

Foreign Labour in the Manufacturing Sector: Evidence from Mauritius

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Abstract

The paper models the factors influencing the probability of employing foreign workers in Mauritius, using survey data for 200 manufacturing firms. First, there is evidence that local and foreign competition increase demand for foreign labour but affect negatively demand for local workers. This is attributed to the high cost, lower productivity, poor commitment to work and high absenteeism of natives. Second, our findings reveal that the textile and clothing sector is highly dependent on foreign workers relatively to other manufacturing firms. Third, manufacturing enterprises chose to employ foreigners as per the standard working hours as overtime represents a high wage burden.

Keywords: *Foreign Workers, Manufacturing Sector, Mauritius*

JEL Classification: *J23, J61, L60, O55*

1. Introduction

It is widely believed that globalisation increases the volatility of employment and decreases the bargaining power of workers (Rodrik, 1997). Consequently, the number of migrants crossing borders in search of employment and human security has been increasing rapidly over the years due to the failure of globalisation to provide jobs and economic opportunities (International Labour Office, 2012). The employment of foreign labour is a worldwide phenomenon and the presence of foreign labour has flourished in both developed and developing countries. Migrant workers leave their home country for various reasons namely to escape poverty, wars, political instability, social unrest, unemployment, among others. Still the main reason behind labour migration rests on the lack of gainful employment at home.

Migrant workers are mostly semi-skilled and unskilled from developing countries and highly skilled from developed countries. It is argued that 42.8 percent of migrant workers from developing countries move to high income OECD nations, 14.1 percent move to high income non-OECD countries and 43.1 percent of them leave for other developing countries (Migration and Remittances Factbook, 2011). Among developing countries, the top ten emigration states are Mexico, India, Russia, China, Ukraine, Bangladesh, Pakistan, Philippines, Turkey and Egypt (International Labour Office, 2012). To date, about half of the migrant workers are women (International Labour Office, 2010). Most of female migrant workers are from Asia, being both skilled and unskilled with the majority in domestic services and entertainment and to a lesser extent, in nursing and teaching (International Labour Office, 2004).

Mauritius has also seen major waves of immigration in the past decades. Mauritius has transformed itself from a sugar economy into a country with one of the highest per capita incomes among African countries. Mauritius' combination of political stability, strong institutional framework, low level of corruption, and favourable regulatory environment as well as its human capital has helped lay the foundation for economic growth, while its open trade policies have been important in sustaining growth (Zafar, 2007).

However, despite this remarkable performance, the small island economy is facing severe economic challenges as the bases of its development are rapidly changing (African Development Bank, 2012). Increasing labour costs in recent years have eroded the competitiveness of the textile industry and preferential market access, which was critical for the development of the sugar sector and garment industry, have phased out. In order to enable the process of development, Mauritius has had recourse to foreign workers in a number of sectors. The presence of foreign labour has flourished in the last decades; coming primarily from Bangladesh, India, China and Philippines among others (Ministry of Finance

and Economic Development, 2012). Mauritius has been deemed a 'high migration state', largely on account of the size of its Diaspora, but also due to the combination of in- and out-migration. The number of foreign workers has surged from around 1,000 in 1990 to more than 24,000 in 2012. In May 2013, there were 37,197 work permits issued by the authorities against 35,629 in the corresponding period in 2012 (Ministry of Labour, Industrial Relations and Employment, 2012).

In this paper, the determinants of foreign and local employment across a survey of 200 manufacturing firms are analysed. First, there is evidence that local and foreign competition increase the probability of employing foreign labour but affect negatively demand for local workers. This is attributed to the high cost, lower productivity, poor commitment to work and high absenteeism of natives. Second, our findings reveal that the textile and clothing sector is highly dependent on foreign workers relatively to other manufacturing firms. Third, manufacturing enterprises chose to employ foreigners as per the standard working hours as overtime represents a high wage burden.

The paper is structured as follows: section 2 reviews the literature and existing empirical work on foreign labour. Section 3 sets out the sampling strategy for the survey and the methodology to be adopted. Section 4 provides a situational analysis of the Mauritian manufacturing sector with particular emphasis on the employment of foreign workers and analyse the survey data. The results are discussed in section 5 and we finally conclude in section 6.

2. Literature Survey

Studies on foreign workers have focussed on the effect of foreign labour on economic issues, social aspect, labour productivity or total factor productivity as well as substitution or complementary relationship between local and foreign labour (Dupuy and DeGrip, 2003, Idris and Rahmah, 2006; Parasnis, 2010; Noor *et al.*, 2011). From the macroeconomic view point, the immigration of foreign workers brings a positive impact to the receiving countries in terms of improvement in labour productivity, or total factor productivity. But, from the microeconomic view point, there are also negative effects, in terms of the rise in wage differentials between high income and low income groups (Aizawa *et al.*, 2002).

One of the primary reasons for firms to employ foreign labour is that they expect these workers to be extremely productive and cheap. Noor *et al.* (2011) find that foreign workers are more productive than domestic workers in UK. Moreover, foreign workers are more compliant, work longer hours, may not urge for higher wages like local workers. Putty (2008) argues that foreign workers are more productive than the locals since they have higher level of communication and are more skilled. The rate of absenteeism is also very low among the foreigners. Jajri and Ismail (2006) argue that demand for foreign labour is higher than demand

for local workers. Many firms especially the manufacturing sector are hiring foreign labour because of a lower cost in production, shorter time frame, lower wages, better skill requirements and commitment towards work. Further, local workers lack motivation and are not willing to work overtime and night shifts and they are lazy Mondays (Hein, 2004).

In addition, Oulton (2000) argues that firms with foreign workers have higher levels of productivity than local ones, and have a growing impact on the level of performance. Similarly, Jungnickel and Keller (2003) show that foreign labour has a positive impact on productivity in West Germany. Fong and Lim (1982) also show that employment in Singapore is historically based on foreign labour which represents one eighth of the total work force. Foreign workers were on the peak in the booming manufacturing sector with unskilled migrants in the short and medium term while skilled migrant workers help in the restructuring of the Singaporean economy. The availability of foreign labour encourages the development and maintenance of industries which could not be supported by local man power (Chew and Chew, 1995). However, Boswell *et al.* (2004) analyse the impact of the inflow of foreign labour on the domestic labour force and its skill composition and note a complementary relationship between foreign and local workers whereby some jobs require skills of foreign labour as they cannot be performed even by qualified local workers. Their results also show a positive impact of skilled foreign labour on productivity, innovation and growth.

Another reason that causes firms to employ more foreign labour is labour shortages in the local economy. Higher economic development leads to higher educational attainment and increased income. Educated people are less willing to take up manual and low-paid jobs or blue-collar jobs. For instance, the open economy of Mauritius has transformed the structure of its workforce such that Mauritians are not willing to work in the low paid manual jobs in the construction and textile sectors and have a strong preference for occupations in the public sector or the services sector (National Economic and Social Council, 2010). Hence, the demand for foreign labour is essentially of a hereditary nature. Manolo (1995) argues that with higher economic development, migration in Asia has increased as there has been a rapid depletion of traditional reserves of flexible domestic labour such as agricultural workers. Similarly, Athukorala (2012) examines the increase in demand for foreign labour in East Asia and shows that the Malaysian manufacturing sector is quite dependent on foreign workers as they take up occupations which are rejected by the local workers. The job for which foreign labour are employed generally tend to fall into two categories: tasks that involve industrious and dull work and static jobs that do not provide a promising future career that is 'dead-end' jobs. The results show that the presence of foreign labour limits domestic wage growth with unfavourable implications for growth in the economy.

Moreover, firms opt for foreign workers due to technological advancement. Technological changes reduce the cost of information and communication and therefore, cause labour movements. Similarly, the growth of the information technology and research and development has caused American firms to search highly skilled talents from other countries (Nowrasteh, 2010). Therefore, technological advancement favours the hiring of workers with better education and more skills. Moreover, firms in developing countries, with a shortage of skilled labour tend to hire highly skilled workers to cope with technological advancement as domestic workers lack the relevant skills and experience. In addition, rising economic and demographic differences between nations make the transfer of people over borders a “natural response” in a globalising world. Nowadays, it is easier to hire foreign workers through recruitment agencies, dealing with the procedures for hiring foreign workers. Development prospects of migration are determined largely by globalisation, which may create both winners and losers both between and within countries (Lincoln, 2012).

3. Foreign Labour in Mauritius

Today Mauritius is experiencing five distinct types of migration. First, emigration persists with continuous brain drain and the second type of migration is the movement between Rodrigues¹ and Mauritius; a migratory flow within the country’s national limits which adds an internal dimension to the migration-development relationship (Lincoln, 2012). The third type of migration is circular migration for a very small number of young workers to take limited term and relatively low-skill employment in Canada, United Arab Emirates and France among others. Fourth, are those who have arrived in Mauritius since 2006 either under a land-owning residential programme designed to attract private investment or as investors and professionals; and lastly by far the most numerous type of migration, workers who are recruited abroad to work in Mauritius under contract (Lincoln, 2012).

In 1970, Mauritius enacted the Export Processing Zone (EPZ) Act and provided incentives and concessions to enterprises exporting their products. The Multi-Fibre Agreement (MFA) which was a set of formal quota agreements and restrictions, governing textile and clothing trade between developing countries and developed world, helped in the expansion of the EPZ. The MFA has been a major determinant in the development of the Export Processing Zone (EPZ) and the Mauritian economy. It was in this context that investors came to set up their factories in Mauritius. In fact, the wearing apparel industry is at the core of the industrial fabric of Mauritius. The main industries which were set up were in the wearing apparel sector, later diversifying into spinning and dyeing of fabrics. The duty free entry of Mauritian products to the European Community, gave the EPZ a crucial advantage over competitors. In the 1980s, the clothing sector comprised of over half of the

¹The small island of Rodrigues forms the poorest administrative region in the Republic of Mauritius.

Mauritian exports, with Mauritius ranking as the third largest exporter of woollen goods (Rogerson, 1993). During 1990s, political uncertainty over the future of Hong Kong encouraged more investors to look for a safe haven and relocate to Mauritius.

However, the MFA was only a short-term measure and phased out over a period of ten years. Since its elimination in January 2005, Mauritius no longer has guaranteed access into some key countries and started to face daunting challenges as it struggled to find its place in an increasingly competitive world market. The reason for the phasing out of the preferential treatment legislation was due to the fact that Mauritius was no longer categorised by the WTO for special treatment, as its per capita income exceeded the set criterion of US\$1,000. Given that European countries makeup over 70 per cent of Mauritius' yearly exports, the economy has been highly vulnerable to unfavourable changes in their currency fluctuation. The EPZ sector experiences a huge decline in returns following which, factory closings and resulting job losses in the Mauritian apparel industry increased drastically with disinvestment by Hong Kong-based apparel companies which started to relocate their manufacturing operations back to China or in other low-cost countries in Asia. Other EPZ firms have been relocating to the neighbouring island of Madagascar and the African continent where labour is cheaper.

Many manufacturing firms, which have stayed behind, had resorted to foreign workers with the appropriate skills in order, to increase their competitive edge at the global level. Many companies have no choice but to rely on foreign workers to continue to operate. Foreign workers were thus, seen as the saviours of firms operating in the textile and clothing sectors. This is so because firstly, the cost of foreign labour is lower than that of local labour. Second, foreign workers are willing to work longer and odd hours to raise money for their families abroad. Third, the fact that the entry of foreign workers was liberalised in 2007, has made recruitment of foreign workers much easier for firms since foreigners can come to Mauritius only with a tourist visa. This has also meant that Mauritius has now 2,000 to 2,500 foreign workers who work illegally in the country and this number is growing.

Figure 1 below shows the rising trend in foreign labour from 1983 to 2012. The number of foreign workers has surged from around 1,000 in 1990 to more than 24,000 in 2012. We note the drastic rise in foreign labour as from 2004 and 2005, which coincides with the end of the MFA.

[Insert Figure 1]

In addition, Mauritius imports both highly qualified professionals and less qualified. Hence, foreign workers in Mauritius work as cook, mason, machine operator, baker, carpenter, fish cutter, carpenter, public relations officer, customer service officer, domestic helper, interpreter, software engineer, interior decorator, teacher, nurse specialist, dental mechanic, sculptor, musician and jockey among others. In fact, the number of valid work

permits has been on the rise for the last five years. It is also noted that the number of work permits issued to male workers exceeds that allocated to female labour (Ministry of Labour, Industrial Relations and Employment, 2013). Foreign workers come essentially from Bangladesh with a large increase since 2009. Further, the number of migrant labour from India, Madagascar and Sri Lanka has also been increasing over the years. Other source countries are Nepal, Morocco, Lebanon, Korea, Japan, Israel, Indonesia, Haiti, Algeria, Argentina, Burundi, Congo and Denmark (see Figure 2 below).

[Insert Figure 2]

It is further noted that 76 per cent of the foreign workers are employed in the manufacturing sector, 16 per cent in construction, 2 per cent in hotels and restaurants, 1 per cent in wholesale and retail trade and 2 per cent in health and social work, among others (see Figure 3 below). Other sectors include real estate, transport, storage and communications, financial sector, agriculture, other community, social and personal services, Information and Communication Technology, fisheries and education.

[Insert Figure 3]

4. Sampling Strategy and Methodology

4.1 Sampling Strategy

A survey of manufacturing firms was undertaken as foreign workers in Mauritius tend to be highly concentrated in the manufacturing industry. The sampling methodology generates sample size appropriate to achieve the main objective of having a representative sample to conduct firm performance analyses focusing mainly on productivity and job creation in the manufacturing sector.

The population was divided into different groups based on characteristics such as size, location, firm age, area of activity and legal status of each firm. To determine the sample size, three criteria were specified namely the level of precision, the level of confidence or risk, and the degree of variability in the attributes being measured (Miaoulis and Michener, 1976). Assuming that we do not know the variability in the proportion of firms in the manufacturing sector in Mauritius; therefore, assume $p = 0.5$ (maximum variability). In addition, suppose we abide to a 90percent confidence level and $e = \pm 6$ percent is the level of precision. The resulting sample size is demonstrated in the following equation.

$$n_0 = \frac{Z^2 pq}{e^2} = \frac{(1.65)^2 (0.5)(0.5)}{(0.06)^2} = 189.06.$$

6 per cent level of precision has been used since it

has been expensive, time consuming and often impractical to meet all the firms in manufacturing sector. Long distances travels were significant in both urban and rural areas in order to carry out the survey. Firm managers were also very reluctant to answer questions. This was thus very time consuming and increased the cost of the survey.

Since the population is small then the sample size can be reduced slightly. This is because a given sample size provides proportionately more information for a small population than for a large population. The sample size (n_0) can be adjusted as

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}} = \frac{18906}{1 + \frac{(18906 - 1)}{13515}} = 1865, \text{ where } N \text{ is the population size.}$$

Thus, data was collected from 200 firms in the manufacturing sector including as sub-sectors food/beverages (excluding sugar), textile products, production of light engineering goods, jewellery, health care products, printing and publishing, electronics, high precision plastics, information technology and pharmaceutical products.

The questionnaire was designed to assess whether firms in the manufacturing sector employ foreign labour and the factors behind demand of foreign workers. The questionnaire consisted of two sections (A and B). Section A covers the profile of the manufacturing firm in terms of firm age, size, location, export status and legal status of each firm, among others. On the other hand, section B dealt with the employment and skills of foreign and local workers. It also included the wage of local and foreign workers, the number of hours worked, training, and allowances paid to workers among others. Besides, this section also accounts for the major obstacles that firms face in importing labour. A pilot test was conducted and amendments were made to the questionnaire.

4.2 Methodology

Our empirical setting is that of neoclassical producer behaviour. We follow the standard practice as proposed in Hamermesh (1993) and model the unconditional labour demand by assuming firms to maximise their current profits. Employing workers typically is modelled as a firm decision, and from a neoclassical perspective, firms take wages and other input costs as given, and with knowledge of their product demand, firms choose employment to maximise returns, or at least to minimise production costs for a given output.

4.2.1 Probability of Employing Foreign Labour

The empirical specification used to estimate the probability of firms to employ foreign workers is given by the following equation:

$$\begin{aligned}
 \text{ForeignWorkers}_i = & \beta_0 + \beta_1 \text{FirmSize}_i + \beta_2 \text{ExportsAfrica}_i + \beta_3 \text{ExportsNon-Africa}_i + \beta_4 \text{RelativeWages}_i + \\
 & \beta_5 \text{LocalCompetition}_i + \beta_6 \text{ForeignCompetition}_i + \beta_7 \text{FirmAge}_i + \beta_8 \text{DomesticSales}_i + \\
 & \beta_9 \text{Urban}_i + \beta_{10} \text{Sector}_i + \varepsilon_i
 \end{aligned}$$

(1)

where i is the firm; *ForeignWorkers* is the probability to employ foreign workers in firm i and is a dummy variable taking the value of 1 if the firm employs foreign labour and 0, otherwise². The labour demand characteristics such as type of industry, firm size, export status of the enterprise, the competitive pressures the firm faces both locally and internationally, firm age, domestic sales, the location of the firm in the urban region or rural areas are considered as specified above.

Exposure to import competition as well as competition in the domestic market is likely to affect the local labour market through manufacturing employment which unsurprisingly is adversely affected (Autor *et al.*, 2012). Globalisation with increased competition from emerging as well as developing nations may reduce demand for local labour but may in turn increase the demand for foreign labour which is relatively cheaper. Competition leads to these cost reductions reducing product prices and at the lower price more output is sold, and hence more employment is required. A positive link is thus expected between foreign competition and the demand for foreign workers. The same will hold for local competition and the dependent variable. Local competition is captured by a dummy variable where the firm provides information on the number of local competitors in the domestic market. For any number of local competitors greater than one, it means that the firm faces competitive pressures in the local market and the dummy variable is assigned a value of 1 and 0 otherwise. Foreign competition is also a dummy variable with a value of 1 if the firm faces competition from foreign firms in the international market and 0 otherwise. A similar variable is used in the World Bank Enterprise Surveys to capture competition faced by enterprises both locally and internationally.

Wages capture the cost of labour and labour being a factor input is a derived demand. When firms see increasing demand for their products, they will need to employ extra workers and thus the demand for labour increases. There is normally an inverse relationship between the demand for labour and the wage rate that the firm will have to pay for each additional worker. A negative link is postulated between foreign wage and demand of foreign workers. Similarly, higher local wages are likely to encourage firms employing cheaper foreign labour and thus a positive link is a priori expected. We use different measures of wages namely

² The number of foreign workers as a share of total number of workers employed in the firm is also used as the dependent variable. There is no change in the results which remain robust.

relative wages which is the ratio of local wage to foreign wage. The wage differential between local and foreign skilled workers as well as wage disparity between natives and foreign labour are included.

The characteristics of the employing organisation such as firm size, the degree of technology application, labour relations, the composition of workforce, and internal labour market, influence the types of jobs available at the workplace and hence the types of labour demanded (Desjardins and Rubenson, 2011). Firm-size is an important determinant of the profitability of a firm and therefore the income levels of the owners (Amin, 2011). Firm size (*FirmSize_i*) here relates to the size of the firm in terms of employees, for instance small firms have between 1-50 employees, medium firms employ 51-101 employees and large enterprises employ above 101 workers. Large firms tend to employ more workers as they are more cost effective, achieve economies of scale and employ the latest technology. A positive link is expected between firm size and demand for foreign labour.

The export behaviour of the firm and its corresponding impact on labour demand must not be limited to whether the firm exports or not. There may be important differences between firms that export regionally and those exporting to international markets. This dimension of exporting in Africa is still not well understood (Söderbom and Teal, 2001). In order to explore this interpretation further, we take into account that the market the exporting firms will supply. The exporting status of firms is decomposed into exports to African countries and exports outside the African continent. A similar analysis was performed to examine the impact of the export behaviour of firms across different export destinations on wages and skilled-unskilled wage differential in Africa (see Milner and Tandrayen, 2007).

In general, African markets are relatively more protected and less competitive. Intra-African trade often occurs in the context of preferential trading arrangements, combined with substantial 'natural' protection from extra-regional competition associated with distance and poor infrastructure (Milner and Tandrayen, 2007). Hence, we expect a negative relationship between those firms exporting within the African continent and demand for foreign labour as the employment of foreign workers is essentially a tool to be more competitive internationally. However, a positive coefficient is assumed for those firms exporting to non-African markets, as they are more likely to employ foreign workers to face the fierce competition on the international market. The variable *ExportsAfrica* is a dummy variable taking a value of 1 if the firm exports to the African continent and 0, otherwise; while *ExportsNon-Africa* has a value of 1 if the firm exports outside Africa and 0, otherwise³. The benchmark dummy refers to those firms which do not export.

³ Instead of dummy variables, percentage of goods exported to African and non-African countries were also used and the results remain unchanged.

Firm age (*FirmAge*) is further included to show that the firm may need a given level experience and learning to be more productive (Söderbom and Teal, 2000, Rankin 2001) and hence employ more foreign labour. A positive coefficient is thus assumed. Sector dummies are also accounted for to cover the different sub sectors within the manufacturing industry namely textile and clothing, food and beverages and sugar and ε_i is the error term.

Enterprises not only sell in different parts of the world but also have higher domestic sales (Bernard *et al.*, 2002). Hence, firms that have high domestic sales, tend to export less on the foreign markets and concentrate more on local demand. As a result, they may demand less foreign workers if they produce for the domestic market where they face less competition. But if firms have a large percentage of domestic sales, they tend to be larger in size and the demand for workers either local or foreign labour may rise. Again, the sign of the coefficient remains an empirical question. Domestic sales are split in three categories, for those firms selling less than or equal to 25 per cent of their goods on the local market, we denote these firms as having low domestic sales while for those selling between 26 to 75 per cent of their goods locally are viewed as having average domestic sales (medium domestic sales) and lastly for those firms selling locally more than 75 per cent on the local market, they have high domestic sales. Low domestic sales is here the benchmark dummy variable.

4.2.2 Employing Local Workers

Employment of local workers, here measured by the total number of local workers employed depends on the characteristics of the firms in the manufacturing sector such as the size of the firm, its export status, domestic sales and competition that the firm faces in the local and foreign markets, the sector of activity, location of the firm in the urban areas or rural region and firm age. The same variables used in the demand equation for labour is applied in this case.

Hence, the following specification for the employment of local workers is:

$$\begin{aligned} LocalWorkers_i = & \alpha_0 + \alpha_1 FirmSize_i + \alpha_2 ExportsAfrica_i + \alpha_3 ExportsNon-Africa_i + \alpha_4 LocalCompetition_i \\ & + \alpha_5 ForeignCompetition_i + \alpha_6 FirmAge_i + \alpha_7 DomesticSales_i + \alpha_8 RelativeWages_i + \alpha_9 Urban_i \\ & + \alpha_{10} Sector_i + \varepsilon_i \end{aligned}$$

(2)

The variables are as defined above.

5. Survey Analysis and Findings

5.1 Survey Analysis

Table 1, below sets out the important features of the survey and describes the main variables used in the empirical analysis. We note that mean number of foreign workers tend to be more pronounced in the textile sector and also among large firms. Firms exporting to other African countries have a higher average number of female foreign workers while firms exporting outside the continent rely relatively more on male foreign workers. The descriptive statistics show the variation in the employment of male and female local and foreign workers across firms having different specificities.

[Insert Table 1]

In addition, Table 2 depicts a correlation matrix for the main variables and it is observed that demand for foreign labour is positively correlated with local and foreign competition, firm size, firm age, exports status of the firm, and wages of local workers. A negative correlation coefficient is noted for wages of foreign workers and a positive coefficient for wages of natives.

[Insert Table 2]

From the survey, 68 per cent of the firms in the manufacturing sector are small, while 12 per cent are of medium-size and 21 per cent are large enterprises⁴. In the sample, 38 per cent of the firms produced textiles, 16 per cent are in the food/beverage sector while the remaining, that is, 46 per cent produced light engineering goods, jewellery, printing and publishing, electronics, high precision plastics, information technology and pharmaceutical products. Further, 53 per cent of the manufacturing firms surveyed export their goods and the remaining 47 per cent sell on the domestic market. Being export-oriented is indicative to the fact that the firm needs to be competitive to survive on the foreign market. The firms exporting to African countries represent 33.5 per cent of the sample while 27.5 per cent of firms export to non-African economies.

From Figure 4 below, it is noted that 58 per cent of firms did not employ foreign labour and 42 per cent employ foreign workers. The foreign workers come mainly from Bangladesh (50 per cent), 30 per cent are from India, 9 per cent from China, 4 per cent from Madagascar and 7 per cent from other countries. Bangladesh was the first choice of most firms, as Bangladesh is known as an exporter of cheap workers. Bangladesh, India and China form part of the top 10 emigration countries among developing nations (Migration and Remittances Factbook, 2011).

[Insert Figure 4]

Foreign workers also tend to work more than the required number of hours and from the sample, for 72 per cent of the firms, foreign workers work 8-10 hours. In 24 per cent of

⁴ Size is measured in terms of number of employees. Small enterprises have 0-50 employees while medium firms have between 51 and 100 workers and large firms have more than 101 employees.

firms, foreign workers work for 10-12 hours while in 5 per cent of enterprises, workers are working for more than 12 hours per day. This is beyond the legal requirement of 48 working hours per week as foreign workers are allowed 6 working days per, normal working hours as 8 hours per day and overtime with additional 5 hours. Both local and foreign workers were asked as to whether they prefer to work on a shift system. Among the locals, 37.4 per cent of males and 31.7 per cent of women will wish to work on a shift system. Around 39 per cent of male foreign workers and 36 per cent of female foreign labour will chose the shift system. The shift system tends to suit better foreign workers relative to natives.

It is further observed that 63 per cent of firms provide additional training when recruiting foreign workers while, 37 per cent of firms do not provide training to foreign workers. Foreign workers are more productive with better training (Putty, 2008). Further, we differentiate across the manufacturing firms in the sample to analyse their demand for skilled and unskilled foreign and local workers. In Table 3, we observe that around 55 per cent of those firms employing skilled natives firms are in light engineering like watches and jewellery, instrumentation and electronic devices and health care industry such as pharmaceuticals and beauty care products while 32.4 per cent are in textiles and the rest around 13 per cent are in food and beverages. The highest percentage employing local unskilled workers are also in the same sector as above with 55.7 per cent. However, the textile sector leads with respect to foreign labour. Out of those firms employing foreign skilled workers, 42 per cent are from the clothing and apparel industry and for those employing foreign unskilled workers, 40 per cent are from the textile sector.

[Insert Table 3]

Around 53 per cent of firms prefer to employ locals rather than foreign labour. From Figure 5 below, we note that 47 per cent of firms have a strong preference for foreign workers for a number of reasons. Foreign workers are preferred over local by 69 per cent of firms because of their low rate of absenteeism. In addition, 45 per cent of enterprises argue that foreigners are more skilled while 42 per cent of firms postulate that foreign workers do not have a family life and thus spend more time at work. Also, 42 per cent of the enterprises surveyed state that they employ foreign labour because of low wages; 50 per cent of businesses confirm that they are more productive and 64percent argue that foreign workers are more committed to work than locals. This is in line with previous studies such as Oulton (2000) showing that foreign workers are committed to their duties and hence very productive.

[Insert Figure 5]

Moreover, when firms were asked about some of the major problems with labour regulations pertaining to the imports of foreign workers, 18 per cent stated that there were problems relating to training. Besides, 40 per cent of enterprises argue that there is a limit on

temporary hiring of foreign workers and 35 per cent note that there are problems such as lay off procedures and cost retrenchment. Furthermore, a larger percentage of firms (67 per cent) face problems when dealing with hiring procedures of foreign workers.

5.2 Findings

5.2.1 Logistic Regression: Probability of Employing Foreign Labour

We use the logistic regression technique to estimate the probability of employing foreign labour in the manufacturing sector in Mauritius⁵. Table 4 below presents the findings from logistic regression model and it is noted that competition is a major factor influencing the employment of foreign labour in the Mauritian manufacturing sector. Both competitions at home and on the international markets induce firms to employ foreign workers. Further, larger firms are more likely to employ foreign workers as shown by the positive and statistically significant coefficient of 0.11 for firm size.

[Insert Tables 4 and 5]

With regards to sector dummies, it is observed that the textile sector employs more foreign labour relative to the other sectors in light engineering like watches and jewellery, instrumentation and electronic devices and health care industry such as pharmaceuticals and beauty care products among others. The coefficient is positive but statistically insignificant for food and beverages. Further, those firms having average domestic sales tend to demand more foreign labour because they are also exporting part of their production and to be competitive on the world market, foreign labour represents an asset.

Relative wages that is the ratio of local to foreign wage is found to be positively related to demand for foreign labour. Labour demand decisions are likely to depend not only on domestic, but also on foreign labour costs. Hence higher local labour costs may encourage firms to import more foreign workers and this may reduce the labor cost of the firm. Similar results have been found by Lai and Masters (2005) for Taiwan. Firms that seek maximum profit will hire foreign workers to replace local workers. Further, we differentiate between skilled and unskilled wages of natives and foreign workers. The results provide evidence that the greater the skilled wage disparity between local and foreign workers, the higher the probability for firms in the manufacturing sector to employ foreign workers. This finding is also consistent for unskilled wage disparity. The foreign workers are usually young and their importation has a lower impact on the older native workers than on young native workers. Firm will hire foreign workers to replace young men and women (Lai and Masters, 2005). In fact, Mauritius is presently facing a high mounting youth unemployment rate and essentially rising female unemployment rate.

⁵The probit regression technique is also applied and the results are reported in Table 5

Our results show negative but statistically insignificant coefficients for the export variables. Firms exporting within the African continent may not demand foreign labour as discussed above; African markets are relatively more protected and less competitive. Thus, the need for foreign labour is not vital. Other control variables like firm age and location of the firm in the rural or urban area are insignificant. The latter can be explained by the small size of the island where there is not much difference between rural and urban regions.

5.2.2 Logistic Regression: Employment of Local Workers in the Manufacturing Sector

Further, we model the employment of local workers using equation (2) above. Table 6 below shows that large firms tend to employ more local workers with a positive and significant coefficient for firm size. Both local and foreign competitors affect negatively the demand for local workers. In fact, the high cost of local workers affects enterprises in the manufacturing sector and to be competitive on both the local and international markets, they have no choice than to have recourse to foreign workers. This is consistent with our results above.

[Insert Table 6]

By sector, we note that enterprises in the textile and clothing sectors rely less on local workers, as the coefficient proves to be significantly negative. This is also consistent with the results for demand for foreign labour where apparel firms rely more on foreign workers. The coefficients for relative wages turn out to be negative but statistically insignificant. Skilled wage differentials between natives and foreign workers have a significant and negative link with demand for local workers. Thus, the higher the wage gap between local skilled and foreign skilled workers, the lower the demand for natives in the manufacturing sector. However, unskilled wage disparity turns out to be insignificant.

Firm age, working hours, export status and domestic sales prove to be statistically insignificant. Other variables like training, membership to trade unions and ownership structure of the firm are included to test the robustness of the regression. The results remain robust and the additional variables turn out to be statistically insignificant.

5.2.3 Sensitivity Analysis

To check the robustness and sensitivity of the regression, different variables to capture wage differential as well as other control variables like whether the firm undertakes training for its workers (both foreign and local) or not and whether the workers are members of a trade union or not are taken into account. The ownership structure of the firm as to whether it is a domestic or foreign owned enterprise and the existence of a shift system in the firm are also included. It is noted that the existence of a shift system encourages firms to demand more foreign labour. This positive and highly significant link is consistent with the fact that it is

essentially foreign workers that are more likely to work odd hours compared to the natives. Overall, the results remain robust (see Tables 4 and 5).

We further include interaction terms with the textile sector to analyse whether local and foreign competition and relative wages in the apparel sector affects more the demand for foreign workers. The results are shown in Table 7 below. It is observed that local competition in the textile sector affects positive demand for foreign workers while foreign competition in the textile sector is statistically insignificant. Higher relative wages in the textile sector also affect positively employment of foreign labour.

[Insert Table 7]

5.2.4 Marginal Effects

The marginal effect of an explanatory variable on the dependent variable is the ceteris paribus effect of a unit increase in that explanatory variable on the conditional mean of the dependent variable. In the above analysis, we note that the significant variables impacting on employment of foreign labour are relative wages, size of the firm, local and foreign competition and medium sales level. The marginal effects are shown in Tables 8, 9 and 10 below.

[Insert Tables 8, 9, 10]

It is observed that the predicted probability for those firms facing local competition is 0.46 and those having to confront foreign enterprises is 0.52. Those firms in the textile sector also have a higher predicted probability of 0.64 and the difference in probabilities for the textile and non-textile sectors stands at 0.35. Similarly enterprises with medium domestic sales levels and those located in the rural regions of the island also have higher predicted probabilities of employing foreign labour. When we estimate marginal effects for different firm size, we see that the effect on firm's size on demand for foreign labour rises. Higher predicted probabilities are observed as we move to larger firm size. Larger firms tend to employ more foreign workers. The predicted probabilities are also estimated for the continuous variable relative wage. The probability rises from 0.39 with a ratio of local to foreign wage of 0.30 to reach 0.55 as the relative wage doubles. The predicted probabilities of the significant independent variables are also plotted in Figures 7-11 below. The plots confirm the positive relationship between demand for foreign labour with relative wages and firm size. Firms in the textile sector also demand more foreign workers. A similar picture holds for those enterprises faced with both local and foreign competition.

[Insert Figures 7-11]

6. Conclusion

This paper investigates the factors affecting probability of employing foreign labour in the manufacturing sector in Mauritius. Based on a survey of 200 manufacturing firms, it is observed that a high percentage of firms prefer foreign workers from Bangladesh and India. Furthermore, firms in the manufacturing industry will prefer in future to import more foreign male workers rather than foreign female workers and mostly skilled ones. Our findings also reveal that local and foreign competitions are also important factors influencing positively the employment of foreign workers. This is not the case for the employment of local workers whereby both local and foreign competitions are negative and significant. Large firms are also more likely to employ foreign workers. It is noted that foreign workers are necessary for the survival of firms in this competitive global world.

Our results further show that, the textile and clothing sector is highly dependent on foreign workers, compared to other manufacturing firms. Manufacturing enterprises also chose to employ foreigners as per the standard working hours as overtime represents a high wage burden. Migrant workers in fact contribute to the flexibility of businesses, leading to cheaper prices, better quality products and higher profits. It is said that immigrants from India, China and other countries are known to work harder and more efficiently than Mauritians. In fact, from the survey, firms stated that the foreign workers were very committed to their duties, are likely to be less absent from work, they are more skilled and productive and do not have a family life so they spend most of their time at work.

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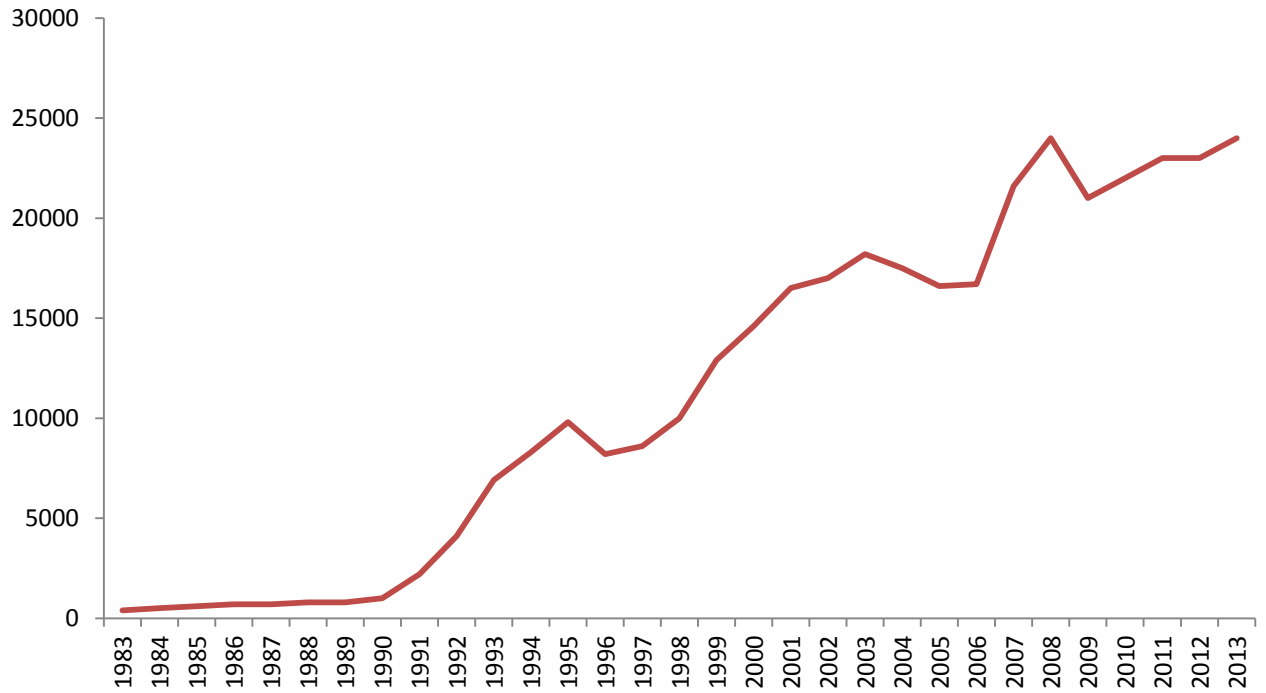
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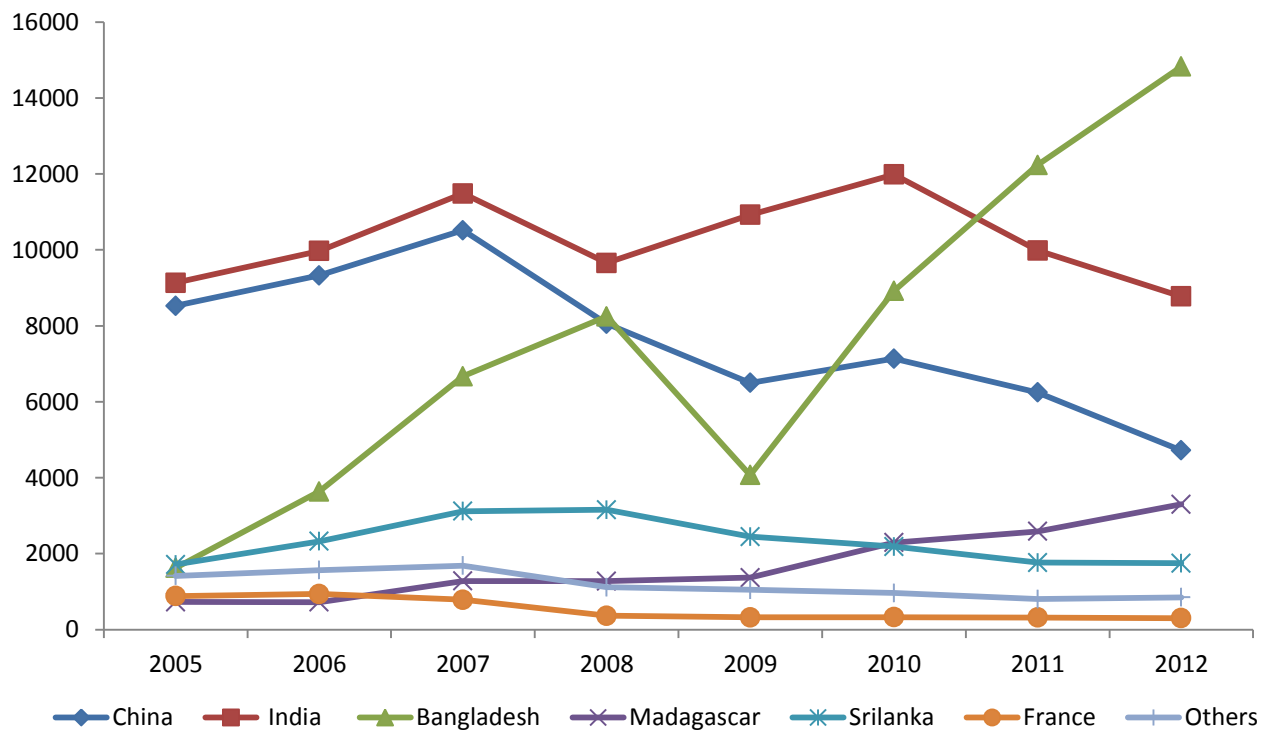
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Figure 1: Number of Employed Foreign Workers in Mauritius (1983-2013)



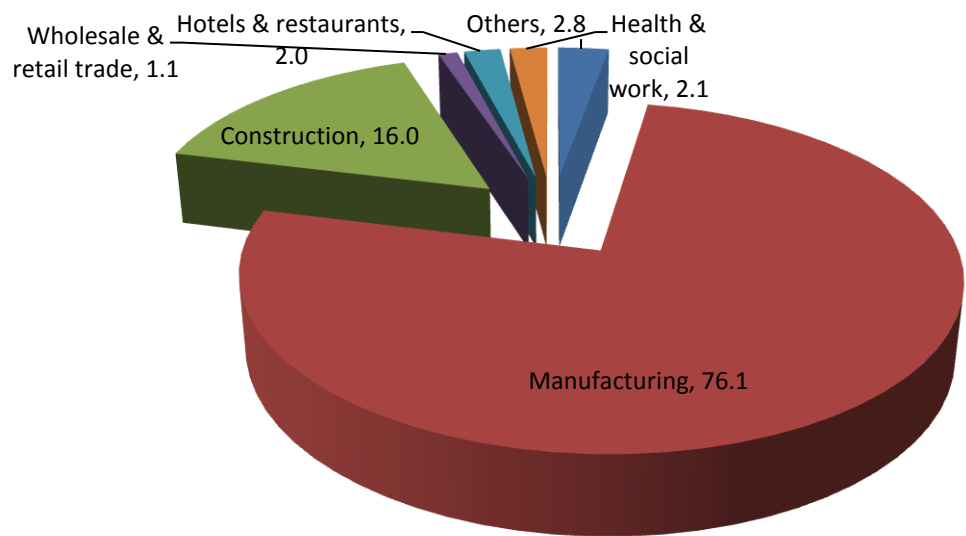
Source: Statistics Mauritius, 2012

Figure 2: Number of Valid Work Permits by Source Country (2013)



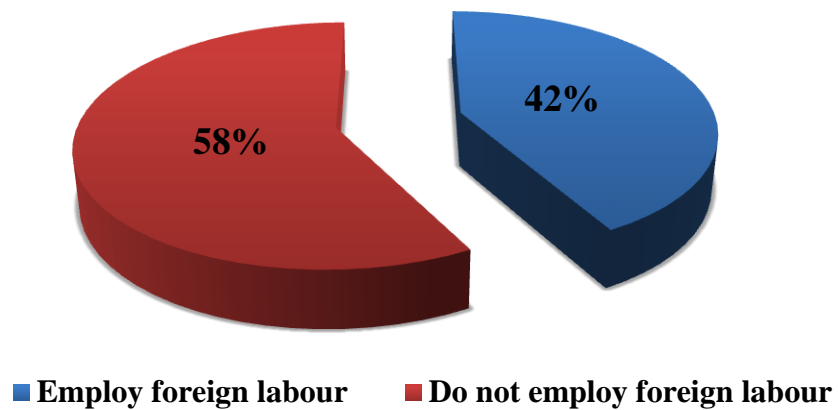
Source: Ministry of Labour, Industrial Relations and Employment, 2013

Figure 3: Number of Valid Work Permits by Sector (2013)



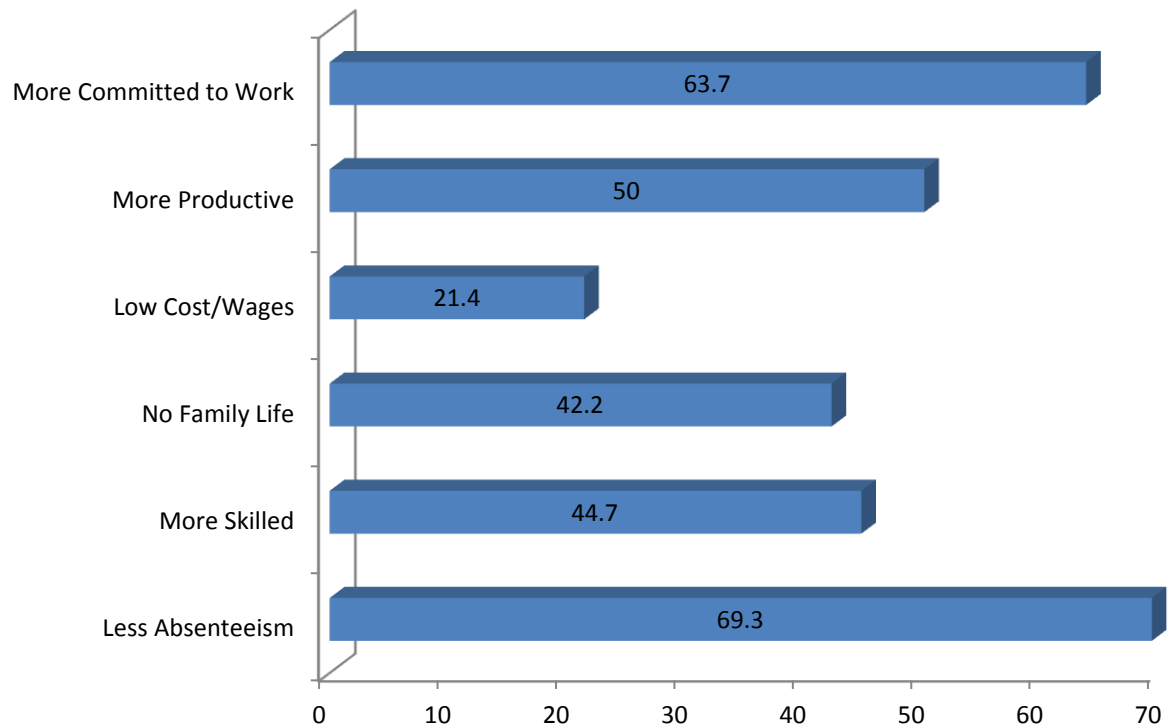
Source: Ministry of Labour, Industrial Relations and Employment, 2013

Figure 4: Firms Employing Foreign Workers



Source: Survey Data, 2012

Figure 5: Reasons for Enterprises to Employ Foreign Workers over Local Workers



Source: Survey Data, 2012

Table 1: Summary Statistics

Firm Characteristics	Percentage	Mean			
		Local Workers		Foreign Workers	
		Male	Female	Male	Female
Sector					
Textile	38	37.5	33.4	37.0	37.3
Food and Beverages	15	88.5	39.3	11.6	14.4
Others	47	27.6	24.3	19.2	14.5
Ownership Structure					
Domestic	95	38.8	26.5	26.7	29.3
Foreign-Owned	5	74.9	64.3	43.0	28.3
Firm Size					
Small	67.5	10.8	9.6	8.1	8.7
Medium	11.5	35	28.9	20	6.7
Large	21	146	93.9	71.1	77.3
Location					
Urban areas	55.5	51.9	37.0	31.3	29.0
Rural areas	45.5	26.1	18.6	22.2	30.0
Export Status					

Exports within Africa	33.5	75.2	41.1	37.2	38.9
Exports outside Africa	27.5	71.1	48.0	39.9	26.8
<u>Domestic Sales</u>					
Low domestic sales	8.5	58.6	55.9	40.6	14.4
Medium domestic sales	17.0	21.8	15.7	11.9	14.0
Large domestic sales	74.5	43.5	28.7	31.3	36.3

Source: Authors' Computation

Table 2: Correlation Matrix

	Foreign Labour	Local Comp	Foreign Comp	Firm Size	Exports within Africa	Exports outside Africa	Food and Bevges Sector	Textile Sector	Firm Age	Urban Location	Medium Dom. Sales	High Dom. Sales	Wage of Foreign Workers	Wage of Local Workers	Other Sectors
Foreign Labour	1														
Local Competition	0.16	1													
Foreign Competition	0.08	0.16	1												
Firm Size	0.29	0.08	-0.17	1											
Exports within Africa	0.08	-0.02	-0.20	0.43	1										
Exports outside Africa	0.08	0.07	-0.15	0.30	-0.09	1									
Food and Beverages Sector	-0.05	-0.03	0.08	0.12	0.14	-0.05	1								
Textile Sector	0.35	-0.15	-0.08	0.17	0.13	0.11	-0.30	1							
Firm Age	0.01	0.07	-0.12	0.27	0.19	0.02	0.23	-0.12	1						
Urban Location	0.07	0.22	-0.23	0.32	0.26	0.14	-0.04	0.09	0.10	1					
Medium Domestic Sales	0.20	0.08	-0.16	-0.06	0.01	-0.04	-0.05	-0.02	-0.07	0.11	1				
High Domestic Sales	-0.16	-0.05	0.21	-0.08	-0.10	-0.15	0.03	0.04	0.04	-0.13	-0.79	1			
Wage of Foreign Workers	-0.18	0.04	-0.06	0.11	-0.04	0.12	0.02	0.09	0.00	0.02	-0.05	0.04	1		
Wage of Local Workers	0.10	-0.02	0.01	-0.03	-0.14	-0.04	0.03	-0.05	-0.05	0.00	0.10	-0.03	0.12	1	
Other Sectors	-0.31	0.17	0.03	-0.23	-0.25	-0.07	-0.36	-0.76	-0.02	-0.04	0.05	-0.06	-0.10	0.03	1

Source: Authors' Computation

Table 3: Skilled and Unskilled Foreign and Local Labour by Sub-Sectors of the Mauritian Manufacturing Sector

Percentage (%)/ Sector	Textile	Food	Others
Local Skilled Workers	32.35	12.75	54.90
Local Unskilled Workers	27.87	16.39	55.74
Foreign Skilled Workers	41.67	16.67	41.67
Foreign Unskilled Workers	40.00	35.00	25.00

Source: Authors' Computation

Table 4: Foreign Labour in the Mauritian Manufacturing Sector – Logistic Regression

Local Competition	1.696	2.065	2.187	1.717	1.713	1.706	1.587	1.557
	(2.76)***	(2.58)***	(2.64)***	(2.74)***	(2.77)***	(2.69)***	(2.69)***	(2.70)***
Foreign Competition	0.886	0.970	1.019	0.890	0.796	0.819	0.510	0.549
	(1.92)*	(2.09)**	(2.05)**	(1.97)**	(1.68)*	(1.74)*	(1.65)*	(1.65)*
Firm size	0.722	0.570	0.631	0.690	0.700	0.739	0.735	0.721
	(4.26)***	(3.20)***	(3.17)***	(3.80)***	(3.91)***	(3.92)***	(3.68)***	(3.62)***
Exports Africa	-0.161	0.050	-0.197	-0.625	-0.642	-0.619	-0.405	-0.42
	(0.33)	(0.09)	(0.32)	(1.14)	(1.19)	(1.12)	(0.71)	(0.74)
Exports Non-Africa	0.102	0.141	0.078	-0.289	-0.296	-0.378	-0.330	-0.291
	(0.16)	(0.27)	(0.14)	(0.56)	(0.57)	(0.72)	(0.60)	(0.52)
Food and Beverages	-0.360	-0.148	-0.254	-0.106	-0.213	-0.165	-0.193	-0.182
	(0.59)	(0.20)	(0.32)	(0.14)	(0.28)	(0.22)	(0.28)	(0.27)
Textile	2.216	1.918	1.951	2.010	2.018	1.962	1.773	1.761
	(4.37)***	(4.49)***	(4.30)***	(4.52)***	(4.51)***	(4.28)***	(3.61)***	(3.59)***
Firm Age	0.075	-0.236	-0.202	0.119	0.114	0.100	-0.066	-0.046
	(0.38)	(1.08)	(0.85)	(0.57)	(0.54)	(0.47)	(0.30)	(0.21)
Urban Region	-0.787	0.174	-0.011	-0.492	-0.540	-0.579	-0.148	-0.165
	(1.69)*	(0.37)	(0.02)	(1.06)	(1.14)	(1.20)	(0.30)	(0.32)
Medium Domestic Sales	1.189	1.840	2.293	2.029	1.935	1.712	2.108	2.053
	(1.65)*	(2.39)**	(2.54)**	(2.36)**	(2.17)**	(2.02)**	(1.94)*	(1.88)*
High Domestic Sales	-0.261	-0.055	0.049	0.037	0.024	-0.217	-0.031	-0.101
	(0.40)	(0.09)	(0.07)	(0.05)	(0.03)	(0.33)	(0.04)	(0.12)
Relative Wages	0.592	-	-	-	-	-	-	-
(Local Wage/Foreign Wage)	(1.69)*	-	-	-	-	-	-	-
Wages Skilled Foreigners	-	-0.008	-0.003	-	-	-	-	-
	-	(0.37)	(2.45)**	-	-	-	-	-
Wages Unskilled Foreigners	-	-0.003	-0.009	-	-	-	-	-
	-	(2.27)**	(2.08)**	-	-	-	-	-
Wages Skilled Locals	-	-	0.001	-	-	-	-	-
	-	-	(2.45)**	-	-	-	-	-

Wages Unskilled Locals	-	-	0.002	-	-	-	-	-
	-	-	(1.30)	-	-	-	-	-
Skilled Wage Differential	-	-	-	0.003	0.001	0.003	0.002	0.003
(Locals-Foreigners)	-	-	-	(2.78)***	(2.85)***	(3.00)***	(2.89)***	(2.99)***
Unskilled Wage Differential	-	-	-	0.001	0.006	0.001	0.009	0.009
(Locals-Foreigners)	-	-	-	(2.18)**	(2.26)**	(2.31)**	(2.60)**	(2.44)**
Training	-	-	-	-	0.436	0.424	0.266	0.203
	-	-	-	-	(1.02)	(0.97)	(0.60)	(0.44)
Domestic Ownership	-	-	-	-	-	1.085	0.502	0.539
	-	-	-	-	-	(1.33)	(0.56)	(0.61)
Shift System	-	-	-	-	-	-	2.366	2.274
	-	-	-	-	-	-	(3.55)***	(3.46)***
Trade Union	-	-	-	-	-	-	-	0.403
	-	-	-	-	-	-	-	(0.69)
Constant	-5.701	-5.378	-5.422	-5.124	-5.293	-6.128	-5.843	-5.806
	(4.76)***	(4.55)***	(4.29)***	(4.66)***	(4.69)***	(4.56)***	(3.96)***	(3.99)***
R-Squared	0.435	0.342	0.394	0.311	0.315	0.319	0.398	0.397
Number of observations	180	180	180	180	180	180	180	180

Source: Authors' Computation

Note: ***, ** and * show significance at 1 per cent, 5 per cent and 10 per cent
 T-ratios are in brackets

Table 5: Demand for Foreign Labour in the Mauritian Manufacturing Sector – Probit Regression

Local Competition	0.998	1.154	1.219	1.052	1.056	1.05	0.949	0.932
	(2.82)**	(2.84)***	(3.02)***	(2.89)***	(2.91)***	(2.85)***	(2.72)***	(2.74)***
Foreign Competition	0.426	0.554	0.557	0.505	0.444	0.461	0.305	0.323
	(1.65)*	(2.15)**	(2.01)**	(1.95)*	(1.65)*	(1.71)*	(1.10)	(1.18)
Firm size	0.45	0.361	0.384	0.406	0.415	0.438	0.415	0.407
	(4.58)***	(3.59)***	(3.53)***	(4.00)***	(4.12)***	(4.19)***	(3.80)***	(3.75)***
Exports Africa	-0.149	-0.066	-0.175	-0.341	-0.361	-0.348	-0.171	-0.18
	(0.55)	(0.21)	(0.53)	(1.13)	(1.21)	(1.15)	(0.55)	(0.58)
Exports Non-Africa	-0.086	0.057	0.023	-0.171	-0.177	-0.229	-0.139	-0.124
	(0.26)	(0.2)	(0.08)	(0.6)	(0.62)	(0.79)	(0.45)	(0.4)
Food and Beverages	-0.141	-0.008	-0.028	0.029	-0.042	-0.009	-0.086	-0.094
	(0.42)	(0.02)	(0.06)	(0.07)	(0.10)	(0.02)	(0.22)	(0.24)
Textile	1.229	1.126	1.142	1.210	1.213	1.179	-1.022	1.009
	(4.68)***	(4.61)***	(4.42)***	(4.84)***	(4.83)***	(4.59)***	(3.75)***	(3.74)***
Firm Age	0.034	-0.126	-0.111	0.059	0.054	0.044	-0.042	-0.034
	(0.3)	(1.02)	(0.85)	(0.50)	(0.45)	(0.36)	(0.35)	(0.27)
Urban Region	-0.472	0.052	-0.023	-0.260	-0.283	-0.300	-0.103	-0.107

	(1.85)*	(0.20)	(0.08)	(1.04)	(1.12)	(1.17)	(0.39)	(0.4)
Medium Domestic Sales	0.237	-	-	-	-	-	-	-
	(2.07)**	-	-	-	-	-	-	-
High Domestic Sales	0.741	1.085	1.322	1.202	1.140	1.001	1.148	1.117
	(1.68)*	(2.46)**	(2.68)***	(2.50)**	(2.30)**	(2.09)**	(2.06)**	(1.99)**
Relative Wages	-0.132	-0.044	0.019	0.040	0.025	-0.120	-0.036	-0.070
(Local Wage/Foreign Wage)	(0.35)	(0.12)	(0.05)	(0.10)	(0.06)	(0.31)	(0.08)	(0.16)
Wages Skilled Foreigners	-	-0.002	-0.006	-	-	-	-	-
	-	(0.36)	(2.64)***	-	-	-	-	-
Wages Unskilled Foreigners	-	-0.001	-0.002	-	-	-	-	-
	-	(2.51)**	(2.79)***	-	-	-	-	-
Wages Skilled Locals	-	-	0.006	-	-	-	-	-
	-	-	(2.64)***	-	-	-	-	-
Wages Unskilled Locals	-	-	0.002	-	-	-	-	-
	-	-	(1.33)	-	-	-	-	-
Skilled Wage Differential	-	-	-	0.006	0.006	0.006	0.006	0.006
(Locals-Foreigners)	-	-	-	(2.97)***	(3.08)***	(3.27)***	(2.91)***	(2.98)***
Unskilled Wage Differential	-	-	-	0.003	0.003	0.003	0.002	0.002
(Locals-Foreigners)	-	-	-	(2.09)**	(2.23)**	(2.28)**	(2.48)**	(2.31)**
Training	-	-	-	-	0.271	0.265	0.171	0.148
	-	-	-	-	(1.10)	(1.07)	(0.68)	(0.56)
Domestic Ownership	-	-	-	-	-	0.666	0.352	0.362
	-	-	-	-	-	(1.41)	(0.71)	(0.73)
Shift System	-	-	-	-	-	-	1.300	1.258
	-	-	-	-	-	-	(3.69)***	(3.56)***
Trade Union	-	-	-	-	-	-	-	0.188
	-	-	-	-	-	-	-	(0.57)
Constant	-3.283	-3.144	-3.126	-3.085	-3.19	-3.704	-3.443	-3.409
	(5.14)***	(4.90)***	(4.69)***	(4.90)***	(4.93)***	(4.85)***	(4.30)***	(4.33)***
Number of observations	180	180	180	180	180	180	180	180
R-Squared	0.343	0.336	0.390	0.312	0.317	0.322	0.396	0.395

Source: Authors' Computation

Note: ***, ** and * show significance at 1 per cent, 5 per cent and 10 per cent
T-ratios are in brackets

Table 6: Demand for Local Workers in the Mauritian Manufacturing Sector – Ordinary Least Squares Regression

Local Competition	-0.616	-0.602	-0.572	-0.614	-0.604	-0.607	-0.621	-0.648
	(2.56)**	(2.47)**	(2.37)**	(2.55)**	(2.55)**	(2.55)**	(2.50)**	(2.68)**
Foreign Competition	-0.252	-0.237	-0.217	-0.245	-0.275	-0.279	-0.288	-0.244
	(1.65)*	(1.67)*	(1.72)*	(1.68)*	(1.65)*	(1.66)*	(1.71)*	(1.72)*
Firm size	0.822	0.810	0.802	0.816	0.816	0.809	0.797	0.805
	(11.99)**	(11.43)**	(11.32)**	(11.73)**	(11.66)**	(11.18)**	(10.50)**	(10.30)**
Exports Africa	0.066	0.107	0.105	0.093	0.089	0.079	0.072	0.054
	(0.42)	(0.68)	(0.68)	(0.59)	(0.56)	(0.49)	(0.44)	(0.33)
Exports Non-Africa	0.164	0.179	0.205	0.181	0.177	0.187	0.208	0.212
	(1.14)	(1.24)	(1.41)	(1.26)	(1.22)	(1.27)	(1.40)	(1.46)
Food and Beverages	0.099	0.105	0.097	0.113	0.074	0.066	0.055	0.067
	(0.54)	(0.58)	(0.54)	-0.63	(0.38)	(0.35)	(0.29)	(0.36)
Textile	-0.26	-0.259	-0.264	-0.245	-0.252	-0.231	-0.254	-0.219
	(1.85)*	(1.80)*	(1.87)*	(1.70)*	(1.72)*	(1.68)*	(1.67)*	(1.65)*
Firm Age	0.048	0.039	0.033	0.043	0.039	0.043	0.043	0.049
	(0.66)	(0.55)	(0.45)	(0.61)	(0.56)	(0.62)	(0.62)	(0.70)
Urban Region	0.102	0.093	0.127	0.101	0.09	0.094	0.088	0.064
	(0.7)	(0.66)	(0.89)	(0.71)	(0.62)	(0.65)	(0.60)	(0.44)
Medium Domestic Sales	0.107	0.07	0.086	0.068	0.029	0.055	0.026	0.034
	(0.43)	(0.28)	(0.35)	(0.27)	(0.12)	(0.23)	(0.11)	(0.14)
High Domestic Sales	0.222	0.22	0.251	0.223	0.208	0.236	0.210	0.194
	(0.94)	(0.92)	(1.06)	(0.95)	(0.91)	(1.03)	(0.93)	(0.83)
Relative Wages (Local Wage/Foreign Wage)	-0.010	-	-	-	-	-	-	-
	(0.94)	-	-	-	-	-	-	-
Wages Skilled Locals	-	-0.035	-0.019	-	-	-	-	-
	-	(0.52)	(1.92)*	-	-	-	-	-
Wages Unskilled Locals	-	-0.016	-0.076	-	-	-	-	-
	-	(0.21)	(0.13)	-	-	-	-	-
Wages Skilled Foreign	-	-	0.012	-	-	-	-	-
	-	-	(1.93)*	-	-	-	-	-
Wages Unskilled Foreign	-	-	0.001	-	-	-	-	-
	-	-	(0.71)	-	-	-	-	-

Skilled Wage Differential	-	-	-	-0.083	-0.082	-0.088	-0.072	-0.055
(Locals-Foreigners)	-	-	-	(1.65)*	(1.66)*	(1.65)*	(1.73)*	(1.87)*
Unskilled Wage Differential	-	-	-	-0.029	-0.003	-0.031	-0.028	-0.022
(Locals-Foreigners)	-	-	-	(0.79)	(0.78)	(0.79)	(0.68)	(0.56)
Training	-	-	-	-	0.119	0.125	0.110	0.114
	-	-	-	-	(0.99)	(1.05)	(0.92)	(0.95)
Domestic Ownership	-	-	-	-	-	-0.188	-0.169	-0.141
	-	-	-	-	-	(1.03)	(1.00)	(0.78)
Trade Union	-	-	-	-	-	-	0.18	0.208
	-	-	-	-	-	-	(1.17)	(1.36)
Shift System	-	-	-	-	-	-	-	-0.175
	-	-	-	-	-	-	-	(0.97)
Constant	-0.898	-0.865	-0.899	-0.915	-0.930	-0.781	-0.761	-0.822
	(2.26)**	(2.18)**	(2.30)**	(2.32)**	(2.38)**	(1.84)*	(1.83)*	(1.89)*
R-Squared	0.76	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Number of observations	165	165	165	165	165	165	165	165

Source: Authors' Computation

Note: ***, ** and * show significance at 1 per cent, 5 per cent and 10 per cent
T-ratios are in brackets

Table 7: Demand for Foreign Workers in the Mauritian Manufacturing Sector – Interaction Term with Textile Sector

Local Competition	1.54	14.24	1.67
	(0.678)***	(0.826)***	(0.635)***
Local Competition*Textile	—	12.73	—
	—	(1.067)***	—
Foreign Competition	0.92	0.91	0.649
	(0.471)**	(0.480)*	(0.529)
Foreign Competition*Textile	—	—	0.586
	—	—	(1.028)
Lnsize	0.78	0.72	0.719
	(0.189)***	(0.170)***	(0.170)***
ExportsAfrica	-0.21	-0.19	-0.160
	(0.516)	(0.489)	(0.486)
Exportsnon-Africa	0.19	0.11	0.083
	(0.579)	(0.628)	(0.619)
Food and Beverages	-0.54	-0.37	-0.314
	(0.688)	(0.630)	(0.589)

Textile	2.55	14.89	2.070
	(0.497)***	(0.995)***	(0.531)***
LnAge	0.07	0.08	0.054
	(0.229)	(0.198)	(0.201)
Relativewage	-1.15	-0.58	-0.598
	(0.512)**	(0.344)	(0.368)
Relative Wage *Textile	-1.06	–	–
	(0.536)*	–	–
City	-0.84	-0.79	-0.81
	(0.539)*	(0.462)*	(0.468)*
MediumDomesticSales	1.30	1.10	1.18
	(0.792)*	(0.775)	(0.760)*
HighDomesticSales	-0.33	-0.34	-0.28
	(0.659)	(0.661)	(0.625)
Constant	-5.92	-18.15	-5.50
	(1.215)	(1.160)	(1.169)
R-Squared	0.40	0.36	0.36
Number of observations	180	180	180

Source: Authors' Computation

Note: ***, ** and * show significance at 1 per cent, 5 per cent and 10 per cent
 T-ratios are in brackets

Table 8: Predicted Probabilities – Foreign Labour and Discrete Variables

	Delta-method					
	Margin	Std. Err.	z	P>z	[95% Conf.	Interval]
Local Competition						
0	0.23	0.06	3.86	0.00	0.12	0.35
1	0.46	0.03	15.12	0.00	0.40	0.51
Foreign Competition						
0	0.39	0.03	11.33	0.00	0.32	0.46
1	0.52	0.05	10.71	0.00	0.43	0.62
Textile						
0	0.29	0.04	7.73	0.00	0.21	0.36
1	0.64	0.05	13.13	0.00	0.54	0.73
Medium Domestic Sales						
0	0.39	0.03	11.86	0.00	0.33	0.46
1	0.57	0.11	5.44	0.00	0.37	0.78

High Domestic Sales						
0	0.46	0.07	6.54	0.00	0.32	0.59
1	0.42	0.04	10.28	0.00	0.34	0.50
Urban Region						
0	0.49	0.05	10.55	0.00	0.40	0.58
1	0.38	0.04	9.97	0.00	0.30	0.45

Source: Authors' Computation

Table 9: Predicted Probabilities – Foreign Labour and Relative Wage

Delta-method						
	Margin	Std. Err.	z	P>z	[95% Conf.	Interval]
Relative Wage						
0.30	0.39	0.03	13.35	0.00	0.33	0.44
0.50	0.41	0.03	13.10	0.00	0.35	0.47
0.75	0.43	0.04	11.45	0.00	0.36	0.51
1.00	0.45	0.05	9.70	0.00	0.36	0.55
1.25	0.48	0.06	8.31	0.00	0.37	0.59
1.50	0.50	0.07	7.27	0.00	0.37	0.64
1.75	0.53	0.08	6.49	0.00	0.37	0.69
2.00	0.55	0.09	5.91	0.00	0.37	0.73

Source: Authors' Computation

Table 10: Predicted Probabilities – Foreign Labour and Firm Size

Delta-method						
	Margin	Std. Err.	z	P>z	[95% Conf.	Interval]
Ln Size of the Firm						
1	0.16	0.05	3.04	0.00	0.06	0.26
2	0.19	0.05	3.68	0.00	0.09	0.29
3	0.22	0.05	4.61	0.00	0.13	0.32
4	0.27	0.04	6.01	0.00	0.18	0.35
5	0.31	0.04	8.16	0.00	0.24	0.39
6	0.36	0.03	11.18	0.00	0.30	0.43
7	0.42	0.03	13.90	0.00	0.36	0.48
8	0.48	0.03	13.99	0.00	0.41	0.54
9	0.54	0.04	12.45	0.00	0.45	0.62
10	0.60	0.05	11.07	0.00	0.49	0.70

11	0.65	0.06	10.24	0.00	0.53	0.78
12	0.71	0.07	9.89	0.00	0.57	0.85
13	0.76	0.08	9.93	0.00	0.61	0.91
14	0.81	0.08	10.34	0.00	0.65	0.96
15	0.85	0.08	11.12	0.00	0.70	1.00
16	0.88	0.07	12.36	0.00	0.74	1.02

Source: Authors' Computation

Figure 7: Predictive Margins –Foreign Labour and Relative Wages

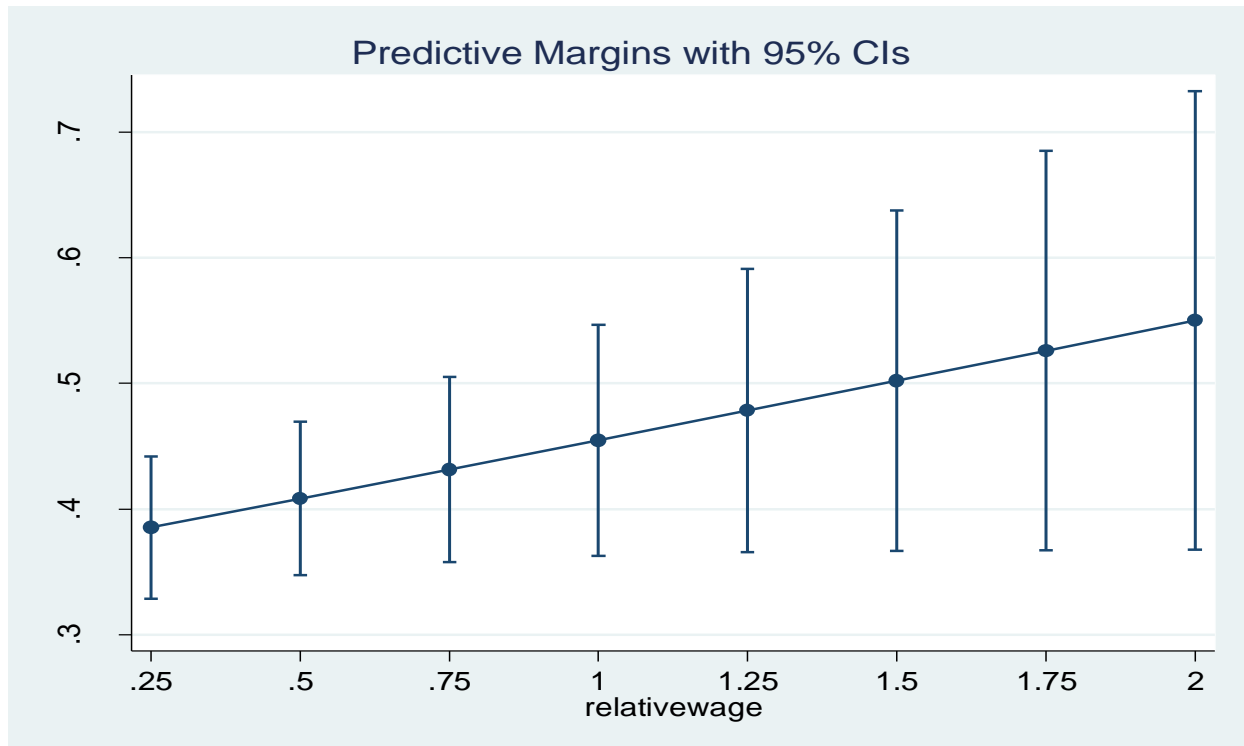


Figure 8: Predictive Margins –Foreign Labour and Firm Size

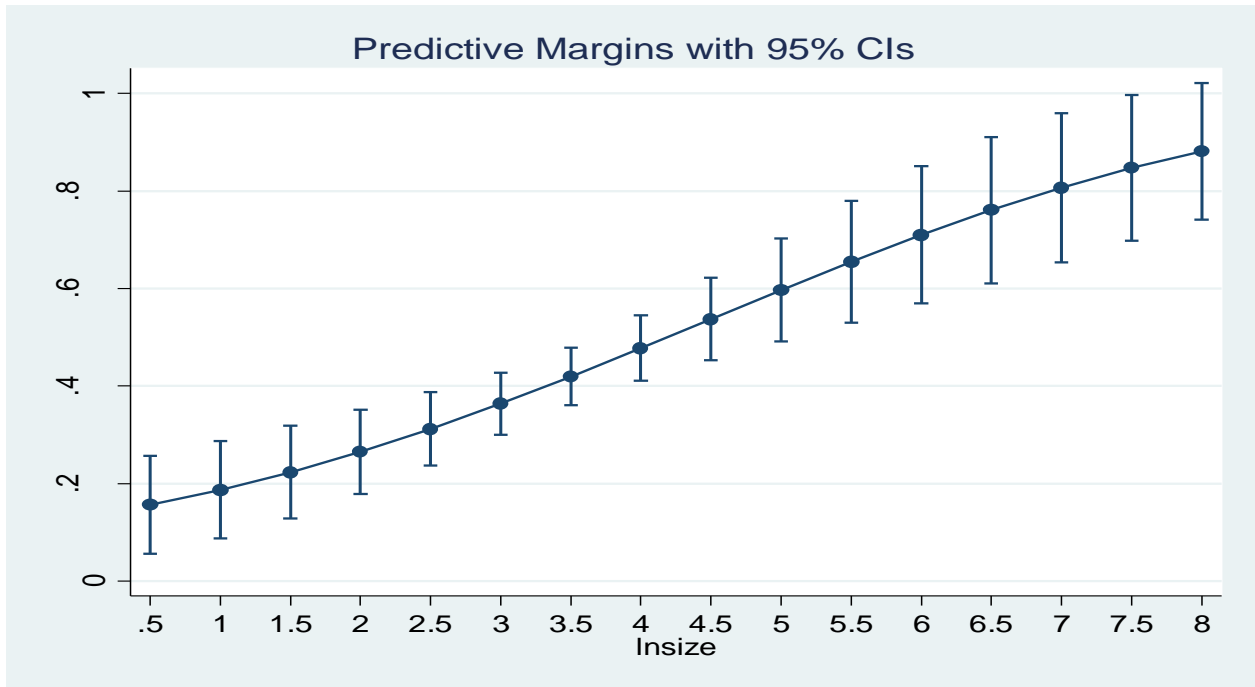


Figure 9: Predictive Margins –Foreign Labour and Textile Sector

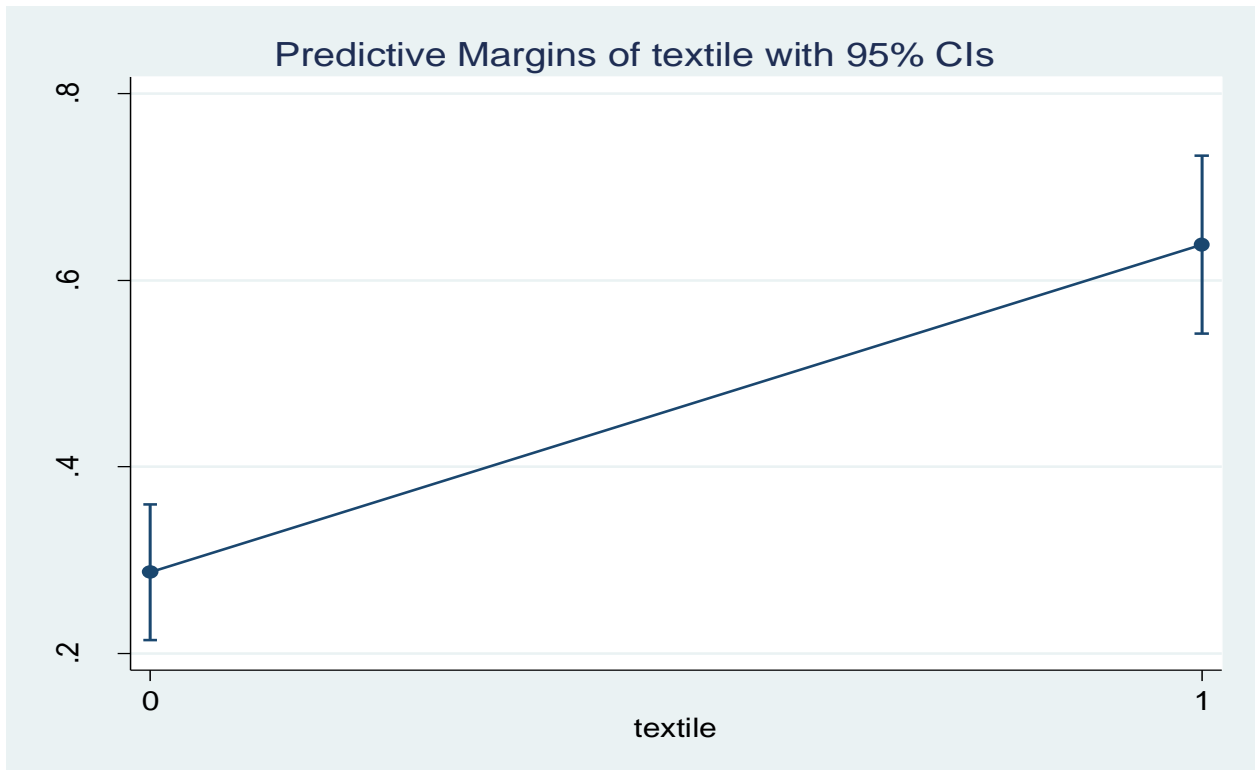


Figure 10: Predictive Margins –Foreign Labour and Local Competition

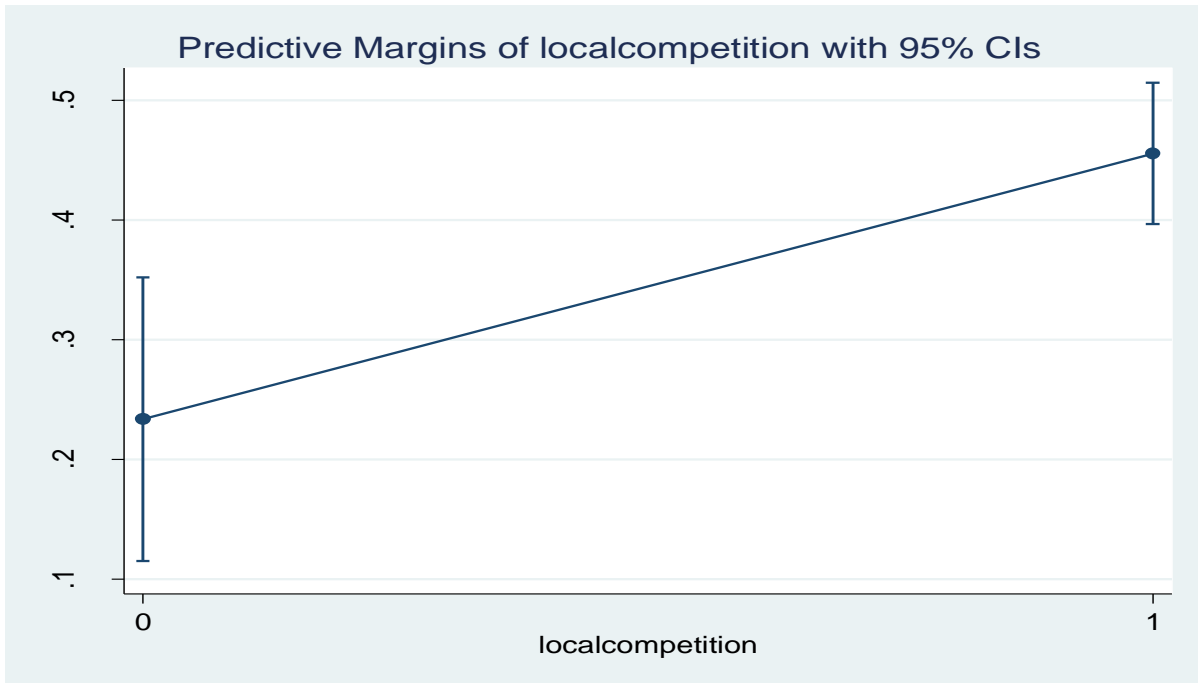


Figure 11: Predictive Margins –Foreign Labour and Foreign Competition

