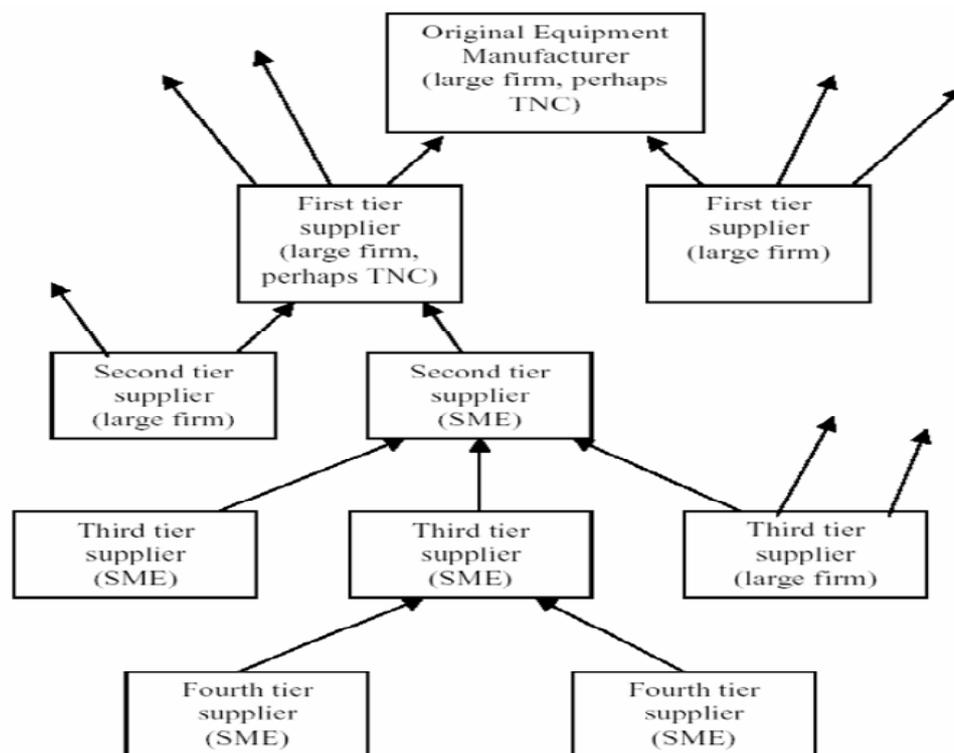
In terms of process innovation (new machines, improving existing machines, and introduction of new ideas), the majority of the SMEs in garments, and automotive parts and components, have done so; a higher percentage than those in others. However, only 21% of SMEs in garments, and 25% of SMEs in automotive parts and components reported introducing new products into new markets compared with 71% of those in others. Finally, about 14% of SMEs in garments and 15% of SMEs in automotive parts and components have

reported introducing new products using new technology compared with 66% of those in others.

### 5.3. SMEs Participation in Production Networks

Following Abonyi (2005), SMEs participation in production networks is limited to the ones that sell their products to those in a higher tier in the production chain as shown in Figure 2.

**Figure 2. SMEs in Production Network**



Source: Abonyi (2005).

As noted by Abonyi (2005), SMEs are normally located at a lower tier in the production network and are often associated with performing low-skill, low-value added activities, producing simple products, and competing on price with limited capacity and options for upgrading. The higher the position of SMEs in production networks the better, since being in the lower tier is associated with a greater chance of dropping out due to fiercer cost competition from other suppliers.

From the above definition, 28 out of 99 SMEs in the surveyed sample are in production networks. Out of the 28 in the networks, none are from the garments sector, 8 are from automotive parts and components, and 20 SMEs are from others.

There seems to be not much difference in the SMEs that are in networks, from the general characteristics of the firms in the survey, as described in section 5.1, except for the fact that the SMEs in the production networks seem to have a higher proportion of employees who have a tertiary education level compared with those that are not in networks.

However, their most interesting characteristics are the distinctive features of their business capability and innovation performance, comparing the SMEs in the production networks and those that are not, as shown in Table 7.

**Table 7. Selected Characteristics, Business Capability and Innovation of the Surveyed SMEs by Status in Production Network**

Business Capability and Innovation	IN		OUT	
	N	% of total	N	% of total
Meeting international standards(ISO)	3	10.7	12	16.9
Introducing ICT	17	60.7	26	36.6
Establishing new divisions or plants	9	32.1	14	19.7
Participation in business network, trade fairs	27	96.4	51	71.8
New machines or facilities	24	85.7	50	70.4
Improving existing machines	25	89.3	65	91.5
Introducing new ideas	24	85.7	53	74.6
Introducing new products into new markets	21	75.0	33	46.5
Introducing new products using new technology	19	67.9	29	40.8

*Source:* ERIA – SMEs Survey 2009.

Except for meeting international standards (e.g. ISO) and improving existing equipment, the majority of SMEs participating in production networks has better capabilities and is engaged more in both product and process innovation.

#### **5.4. Constraints Faced by the Surveyed SMEs**

Following OECD (2008), all SMEs in the sample were asked to assess the importance of 44 barriers using a five-point Likert scale (“(1) very significant” to “(5) not significant”) and they were also asked to rank their constraints using 8 main categories, ranging from “very important” (1) to “least important” (8). All the rankings are shown in Tables and 10. The

grouping of the main category of constraints and the complete results for all barriers are given in the appendix.

Table 8 presents the top 10 out of 44 barriers as seen by the surveyed SMEs, ranked using the average response rate (mean). For the ranking of the top 10 constraints for the whole sample, the top 2, i.e., “the lack of managerial time to identify new business opportunities” and “lack of production capacity to expand”, plus the fourth “shortage of working capital to finance new business plans” and the tenth “lack of human capital”, all reflect “Functional Barriers” that are also ranked highly on the main constraint categories in Table 9. The third and ninth ranked constraints are in “Product and Price Barriers” which are also consistently ranked highly in the main categories in Table 9. Ranked sixth is “limited information”, seventh “inability to identify and contact potential business partners”, and eighth “unreliable market data” are all in the “Information Barriers category”. Lastly, ranked fifth “establishing and maintaining trust with business partners” is in the “Distribution, logistics, and Promotion Barriers category” as shown in the appendix.

For SMEs in production networks, the ranking of the top 10 constraints is quite similar to the whole sample, retaining 8 out of the top ten ranked constraints as in the whole sample. Belonging to the “Functional Barriers” main category which ranks the same as in the whole sample, “lack of production capacity to expand” ranked top, followed by “lack of managerial time to identify new business opportunities” ranked third, and “shortage of working capital to finance new business plans” ranked fourth. However, two different constraints from the whole sample are present in the SMEs in the production networks, i.e., ranked ninth “unavailability of inventories/warehousing facilities” and tenth “Perceived risks in current and new business operations” which are within the “Distribution, logistics, and Promotion Barriers” and “Others Barriers” category, respectively.

**Table 8. Ranked Top-Ten Constraints Faced by the Surveyed SMEs and by Status in Production Network**

Rank	Whole Sample	Production Network	
		IN	OUT
1	B4. Lack of managerial time to identify new business opportunities	B6. Lack of production capacity to expand	B4. Lack of managerial time to identify new business opportunities
2	B6. Lack of production capacity to expand	B14. Offering competitive prices to customers	B6. Lack of production capacity to expand
3	B14. Offering competitive prices to customers	B4. Lack of managerial time to identify new business opportunities	B7. Shortage of working capital to finance new business plans
4	B7. Shortage of working capital to finance new business plans	B7. Shortage of working capital to finance new business plans	B14. Offering competitive prices to customers
5	B19. Establishing and maintaining trust with business partners	B19. Establishing and maintaining trust with business partners	B2. Unreliable market data (costs, prices, market shares)
6	B1. Limited Information to locate/analyze markets/business partners	B1. Limited Information to locate/analyze markets/business partners	B5. Insufficient quantity of and/or untrained personnel for market expansion
7	B3. Inability to identify and contact potential business partners	B13. Offering technical/after-sales service	B1. Limited Information to locate/analyze markets/business partners
8	B2. Unreliable market data (costs, prices, market shares)	B3. Inability to identify and contact potential business partners	B19. Establishing and maintaining trust with business partners
9	B13. Offering technical/after-sales service	B20. Unavailability of inventories/warehousing facilities	B3. Inability to identify and contact potential business partners
10	B5. Insufficient quantity of and/or untrained personnel for market expansion	B35. Perceived risks in your current and new business operations	B13. Offering technical/after-sales service

Source: ERIA – SMEs Survey 2009.

The ranking for those SMEs not in production networks retains all top-ten constraints as in the whole sample with differences only in the order of the ranking.

Table 9 shows the ranking of the main category of constraints by the surveyed SMEs. The ranking is the same for the whole sample and for those SMEs that are not in production networks. However, while the “Business Environment Barrier” and “Functional Barriers” rank first and second at the top of the whole sample, and among SMEs not in production

networks, “Product and Price Barriers” and “Functional Barriers” rank first and second for SMEs that are in the production networks, followed by the “Business Environment Barrier”

**Table 9. Ranked Constraints by Category Faced by the Surveyed SMEs**

Rank	All sample	Production Network	
		IN	OUT
1	Business Environment Barrier	Product and Price Barriers	Business Environment Barrier
2	Functional Barriers	Functional Barriers	Functional Barriers
3	Product and Price Barriers	Business Environment Barrier	Product and Price Barriers
4	Information Barriers	Information Barriers	Information Barriers
5	Distribution, logistics, and Promotion Barriers	Tax, Tariff and Non-Tariff Barriers	Distribution, logistics, and Promotion Barriers
6	Tax, Tariff and Non-Tariff Barriers	Distribution, logistics, and Promotion Barriers	Tax, Tariff and Non-Tariff Barriers
7	Procedural Barriers	Procedural Barriers	Procedural Barriers
8	Other Barriers	Other Barriers	Other Barriers

*Source:* ERIA – SMEs Survey 2009.

In summary, results from the survey on the constraints faced by SMEs in Cambodia reaffirm the fact that, overwhelmingly, most surveyed SMEs are operating under severe internal constraints. In general, for the SMEs in the sample and those that are not in the production networks, the majority of the constraints are in their Functional Barriers (management, finance capability) and ability to compete (Product and Price barriers), and “Information” appear to be their main hindrances. However, when separately ranked from the main category, the business environment barrier appears to be the main constraint, reflecting the fact that “peace and stability” is still a great concern given the tragic experiences throughout the country’s history. For SMEs that are in production networks, both the detailed and main category ranking of constraints is consistently high on “Functional Barriers” and “Product and Price Barriers”.

### 5.5. Ranked Effectiveness and Perceptions of Needs-Assistance

The SMEs were also asked whether they have received any assistance from the government or non-governmental organizations (NGOs) and to rate the effectiveness of the assistance which comprises 7 main components.

Table 10 shows the effectiveness and types of assistance for all the surveyed SMEs. Quality of support in “Business linkages and networking” and “Information” is reported to be high, as 89% and 85% of SMEs received these services, respectively. “Training” and “Financing” appear to be lower.

**Table 10. Ranked Effectiveness and Perception of Needs-Assistance to the Surveyed SMEs by Degree of Importance – All Sample**

Rank	Effectiveness of Assistance	% of Assisted SMEs	Perception of Needs- Assistance
1	Information	84.8	Business linkages and networking
2	Business linkages and networking	88.9	Financing
3	Technology development and transfer	50.5	Overall improvement in investment climate
4	Training	24.2	Information
5	Overall improvement in investment climate	63.6	Technology development and transfer
6	Financing	19.2	Counseling and advice
7	Counseling and advice	39.4	Training

Source: ERIA – SMEs Survey 2009.

As for the effectiveness of the assistance, “Information” and “Business linkages and networking” rank first and second, followed by “Technology development and transfer”, “Training”, “Overall improvement in investment climate”, “Financing”, and finally “Counseling and advice”.

It should be logical that the types of assistance that are ranked top in their effectiveness should be ranked lower in terms of needs-assistance of the SMEs. However, “Business linkages and networking”, “Overall improvement in the investment climate” and “Information” still tend to be the most popular type of assistance needed by the SMEs. This

could suggest that these two factors together with “Financing” are the overriding factors which should be addressed to facilitate the further development of SMEs in Cambodia.

When distinguishing between those SMEs that are in production networks and those that are not, Table 11 shows that both groups reported having effective support in “Information” and “Business linkages and networking”. However, those that are not in production networks tend to have insufficient “Financing” support compared with those in production networks.

As far as the perception of needs-assistance is concerned, “Business linkages and networking” and “Financing” are the top priority for those SMEs that are in the networks. For those SMEs that are not in production networks, “Financing” ranks top of the list, followed by “Business linkages and networking”, “Information”, and “Overall improvement in the investment climate”, of the top four.

In summary, the survey on effectiveness and needs-assistance could provide another avenue through which to identify ways and priorities to effectively help SMEs in Cambodia overcome constraints in either their normal expansion or their participation in foreign markets and production networks. The supports can be targeted at SMEs in general or focused according to the degree of importance of their participation in production networks.

**Table 11. Ranked Effectiveness and Perception of Needs-assistance to the Surveyed SMEs by Degree of Importance and their Status in Production Network**

Rank	In Production Network			Out of Production Network		
	Effectiveness of Assistance		Perception of Needs- Assistance	Effectiveness of Assistance		Perception of Needs- Assistance
	Rank (mean)	% of Assisted SMEs		Rank	% of Assisted SMEs	
1	Information	96.4	Business linkages and networking	Information	80.3	Financing
2	Business linkages and networking	100.0	Overall improvement in investment climate	Business linkages and networking	84.5	Business linkages and networking
3	Financing	21.4	Financing	Technology development and transfer	46.5	Information
4	Overall improvement in the investment climate	67.9	Information	Training	23.9	Overall improvement in investment climate
5	Training	25.0	Technology development and transfer	Counseling and advice	36.6	Technology development and transfer
6	Counseling and advice	46.4	Counseling and advice	Overall improvement in investment climate	62.0	Counseling and advice
7	Technology development and transfer	60.7	Training	Financing	18.3	Training

Source: ERIA – SMEs Survey 2009.

### **Box1. Case Study of Ly Ly Food Industry**

Ly Ly Food Industry was established in 2002 by a young Cambodian female entrepreneur with a mission to provide jobs to Cambodians, create a market for local products, namely corn and rice, and substitute imported foreign products. The company has grown quite remarkably since its inception. There were only 25 workers in 2002 with an investment capital of about 100, 000 US Dollars, now the company has more than 100 employees. The production cost structure of the company is 40 percent packaging (plastic bags are imported from Vietnam), 30 percent labor (totally domestic labor), and 30 percent on other costs (electricity, water etc...).

The target market is children, and average sales are about 400, 000 packs per day. The company's net profit is around 10 percent of total sales. Profit is mainly used for reinvestment and business expansion. The machinery was imported from mainland China. On-the-job training is used to create a pool of human resources, with this capacity building partially assisted by several Non-Governmental Organizations such as IMPACT Cambodia, GTZ, and the World Bank. Management skills and production know-how are the top priority for human resources development. IMPACT also provides vitamins to be integrated into the products in order to improve the health of the children/consumers.

The main strengths of the company are entrepreneurship, support from the government and international organizations, human resource management, and marketing strategy. The company's vision (help Cambodian farmers to find a market and assist Cambodian people in finding employment) is strongly supported by the consumers and other key stakeholders alike.

The main challenges are the high cost of electricity and imported packages from the neighboring country, Vietnam. The company wants to export their products to neighboring countries but the complicated export process and their lack of capacity prevent the company from doing so. The lack of high production technology is limiting the production capacity of the company. The owner- manager is looking for a partnership or joint venture with foreign investors to introduce a new high technology form of production. Strategic management to expand new business opportunities is also a constraint.

### **Box1: Case Study of Eurotech**

Eurotech is a drinking water producer in Cambodia. This company is owned by a Cambodian businesswoman. The company was founded in 1993 with only 10 staff and a limited operation (Products are basically distributed in Phnom Penh). Nowadays, Eurotech has become the leading water producer in the country with 200 staff members and its production has been recognized by Cambodian Standard (CS) and ISO 9001-2000. The company revenue in 2008 was 1,740,000 USD. This success, according to the company, is due to the government's efforts in easing all complicated procedures for enterprises so that they can operate their businesses and expand their trade relations with other countries. We can infer that East Asian regionalism has at least made the Royal Government of Cambodia carry out its internal reforms with the aim of attracting local and external investment. In addition, regionalism has also made local producers try their best to improve the quality of products, which are subject to competition from other countries in the region. In the case of Eurotech, the company has tried hard to compete with other products in the local market by importing water purifiers and raw materials (such as bottles and covers) from British and American companies.

Despite some opportunities brought about by East Asian regionalism, the company also pinpointed a series of challenges ranging from the lack of funds or credit support to expand their businesses, lack of knowledge and production skills, and lack of government support for entrepreneurs in seeking overseas markets, weak financial systems, fake products, and high tariff rates on imported raw materials. Another noticeable challenge, which could be triggered by the regional integration of Cambodian SMEs (based on Eurotech's experience), is the high tariff imposed on raw materials, which leads to high production costs. This suggests that the Royal Government of Cambodia needs to expedite the process of tariff cuts so that businesses could have a variety of options to reduce their production costs. The case of Eurotech reveals that the company could have more options in choosing the import source of raw materials, for example from ASEAN countries or non-ASEAN countries, if the tariffs imposed on the materials from ASEAN countries were greatly reduced. By doing so, Eurotech would be able to reduce its production costs, ultimately raising the competitiveness of its products in overseas markets.

## **6. Conclusion and Policy Recommendations**

SMEs have played a significant role in Cambodian economic development, especially in the context of the global economic crisis. Regional integration in Southeast and East Asia has created both opportunities and challenges for Cambodia's SMEs. Their limited capacity for business expansion and integration in production networks restrain Cambodia SMEs from making use of regional integration. Cambodia's trade deficits with its East Asian neighbors clearly prove the inefficiency of Cambodian enterprises in exporting to the regional market.

What we can learn from the results of this survey is that very few Cambodian SMEs are capable of participation in export markets, which reflects their limited capacity and the constraints they face when they want to upgrade.

There are certain different characteristics for those SMEs that participate in production networks from those which do not, such as their higher productivity, business capability and innovation.

Most surveyed SMEs are operating under severe internal constraints. In general, for the SMEs in production networks and those that are not, the constraints in their Functional Barriers (management, finance capability) and ability to compete (Product and Price barriers), and "Information" appear to be their main hindrances. However, when separately ranked from the main sample, the business environment barrier appears to be the main constraint, reflecting the fact that "peace and stability" is still a concern given the tragic events throughout the country's history. For SMEs that are in production networks, both the detailed and main category ranking of constraints is consistently high on "Functional Barriers" and "Product and Price Barriers".

Though SMEs receive some assistance, they still need support in the fields of "Business linkages and networking" and "Financing". "Overall improvement in the investment climate" and "Information" are the overriding factors to facilitate further SME development in Cambodia. For those SMEs that are in production networks, support in "Business linkages and networking", "Overall improvement in the investment climate", and "Financing" are the top priorities. For those SMEs that are not in the production networks, "Financing" ranks top of the list, followed by "Business

linkages and networking”, “Information”, and “Overall improvement in the investment climate”.

Since access to financing is consistently viewed as one of the biggest constraints faced by SMEs, specialized SME banks, which are very common in the region, should be established, or a loan or mortgage guarantee from the government as practiced in Indonesia should be considered. An SME Development Fund could be established, and set aside to be managed by private banks, and could be another option to iron out these constraints.

The best practices in SME Business Development Services (BDS), for example, provided by the Penang Skills Development Center of Malaysia, should be explored. The BDS could provide part or complete support services ranging from training; counseling and advice; technology development and transfer; information; business linkages; and financing.

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## **Appendix 1. List of Constraints and their Categories**

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### **INFORMATIONAL BARRIERS**

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- B1. Limited Information to locate/analyze markets/business partners
  - B2. Unreliable market data (costs, prices, market shares)
  - B3. Inability to indentify and contact potential business partners
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### **FUNCTIONAL BARRIERS**

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- B4. Lack of managerial time to identify new business opportunities
  - B5. Insufficient quantity of and/or untrained personnel for market expansion
  - B6. Lack of production capacity to expand
  - B7. Shortage of working capital to finance new business plans
  - B8. Difficulty in getting credit from suppliers and financial institutions
- 

### **PRODUCT AND PRICE BARRIERS**

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- B9. Developing new products
  - B10. Adapting to demanded product design/style
  - B11. Meeting product quality/standards/specifications
  - B12. Meeting packaging/labeling requirements
  - B13. Offering technical/after-sales service
  - B14. Offering competitive prices to customers
  - B15. Difficulty in matching competitors' prices
  - B16. Anti-competitive or informal practices
- 

### **DISTRIBUTION, LOGISTICS AND PROMOTION BARRIERS**

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- B17. Complexity of the production value chain
  - B18. Accessing a new production chain
  - B19. Establishing and maintaining trust with business partners
  - B20. Unavailability of inventories/warehousing facilities
  - B21. Excessive transportation/insurance costs
  - B22. Participation in promotional activities to target markets/business partners
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### **PROCEDURAL BARRIERS**

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- B23. Unfamiliarity with the complexity of procedures/paperwork
  - B24. Difficulties in enforcing contracts and resolving disputes
  - B25. Lack of home government assistance/incentives
  - B26. Unfavorable home rules and regulations
  - B27. Unfavorable host/foreign rules and regulations
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### **BUSINESS ENVIRONMENT BARRIERS**

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- B28. Poor/deteriorating economic conditions (home)
  - B28. Poor/deteriorating economic conditions (foreign)
  - B29. Inadequacy of basic and IT infrastructure (home)
  - B29. Inadequacy of basic and IT infrastructure (foreign)
  - B30. Political instability (home)
  - B30. Political instability (foreign)
-

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**TAX, TARIFF AND NON-TARIFF BARRIERS**

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B31. High tax and tariff barriers (home)

B31. High tax and tariff barriers (foreign)

B32. Inadequate property rights protection (*e.g.* intellectual property)- (home)

B32. Inadequate property rights protection (*e.g.* intellectual property) - (foreign)

B33. Restrictive health, safety and technical standards (*e.g.* sanitary and phytosanitary requirements) - (home)

B33. Restrictive health, safety and technical standards (*e.g.* sanitary and phytosanitary requirements) - (foreign)

B34. High costs of Customs administration, in exporting or importing (home)

B34. High costs of Customs administration, in exporting or importing (foreign)

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**OTHER BARRIERS**

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B35. Perceived risks in your current and new business operations

B36. Lack of the perceived benefits from joining production networks

B37. Willingness to adopt new business strategy or ideas

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*Source:* Adapted from OECD (2008).

## Appendix 2. Complete Ranking of Perception of Barriers for SMEs

Barrier	Obs	Mean	S.D.	Rank
B4. Lack of managerial time to identify new business opportunities	99	1.67	0.82	1
B6. Lack of production capacity to expand	99	1.72	0.98	2
B14. Offering competitive prices to customers	99	1.76	0.93	3
B7. Shortage of working capital to finance new business plans	99	1.81	0.99	4
B19. Establishing and maintaining trust with business partners	99	2.20	1.29	5
B1. Limited Information to locate/analyze markets/business partners	99	2.21	1.02	6
B3. Inability to indentify and contact potential business partners	99	2.25	1.03	7
B2. Unreliable market data (costs, prices, market shares)	99	2.26	0.92	8
B13. Offering technical/after-sales service	99	2.27	0.89	9
B5. Insufficient quantity of and/or untrained personnel for market expansion	99	2.29	0.95	10
B15. Difficulty in matching competitors' prices	99	2.39	0.85	11
B9. Developing new products	99	2.52	0.96	12
B8. Difficulty in getting credit from suppliers and financial institutions	99	2.54	0.95	13
B20. Unavailability of inventories/warehousing facilities	99	2.54	1.05	14
B10. Adapting to demanded product design/style	99	2.55	1.05	15
B11. Meeting product quality/standards/specifications	99	2.72	1.14	16
B35. Perceived risks in your current and new business operations	99	2.76	1.23	17
B18. Accessing a new production chain	99	2.82	1.08	18
B17. Complexity of production value chain	99	2.84	1.01	19
B28. Poor/deteriorating economic conditions (home)	99	2.91	0.98	20
B37. Willingness to adopt new business strategy or ideas	99	3.04	1.04	21
B29. Inadequacy of basic and IT infrastructure (home)	98	3.05	1.12	22
B21. Excessive transportation/insurance costs	99	3.13	1.04	23
B12. Meeting packaging/labeling requirements	99	3.16	1.22	24
B31. High tax and tariff barriers (home)	99	3.18	1.25	25
B23. Unfamiliarity with complexity of procedures/paperwork	99	3.22	0.94	26
B33. Restrictive health, safety and technical standards (e.g. sanitary and phytosanitary requirements) - (home)	98	3.32	1.39	27
B25. Lack of home government assistance/incentives	99	3.33	1.02	28
B30. Political instability (home)	99	3.33	1.29	29
B22. Participation in promotional activities to target markets/business partners	99	3.38	1.10	30
B36. Lack of the perceived benefits from joining production networks	99	3.39	1.04	31
B16. Anti-competitive or informal practices	99	3.67	1.29	32
B34. High costs of Customs administration, in exporting or importing (home)	99	3.70	1.31	33
B24. Difficulties in enforcing contracts and resolving disputes	99	3.93	0.95	34
B32. Inadequate property rights protection (e.g. intellectual property)- (home)	99	4.07	1.13	35
B26. Unfavorable home rules and regulations	99	4.09	1.00	36
B27. Unfavorable host/foreign rules and regulations	99	4.20	1.08	37
B28. Poor/deteriorating economic conditions (foreign)	97	4.28	0.95	38
B29. Inadequacy of basic and IT infrastructure (foreign)	97	4.34	1.02	39
B30. Political instability (foreign)	97	4.42	0.98	40
B31. High tax and tariff barriers (foreign)	98	4.45	0.86	41
B34. High costs of Customs administration, in exporting or importing (foreign)	98	4.58	0.88	42
B33. Restrictive health, safety and technical standards (e.g. sanitary and phytosanitary requirements) - (foreign)	97	4.60	0.86	43
B32. Inadequate property rights protection (e.g. intellectual property) - (foreign)	98	4.68	0.73	44

### Appendix 3. Complete Ranking of Perception of Barriers for SMEs in the Production Network

Barrier	Obs	Mean	S.D.	Rank
B6. Lack of production capacity to expand	28	1.61	0.69	1
B14. Offering competitive prices to customers	28	1.64	0.78	2
B4. Lack of managerial time to identify new business opportunities	28	1.79	0.69	3
B7. Shortage of working capital to finance new business plan	28	1.86	0.76	4
B19. Establishing and maintaining trust with business partners	28	2.00	0.90	5
B1. Limited Information to locate/analyze markets/business partners	28	2.04	0.58	6
B13. Offering technical/after-sales service	28	2.07	0.60	7
B3. Inability to indentify and contact potential business partners	28	2.14	0.76	8
B20. Unavailability of inventories/warehousing facilities	28	2.32	0.77	9
B35. Perceived risks in your current and new business operations	28	2.39	0.63	10
B2. Unreliable market data (costs, prices, market shares)	28	2.43	0.69	11
B5. Insufficient quantity of and/or untrained personnel for market expansion	28	2.46	0.74	12
B15. Difficulty in matching competitors' prices	28	2.46	0.69	13
B18. Accessing a new production chain	28	2.46	0.58	14
B17. Complexity of production value chain	28	2.50	0.58	15
B9. Developing new products	28	2.54	0.69	16
B10. Adapting to demanded product design/style	28	2.57	0.88	17
B31. High tax and tariff barriers (home)	28	2.61	0.83	18
B8. Difficulty in getting credit from suppliers and financial institutions	28	2.68	0.72	19
B21. Excessive transportation/insurance costs	28	2.71	0.85	20
B11. Meeting product quality/standards/specifications	28	2.75	1.00	21
B34. High costs of Customs administration, in exporting or importing (home)	28	2.75	0.89	22
B28. Poor/deteriorating economic conditions (home)	28	2.79	0.79	23
B29. Inadequacy of basic and IT infrastructure (home)	28	2.79	0.69	24
B23. Unfamiliarity with complexity of procedures/paperwork	28	2.96	0.64	25
B36. Lack of the perceived benefits from joining production networks	28	3.04	0.84	26
B22. Participation in promotional activities to target markets/business partners	28	3.11	0.88	27
B30. Political instability (home)	28	3.11	1.13	28
B37. Willingness to adopt new business strategy or ideas	28	3.18	0.77	29
B12. Meeting packaging/labeling requirements	28	3.36	0.91	30
B25. Lack of home government assistance/incentives	28	3.39	0.79	31
B33. Restrictive health, safety and technical standards (e.g. sanitary and phytosanitary requirements) - (home)	28	3.43	1.32	32
B16. Anti-competitive or informal practices	28	3.79	0.92	33
B30. Political instability (foreign)	28	3.79	1.10	34
B24. Difficulties in enforcing contracts and resolving disputes	28	3.82	0.67	35
B26. Unfavorable home rules and regulations	28	3.82	0.67	36
B29. Inadequacy of basic and IT infrastructure (foreign)	28	3.82	1.09	37
B27. Unfavorable host/foreign rules and regulations	28	3.93	0.98	38
B32. Inadequate property rights protection (e.g. intellectual property)- (home)	28	3.93	1.21	39
B28. Poor/deteriorating economic conditions (foreign)	28	4.11	0.74	40
B31. High tax and tariff barriers (foreign)	28	4.21	0.69	41
B34. High costs of Customs administration, in exporting or importing (foreign)	28	4.36	0.73	42
B33. Restrictive health, safety and technical standards (e.g. sanitary and phytosanitary	28	4.46	0.84	43
B32. Inadequate property rights protection (e.g. intellectual property) - (foreign)	28	4.64	0.49	44

#### Appendix 4. Complete Ranking of Perception of Barriers for SMEs Out of Production Network

Barrier	Obs	Mean	S.D.	Rank
B4. Lack of managerial time to identify new business opportunities	71	1.62	0.87	1
B6. Lack of production capacity to expand	71	1.76	1.08	2
B7. Shortage of working capital to finance new business plans	71	1.79	1.07	3
B14. Offering competitive prices to customers	71	1.80	0.98	4
B2. Unreliable market data (costs, prices, market shares)	71	2.20	0.99	5
B5. Insufficient quantity of and/or untrained personnel for market expansion	71	2.23	1.02	6
B1. Limited Information to locate/analyze markets/business partners	71	2.28	1.15	7
B19. Establishing and maintaining trust with business partners	71	2.28	1.41	8
B3. Inability to indentify and contact potential business partners	71	2.30	1.13	9
B13. Offering technical/after-sales service	71	2.35	0.97	10
B15. Difficulty in matching competitors' prices	71	2.37	0.91	11
B8. Difficulty in getting credit from suppliers and financial institutions	71	2.48	1.03	12
B9. Developing new products	71	2.51	1.05	13
B10. Adapting to demanded product design/style	71	2.54	1.12	14
B20. Unavailability of inventories/warehousing facilities	71	2.62	1.14	15
B11. Meeting product quality/standards/specifications	71	2.70	1.20	16
B35. Perceived risks in your current and new business operations	71	2.90	1.37	17
B18. Accessing a new production chain	71	2.96	1.20	18
B28. Poor/deteriorating economic conditions (home)	71	2.96	1.05	19
B17. Complexity of production value chain	71	2.97	1.11	20
B37. Willingness to adopt new business strategy or ideas	71	2.99	1.13	21
B12. Meeting packaging/labeling requirements	71	3.08	1.32	22
B29. Inadequacy of basic and IT infrastructure (home)	70	3.16	1.24	23
B33. Restrictive health, safety and technical standards (e.g. sanitary and phytosanitary requirements) - (home)	70	3.27	1.42	24
B21. Excessive transportation/insurance costs	71	3.30	1.06	25
B25. Lack of home government assistance/incentives	71	3.31	1.10	26
B23. Unfamiliarity with complexity of procedures/paperwork	71	3.32	1.03	27
B31. High tax and tariff barriers (home)	71	3.41	1.32	28
B30. Political instability (home)	71	3.42	1.34	29
B22. Participation in promotional activities to target markets/business partners	71	3.49	1.17	30
B36. Lack of the perceived benefits from joining production networks	71	3.54	1.08	31
B16. Anti-competitive or informal practices	71	3.62	1.41	32
B24. Difficulties in enforcing contracts and resolving disputes	71	3.97	1.04	33
B34. High costs of Customs administration, in exporting or importing (home)	71	4.07	1.27	34
B32. Inadequate property rights protection (e.g. intellectual property)- (home)	71	4.13	1.09	35
B26. Unfavorable home rules and regulations	71	4.20	1.09	36
B27. Unfavorable host/foreign rules and regulations	71	4.31	1.10	37
B28. Poor/deteriorating economic conditions (foreign)	69	4.35	1.03	38
B31. High tax and tariff barriers (foreign)	70	4.54	0.91	39
B29. Inadequacy of basic and IT infrastructure (foreign)	69	4.55	0.92	40
B33. Restrictive health, safety and technical standards (e.g. sanitary and phytosanitary requirements) - (foreign)	69	4.65	0.87	41
B34. High costs of Customs administration, in exporting or importing (foreign)	70	4.67	0.93	42
B30. Political instability (foreign)	69	4.68	0.80	43
B32. Inadequate property rights protection (e.g. intellectual property) - (foreign)	70	4.70	0.80	44

## Appendix 5. Ranked Constraints by Category Faced by SMEs

All Sample					In Production Network					Out Production Network				
Barrier	Obs	Mean	S.D.	Rank	Barrier	Obs	Mean	S.D.	Rank	Barrier	Obs	Mean	S.D.	Rank
Business Environment Barrier	98	2.64	1.46	1	Product and Price Barriers	28	3.04	1.23	1	Business Environment Barrier	70	2.44	1.31	1
Functional Barriers	99	2.81	1.55	2	Functional Barriers	28	3.11	1.81	2	Functional Barriers	71	2.69	1.43	2
Product and Price Barriers	99	2.93	1.34	3	Business Environment Barrier	28	3.14	1.69	3	Product and Price Barriers	71	2.89	1.39	3
Information Barriers	96	3.92	1.96	4	Information Barriers	28	3.36	1.91	4	Information Barriers	68	4.15	1.95	4
Distribution, logistics, and Promotion Barriers	97	4.80	1.62	5	Tax, Tariff and Non-Tariff Barriers	28	4.68	1.96	5	Distribution, logistics, and Promotion Barriers	69	4.84	1.53	5
Tax, Tariff and Non-Tariff Barriers	98	4.84	2.03	6	Distribution, logistics, and Promotion Barriers	28	4.71	1.84	6	Tax, Tariff and Non-Tariff Barriers	70	4.90	2.07	6
Procedural Barriers	96	5.96	1.49	7	Procedural Barriers	28	5.96	1.57	7	Procedural Barriers	68	5.96	1.46	7
Other Barriers	86	7.78	0.89	8	Other Barriers	28	8.00	0.00	8	Other Barriers	58	7.67	1.07	8

## Appendix 6. Ranked Effectiveness of the Assistance to the Surveyed SMEs

All Sample					In Production Network					Out Production Network				
Assistance	Obs	Mean	S.D.	Rank	Assistance	Obs	Mean	S.D.	Rank	Assistance	Obs	Mean	S.D.	Rank
Information	84	1.19	0.48	1	Information	27	1.11	0.32	1	Information	57	1.23	0.54	1
Business linkages and networking	88	1.39	0.69	2	Business linkages and networking	28	1.14	0.45	2	Business linkages and networking	60	1.50	0.75	2
Technology development and transfer	50	1.74	0.83	3	Financing	6	1.17	0.41	3	Technology development and transfer	33	1.76	0.87	3
Training	24	1.75	0.74	4	Overall improvement in investment climate	19	1.42	0.51	4	Training	17	1.88	0.78	4
Overall improvement in investment climate	63	1.84	0.70	5	Training	7	1.43	0.53	5	Counseling and advice	26	1.96	0.77	5
Financing	19	1.84	1.07	6	Counseling and advice	13	1.69	0.63	6	Overall improvement in investment climate	44	2.02	0.70	6
Counseling and advice	39	1.87	0.73	7	Technology development and transfer	17	1.71	0.77	7	Financing	13	2.15	1.14	7

### Appendix 7. Ranked Perception of the Assistance to the Surveyed SMEs

All Sample					In Production Network					Out Production Network				
Assistance	Obs	Mean	S.D.	Rank	Assistance	Obs	Mean	S.D.	Rank	Assistance	Obs	Mean	S.D.	Rank
Business linkages and networking	99	2.75	1.64	1	Business linkages and networking	28	2.11	1.03	1	Financing	70	2.63	1.40	1
Financing	98	2.77	1.36	2	Overall improvement in investment climate	28	2.18	1.47	2	Business linkages and networking	71	3.00	1.76	2
Overall improvement in investment climate	99	3.01	1.89	3	Financing	28	3.11	1.23	3	Information	70	3.06	1.56	3
Information	98	3.08	1.45	4	Information	28	3.14	1.15	4	Overall improvement in investment climate	71	3.34	1.95	4
Technology development and transfer	98	5.20	1.57	5	Technology development and transfer	28	5.50	1.37	5	Technology development and transfer	70	5.09	1.64	5
Counseling and advice	97	5.60	1.50	6	Counseling and advice	28	5.79	1.17	6	Counseling and advice	69	5.52	1.62	6
Training	97	5.74	1.29	7	Training	28	6.11	0.88	7	Training	69	5.59	1.41	7