Chapter 12

Structural Adjustment and International Migration: Firm Survey Analysis of the Thai Clothing Industry

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CHAPTER 12

Structural Adjustment and International Migration: Firm Survey Analysis of the Thai Clothing Industry

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This paper probes the structural adjustment process using evidence from the Thai clothing industry, with a view to informing the policy debate about international migration. The analysis is based on in-depth interviewing with 50 clothing firms in Thailand during November 2009-February 2010. The key finding is that not all firms opt to hire unskilled foreign workers (henceforth foreign workers). There are systematic differences in firm characteristics between firms who hire foreign workers and those who do not. The latter are relatively large in size (both employment and sales), perform better, and actively undertake upgrading activities. The former are struggling to maintain their profit margin, are relatively small, and do not adequately invest in upgrading activities. Interestingly, hiring foreign workers is not firms' first response but is a reflection of the fact that they have not yet been successful in undertaking functional upgrading. While there are many kinds of upgrading (service, product and functional), our finding points to the relative importance of functional upgrading for long-term and more sustainable development. Firms which were late in undertaking functional upgrading are likely to hire foreign workers during their structural adjustment process. Allowing unskilled foreign workers on a temporary basis would be a win-win-win solution for labor importing and exporting countries, as well as for the migrants themselves. Nevertheless, a condition for firms hiring unskilled foreign workers must be related to preventing any retarding effect on upgrading effort. Three policy inferences can be made from this paper. First, potential exists for mutual benefit for countries in the region, and there is room for international organization to materialize such potential. Secondly, it seems risky for labor-importing countries to impose one-size-fit-all policy measures in managing flows of unskilled foreign workers. Sector-specific types of policies are preferable. Finally, it is functional upgrading that plays the pivotal role in a sustainable development process.

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1. Issues

Liberalizing international trade, accelerating technological change and shifting societal concerns are important drivers of structural change, both within and across firms and industries. Such structural adjustment raises acute challenges. The requirement is for successful trade-related structural adjustment via the reallocation of labor and capital to more efficient uses, while minimizing adjustment costs for individuals, communities and society as a whole. The policy challenge is, therefore, to facilitate the change so as to take advantage of new possibilities while at the same time limiting adjustment costs.

In the context of the East Asian region, the process of structural adjustment is policy relevant, as it is related to the growing important phenomenon of cross-border movement of unskilled workers, driven by differences in economic development and demographic factors (i.e. aging population) (Salt, 1992; Global Commission on International Migration, 2005; World Bank, 2006: ILO, 2006). In theory, when a firm is undergoing a structural adjustment process as a result of labor market tightening and continued increase of (real) wages, three options are open; (1) hiring foreign workers, (2) capital deepening, and (3) capital exporting. The first option seems to be controversial. While labor-exporting and least developed countries have become increasingly active in helping their workers to work abroad, at least on a temporary basis, governments in labor- receiving countries have expressed their reluctance to allow flows of workers, and unskilled workers in particular, despite the presence of demand from their entrepreneurs. At best, they just allow such flows on a temporary basis and retain a high degree of policy discretion. Among numerous social and economic consequences resulting from importing unskilled foreign workers, one relates to possible negative consequences in the structural adjustment processes of firms. Particularly, when firms are allowed to hire unskilled foreign workers in order to undergo structural adjustment, they may become reliant on them. Subsequently, their investment and other decisions might be made on the premise that labor costs would continue to be held down by migration. As a result, firms will remain at the low end of

the value chain and rely on low wages as a key factor in competing in the world market. This would eventually retard upgrading.[1]

However, there are not prior theoretical arguments suggesting that decisions to upgrade and to hire unskilled foreign workers have to be interrelated. This is especially true for export-oriented industries like clothing and footwear, where multinational enterprises play an important role in global trade (Humphrey & Schmitz, 1998; Rabellotti, 1997; Schmitz &Nadvi, 1999; Gereffi, 1999; Gereffi & Memedovic, 2003). When firms have not yet completed their upgrading activities, they might opt to hire unskilled foreign workers during their transition, so as to avoid drastic adjustment. While the choice to undertake structural adjustment is a matter for the firm, each type of firm seems to have an uneven opportunity to choose. In the context of developing countries, small and medium firms as well as indigenous firms might have difficulties in using Options 2 and 3, (Capital Deepening and Capital Exporting) partly due to market failure elsewhere such as a less-developed financial system, credit constraints and other kinds of distortion affecting these kinds of firms.

In addition, international organizations such as the Association of South East Asian Nations (ASEAN), the Asia Pacific Economic Cooperation (APEC), the World Trade Organization (WTO), and the International Labor Organization (ILO), started searching for a form of international cooperation to manage the flows of unskilled workers, so as to maximize benefits while preserving the integrity of borders and human rights. So far such cooperation is still at an early stage. There were also policy initiatives between Thailand and her neighbors sharing borders, reflected in a signed memorandum of understanding (MOU) about labor mobility across borders.[2] For example, unskilled labor movement has just been incorporated in the WTO multilateral negotiation, Doha Development round (i.e. Mode IV in the General Agreement of Trade in Services-GATS) (Schiff, 2007; Hanson, 2008). Another example is the launching of the ILO Multilateral Framework on Labor Migration: Non-binding Principles and Guidelines for a Rights-based Approach to Labor Migration. There was a movement in APEC where

[1] Upgrading here is defined broadly covering service, product and functional-based. See the definition in Section 6.

[2] Thailand signed a Memorandum of Understanding (MOU) with Laos in 2002 (Ministry of Labor), Cambodia in 2003 (Ministry of Labor) and Myanmar in 2003(Ministry of Foreign Affairs) bilaterally in order to manage the cross-border flows of unskilled labor.

key immigration officials were brought together in a non-threatening atmosphere to discuss issues of mutual interest, which can be the basis for more detailed later engagement (Hugo, 2008).

All in all, these developments point to the need for a systematic micro analysis to understand firm behavior in hiring unskilled foreign workers, e.g. what employers are looking for, to what extent the labor market is segmented, and what are the available alternative responses. A better understanding of firm behavior would be helpful in designing sensible policy toward migrants. Therefore, this paper aims to provide an in-depth firm-level analysis of firm behavior in employing foreign workers. Our focus is on the responses of firms undergoing structural adjustment to rising wages, how firms maintain their competitiveness, the ability to compete in markets for goods or services.[3] This paper is in line with the recent research effort in the UK. The Migration Advisory Committee (MAC), a body of independent economists has been tasked to advise the UK Government. Insights revealed in this paper could well be a complement to the previous studies, which were mainly econometric-based and emphasized the impact of migration on wages and job opportunities for native workers.[4]

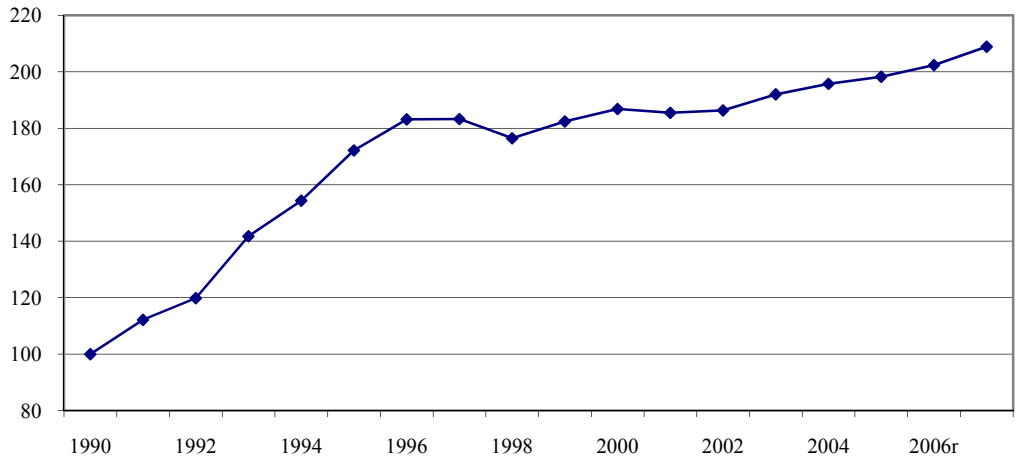
The clothing industry in Thailand is an excellent case study for the issue in hand. Clearly, an upward trend of real wages in Thailand indicates that the country is reaching the so called 'Lewisian' Turning Point, in which the excess supply of labor observed in the 1970s is running out (Figure 1). Among industries undergoing structural change, the Thai clothing industry receives special attention as it is the industry which is the most labor intensive, absorbs a sizable amount of manufacturing workers and contains numerous SMEs. Between the late 1980s and the early 1990s, the clothing industry was the most important in Thai manufacturing in terms of exports, value added and employment. Interestingly, many firms entered the industry as a result of policy-induced economic rents from a cascading tariff structure as well as from the quota system in global trade, known as the Multi-fiber Agreement (MFA) and then the

[3] Porter (2008: 174) argues that competitiveness at the firm level is clearly defined. What remains unclear is competitiveness at the national level.

[4] There are long lists of studies examining the impact of immigration on wages in labor receiving countries. For example, Borjas *et al.* (2008), Ottaviano, G. and G. Peri (2007), Borjas *et al.* (1997) Card (1990,2001,2005), Altonji & Card (1991); Borjas (1987), Grossman (1982) for the United States, Aydemir & Borjas (2007) for Canada, the US and Mexico, Roy (1997) for Canada.

Agreement of Textiles and Clothing (ATC). From 2005, structural adjustment in the clothing industry was triggered by the abolition of the ATC. In addition there are a number of clothing factories employing foreign workers in order to maintain their international competitiveness (Kohpaiboon, 2009).

Figure 1. Real Wage Index in Thailand (1990=100), 1990-2007



Note: Real wage is the ratio between (real) employment compensation and employedworkers, converted to a 1990 index (1990=100).

Sources: Employment compensation is compiled from the National Income Account, National Economic and Social Development Board (NESDB), and for employed workers from Key Indicators for Asia and the Pacific 2008, Asian Development Bank (ADB).

The paper is organized as follows; Section 2 discusses the analytical framework, illustrating choices for firms undergoing structural adjustment. In the following section, research methodology is discussed. Section 4 discusses the aggregate picture of migration in Thailand as well as policy responses so far by the Thai government. Section 5 presents the policy environment as well as the overall performance of the clothing industry. The firm-survey analysis is in Section 6. Conclusion and policy inferences are in the final section.

2. Analytical Framework

This paper's analytical framework is based on the open-economy version of the Lewis model (Lewis, 1954, 1958) developed in Athukorala & Manning (1999). In the original model, a labor-surplus economy consists of two sectors, namely the 'modern' sector and the 'subsistence' sector (i.e. it is a dual economy).[5] The production process in the modern sector makes use of capital and labor, while there are three primary inputs used in the subsistence sector, namely capital, labor and land. Note that the subsistence sector covers not only agriculture, but also handicraft workers, petty traders and domestic servants as well as farmers.

As the modern sector begins expanding, excess supply of labor moves from the subsistence sector. Employment in the modern sector is determined by the demand for labor. Given the low opportunity cost of labor in the subsistence sector, the modern sector can hire workers at a slightly higher fixed wage to compensate for the higher costs of town over rural life. Capital formation and technical progress in the modern sector do not raise wages, but increase the share of profits in the national income.

When the original model is applied to an open economy, the modern sector in a given economy must be a part of the expanding modern sector of the world. For the surplus labor economy, an opening economy means greater opportunities for output expansion through the export of goods that are intensive in unskilled labor. As the world division of labor becomes more finely articulated, countries will find their own niches in the world market. In this circumstance, labor cost becomes increasingly important for a labor surplus economy in determining the international location of production gains (Krugman 1995).

Note that labor surplus depletion in the open economy model would occur at a faster rate than happens in the closed economy model. When the labor market becomes tightened, wages begin to rise above the subsistence level and international competitiveness declines. This is the so-called 'Lewisian turning point'. When a

[5] We follow the terminology used in Athukorala & Manning (1999). This is different from a number of previous studies that use 'industry' and 'agriculture'. This alternative terminology simply ignores micro enterprises in non-agricultural and informal sectors that are important in developing countries. In addition, such terminology gives the wrong impression that the model is not applicable to countries like Singapore, or to Hong Kong, where there is no agricultural sector, as such.

country is reaching the 'Lewisian turning point', three options are available for maintaining its international competitiveness, namely importing cheap labor from abroad, capital exporting (relocation of production to another low wage or surplus labor country) and capital deepening.

In Option 1, business can be expected to proceed in the same manner as during the labor surplus phase of development. The only difference is that abundant supplies of labor at subsistence wages are drawn from abroad. Nonetheless, in theory importing labor could retard technological progress. Once entrepreneurs become accustomed to the steady availability of unskilled workers, this would slow down productivity improvement. Investment and other decisions are made on the premise that labor costs would continue to be held down by migration. All in all, the reliance on migrant workers is likely to postpone capital deepening and technological advances in the labor receiving country. In addition, there are always concerns about the non-economic consequence of importing low-wage foreign workers, such as cultural contamination and disruption of social peace.

Option 2 is capital exporting. While in theory this option is widely open for all types of firms, in practice it is only available to large firms in tradable good sectors operating in an oligopolistic market environment. As postulated in the literature of foreign direct investment, a firm taking this step must be able to use abroad its proprietary technology, so as to offset the potential disadvantage against local firms possessing superior knowledge of the availability of factor inputs, business practices and/or consumer preferences in the host country (Dunning, 1993; Caves, 2007). In addition, foreign firms which have their global operation networks and more experience in doing business abroad would be in a better position to use this option, compared to indigenous firms. This is particularly true in the case of SMEs and also firms involved in diffused-technology product lines. In addition, relocating factories abroad would generally be a net loss to the given capital-exporting country (a reduction in national income).[6] The exception would be the relocation of locally owned firms because these

[6] Welfare improvement could result by shifting production abroad to foreign affiliates. This occurs when the entry of foreign affiliates is driven by tariff/protection motivation (Bhagwati 1973, Brecher and Diaz-Alejandro 1977, Brecher and Findlay 1983). In this circumstance, the investment-

would reap the rewards of their foreign operation and would increase the national product. Nevertheless, labor's share of the national product would be hurt.

Option 3 is to adopt labor-saving technology (Kindleberger, 1967). In theory this option would naturally occur. At the beginning, the expansion of output demand at a constant real wage leads to increased profits, savings and investment, so that the country's capital-labor increases over time. The public, especially in developing countries, views this option as far superior to the other options as it is seen as the indicator of success in the country's industrialization. In practice, a smooth adjustment does not automatically occur, but depends on how well preconditions, such as skilled workers and infrastructure, have been established. More importantly, many of these preconditions are directly related to the role of government. Another impact consideration is the involvement of multinational enterprises (MNEs). If their entry is based predominantly on the relative cost competitiveness of the given country on a global scale, and they operate in their own enclaves, they always have the option of relocating to another low-wage location rather than upgrading and/or adapting their production process to suit domestic market conditions.

As argued in Athurkorala & Minning (1999), choice among these three available options depends on both economic and non-economic factors, such as the relative importance of the non-tradable sector, industry composition, geographic factors, geo-political factors, ethnic diversity, history and geographical factors. Hence, there is not a universal solution appropriate to all countries; rather, it varies from country to country and industry to industry.

3. Research Methodology

The research methodology involved a flexible questionnaire approach. In the approach, a formal questionnaire was developed and filled-in by personal interview. Over and above filling-in the questionnaire, an additional personal interview was also

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receiving countries could experience immersing growth induced by the entry of foreign firms so that their departure could well increase (rather than reduce) national welfare.

conducted in order to gain insight of the issues at stake. This would minimize the likelihood of missing important facets of the story and maximize insight into what actually happens. In this study, sample firms were purposively chosen from information-rich cases for in-depth analysis related to the central issues under study, (Patton, 1990). Firms included must have been exposed to international competition to a certain extent. The interview period averaged one hour, and was conducted by the author.

The designed questionnaire is in Appendix 1. It starts with basic information about the firm; name, position, address, trade orientation and whether the firm employed foreign workers. The question about export status is used as the screening question. Section 1 aims to assess firms' performance in terms of changes in sales volume and value. They can be used as a proxy of the *ex post* competitiveness of firms.[7] We start with basic information on the enterprises; e.g. size, ownership, age, nature of export (OEM vs. own brand). We proposed 5 major categories (sports wear, baby wear, men's wear, women's wear and jacket/jumper). Suggested by previous studies, these five categories are different from each other in skill intensity, lead time, local content, the nature of buyers, and growth prospects. This might have impact on upgrading options. The next four questions in Section 1 are to assess firms' export capability. The interviewed firms were asked to reveal their past sales performance in terms of value and quantity. Since garments, like other products such as electronics, experienced price deflation in the past decade, solely focusing on export value decline might somehow mislead. The last two questions, the export-output ratio and export destination, are to take into account possible heterogeneity among exporters. Our hypothesis is that export to the Triad region (US, EU-15 and Japan) would be more sustainable and unlikely to be a once-and-for-all event. The last two questions are about employment and the degree of substitution among labor and capital.

Section 2 focuses on employing foreign workers and its rationale. Only enterprises hiring foreign workers answer this section. In this section, the last two questions are open widely to allow us to examine their rationale in choosing to employ foreign workers as opposed to the other two options (capital deepening and capital exporting).

[7] As discussed earlier, firm competitiveness refers to their ability to maintain their sales.

In Section 3, we examine the upgrading experience of enterprises and their difficulty in doing so. Upgrading options include updating existing machines (i.e. change to new models), installing new machines (new types of machines e.g. laser cut, seam sealed), introducing new product lines, having new suppliers, and starting e-business. Most of these are about capital deepening. Section 4 is open for any comments from the enterprise.

50 firms were interviewed between November 2009- 14 February 2010. The sample was well distributed in terms of employment size (Table 1). There are 20 firms whose employment is less than 200 workers. Their employment accounted for 40 per cent of the total interviewed samples. The large-sized firms whose employment exceeds 500 workers accounted for another 40 per cent of the total sample. There are another 10 firms whose employment was between 200 and 500 workers. In the new millennium, research attention has shifted toward structural adjustment as a consequence of liberalized global trade in garments (i.e. the abolition of the Agreement on Textiles and Clothing-ATC), so those exports firms are our focus group in the sampling process. As a result, firms whose export share is greater than 60 per cent accounted for 60.5 per cent of the total samples (Table 2). To ensure the absence of sample selection bias, domestic-oriented firms are also covered in the sample in spite of the limited number.[8]

Table 1. Employment Structure of Sample

Numbers of Workers	2008	As of June 2009
50 ≤	3 (6)	3 (6)
51 – 200	17 (34)	18 (36)
201– 500	10 (20)	9 (18)
501 – 1,000	9 (18)	8 (16)
> 1,000	11 (22)	12 (24)
Total	**50 (100)**	**50(100)**

Note: Numbers reported are the numbers of firms and those in parentheses are the percentage of total firms.

Source: Firm survey conducted by authors.

[8] In the sample, 43 out of 50 firms exported their products in 2008.

Table 2. Exports Structure of Sample

Percentage of Export to Total Sales	2008	January - June 2009
20% ≤	7 (16.3)	8 (18.6)
21 – 40%	4 (9.3)	4 (9.3)
41 – 60%	6 (14)	6 (14)
> 60%	26 (60.4)	25 (58.2)
Total	**43(100)**	**43 (100)**

Note: Numbers reported are the numbers of firms and those in parentheses are the percentage of total firms.

Source: Firm survey conducted by authors.

4. Migration in Thailand and Policy Responses

4.1. Patterns of Migrant in Thailand

Cross-border migration from neighboring countries is not a new phenomenon but was recognized long before the economic boom in the late 1980s. Most migrants during the 1970s and early 1980s were refugees from neighboring countries fleeing the conflict and devastation of civil wars and most of them were re-settled in third countries or repatriated (Supang, 1993). Since the late 1980s Thailand has experienced a surge of unskilled foreign workers, especially from neighboring countries. For example, the total of legal immigrant workers in Thailand was 98,243 persons in January-November 2003 (Chalamwong, 2004: 515), gradually increasing from 63,600 and 69,750 workers in 1997 and 1998, respectively (Chalamwong, 2001: 12). This is in a sharp contrast to estimates of unskilled workers in Thailand that increased from 38,000 workers in 1987 to 717,000 and 986,889 workers in 1997 and 1998 (Chalamwong, 2001: Table 4). In 2004-6, the estimate reached 2.2 million workers (Hugo, 2008: Table 1.10). Most of the unskilled workers are from three neighboring countries, namely Cambodia, Lao, and Myanmar (CLM).

Table 3 illustrates the pattern of registered unskilled foreign workers between 1998 and 2009. Since figures in the table are official, their distribution to a certain extent was related to the degree of policy restrictiveness toward unskilled foreign workers. Despite

the presence of such shortcoming, the pattern observed in the table would reflect trends and patterns of unskilled foreign worker demand. Clearly an export-oriented manufacturing sector like garments, plastics and electronics became an increasingly important destination for these workers. In 1998, foreign workers were highly concentrated in the construction, domestic services, fishery and agricultural sectors, in total accounting for nearly 90 per cent. Their share dropped to 57.3 in 2009 (Table 3). The manufacturing sector was an important destination absorbing these workers. Its share increased from 6.3 in 1998 to 18.2 and 18.7 in 2003 and 2009, respectively. Within the manufacturing sector, garments are the third largest destination, accounting for 20 per cent of the total.

Table 3. Sector Distribution of Registered Unskilled Foreign Workers, 1998, 2003 and 2009

Occupation	1998	2003	2009
Helper	13.6	18.2	9
Agricultures	32.2	23.0	16.9
Fishery & Related	14.2	19.3	14.7
Construction	30.7	n.a.	16.7
Manufacturing	6.2	18.2	18.7
Subtotal	97	78.7	76
A number of registered workers	89,862	288,780	1,310,690

Sources: Compiled from an official source, Department of Employment, Ministry of Labor.

Migration in Thailand is largely an economic phenomenon determined by a combination and interaction of supply-push and demand-pull factors, and government policies. Thailand has passed through a full migration cycle, moving from being a major source of labor to the Middle East, and the more advanced economies of Asia, to becoming an important destination for unskilled migrant workers from neighboring low-income countries, mostly on an irregular basis. Real wages in Thailand show a steady upward trend since the late 1980s (Figure 1). Even though it dropped after the 1997/98 crisis, its growth rate has remained positive. It suggests that the country has reached the so called 'Lewisian' Turning Point, in which the excess supply of labor observed in the

1970s is running out. There are jobs that are shunned by native workers, such as domestic services, fishery, sugar and palm plantations and construction.

Reflected in Table 4, there is tendency that flows of unskilled workers from CLM to Thailand will continue. Demographic indicators such as expected growth of workforces, and the ageing index, tend to suggest that the labor market in Thailand will remain tight. While economic advance has been observed in the past few years for three neighbors sharing the common border (i.e. Cambodia, Lao, and Cambodia), the income gap will remain wide in the next decade.

Table 4. Population, Population Growth and Population Ageing Index

Country	Total population in 2007 (mil)	Projected Growth of the Population Aged 15-64 (%)			Ageing Index 2007	(PPP) GDP per capita 2007($)	Forecasted Growth Rate (%) 2010-14
		2005-10	2010-20	2020-30			
Thailand	65.2	0.96	0.47	-0.01	47.5	7,941.65	5.0
Thailand's neighbors which share common borders							
Cambodia	14.6	1.03	1.018	1.015	16.2	1,949.12	6.1
Laos	6.2	1.03	1.02	1.017	13.3	1,979.48	7.0
Myanmar	51.5	1.0	1.0	1.0	28.1	1,110.02	5.0
Other ASEAN members							
Brunei	0.4	2.7	1.9	1.3	17.4	50,902.03	1.4
Indonesia	228.1	1.5	1.2	0.6	30.9	3,721.78	5.5
Malaysia	26.2	2.4	1.7	1.0	23.5	13,400.57	4.8
Philippines	85.9	2.4	1.9	1.3	18.5	3,379.75	4.1
Singapore	4.4	1.8	0.2	-1.1	74.8	50,448	4.3
Vietnam	86.4	2.3	1.3	0.7	26.5	2,607.15	6.4

Source: UN, World Population Ageing 2007; International Monetary Fund, World Economic Outlook Database, October 2009.

4.2. Policy Responses

The Thai government began managing flows of foreign workers from the late 1980s when the economy experienced rapid economic expansion and the labor market was tightening and, hence, the number of illegal migrants increased rapidly. The general policy response during the past two decades is classified as active intervention (Hugo, 2008). In general, Thailand keeps open the option of hiring unskilled foreign workers on a temporary basis and uses it in a discretionary manner, as reflected in the Alien Working Act, a piece of primary legislation to govern flows of foreign workers, introduced in 1978 (Article 12) and amended in 2008 (Article 14).

Trial and error experiments were observed during the period 1990 and 2008 in aimed at managing illegal migration and ensuring the entry of these migrants on a temporary basis only. The first registration system was trialed in 1992, allowing employers in 9 provinces with certain occupations listed under Category C of the Alien Business Laws, to recruit foreign migrants. There was policy inconsistency, as foreign workers could alternatively receive purple cards, a substitute for a work permit, from the Ministry of Interior at no cost, so the effectiveness of the policy measures was unsatisfactory. In 1996, registration was set up on a regular basis and policy inconsistencies such as the purple cards were removed. The number of provinces was extended from 9 to 43 in 1996. Two-year work permits were granted but it was clearly anticipated that the work permits would be extended another two years (Martin, 2004). As a result, the number of registered workers increased from 700 in 1992 (Archavanitkul, 1998:8) to 323,123 workers between September and November 1996 (Chintayananda *et al.*, 1997).

In early 1998, there was a short-lived policy reversal on migrants. The government announced a new plan to remove 300,000 migrants by not renewing work permits for these workers, simply because of the concern that the 1997/98 crisis would impact on employment opportunities for native workers. Nevertheless, despite the crisis, certain kinds of jobs that are shunned by local workers remained, and there was demand for unskilled foreign workers. For example, the Tak Industrial Council in January 2000 complained that 20,000 migrants were removed, and only 6,000 Thais applied for their jobs. As a result, the government resumed their stance of renewing work permits for these migrants until 2000 (Martin, 2004).

From 2001, the government's objective has been clearer. Economic needs for unskilled foreign workers seem unavoidable and policy focus should be on how to manage them to avoid permanent settlement and any adverse potential effect such as rising demand for public services, reduction of social cohesion and an increasing incidence of disease and crime. To meet this policy objective, a new registration system was introduced. In the new system, no restriction on types of industries and geographical areas was imposed as it had before. These workers are allowed to work in Thailand for a maximum of 4 years under the new system. All foreign workers must be registered and all migrants had to be photographed and fingerprinted. In order to

implement these measures effectively, Thailand signed Memorandum of Understanding (MOU) with Lao (October 2002), Cambodia (May, 2003) and Myanmar (Jun 2003). The signed MOUs are to facilitate the repatriation process and to protect basic rights for the migrants. Interestingly, there is an additional option for provinces at the border to hire foreign workers, as expressed in Article 14 of the 2008 Act.

5. First Look at the Thai Clothing Industry

The policy environment influencing firms in the Thai clothing industry is dominated by a cascading tariff structure, in which tariffs on fabrics and yarns have always been lower than those on clothing since the mid 1980s. This encourages local enterprises to produce finished goods, as opposed to intermediate goods. Non-tariff measures were used only between 1971 and 1987.[9] By 2007, the tariff rate for clothing was 30 per cent - far higher than the country's average - whereas its intermediates (i.e. fabrics and yarns) are subject to 5 per cent tariff rates (Jongwanich & Kohpaiboon, 2007). Similar to other export-oriented industries, exporters can apply for various tariff exemption/rebate schemes such as the Board of Investment (BOI) tariff exemptions, tariff drawbacks (Section 19 of the Customs Laws) given by the Department of Customs, and tax rebate schemes given by the Fiscal Policy Offices (FPO) to mitigate the effect of input tariffs on exports.[10]

There are two adverse effects arising from this policy environment on the industry's development process. In this policy environment setting, firms have two choices; first to operate under the cascading tariff structure by producing goods for the highly protected domestic market and second to export by making use of the competitive wage

[9] During this period spinning and weaving industries were subject to non-tariff measures and controls of production capacity (Kohpaiboon, 1995). As a result, clothing firms experienced a negative effective rate of protection (ERP) (Suphachalasai, 1992: p. 31).

[10] From 1990, there have been another three alternatives, i.e.(i) duty relief for goods placed under the Custom Bonded Warehouse scheme; (ii) duty exemption for goods taken into the Free Zones established by Customs; (iii) duty exemption for goods taken into the Export Processing Zones (EPZ). Except for (ii) these measures are directly under the administrative responsibility of the Thai Customs Department to grant duty drawback and duty exemption. Measure (ii) is under the control of the Industrial Estate Authority of Thailand.

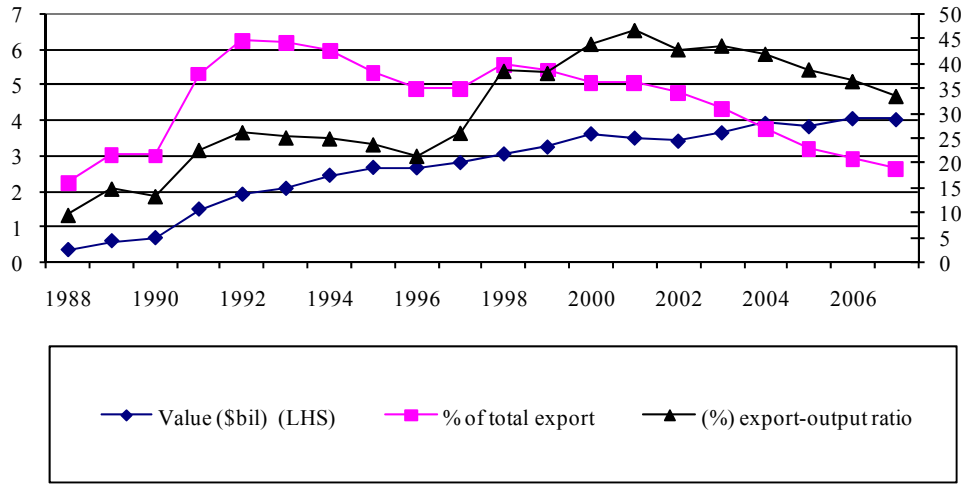
rate in the manufacturing sector and the then only partially utilized export quota of Thailand.[11] Given low barriers to entry, entrepreneurs are free to choose one over the other. While some decided to be integrated in the production networks of worldwide brand owners e.g. Nike, Addidas, Decaron, Calvin Klien, Enfant, many chose to serve the highly protected domestic market. This could dampen the technological learning activities of firms, as participating in a global network gives opportunities for suppliers to learn the advanced technology associated with the network. When firms are active in the highly protected domestic market, they are likely to be less active in improving their technological capability, as well as in addressing requests for improvements in the quality and price of the goods they offer (Bell *et al.,* 1984; Everson & Westphal, 1995; Moran, 2001). Rather, firms are more likely to produce low quality clothing in order to maximize the benefits entailed from the tariff structure. In addition, under the high tariff on intermediates, connection between clothing exporters and the domestic textile industry is unlikely. It is costly for clothing exporters to source locally manufactured fabrics and yarns because of input tariffs. Rather, they source imported fabrics and yarns and apply tariff exemption/drawbacks.

In regard to the industry's economic performance, clothing was the foremost manufacturing export of Thailand between the mid-1980s and the early 1990s (Figure 2). The surge in exports began during the mid-1980s. The dollar value of exports soared from $ 419 million during the first half of the 1980s to almost $2,000 million in the second half. Its share as a proportion of total exports was around 5% in the early 1980s before rising to 12% during the period 1987-93. Its share when compared to total manufacturing exports exhibited a more or less similar trend. In 1996, Thai clothing exports experienced a sharp drop to $3,000 million from $4,800 million in 1995. This was due to the successive overvaluation of real exchange rates between 1988 and 1996 (Jongwanich, 2008). From then on, export value gradually rebounded and reached about $4,000 million by 2007. Its share of total manufacturing exports declined

[11] Thailand was a member of the MFA between 1975 and 2000. In the early years, the MFA provided export markets for Thailand by curtailing the exports of the three major exporters-Hong Kong, the Republic of Korea and Taiwan. The utilization of Thai export quotas remained moderate during the early 1980s. See the utilization rate of Thai clothing exports to the United States and European Union in Tables 6.3 and 6.4 of Suphachalasai (1992: p. 58-59).

markedly because of the relatively slower growth rate compared to electronics and electrical appliance exports, as well as vehicle export.

Figure 2. Thai Clothing Exports, 1970-2007



Note: Clothing here includes HS 6101, 6102, 6103, 6104, 6105, 6106, 6107, 6108, 6109, 6110, 6111, 6112, 6113, 6114, 6115, 6116, 6117, 6201, 6202, 6203, 6204, 6205, 6206, 6207, 6208, 6209, 6210, 6211 and 6212.

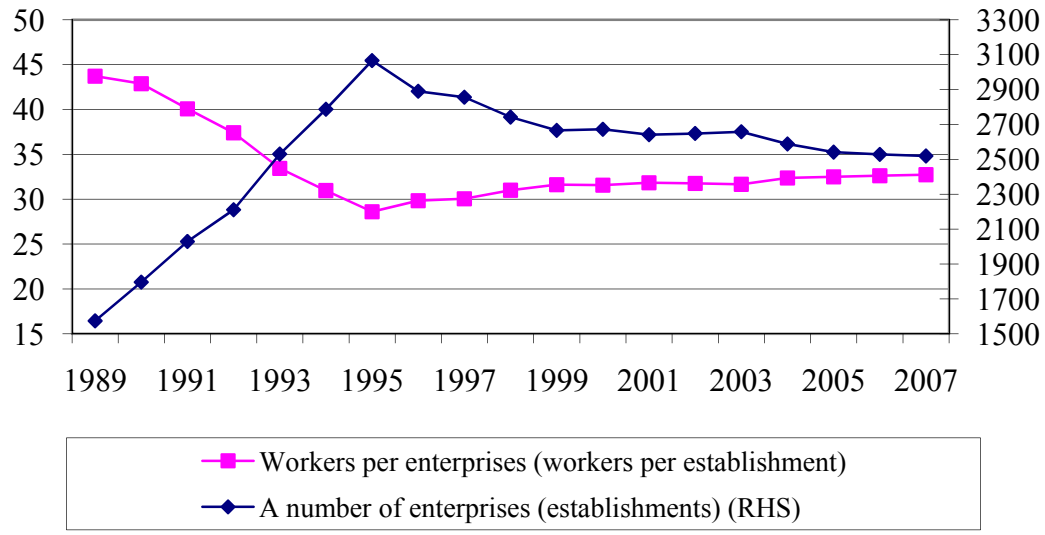
Source: Author's compilation from UN Comtrade Database.

The clothing industry is labor intensive and its barriers to entry are relatively low as opposed to some other industries. As a result, Thais employed in the clothing industry accounted for a considerable section of the total workforce in the manufacturing sector. The number of workers increased considerably from 688,000 in 1989 to 862,000 in 1996, which represented around 22.4% of total employment in the manufacturing sector during that period. Despite experiencing a steady export growth, the industry's employment level was more than 800,000 workers for the decade ending in 2007. Nevertheless, its relative importance in the manufacturing sector had noticeably declined to 15% by 2006. This is a reflection of the growing importance of other labor-intensive industries, such as the assembly of electrical appliances and electronics.

Interestingly, firms in the clothing industry tend to respond to policy-induced economic incentives. The number of enterprises increased significantly during the

export boom, from 1,574 s in 1989 to 3,066 enterprises in 1995. Interestingly, they are likely to be small and medium enterprises (SMEs). The ratio of the number of workers to that of enterprises dropped from 43.7 workers per firm in 1989 to 29.8 workers per firm in 1996 (Figure 3). This suggests that the private sector and SMEs in particular prefer the 'first' policy option (the policy-induced incentive offered by the cascading tariff structure) to the 'second' option (tariff exemptions/drawbacks). When non-tariff protection on fabrics and yarns was lifted in 1987 and the Effective Rate of Protection (ERP) turned out to be positive, SMEs entered the sector to benefit from the highly protected domestic market. Such an explanation is in line with the export-output ratio, observed in Figure 1, which was rather flat during the export boom. It also reflects the nature of relatively low entry barriers in the clothing industry.

Figure 3. Number of Enterprises and Workers per Enterprise (1989-2007)



Source: Thai Textile Development Institute.

With the limited size of the domestic market, firms tended to compete with each other. This led the domestic price to fall and made clothing tariffs unlikely to be binding. In the meantime, while wage rates continued to grow as a consequence of the countrywide economic boom, the international competitiveness of the Thai clothing industry eroded, along with indirect export opportunities. Since 1995, therefore, the number of enterprises operating has dropped. Between 1996 and 2006, 36 enterprises

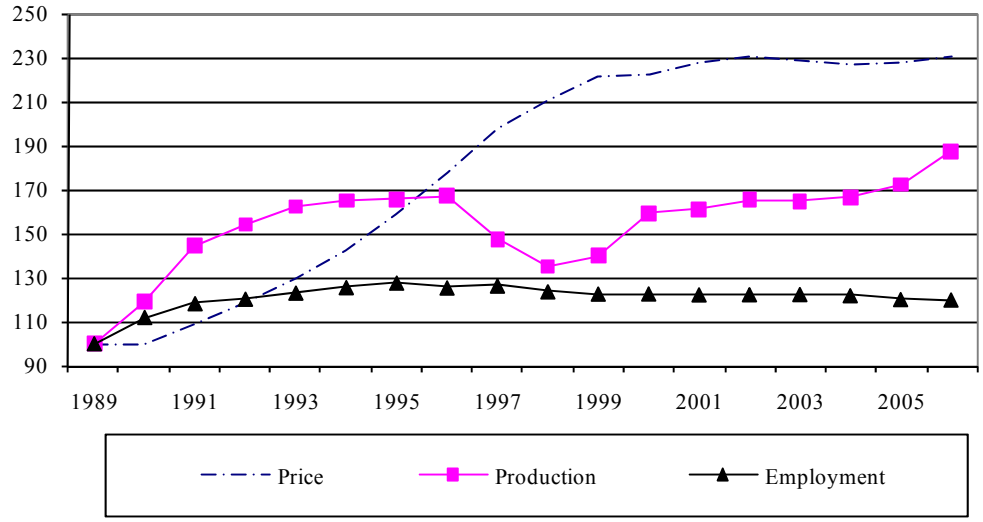
exited the clothing industry every year. By 2007, there were 2,519 enterprises in the clothing industry.

As the international competitiveness of the Thai clothing industry was faltering, the industry was forced to upgrade its production to higher value products, where wage rates are not the key factor in determining international competitiveness. However, technological learning and upgrading is a complex, difficult, and lengthy process that must be undergone before being able to reap the economic and environmental gains associated with shifts to more efficient technologies. Thus, firms must commit substantial resources to a long-term incremental and cumulative effort to expand their technological capability. Those operations that were unable to upgrade their products often exited the industry. Many of these were SMEs, as the ratio of the number of workers to that of enterprises has increased steadily since 1996. The number of workers per enterprise increased to 32.7 in 2007, from 28.6 in 1995 (Figure 3).

Of note is the fact that the above noted exit did not have a significant impact on the number of workers employed in the industry (Figure 4). The number of workers declined slightly to 824,500 workers in 2007, from its peak of 870,000 workers in 1995, so that the rate of employment per enterprise increased. Combined with the upward trend in the export-output ratio observed during the same period, the mild decline in employment within the industry suggests that exporting firms can move up to higher-value clothing. Therefore, workers who used to work in companies that shut down can be reallocated to work with larger and more export-oriented clothing firms.

In the new millennium, the global trade in textiles and clothing became more liberal as a consequence of the abolition of export quotas. This became a major push factor in the structural adjustment process. Between 1970 and 1995, global trade in textiles and clothing was carried out under the voluntary export restraints (VERs) governed by the Multi-fibre Arrangement (MFA). In the presence of the MFA, countries which are competitive in textiles and clothing exports are likely to be constrained by the imposed quota. On the other hand, for those that have not yet been competitive, the MFA gave opportunity to participate in the global trade and earn economic rents induced by the quota.

Figure 4. Indices of Price, Production and Employment of Thai Clothing Industry (1989=100) 1989-2006



Source: Author's compilation. Export data are from UN Comtrade Database whereas gross output is obtained from the National Economics and Social Development Board. Employment and a number of enterprises are from the Thai Textile Institute.

When the Uruguay round of the General Agreement on Tariffs and Trade (GATT) was concluded, all GATT members agreed to gradually bring the global trade in textiles and clothing under more or less the same rules as other manufactured goods under the World Trade Organization (WTO) system. During the transition period, their global trade was governed by the Agreement of Textiles and Clothing (ATCs). Since 2005, global trade in textiles and clothing was expected to be more liberalized. Exports would be determined by the country's competitiveness and global competition would be more intense.

6. Firm Survey Analysis

Firm interview evidence suggests that garment firms in Thailand, and export-oriented ones in particular, are in the process of structural adjustment, largely driven by the ATC abolition. Its effect has been observed since 2004 where more than 60 per cent

of global trade in textiles and clothing was liberalized. Interestingly, firm adjustment varies significantly from firm to firm. Some firms perform better in the quota-free era.[12] Three options, including capital deepening, exporting capital, and hiring unskilled foreign workers have been used in the structural adjustment process. From the firms viewpoint, these three options are not entirely mutually exclusive, i.e. there are some firms employing all of them simultaneously. This is due to the fact that garment production is labor intensive and the degree of substitution between capital and labor is very limited. Regardless of the levels of technology employed, full automation seems impossible for clothing firms, so that labor cost remains an important item in the cost structure, accounting for 20-30%. This estimate is more or less the same as that in the mid 1990s, although wage rates between two periods are far different.

6.1. Who Hires Unskilled Foreign Workers?

According to our firm interviews, 23 out of 50 firms report that they do not employ unskilled foreign workers. 'Not hiring unskilled foreign workers' is their choice, rather than a consequence of failing to find foreign workers, or policy constraints. The common characteristics of firms that do not hire these foreign workers are; they are relatively large (in terms of employment and sale value), they performed well in the past five years in terms of sales growth, and they successfully maintained their price-cost margin, as opposed to those hiring unskilled foreign workers. For example, 11 out of 23 firms employ more than 500 workers (Table 5). Another 11 firms had sales value records exceeding 250 million baht a year (2008 estimates) (Table 6).

[12] See Amann & Nixson (2009) and works cited therein for the most recent empirical studies on this issue.

Table 5. Employment Structure in 2008 Classified by Decision to Hire Unskilled Foreign Workers

Numbers of Workers	Hiring Foreign Workers		Not Hiring Foreign Workers
	Bangkok and Vicinity	Border Area	
50 ≤	1(7.7)	0 (0)	2 (8.7)
51 – 200	4 (30.8)	8 (57.1)	5 (21.7)
201– 500	4 (30.8)	1 (7.1)	5 (21.7)
501 – 1,000	2 (15.4)	4 (28.6)	3 (13.0)
> 1,000	2 (15.4)	1 (7.1)	8 (37.8)
Total	**13 (100)**	**14 (100)**	**23(100)**

Note: Numbers reported are the numbers of firms and those in parentheses are the percentage of total firms.
Source: Firm survey conducted by authors.

Table 6. Sale Value Structure in 2008 Classified by Decision to Hire Unskilled Foreign Workers

Million Baht	Hiring Foreign Workers		Not Hiring Foreign Workers
	Bangkok and Vicinity	Border Area	
100 ≤	5 (38.5)	12 (85.7)	8 (34.8)
101 - 250	5 (38.5)	2 (14.3)	4 (17.4)
251 - 500	1 (7.7)	0 (0)	3 (13.0)
501-1,000	1 (7.7)	0 (0)	2 (8.7)
> 1,000	1 (7.7)	0 (0)	6 (26.1)
Total	**13 (100)**	**14 (100)**	**23 (100)**

Note: Numbers reported are the numbers of firms and those in parentheses are the percentage of total firms.
Source: Firm survey conducted by authors.

On the other hand, firms with unskilled foreign workers are relatively small. Their performance varies across firms significantly. The average employment size of firms with unskilled foreign workers was 422 workers in 2008. The corresponding figure for those without unskilled foreign workers is 622 workers (Table 5).[13] In addition, there are only three firms (out of 27) whose sales value exceeds 200 million baht a year, whereas the others' sale value is below 200 million baht a year. Many of the firms hiring foreign workers complain about squeezed profit margins and raise concerns about business uncertainty.

Firms who employ foreign workers can be further disaggregated into two sub-groups. The first sub-group is medium-sized firms located in Bangkok and its vicinity.

[13] Mid-point estimate is used.

There are 13 firms in this subgroup. Firms in the first sub-group just started hiring foreign workers about 3-4 years ago on average. Their ratio of foreign workers to total workers was about 31.6 % in 2008, and increased to 38 % in the first half of 2009. This is due to the fact that unskilled workers from CLM have been legalized since 2003. For this sub-group, hiring foreign workers is not the first option to be chosen, as opposed to the other adjustment options. Generally, foreign workers are less productive (measured in terms of capability to do very complicated garments, output per worker, dedicated, etc.) than natives. Many respondents in this subgroup reported that the productivity of foreign workers is about 70-75% of the productivity of native workers. There are also problems associated with this option such as communication, worker cohesion in the factory, and other bureaucratic issues related to migrant living.[14] The main reason for hiring foreign workers is simply the labor shortage, i.e. difficulty in finding native workers and to keeping current native workers. When they want to keep their business running, this option seems unavoidable.

The second sub-group consists of 14 firms located at the border between Thailand and Myanmar, in Tak province and Myawaddy province in particular. These firms have long-term experience in hiring foreign workers. They have hired unskilled foreign workers for more than 4 years because these foreign workers are allowed to cross the border on a daily basis to Mae Sot sub-province, the gateway between Thailand (Tak province) and Myanmar (Myawaddy province). There are a number of Burmese workers who work in Mae Sot sub-province during the day and return to their home after work. As a result, the ratio of unskilled foreign workers to total workers is nearly 100 per cent, 86.2% in 2008 and the first half of 2009. Most garment factories in this area are small. Twelve out of 14 firms in this subgroup have sales value less than 100 million baht (Table 6). The other two have sales value recorded between 101 and 250 million baht. There are only 5 out of 14 firms that employ more than 500 workers. The others' employment is in the range of 51 to 200 workers (Table 6). The majorities are subcontractors of bigger firms in Bangkok, and perform only certain activities, and

[14] For example, as revealed by a former chief supervisor of the factory, migrants must stay only in a location registered. There were many cases where these migrants visited their friends and relatives in other provinces and were caught by the police. When such a case occurred, it was the responsibility of the factory's owner to bail out these workers.

sewing activities in particular (i.e. the most labor intensive activities in garment manufacturing). Similar to the first sub-group, firms in this sub-group reveal their difficulty in maintaining price-cost margins.[15] To a certain extent, firms in the second sub-group are an outcome of the structural adjustment of existing firms, which are usually located in Bangkok and its vicinity. When wages increased and hiring unskilled foreign workers was prohibited in Bangkok, many Bangkok-based firms either set up new factories or outsourced sewing activities to smaller firms in Mae Sot sub-province, both of which were to access low wage unskilled foreign workers. On average, they were established in 2002.

6.2. Upgrading Experience

As discussed earlier, one concern related to hiring foreign workers is the negative effect on upgrading and growth sustainability. In general, upgrading can occur in several ways, such as service, product, and functional-based upgrading (Gereffi & Memedovic, 2003; Gereffi & Tam, 1998; Gibbon, 2003; Palpacuer *et al*., 2005). Service-based upgrading refers to the ability to provide a broader range of services beyond simple assembly, including product design, fabric sourcing, inventory management and management of production sourcing. Product-based upgrading refers to the ability to manufacture higher quality products for higher priced market segments; and functional-based upgrading involves reduced inventories and waste through the adoption of modern management techniques such as the lean production system.

Our firm interviews reveal that upgrading decisions seem to be independent of firm behavior in hiring foreign workers. Although efforts to upgrade vary significantly across firms, they all reveal upgrading activities such as in installing new models of production equipment (e.g. sewing machines), producing more complicated orders, and undertaking more tasks beyond manufacturing. Foreign buyers play a key role, and have a tremendous effect on upgrading, in the global trade of clothing like other traditional labor-intensive products (e.g. toys, footwear), reflected in the global value chain literature. The chains are seen as buyer-driven value chains. These buyer-driven

[15] There is an exception among them which has performed well in the past few years. The owner doubled production capacity in 2009 from 500 to 1,000 workers in spite of the global recession. As revealed by the owner, his factory would be the largest cotton yarn producer in Thailand in 2009.

chains are those in which large multinational retailers, marketers, and branded manufacturers play pivotal roles in setting up decentralized production networks in a variety of exporting countries, typically in developing countries. Nike, Adidas, Decaron, Patagonia, Wal-mart, and Carrefour are obvious examples of these buyers.[16] These buyers operate in many countries and have considerable influence on local suppliers (Hone, 1974: p.149; Keesing, 1983: p.339; Rhee *et al*., 1984: p.54). They not only negotiate price and delivery times, but also demand that suppliers perform specific procedures in fulfilling orders. This is especially true for North-South trade, where there is a wide range of required quality parameters, including input specifications and quality, product design, and labeling and packaging (Keesing 1983: p.339; Rhee *et al*., 1984: p.61). While some of these aspects may not even be of interest in developing countries, consumers in developed countries are highly sensitive to them and therefore they are vital to market success. As a result, the manufacturing process is far beyond simple manufacturing, and the final product is the result of several activities, comprising research and development (R&D), product design, marketing, and manufacturing.

A consensus is reached in our interviews about the relative importance of the buyers though our respondents' attitudes towards these buyers are not always positive. These buyers usually visit local suppliers to check their production process, and to conduct assessments of their capability, before placing orders. After finding potential suppliers, the buyers provide technical information for improving existing facilities. Hence, these buyers and their requests are to a certain extent a major push factor for upgrading in the manufacturing plant. This is especially true in the new millennium, since these buyers have gained more freedom in sourcing clothing (Interview with two buyers' representatives, one was an MNE representative, and the other a local agent). Since orders from these buyers seem to be large and continuous, firms have incentives to comply with any requests from them.

Not all kinds of upgrading can be forced by the buyers. Upgrading driven by these buyers is largely service and product-based, all of which are needed for fulfilling their orders. As global trade becomes more liberalized, *the buyer* requests suppliers to perform more tasks than before, including such things as pattern development, marker

[16] Hone (1974: p.149), Keesing (1983), Kohpaiboon (2006 and 2008) refer them as MNE Buyers.

making, and sample making. As a result, the Thai producers are no longer doing just the basic manufacturing process (cutting, sewing and packing), but are engaged in service-based upgrading. In addition, buyers operating worldwide have good knowledge of inter-country competitiveness, reflected in their order allocation between countries. As (real) wages in Thailand continue to increase, it is not surprising that orders have become more complicated and that workers handling them must be relatively skillful. As a result, in many cases, manufacturing new orders frequently involves installing new machines needed in the production process. A clear example is the use of laser cutting and seal taping techniques in the industry, as a result of more complicated orders and product-based upgrading. Therefore, service- and product-based upgrading is commonly observed in Thai firms.

Where functional upgrading is concerned, *the buyer*'s role seems to be limited. Functional-based upgrading includes modern management techniques such as the lean production system (also known as the Toyota Production System: TPS), the Continued Productivity Improvement System (CPIS) and high performance work systems (Appelbaum & Gereffi, 1994), the Quality Control Circle (QCC), multiple skill development programs or flexible specialization (Piore & Sabel, 1984; Brusco 1982).[17] Generally functional-based upgrading incurs a certain amount of sunk cost, takes time for firms to benefit from it, and must be carried in a continuous manner as revealed in our firm survey. This is different from service- and product-based upgrading which give benefit instantaneously. In such circumstance, it is difficult for the buyer to force suppliers to commit to functional upgrading.

When firms' upgrading behavior is analyzed, all interviewed firms can be categorized into 3 groups. The first group (Group 1) comprises those firms that implemented all kinds of upgrading. There are 19 firms in this group. All kinds of upgrading are being implemented simultaneously. They are export-oriented and relatively large in terms of both employment and sales values (Tables 7 and 8). In 2008, 8 out of 19 firms employed more than 1,000 workers whereas the others are in the range

[17] A rudimentary idea is that workers should be able to cross functions and have cross skills (multi skills). The former means, for example, that the workers could be able to interchangeably do their functions such as cutting, ironing, and packing. The latter, for example, means that the workers could be able to interchangeably do their sewing jobs such as collars, arms, and sides. Therefore, workers could be able to substitute for their colleagues with least cost.

of 201 to 1,000 workers. There is only one firm in this group employing 51 – 200 workers. Of the total, 8 firms reported that their average sales in 2008 are higher than 500 million baht. Interestingly, they are those who do not rely on unskilled foreign workers in their structural adjustment, although some are constrained by their buyers' requirements.

Table 7. Employment Structure in 2008 Classified by Upgrading Behavior

Numbers of Workers	Group 1	Group 2	Group 3
50 ≤	0 (0)	3 (16.7)	0 (0)
51 – 200	1 (5.3)	8 (44.4)	8 (61.5)
201– 500	6 (31.6)	3 (16.7)	1 (7.7)
501 – 1,000	4 (21.0)	2 (11.1)	3 (23.1)
> 1,000	8 (42.1)	2 (11.1)	1 (7.7)
Total	**19 (100)**	**18 (100)**	**13 (100)**

Note: Numbers reported are the numbers of firms and those in parentheses are the percentage of total firms. Group 1 undertakes all kinds of upgrading whereas Group 2 refers to those undertaking mainly service- and product-based upgrading and beginning functional upgrading. Group 3 is those solely undertaking only service- and product-based upgrading.
Source: Firm survey conducted by authors.

Table 8. Sales Values in 2008 Classified by Upgrading Behavior

Million Baht	Group 1	Group 2	Group 3
100 ≤	3 (15.8)	11 (61.1)	11 (84.6)
101 - 250	5 (26.3)	4 (22.2)	2 (15.4)
251 - 500	3 (15.8)	1 (5.6)	0 (0)
501-1,000	3 (15.8)	0 (0)	0 (0)
> 1,000	5 (26.3)	2 (11.1)	0 (0)
Total	**19 (100)**	**18 (100)**	**13 (100)**

Note: Numbers reported are the numbers of firms and those in parentheses are the percentage of total firms; See notes about firm groups are the same as in those in Table 7.
Source: Firm survey conducted by authors.

Performance of firms in this group is outstanding. They are gradually moving up the quality ladder and targeting high-end markets such as the EU-15 in which customers are fashion-conscious. 12 firms in this group have started becoming involved in product design activities e.g. original design manufacturing (ODM) and original brand-name manufacturing (OBM), some of which have their own brands sold in either international high-end markets, i.e., New York City, or domestic high-end markets. Despite experiencing an export contraction during the recent global recession, most firms have

recovered in export volumes since October 2009. More than half of them reported that they have run at full capacity in their production lines since October 2009. In some firms, confirmed forward orders from their buyers up to the end of 2010 have been received. All claim that their outstanding performance was derived from the three upgrading options.

To deal with the labor shortage problem, they set up new factories in rural areas to access rural workers, whose urban-rural wage premium remains negative.[18] For example, one firm with 4,000-5,000 workers set up their additional factories in Northeastern region (2 factories in Khon Kaen province and one in Korat province). The factory manager in Khon Kaen province is very positive about running the business in rural areas. There are 5 more firms who told more or less the same story. Many of them invested in the "near abroad" for example in Laos, Cambodia, and China. Note that capital relocation (i.e. setting up factories in rural areas) as well as capital exporting are over and above capital deepening.

The last common characteristic among these 19 firms is the nature of the firm owners. Their owners are either western-educated entrepreneurs or else people who assign a high value to modern management systems in productivity improvement. This highlights the role of the entrepreneurial factor. The entrepreneurial factor seems to play a pivotal role when it comes to longer-term and highly uncertain projects like functional upgrading.

The second group (Group 2) comprises those firms that have focused on service- and product-based upgrading, and just began involvement in functional upgrading. There are 18 firms in this group, most of which are medium size, and are located in Bangkok and its vicinity. The average employment size is about 338 workers. 61.1 per cent of firms within the group had annual sales less than 100 million baht in 2008. So far their upgrading seems to follow a passive strategy, and focuses on upgrading their machinery and equipment. Effort to introduce new management systems (functional-

[18] In the context of developing countries, industrialization would promote resource reallocation, shifting excess supply of labor from relatively lower productive primary sectors, usually in rural areas, to more productive industrial sectors in urban area, i.e. urban-rural migrants. For a worker in a rural area, the decision to migrate also depends on net gains, the so called urban-rural premium. This is the difference between a higher wage expected to be earned in town and the higher living costs. Migration occurs only when the net earning is positive (Sjaastad, 1962; Harris & Todaro, 1970; Lucus, 1970; Bernanke, 1989; Athukorala Manning, 2003).

based upgrading) has been limited and is at an early stage. The general impression observed in the interview suggests that just enough upgrading was undertaken to maintain their production volumes and/or sales values. When global trade in clothing has been liberalized, service- and product-based upgrading are clearly inadequate to compensate for successively rising wages and tightening in the labor market. As a consequence, they started undertaking functional upgrading few years ago.

This group's business performance was poor in comparison to the first group. Firms in Group 2 experienced severely tightened profit margins and expressed their concern about industry prospects. Half the firms in this group rely heavily on exports (i.e. their export-output ratio exceeds 60 per cent) (Table 9). They were severely affected by the recent global recession. Even though there were signs of recovery in their export orders, there is still a high degree of uncertainty. In addition to hiring foreign workers, they are shifting away from developed country markets towards regional markets like Southeast Asia as well as domestic markets during their structural adjustment. The latter export destination seems to be less competitive but is subject to high market uncertainty (i.e. fluctuations in volume). For example, 5 firms in this group are developing their own brands and/or establishing their own shops to serve domestic middle to low-end markets.

Table 9. Export Structure in 2008 Classified by Upgrading Behavior

Percentage of Sales Values	Group 1	Group 2	Group 3
20% ≤	2 (10.5)	2 (13.3)	1 (11.1)
21 – 40%	2 (10.5)	3 (20.0)	0 (0)
41 – 60%	3 (15.8)	1 (6.7)	2 (22.2)
> 60%	12 (63.2)	9 (60.0)	6 (66.7)
Total	**19 (100)**	**15 (100)**	**9 (100)**

Note: Numbers reported are the numbers of firms and those in parentheses are the percentage of total firms; for notes about firm groups see Table 7.
Source: Firm survey conducted by authors.

Labor availability is becoming a serious matter. Particularly, the decision to stay on in the business depends on the likelihood of access to labor. This is consistent with the finding about the necessity of labor in the clothing manufacturing process mentioned above. Some firms made a strong claim during the interview that firms would be immediately shut down unless unskilled foreign workers were legally allowed. Hence,

10 out of 18 firms are opting to hire foreign workers and the others are preparing to hire. From their point of view, alternatives like relocating to rural areas or outward direct investment in more labor abundant countries are unlikely to be affordable options. In particular, these alternatives incur significant sunk cost and involve a high degree of uncertainty. Given the current relationships with buyers, no firm prefers an alternative option to hiring foreign workers.

The last firm group (Group 3) comprises those that lagged behind in upgrading activities as compared with the first two groups. Firms in this group are small firms located at the Thailand-Myanmar border. Although they are new entrants (established in about 2002), they seem to operate with traditional and local management models as they are subcontractors from clothing factories in the second group. Roughly speaking, firms in this group can be regarded as sewing departments of the second group. Their main manufacturing activity is sewing, undertaken by unskilled foreign workers. Hence the squeezed profit margins revealed in the second group is passed through to firms in this group. Their service- and product-based upgrading decisions are largely related to the requirements of the second group.

6.3. Impacts on Firm's Competitiveness and Upgrading Efforts

Three implications for a firm's competitiveness can be made from the discussion in Sections 6.1 and 6.2. First, the decision to upgrade seems to be independent of that to hire unskilled foreign workers. This is especially true for export-oriented firms, the majority in our sample. Their decision to carry out service- and product-based upgrades is largely influenced by *the buyer*. It is functional-based upgrading whose decision depends on the vision of firm's owners because of its nature, i.e. sizable sunk cost, continuity, and time-consuming. This can happen whether firms hire unskilled foreign workers or not. The fact that one firm in Tak province entirely relies on unskilled foreign workers, is strongly committed to functional upgrading, and outperforms other firms in the province provides strong support for the independence of these two kinds of decision (upgrading and hiring foreign workers).

Secondly, it seems there is a negative relationship between hiring unskilled foreign workers and a firm's competitiveness, measured in terms of sales growth between 2005 and 2008. As illustrated in Table 10, firms experiencing sales contraction between 2005

and 2008 are likely to be those hiring unskilled foreign workers. The picture is even clearer when the 2008 period, where the global crisis began to effect the industry, is excluded (Table 10). One must be cautious in interpreting the negative relationship. Generally, when firms perform poorly (e.g. low productivity, unable to deliver on time, poor quality), this would be reflected in their sales performance. In other words, they are losing their competitiveness.

Table 10. Firm Characteristics Classified by Decision to Hire Unskilled Foreign Workers

	Not Hiring Foreign Workers	Hiring Foreign Workers	
		Bangkok and Vicinity	Border Area
Numbers of Firms (2008)	23	13	14
Employment (2008) (Numbers of Workers)	727	496	418
Sale Values (2008) (Mil baht)	624.85	300.31	93.64
Export Orientation (2008) (% of Sale Values)	56.7	68.00	67.50
Δ Sale Values [a, b]	13 (1)	11 (6)	13 (0)

Notes: [a] Numbers of firms experiencing a negative growth rate in their sales values from 2005 to 2008. [b] Numbers in parenthesis are numbers of firms experiencing a negative growth rate in their sales values from 2005 to 2007.

Source: Firm survey conducted by authors.

This would have a negative impact on the firms' ability to compete for primary inputs like workers. When the labor market becomes tight, firms must offer higher wages to attract workers. Hence, the ability of a firm to attract workers is related to its performance. The situation in the clothing industry is obvious, where the industry's workers earnings are based on their performance (e.g. baht per piece). Daily earnings of their workers are usually higher than minimum wage. The higher the workers' productivity, the more they receive. Worker productivity is also influenced by the overall performance of their firm. Hence, workers' earnings depend on the overall factory's performance. The better the firm's performance, the better the expected earnings for workers. It also enhances the firm's ability to attract new workers. Additionally, firms which perform well are able to offer other fringe benefits for their

workers. Only firms with good performance can easily attract workers. Firms which perform poorly and/or struggle to maintain their competitiveness experience a severe labor shortage. To keep their business running they have to hire unskilled foreign workers. This also explains the systematic difference in firm characteristics between those with and without unskilled foreign workers.

Thirdly, functional-based upgrading is crucial in determining the current and future performance of firms. Firms which undertook functional-based upgrading outperformed those that had just begun functional upgrading. This is especially true for longer-term competitiveness. It is the second and third groups of firms discussed in Section 6.2 that expressed serious concern about squeezed profit margins. To a certain extent, profit margin reflects the firm's longer-term competitiveness. In general, *the buyer* assesses the competitiveness of their suppliers and then sets a production efficiency benchmark. All suppliers regardless of where they are located must follow the benchmark. If a supplier performs below the benchmark, this would negatively affect expected profit margin, as well as the incoming orders in the future. It takes time for firms which undertake functional-based upgrading to benefit from it. Hence, hiring unskilled foreign workers seems to be useful for firms in the middle of a structural adjustment process.

Table 11 illustrates the relation between the presence in a firm of foreign workers, and the firm's upgrading efforts. The general impression from Table 11 is that allowing firms to hire unskilled foreign workers is likely to make them reluctant to upgrade. All firms not hiring unskilled foreign workers were actively undertaking all kinds of upgrading, whereas upgrading for those with unskilled foreign workers is limited to service- and product-based upgrading only. In fact the relationship is rather reversed, i.e. firms which were slow and non-responsive in upgrading activities had been forced to hire unskilled foreign workers. This rationale is in line with the relationship between foreign workers and the firm's competitiveness. Nonetheless, given the limited number of firms in the sample covered in this paper (due to resource and time constraints), we cannot make a strong claim here. Instead of refusing any possibility of an adverse effect on competitiveness and upgrading, our finding suggests less concern about the impact of hiring unskilled foreign workers on the firm's competitiveness. Measures toward

allowing firms to hire unskilled foreign workers must, however, take into account such a possibility.

Table 11. Upgrading Behaviors of Interviewed Firms

Percentage of Total Samples in that Group	Not Hiring Foreign Workers (23 firms)	Hiring Foreign Workers (27 firms)	
		Bangkok and Vicinity (13 firms)	Border Area (14 firms)
Service-based Upgrading	100	46.2	28.6
Product-based Upgrading	100	92.3	42.9
Functional-based Upgrading	100	30.8	14.3

Note: a Numbers of firms experiencing a negative growth rate in their sales values from 2005 to 2008.
Source: Firm survey conducted by authors.

Currently the government recognizes the necessity demand for unskilled foreign workers from all sectors and allows recruitment on a temporary basis. Policy measures are designed in one-size-fit-all styles, with a maximum allowed employment period of 4 years. Nevertheless, what we have discovered in the case of the clothing industry is that there are industry-specific factors playing an influential role on how firms maintain their competitiveness, as well as how they decide to upgrade their existing production capacity. It seems unlikely that evidence found in the case of the clothing industry can be applicable for other industries countrywide. Instead the clothing industry's experience could be applicable for export-oriented industries where *the buyer* plays a crucial role in the global trading system. In summary, our finding provides a warning against implementing one-size-fit-all styles.

7. Conclusions and Policy Inferences

This paper probes the structural adjustment process using evidence from the Thai clothing industry, with a view to informing the policy debate about international migration. The analysis is based on in-depth interviewing with 50 clothing firms in Thailand during the period November 2009- February 2010. The key finding is that not all firms opt to hire unskilled foreign workers (henceforth foreign workers). There are

systematic differences in firm characteristics between firms who hire foreign workers and those who do not. The latter are relatively large in size (both in employment and in sales), perform better, and actively undertake a variety of upgrading activities. The former are struggling in maintaining their profit margin, are relatively small, and invest inadequately in upgrading activities. Interestingly, hiring foreign workers is not the first response of firms, but reflects the fact that firms have yet to succeed in undertaking functional upgrading. While there are many kinds of upgrading (service, product and functional), our finding points to the relative importance of functional upgrading for long-term and more sustainable development. Firms which were late in undertaking functional upgrading are likely to hire foreign workers during their structural adjustment process. Allowing unskilled foreign workers on a temporary basis would be a win-win-win solution for labor importing and exporting countries as well as the migrants themselves. Nevertheless, any condition imposed on firms wanting to hire unskilled foreign workers must be related to preventing any retarding effect on their upgrading effort.

Three policy inferences can be made from this paper. First, there are potential mutual benefits for countries in the region. While labor-importing countries can minimize costs incurred during their structural adjustment process, accumulated skill in industries like clothing can be beneficial for labor exporting countries in the later stage of development. Inter-country unskilled worker mobility seems to continue for countries in the Indochina region which share common land borders and exhibit vast differences in terms of job opportunities. There is room for international organization to materialize such potential.

The second inference is that it seems risky to use one-size-fit-all policy measures to manage flows of unskilled foreign workers, because of the significant role of industry-specific factors. Given resource and time constraints, our study is unlikely to provide a comprehensive recommendation to all sectors. Our finding suggests that a more appropriate way to proceed is to introduce measures according to broader industry groups, such as export-oriented, import-competing and non-tradable/service sectors. For the export-oriented industries, such as clothing, where global trade remains under the influence of multinational firms, insights into firm behavior revealed in this paper suggest that there are private benefits induced by hiring unskilled foreign workers.

Hence, policy measures for an export-oriented industry could be fee-based and open for individual firms to apply. Work permits would be on a temporary basis, and jointly set with the fee. The longer the period over which firms want to hire unskilled foreign workers, the higher the fee rate. This is to prevent any adverse effect on the firm's competitiveness. As revealed in our firm survey, there are growing concerns about policy uncertainty and the emergence of rent-seeking behavior in the migrant business; the proposed policy measures must go hand in hand with transparency and a pragmatic approach towards the private firm, so as to avoid any hidden costs and facilitate their structural adjustment process.

The last inference is about the heterogeneity we found in the developmental impact of upgrading. Evidence in this paper highlights the pivotal role of functional-based upgrading while firms are undergoing structural adjustment. Such upgrading makes firms more likely to reach a more sustainable level of industrial development. This emphasizes the need to strengthen the role of the capital markets to finance long-term investment, such as functional upgrading.

APPENDIX 1

Questionnaire # _____

Questionnaire Survey

International Labor Migration and Competitiveness:

Firm-level Analysis of Thai Clothing Industry

Type of interview:
☐ Face-to-face ☐ Telephone

Name of enumerator: _____

Date of interview: _____ Day_____Month_____Year

Name of establishment: _____

Location of Headquarters (if applicable): _____

Respondent Name and Designation: Mr/Ms _____

Mobile Phone Number (optional): _____

City/Tambon: _____

District: _____

Province: _____

Grouping Questions

1. Has your firm employed foreign workers?

☐ **Yes** ☐ **No**

2. Has your firm exported?

☐ **Yes** ☐ **No**

All information will be kept confidentially and will be revealed only to a research team. Importantly, the report will not mention both the name of establishment and the name of respondent.

BLOCK A: Basic Information on the Firm

1. In what year did your firm begin operations _____

2. Most important product produced by your firm

☐ Sportswear ☐ Baby and Children wear ☐ Jackets/Jumpers ☐ Male wear

☐ Female wear ☐ Others, please specify_____

3. According to Q2, are those product

☐ OEM ☐ Your own brand ☐ Others, please specify _____

4. Where is a major source of raw materials for your firm?

☐ Domestic ☐ Foreign, please specify _____

Please give reasons for using that source raw materials for your firm

_____

_____

_____

_____

5. Value Sales in the last five years (To track dynamics)

   Approximately what are the value sales of your firm in year?

	Less than 100 million baht	100 - 250 million baht	251 - 500 million baht	501-1,000 million baht	1,001 – 2,000 million baht	More than 2,000 million baht	Approximate (million baht)
2005	☐	☐	☐	☐	☐	☐	
2006	☐	☐	☐	☐	☐	☐	
2007	☐	☐	☐	☐	☐	☐	
2008	☐	☐	☐	☐	☐	☐	
2009 (Jan – Jun)	☐	☐	☐	☐	☐	☐	

6. Volume Sales in the last five years (To track dynamics)

   Approximately what are the volume sales of your firm in year?

	Less than 1 million unit	1 - 20 million unit	21 - 50 million unit	51-100 million unit	101 – 200 million unit	More than 200 million unit
2005	☐	☐	☐	☐	☐	☐
2006	☐	☐	☐	☐	☐	☐
2007	☐	☐	☐	☐	☐	☐
2008	☐	☐	☐	☐	☐	☐
2009 (Jan – Jun)	☐	☐	☐	☐	☐	☐

7. Has your firm successively exported in the last five years (since year 2005)?

   ☐ Yes ☐ No

(Export is defined as enterprises tailored made their products to specific demand by the buyers, i.e. brand owners or agents)

8. Nature of Exports in the last five years

(Export sales relative to total sales: in the traded sector, performance in the international marketplace is a direct measure of firm's competitiveness)

	Less than 20 per cent	20 – 39 per cent	40 – 59 per cent	More than 60 per cent
2005	☐	☐	☐	☐
2006	☐	☐	☐	☐
2007	☐	☐	☐	☐
2008	☐	☐	☐	☐
2009 (Jan – Jun)	☐	☐	☐	☐

9. Main Export Destinations

If your firm exports, please identify the biggest destination country based on export revenues in year.

	US	EU - 15	Japan	Other
2005	☐	☐	☐	☐
2006	☐	☐	☐	☐
2007	☐	☐	☐	☐
2008	☐	☐	☐	☐
2009 (Jan – Jun)	☐	☐	☐	☐

10. Employment in the last five years (To track dynamics)

Approximately how many employees were employed in your firm as of?

	Less than 50 workers	51 – 200 workers	201 – 500 workers	501 – 1,000 workers	More than 1,000 workers
December 2005	☐	☐	☐	☐	☐
December 2006	☐	☐	☐	☐	☐
December 2007	☐	☐	☐	☐	☐
December 2008	☐	☐	☐	☐	☐
June 2009	☐	☐	☐	☐	☐

11. Labor Costs per Unit in the last five years (To track dynamics)

Approximately how much were labor costs per unit of your firm in year?

	Less than 10 per cent	11 – 20 per cent	21 – 30 per cent	More than 30 per cent
2005	☐	☐	☐	☐
2006	☐	☐	☐	☐
2007	☐	☐	☐	☐
2008	☐	☐	☐	☐
2009 (Jan – Jun)	☐	☐	☐	☐

BLOCK B: Migration Workers Information on the Firm

1. If your factory has employed foreign workers, please identify the relative size of foreign workers. Otherwise, skip to **BLOCK C**

	Less than 25 per cent	25 – 49 per cent	50 – 74 per cent	More than 75 per cent
2005	☐	☐	☐	☐
2006	☐	☐	☐	☐
2007	☐	☐	☐	☐
2008	☐	☐	☐	☐
2009 (Jan – Jun)	☐	☐	☐	☐

2. Please identify the level of satisfactory of the current level of foreign workers employed

☐ Highly Satisfied because _____

☐ Satisfied because _____

☐ Moderate because _____

☐ Dissatisfied because _____

☐ Highly Dissatisfied because _____

3. Please provide and rank reasons for importing foreign workers

	No	Yes (please rank)	Rank
Difficulty to find local workers	☐	☐	☐
Lower wage benefits	☐	☐	☐
Sufficient skill	☐	☐	☐
Others, please specify _____			☐

4. Is there any alternative option available in replacing importing foreign workers?

_____

_____

_____

_____

_____

5. Are there any obstacles for enterprises to import workers?

_____

_____

_____

_____

_____

BLOCK C: Competitiveness

Please identify productivity upgrading activities of your factory <u>in the last five years</u> (since year 2005)

	Yes, significantly	**Yes, somewhat**	**No**
1. Updating existing machines	☐	☐	☐
2. Installing new machines	☐	☐	☐
3. Changes in product coverage (new product line/ product diversification?)	☐	☐	☐
4. Having new suppliers	☐	☐	☐
5. Starting E-Business	☐	☐	☐

If answer 'Yes' in Q1. and Q2., otherwise go to BLOCK D.

6. Do you experience any difficulty of upgrading?

☐ No ☐ Yes, please identify and rank the following problems

	Rank
Financial constraint	☐
Uncertainty about sale order	☐
Lack of knowledge	☐
Other, please specify……	☐

BLOCK D: Expected Assistances

1. What type of support in terms of products are you getting?

_____

_____

_____

_____

_____

_____

2. What type of support in terms of foreign workers are you getting?

_____

_____

_____

_____

_____

_____

3. What do you think the government can do to support in terms of foreign workers for your establishment?

_____

_____

_____

_____

_____

_____

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