

Trade, Employment and Gender: Case Study of Mauritius

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List of Abbreviations

ACP –EU	: African Carribean Pacific
ADF	: Augmented Dickey – Fuller
ARDL	: Auto Regressive Distributed Lag
BPO	: Business Process Outsourcing
COMESA	: Common Market foe Eastern and Southern Africa
CSO	: Central Statistical office , Mauritius
EOE	: Export Oriented Enterprise
EPZ	: Export Processing Zone
FDI	: Foreign Direct Inflows
GDP	: Gross Domestic Product
HRDC	: Human Resource Development Council
ICT	: Information Communication Technology
ILO	: International Labour Organization
IT	: Information Technology
ITES – BPO	: Information Technology – Enabled Services and Business Process Outsourcing
LR	: Long –Run
MAAA	: Multi – Annual Adaptation Action Plan
MFN	: Most Favoured Nation
MSPA	: Mauritius Sugar Planters’ Association
PP	: Philips – Perron
SADC	: Southern African Development Community
SMEs	: Small Medium Enterprises

SR : Short – Run
SSA : Sub – Saharan Africa
UNCTAD : United Nations Conference on Trade and Development
VAR : Vector Auto Regressive
WDI : World Development Indicators
WTO : World Trade Organization

1. Introduction

The prevailing orthodoxy of inward-oriented, state-dominated development strategies of the 1960s and 1970s emphasized stringent import substitution coupled with heavy state intervention in the economy. Mauritius did not subscribe to this approach. Instead, starting in 1970, the country followed a mixed trade policy of import substitution coupled with incentives for exports. Import substitution and export promotion co-existed, influencing enterprises producing for the small home market and those producing for export. Trade liberalization started only in the 1980s as part of structural adjustment.

One of the distinctive features of trade liberalization in Mauritius has been its gradual approach to reducing import protection and reforming other aspects of its industrial regime over the past decades. This was divided into three distinct periods, each with a different rate of reform and coverage (see Section 3). Implicitly, Mauritius has moved from a highly protected to a very liberal one through waves of trade liberalization. A key feature of the Mauritius outward-strategy was the setting up of Export Processing Zone (EPZ) in 1970s, which has proved to be an excellent mechanism to boost export and create jobs. Milner and Wright (1998) and Subramanian and Roy (2001) argued that the EPZ and the mobilization of female (and later migrant) labour have been a key to the success story.

Over time successive governments have promoted export diversification as a vehicle for boosting economic growth. Exportable services, such as tourism, financial services and Information Technology – Enabled Services and Business Process Outsourcing (ITES-BPO), have emerged as new growth sectors, with job creation potential, especially for young women. Thus, Mauritius provides a good case study of trade and employment as well as trade and female employment. A glance at the data reveals that, in Mauritius, export growth is closely associated with employment growth. For example, export growth in 1986 and 1987 was 27% and 18%, respectively and employment (female employment) growth was 7.7% (11.7%) and 12.3% (8.1%), respectively. Similarly, negative growth rates are correlated with negative or minimal growth in employment. For example, export contracted by 12.1% in 2002 while total employment and female employment contracted by 0.4% and 1.8%, respectively. Further, the export contraction of 4.8% in 2009 was accompanied by a small female employment growth of 1.7%.

However, lately a series of events have shaken the local labour market, leading to layoffs. These events are as follows: first, the erosion of trade preferences; second, globalization-induced events such as the dismantling of the Multi-Fibre Agreement (MFA); and third, the rise of China since 2005. These events have underpinned much of the economy's earlier economic success. The current government strategy is to reorient the economy's traditional sectors in light of preference erosion while promoting new growth avenues. The sugar industry is being converted into an efficient cane industry that is geared towards the production of a higher proportion of white and special sugars, ethanol, energy and by products. This shift was motivated by the drastic cut in sugar price following the EU's sugar trade reforms. In the textiles sector, efforts are being directed to

building a vertically integrated clothing industry encompassing spinning, weaving and dyeing operations, which call for heavy investments in machinery. Being a high-cost country, Mauritius' survival strategy rests on moving into the higher end of the market, where competition is less keen. Further, Mauritius has boosted the tourism industry and set an annual target of 2 million tourists by the year 2015, a more than two-fold increase over the current figure of 800,000. In addition to tourism, the ICT-BPO sector has been promoted during the past years. Over the last few years, a number of information technology-enabled services and business process outsourcing (ITES-BPO) firms have mushroomed over the country (see Box 2). To further diversify the economic base and generate sustainable growth, the government is actively encouraging the following economic activities: (1) land based oceanic industry (2) hospitality and property development (3) healthcare and biomedical industry (3) agro-processing and biotechnology and (4) the knowledge industry.

This study attempts to shed light on the dynamics of the relation between trade and employment in Mauritius, with a focus on female employment. To our knowledge, this is the first in-depth study of the trade-employment nexus in Mauritius. The key objectives of the study are: (1) To analyze the trends in trade and employment, identify the key products and markets driving exports and document the role of trade liberalization in export growth (section 3); (2) To identify the sectors that have been most vulnerable to import competition from China (especially) and to the erosion of trade preferences, and to examine the resulting impacts on employment, including female employment (section 4); (3) To quantitatively investigate the relationship between trade, including regional trade, and employment, with a gender perspective, in Mauritius (section 5); and (4) To summarize the key findings and discuss their policy implications for trade policy and diversification, regional integration, and gender policy (Section 6).

2. Trade and Employment: A Brief Literature Review

Theoretically, models of trade are based on the assumption of full employment. It is assumed that trade that trade can affect wage rates and the industrial distribution of employment but it has no effect on the overall level of employment. However, these general trade models relying on the assumption of full employment predict that trade liberalisations affect the quality of jobs. The literature suggests that a higher degree of openness would create a shift of employees across different sectors and industries in developing countries. Thereby, the effect of trade in the long run would cause relative demand for different types of workers. Similarly, trade liberalization in poor countries that are rich in unskilled labour would shift investment and employment towards labour-intensive exportable sectors, while employment in import-competing industries would decline.

However many studies contradict this assumption. The empirical evidence of trade effects on employment shows that in the long-run, openness can be good for employment. Trade liberalisation, however, may affect the level of employment if full employment is not achieved at the time of trade reform. For instance, in economies with a highly elastic labour supply, exporters can expand production by attracting workers at

existing wage rates. This situation is more likely to occur in developing countries and in such cases trade liberalization would lead to increases in formal employment levels rather than to changes in wages (WTO 2007).

Trade liberalization brings many changes and can be both positive and negative for both women and men depending on the current distribution of economic power and opportunities introduced. Gains from trade, as argued, is not gender neutral. Inequalities in economic ownership, participation and decision making can be assumed to be gender based. As such, women and men may have unequal access to and control over land, credit, information and decision-making on economic matters. Furthermore, the gendered division of labour often means that formal, income-generating jobs are more often performed by men; this includes any jobs in the public domain and is also reflected in men's greater prominence in cash-crop farming. Therefore, gender analysis should be fully integrated into all aspects of trade policy, taking into account the invisibility of women's production in the informal economy, women's unequal access to formal labour markets, and the increased instability of labour resulting from the spread of the informal economy. Hence, it has become conventional to examine the gender impacts of trade from different perspectives.

Women workers have been particularly sought by the export-oriented industry because women workers are generally less unionized; consequently, they have lower bargaining power over their wages and working conditions, and often work in substandard labour conditions (ILO, 2009). The setting up of EPZ has contributed to the export success of many developing countries and South have largely employed female workforce. A large number of women have benefited from new employment opportunities. In many cases, in their efforts to increase competitiveness, export-oriented industries have focused on employing women workers by taking advantage of existing gender inequalities in women's access to economic and labour rights. EPZ are often exempted from following the national provisions of labour legislation, leading to working conditions that exploit the desperate needs of many women and men for some forms of job. Moreover, because of gender stereotypes, women are assumed to be better suited for certain types of work, for example, attitudes about women's suitability for picking and packing products, in the horticultural sector, or for sewing, in the garment sector; or women's suitability for repetitive and manual work.

Occupational segregation leaves women in lower-paying positions and provides them with limited upward mobility. Indeed, a number of studies suggest the precarious nature of women's jobs in the manufacturing sector, with frequent spells of unemployment and a reduced ability to negotiate wages and working conditions. This makes the development of specific skills more difficult and therefore tends to make women generally remain as low-wage earners in the pool of unskilled workers. Nordas (2003), using a comparative study of Mauritius, Mexico, Peru, the Philippines and Sri Lanka, finds that trade liberalization has created jobs for women and caused their relative wages to rise over time. It also finds that a high share of women is employed in exporting industries rather than in the import competing industries.

Using a gender- disaggregated CGE model to simulate the impact of trade liberalization on employment and wages in Bangladesh, Fontana and Wood (2000) find that female employment and wages in manufacturing increased as this sector expanded to absorb the workers shed by the contracting agricultural sector. A study on Turkey using the firm-level data finds that women are concentrating in jobs with low pay in low- skill labor-intensive industries using low skill labor, and that export growth creates new employment opportunities for women (Ozler, 2000). However, the study does not indicate how exports affect women's wages nor does it capture shifts in employment between industries following trade liberalization. Haouas *et al.*, (2003) conduct a panel data estimation in Tunisia of 11 manufacturing industries during 1971 to 1996 to investigate the how employment and wages are affected both in the long run and short run following trade reform. They observed that the adoption of an export promotion strategy since the 1970's alongside trade reforms caused women's participation in the formal labor market to increase significantly, to higher female employment in both the exportable and importable sectors. Also, a rise in real wages was also noted during the liberalization period. However, employment and wages in exportable sectors increase in the short-run, but they decrease in the long-run probably due to the process of learning-by-doing and improved productivity and organizational capacity.

Employment and wages followed a similar pattern in Mauritius. Ancharaz (2004) provides econometric evidence showing that the trade reforms of 1984 boosted EPZ (mainly clothing) employment, which was particularly beneficial to women who represent about two-thirds of the EPZ workforce. Furthermore, wages increased even as employment expanded. However, a more recent analysis (see Ancharaz, 2009) suggests that retrenchment in the clothing industry since 2003 due to preference erosion in the country's main markets had a proportionately large negative effect on female employment, leading to the "feminization" of poverty in Mauritius. The survey evidence of Ancharaz (2009) further indicates that the women who lost their jobs suffered psychological trauma, stress and ill- health; that the economic plight of the unemployment was irregular and precarious; and that while 70 percent of the workers were able to find an alternative job or went into self-employment, 85 percent of those who remained unemployed were women (Ancharaz, 2007). Thus globalization can have extremely different effects on the fate of women workers depending on whether the industry in which they are employed is globally competitive or not.

The impact of services trade on women's employment has not been as rigorously researched as the manufacturing or agricultural sector, probably because this is a new sector in which few developing countries have made significant inroads. The available evidence, albeit scant, is conclusive nevertheless. Much of the ITES-BPO has a pronounced female bias. In India, for example, the proportion of women working in call centers ranges from 40 to 70 percent. Most of the women in this sector are clustered at the low end in jobs requiring basic to intermediate skills while men dominate high-skill jobs (UNCTAD, 2002). Documentary evidence from Asian and Latin American countries on the whole suggests that the growth of services trade has benefited computer-literate women by expanding the range of jobs opportunities available to them. Unfortunately, few countries in Africa share this experience. Mauritius, Morocco and South Africa can provide an example for the other African countries to follow but it is unlikely that the ITES-BPO sector will become a significant provider of jobs in the medium term since

Africa lacks both the IT infrastructure and the IT skills as well the required policy impetus.

There are even fewer empirical investigations of the impact of trade on informal employment from a gender perspective and this in spite of the fact that women tend to dominate the informal sector. A notable study in Africa is that Glick and Roubaud (2004), who consider the impact EPZ activities on female employment and wages in Madagascar during 1995-2002. The authors find that informal employment declined during this period, and although wages in the EPZ were lower than elsewhere in the formal private sector, they were nevertheless higher than in the informal sector. Hence, the study suggests that exports can benefit women by creating employment opportunities for them in the formal sector as well as by paying them higher wages.

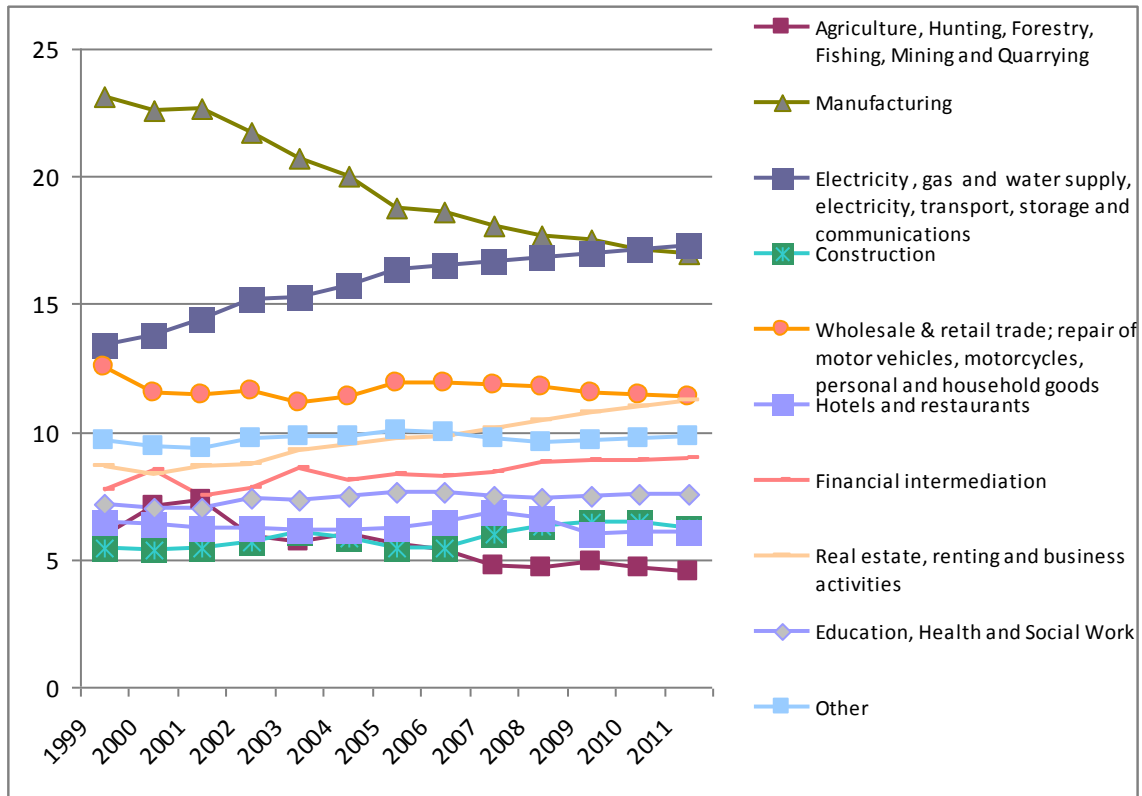
3. Overview of Trade and Employment Trends

At the time of independence in 1969, Mauritius inherited an economic structure fashioned by its colonial past. The island was primarily a sugar plantation, with much of the acreage owned by the Franco-Mauritians, a very small but economically powerful community. This landed aristocracy has judiciously utilized its proceeds from sugar exports, and opportunistically taken advantage of economic incentives, to diversify into textiles, tourism and financial services. In this, Mauritian exporters have benefited most from the market access privileges under the ACP-EU Lomé Convention. On the downside, however, these preferences have hindered both product and market diversification, with exports dominated by sugar and clothing, and the bulk of these exports still being absorbed by the EU. It is recognized that the transformation of the Mauritian economy from a poor sugar economy into a country with one of the highest per capita incomes among African countries depended on several factors which include political stability, strong institutional framework, low level of corruption and favourable regulatory environment (BTI, 2010). These factors have helped to lay the foundation of economic growth while the open trade policies have been the key in sustaining growth.

3.1. Structure of the Mauritian economy

The contemporary Mauritian economy rests on three traditional pillars – sugar, textiles, and tourism. However, lately the contribution of sugar sector has been minimal and now there are some new emerging sectors such as ICT-BPO and financial intermediation with considerable potential to contribute to economic growth. Figure 1 shows the sectoral distribution of GDP.

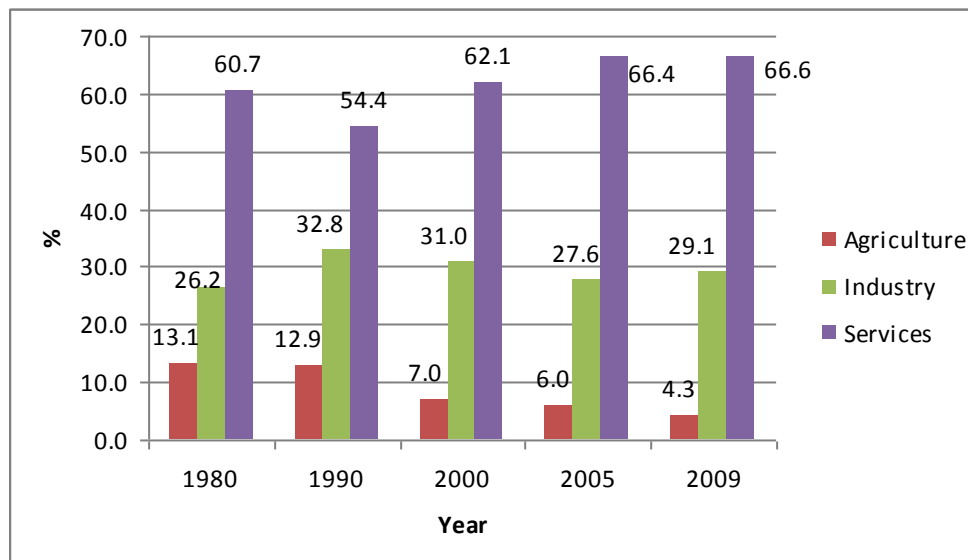
Figure 1: Sectoral Distribution of GDP



Source: CSO

In 2010, manufacturing dominated the economy accounting for 15.7% of its GDP at basic prices (see Table A1 in Appendix). Within this broad sector, the sugar sector contributed 6% to GDP while textiles and food (excluding sugar) contributed to 9.1% and 6.8%, respectively. The agriculture, hunting, forestry and fishing sector contributed 4.2% to the GDP. Within this broad sector, sugar accounted for 2.6% of GDP. Thus, sugar, once the backbone of the economy, has declined to a mere symbolic sector. Tourism is perhaps the only sector that has been left unscathed by the treacheries of globalization. This sector has posted robust growth since 2000. However, one may argue that the multifunctional role of this sector is much larger. While the main pillars of the economy remain the textile and clothing sector, the sugar sector and the tourism sector, recently there has been emergence of new sectors such as financial and ICT sectors. Financial services accounted for some 8.2 % of GDP in 2010. Domestic banks have long dominated financial intermediation in Mauritius although efforts have recently focused on promoting offshore banking activities by emphasizing the country’s reputation as a safe financial haven. However, offshore banking has yet to prove its potential as a driver of growth.

Figure 2: Value Added by Sector



Source: WDI

In 2009, agriculture value added as a % of GDP was 4.3%. That of industry was 29.1% (manufacturing 19.1%) and services 66.7%. Based on Figure 2, the following observation can be made about the structure of the Mauritian economy over the past decades. The value added of the agriculture sector has considerably declined while that of services has experienced a rise and that of industry has been more or less constant (see Figure 2).

The Situation in 2010

Value added of the manufacturing segment, exclusive of sugar milling, went up by 1.5 percent in current US\$ from 1.47 billion in 2009 to 1.54 billion in 2010. Globally, real growth rate increased from 2.1 percent in 2009 to 2.9 percent in 2010, despite the difficult business environment and significant weaknesses on the country's main markets. The increase is explained by the good performance of the food and other sub-sector. As for textiles industry, there is a decrease between 2009 and 2010 if we compare in current US \$. But it should be noted that in real terms, this sub-sector rose by 1% in 2010 after a negative growth of 0.2% in 2009.

As for the export oriented manufacturing enterprises, activities have decreased slightly by 0.6% from 0.54 billion US\$ in 2009 to reach 0.56 US\$ in 2010, due to the average weakening of the major currencies against the rupee and the low consumer sentiment on our main markets limiting the consumer expenditure. Its contribution to GDP should amount to 6.5% in 2010 against 6.9% in 2009. The number of EOE dropped from 414 in September 2009 to 386 in September 2010. The latest employment figures for export oriented enterprises indicate a decrease from 57,107 in September 2009 to 56,624 in September 2010.

The clothing industry, which thrived under EPZ incentives and preferential market access, suffered a major setback in the run up to the fateful January 1, 2005, which signaled the end of apparel quotas and the inauguration of a new era of global competition in clothing exports, featuring formidable players like China, India and others. However, export data for recent years give an altogether different reading: the clothing industry has bounced back, with exports in 2007 reaching an all-time peak before the financial crisis took its toll.

After a year marked by the global recession which has severely affected the tourism industry of the country, 2010 was the year of recovery for this sector. Value Added in current US\$, which went down from 0.67 billion in 2008 to 0.52 billion in 2009, rose to 0.60 billion in 2010. In real terms, the sector recorded a growth rate of 6 percent in 2010 compared to the negative growth of 5.9 percent in 2009. Consequently, the share of 'Hotels and Restaurants' in GDP went up from 6.6 percent in 2009 to 7 percent in 2010. According to preliminary estimates, the number of tourists increased by more than 63,471 (7.3 percent) in 2010 from 871,356 to 934,827. In 2009, a sharp drop of 59,100 visitors was recorded. As for gross earnings from tourism, it has increased by 9.2 percent from US\$ 1.11 billion in 2009 to US\$ 1.26 billion in 2010.

As most of the sectors of the local economy, the rate of real growth for the financial intermediation sector has slowed sharply in 2009 due to the global economic downturn. Nevertheless, with regards to what happened for the banking sector in developed countries, local banks, using a prudential approach and operating mainly through domestic deposits rather than large scale interbank foreign borrowing, were well capitalized and the sector has remained one of the most dynamic sectors during the period. In 2010, in line with the worldwide recovery, the real growth rate of this segment has picked up from 3.8% in 2009 to 4.3% in 2010. However, this growth rate is well below the 2008 figure. Its share in GDP has increased from 9.3 percent in 2006 to 10 percent in 2010. The level of investment in this sector has increased, in current prices, from US 0.04 billion in 2009 to 0.07 billion in 2010. For 2010, it represents 3.1 percent of total investment.

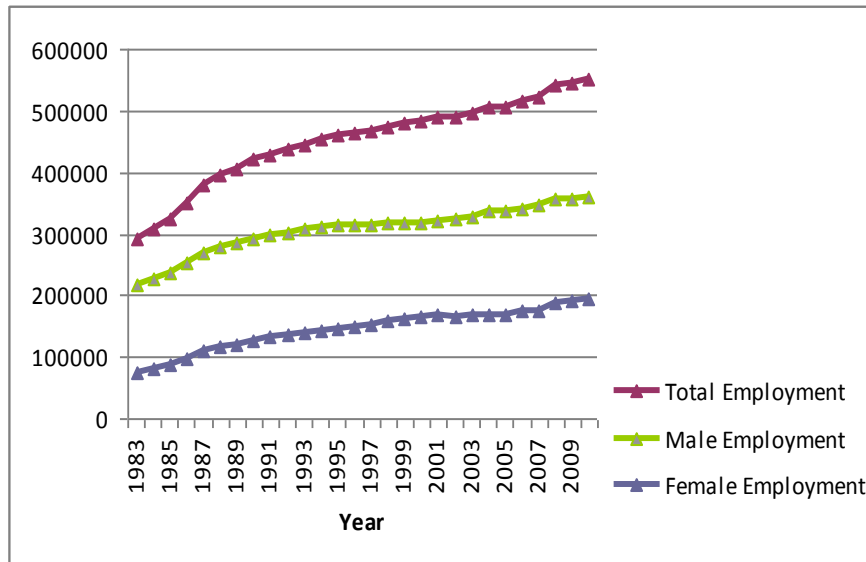
3.2 Trends in Employment

Figure 3 shows employment trends by sex between 1983 and 2010. Aggregate employment has increased smoothly over this period, except in 2002 when employment declined 0.14% relative to the previous year. Moreover, male and female employment numbers have followed similar patterns and rates of change. For the past two years, however, male employment has been falling (see Figure 4). Significantly, male employment dropped 4.64% in 2010, reflecting the lagged effects of the 2008-09 financial crisis. Implicitly, it was the increase female employment¹ that helped sustain

¹ This is a new phenomenon in the Mauritian labour market.

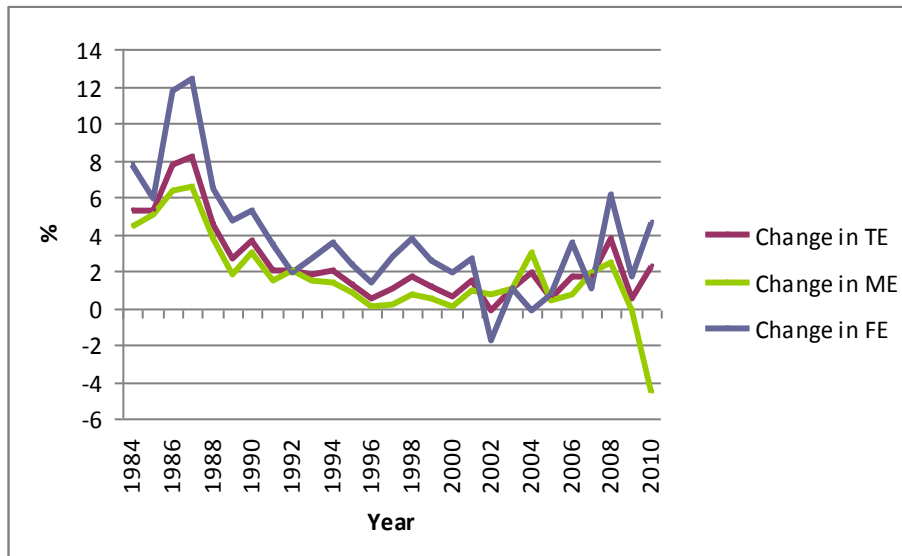
employment in the Mauritian economy in 2010. The total number of employed persons, including foreign workers, was estimated at 558,100 (358,800 males and 199,300 females) in 2010, representing a growth of some 2.25% over the previous year. Referring to figure 4, for the period 1983 to 2010, the Mauritian economy experienced negative change in total employment (0.14%) only in the year 2002. In this particular year, male employment increased by 0.75% while female employment experienced a decline of 1.8%.

Figure 3: Employment, 1983-2010



Source: CSO

Figure 4: % Change in Employment, 1983-2010



Source: CSO

Table A2 in appendix shows the sectoral share of total employment. The following observations can be made:

- (1) The share of agriculture and fishing (sugar cane) has considerably declined over time. It contributed to 12.14% of total employment in 2000 and 8.46% in 2009.
- (2) The manufacturing sector is still the driving force in terms of employment generation. It contributed to 21.2% of the total employment. However compared to previous years, its share has experienced a general decline.
- (3) Within the broad manufacturing sector, the EPZ contributed 10.28% and manufacturing (non – EPZ and sugar). The share of the EPZ sector as an employment generating industry has declined over the past few years
- (4) Over the past three years, the following sectors have expanded in terms of employment generation: construction, wholesale and retail trade, financial intermediation and real estate and business activities.

For the year 2010, analysis from CSO figures reveal the following:

- (1) Total employment in the manufacturing sector exclusive of sugar milling decreased from 82,635 employees (14% of total labour force) in March 2009 to 80,217 (13.2% of labour force) in March 2010. This is mainly due to lay-offs in the textile industry.
- (2) The latest employment figures for export oriented enterprises indicate a decrease from 57,107 in September 2009 to 56,624 in September 2010.
- (3) One of the sectors that has expanded in terms of job creation in the ICT sector. The employment figure has increased by more than 60 percent during the last five years, showing the vitality of this sector. In 2010 there were 138 large companies in the ICT industry employing a total of 12,826 people which represent 4.2 percent of total employment.
- (4) Total employment in the large establishments of the “Hotels and Restaurants” sector increased by 1.8 percent from 22,909 in March 2009 to 23,311 in March 2010. As for employment in large establishments, it has been constantly increasing from 6,800 in March 2000 to 11,387 in March 2010, reflecting the dynamism of this sector.

Table A3 in appendix presents the sectoral share of male employment. Several sectors have expanded in terms of male employment generation namely construction sector, wholesale and retail trade, financial intermediation and transport, storage and communication. However, the traditional sectors such as manufacturing and agriculture and fishing have contracted. In 2009, the share of the agriculture and fishing was 9.34% (15.95% in 1995) and the share of the manufacturing sector was 18.89% (21.80% in 1995). Table A4 shows the sectoral share of female employment. We observe that the manufacturing sector remains the driving force of female employment although its share has declined from 46% in 1995 to 25.6% in 2009. The EPZ, with a predominantly female workforce (56.4% in 2009), accounted for a mere 16.6% of total female employment. This suggests that women in Mauritius are employed across diverse sectors, rather than being concentrated in a few gender-sensitive industries.. Large numbers of women are employed in services, including financial intermediation, wholesale and retail trade, education and real estate, renting and business activities. In these sectors, the female share of employment exceeds the male share. An analysis of the employment

figures also reveal that employment growth in establishment with 10 or more employees has fluctuated significantly since 2002, with women being more subject to the volatility. By contrast, employment outside large establishments (which include own account workers in this case) has been able to compensate for some of these fluctuations and functioned as a labor market stabilizer during this period.

3.3 Trends in Trade

As a secular economy with limited resources, Mauritius relies on trade to boost and foster economic growth. Both imports and exports have increased over the years. Figure 5 shows the movement of exports and imports at constant 2000 US\$ for the period 1976 to 2009. The graph clearly depicts an upward trend for both and exports except for some outliers.

Figure 5: Exports and Imports, 1976 – 2009 (constant US\$ 2000)

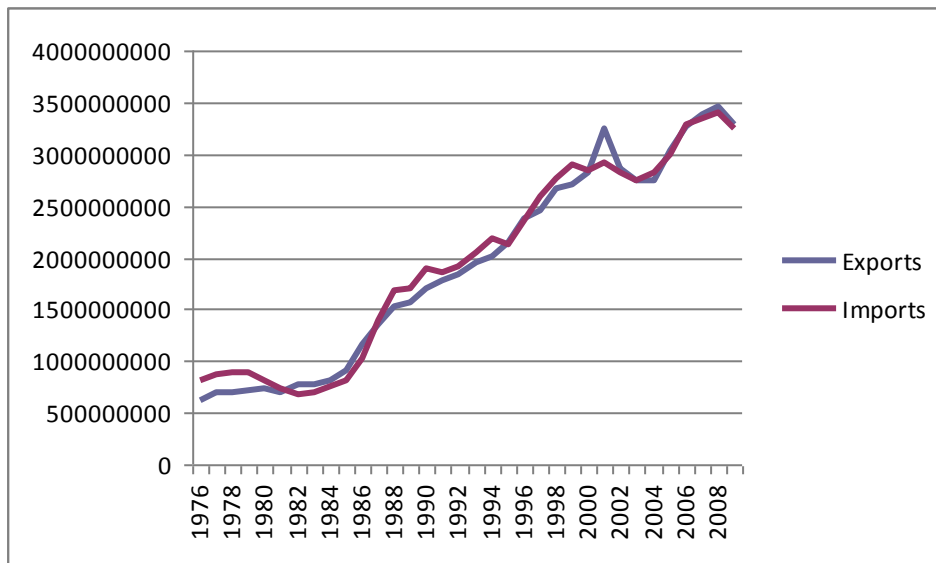


Figure 6: Net Exports, 1976 – 2009 (Constant US\$ 2000)

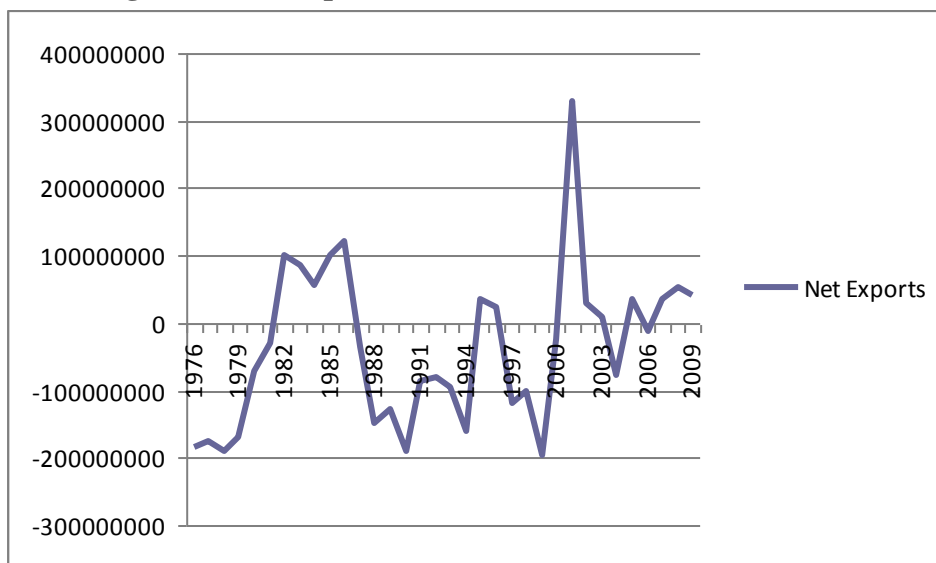
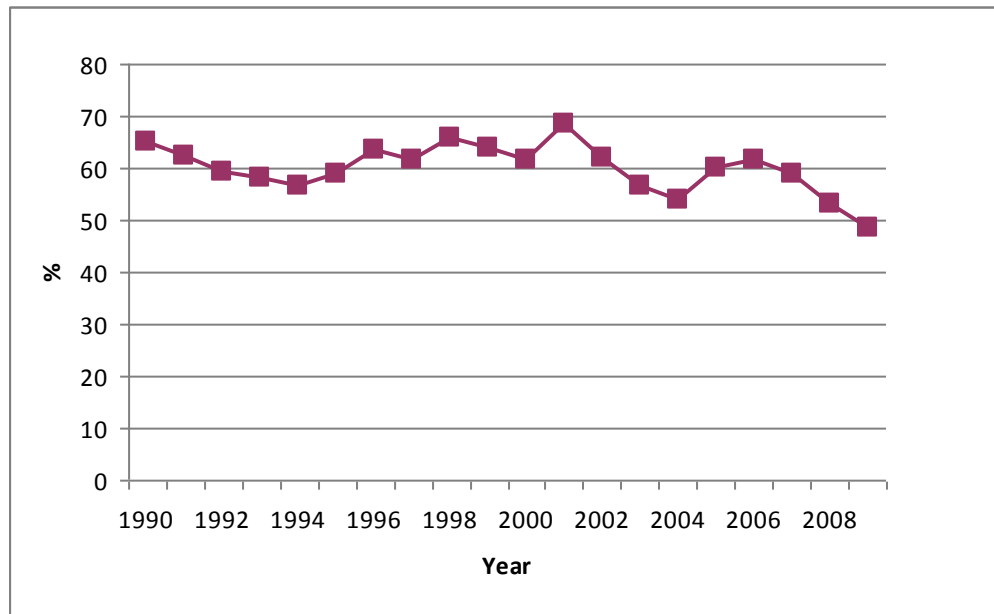


Figure 6 shows net exports for the time period 1976 to 2009. It can be noticed that this variable experienced a hike in the year 2001. However, Mauritius started to experience the effect of the MFA phase-out with export declining considerably during the period 2001 to 2005. Finally, we also note that over the past three years next export is following an upward trend.

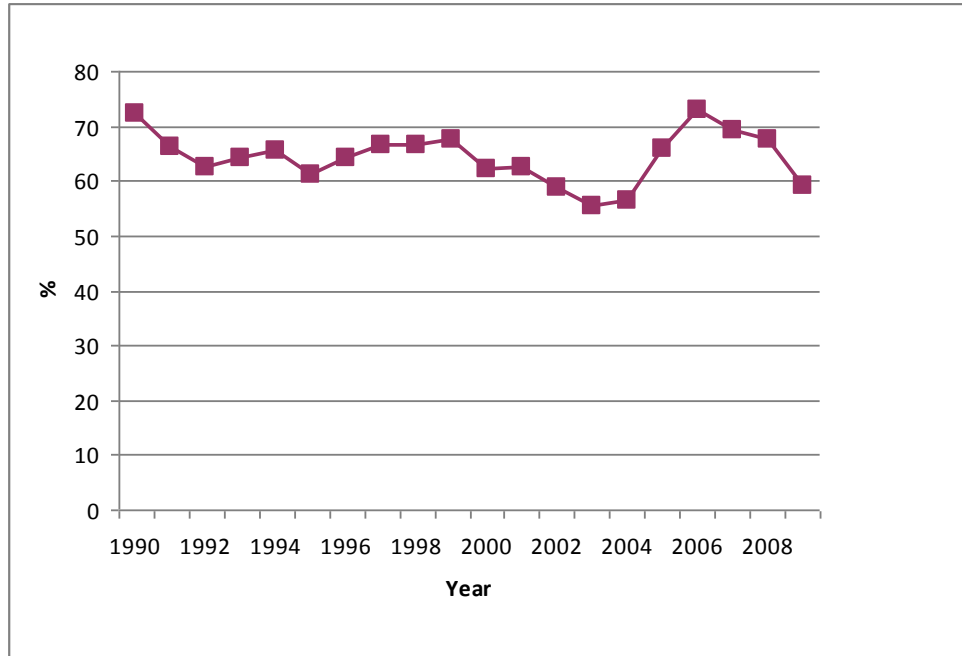
Figure 7: Export as a % of GDP



Source: WDI

Mauritius is one of the most open economies in Africa. Exports as a share of GDP (see Figure 7) averaged 60% over the period 1990-2009. This share peaked at 68.4% in 2001, but declined steadily to less than 50% in 2009 after a temporary upturn during 2004-2006. The dip in the share in recent years reflects the onslaught of the financial crisis, which affected tourism and manufactured exports most severely. Figure 8 shows the evolution of the imports as a percentage of GDP during 1990 – 2009. Since the whole of this period was one of continuous trade liberalization, an increase in the import share would normally be expected. However, the share generally declined from 1990 to 2003, then increased sharply to a peak in 2007 before falling again. The rise in the share is largely attributable to the influx of cheap Chinese products and the subsequent decline is the consequence of the economic turmoil that gripped the Mauritian economy, with real GDP growth falling to 3.1% in 2009.

Figure 8: Imports as a % of GDP



Source: WDI

Top Trading Partners

Table 1 shows Mauritius' exports by partner country. European markets feature prominently among the top export destination UK and France absorbing 23.7% and 16.2%, respectively, of Mauritius' exports, Miscellaneous manufactured articles (mainly wearing apparel), food and live animals and beverages and tobacco are the main items of export to Europe. The US market, with 11% of exports in 2010, comes in third place. Mauritius' exported mainly wearing apparel under the Africa Growth and Opportunity Act (AGOA). Over 80% of Mauritius' exports to the US consist of textiles and clothing, which benefit from duty-free access under the AGOA.

As can be seen from Table 2, India, China, France and South Africa are the top sources of imports of Mauritius. Prior to the year 2000, Mauritius relied primarily on France for its imports. After the formation of SADC in 2000, South Africa was up until 2004, Mauritius's main import source. Since 2005 China has replaced South Africa as Mauritius' main source of imports. Lately, India has replaced China as the main source of Mauritius' imports.

Table 1: Exports by Partner Country

	2000		2005		2010	
	<i>US \$ m</i>	<i>% share</i>	<i>US \$ m</i>	<i>% share</i>	<i>US \$ m</i>	<i>% share</i>
UK	430.7	28.9	640.5	29.9	438.9	23.7
France	326.7	21.9	340.5	15.9	300.1	16.2
USA	305.1	20.5	193.4	9.0	201.5	10.9
Madagascar	76.1	5.1	114.4	5.3	101.1	5.5
Italy	58.4	3.9	113.3	5.3	138.2	7.5
Germany	58.4	3.8	113.3	1.7	138.2	2.0
Spain	33.2	2.2	55.8	2.6	130.1	7.0
UAE	1.9	0.1	172.4	8.0	14.5	0.8
China	1.2	0.1	6.3	0.3	7.2	0.4
India	2.5	0.2	8.8	0.4	16.9	0.9
South Africa	9.0	0.6	26.9	1.3	83.7	4.5
SADC	102.5	6.9	163.1	7.6	231.9	13.1
COMESA	96.3	6.5	144.9	6.8	156.3	8.9

Table 3: Imports by Partner Country

	2000		2005		2010	
	<i>US \$ m</i>	<i>% share</i>	<i>US \$ m</i>	<i>% share</i>	<i>US \$ m</i>	<i>% share</i>
India	182.6	8.8	218.7	6.9	983.6	11.2
China	157.6	7.6	310.2	9.8	586.2	6.7
France	201.0	9.7	241.6	7.6	388.6	4.4
South Africa	309.6	14.9	270.8	8.6	370.5	4.2
Germany	79.1	3.8	127.4	4.0	106.0	1.2
USA	60.8	2.9	69.3	2.2	105.8	1.2
Thailand	31.2	1.5	51.8	1.6	101.3	1.2
UK	89.8	4.3	87.8	2.8	97.2	1.1
Madagascar	33.5	1.6	14.8	0.5	18.5	0.2
UAE	24.5	1.2	121.4	3.8	37.9	0.4
Finland	2.8	0.1	151.8	4.8	5.6	0.1
SADC	361.5	8.7	332.9	5.3	376.5	5.1
COMESA	56.4	1.4	74.1	1.2	104.5	1.4

From India, Mauritius imports mainly mineral fuels, lubricants and related materials (71% of total import from India in 2010, mainly petroleum products). Manufacturing goods classified chiefly by materials, machinery and transport equipment and miscellaneous manufactured articles are the main categories imported from China. In 2010, these categories represented 39.5%, 31% and 19.5% of total import from China respectively. The main products imported were textile yarn; telecommunication and sound-recording and reproducing apparatus and equipment; office machines and automatic data-processing machine and office stationary.

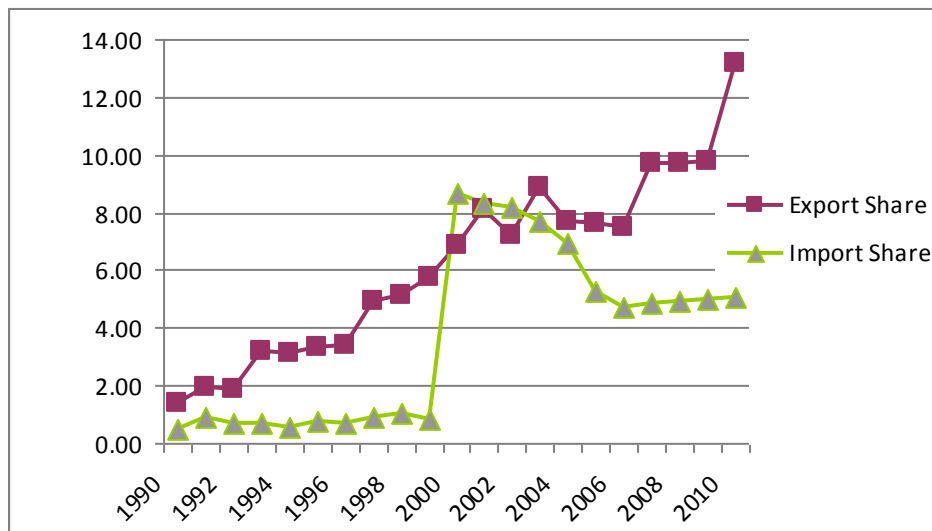
In comparison to other import partners, the imports from France are more products diversified: crude materials, inedible, except fuels (15.8%), chemicals and related products, not included elsewhere (15.6%), manufactured goods classified chiefly by materials (1.6%), machinery and transport equipment (20.4%) and miscellaneous manufactured articles (18.3%). Products imported include cereals and cereal preparations, medicinal and pharmaceutical products, wine, fish, crustaceans, molluscs, aquatic invertebrates and preparations. The main categories imported from South Africa in 2010 were food and live animals (19.7%), mineral fuels, lubricants and related materials (23.5%) and manufactured goods classified chiefly by materials (21.5%). Products imported include wine, iron and steel, coal, coke and briquettes and petroleum, petroleum products and related materials.

Regional Trade

At the regional level, Mauritius is a member of several RTAs in Africa, including the Southern African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA) and the Indian Ocean Commission (IOC). It views its membership in regional groupings as a means to leverage its negotiating position in international trade forums in addition to promoting trade and cooperation.

The share of total exports absorbed by SADC has increased over the years (with the exception of 2009) as can be seen from Table 2. In 2010, this share was 13.1%. Within SADC, the main markets are Madagascar (47.5% of total SADC exports in 2010) and South Africa (48.5%). Together, these two partners absorbed 10% of total exports in 2010. From Figure 9, an interesting pattern can be observed, after 2007 export share to SADC countries has increased considerably while import share was more or less constant. Import share stood at 5.05% in 2010. Within SADC region, the main import partner is South Africa with 90% share of SADC imports.

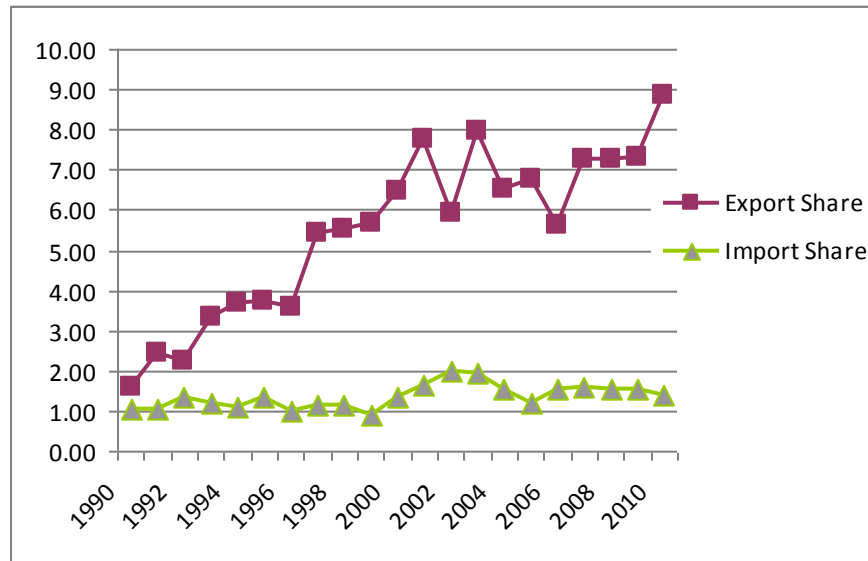
Figure 9: Export and Import Share, SADC



Source: WDI

In terms of commodities, Mauritius exported mainly cereals and cereal preparations and feeding stuff for animals (not including unmilled cereals) and textile yarn, fabrics, made up articles and related products to SADC countries. The main imported commodities are vegetables & fruits and fish, crustacean and molluscs and preparations thereof.

Figure 10: Export and Import Share, COMESA



Source: WDI

Figure 10 depicts the export and import share from COMESA region. Export to COMESA countries has constantly increased during the time period 1990 to 2010 except some outlier years. Within COMESA, Madagascar accounted for 77% of total COMESA export and Seychelles 15% in 2010. Mauritius export mainly textile yarn, fabrics, made up articles and related products to COMESA countries. Imports from COMESA nations are fairly minimal. This figure stood at 1.4% in 2010. The main importing partners were Egypt (40% of COMESA imports in 2010) and Madagascar (25% of COMESA imports in 2010). The product imported from these countries are various namely (1) fish, crustacean and molluscs, and preparation thereof (2) miscellaneous edible products and preparation (3) tobacco and tobacco manufactures (4) textile fibres (not) wool tops and their wastes (not in yarns) (5) fertilizers (6) oil and perfumes materials and (7) iron and steel. Thus, while imports from COMESA countries are quite minimal, a wide variety of products are imported from this trading block.

Sectoral Trade

Tables A5 and A6 in appendix show exports by category SITC2 and imports by category SITC 2, respectively. Historically a large proportion of Mauritius export consists mainly of miscellaneous manufactured articles (49.3% share of total exports in 2009) and food and live animals (31.7% share of total exports in 2009). Referring to table A6, it can be noted that Mauritian's imports are mainly machinery and transport equipment (23.2% share of total imports in 2009), food and live animals (18.61% share of total imports in

2009), manufactured goods classified chiefly by material (18.51% share of total imports in 2009) and minerals fuels, lubricants and related materials (15.75% share of total imports in 2009). Three categories dominated the exports of export oriented enterprises namely miscellaneous manufacturing articles (73% of total EOE share in 2010, dominated by exports of articles of apparel and clothing), food and live animals (20.9 % of total EOE share in 2010 dominated mainly by exports of fish and fish preparations) and manufactured goods classified chiefly by material (10.2% of total EOE share in 2010 dominated jointly by export of textile yarn, fabrics, made up articles and pearls, stone and semi precious stones. In terms of imports, EOE imports mainly manufactured goods classified chiefly by material (43% of total EOE imports in 2010 dominate mainly by imports of textile yarn and fabrics) and food and live animals (24% of total EOE imports in 2010).

4. Sectoral Analysis of Trade and Employment

Historically, import competition did not dislocate jobs of workers in Mauritius. However with the emergence of China, several firms claim that influx of cheap Chinese products has had an effect on their business operation. These are mainly the small, import competing firms in the garment, footwear and furniture industries. However, while both the data and the survey suggest that these effects have been mild, the federation of SMEs claims that small firms have been hit hard by fiercer import competition. Ancharaz and Tandrayen (2010) conducted a survey to analyse the effects of imports from China on SMEs. The survey was conducted on 30 firms in 4 sectors, namely garment and related products (e.g. linen, bedding), footwear, furniture and printing. Further over half of the firms were in the garment sub-sector. The study found that 12 firms (out of 15) claimed that China has had a negative impact on their operations. Chinese cheap imports impacted on employment, domestic sales and exports.

However, it appears that the policy of trade liberalization rather than Chinese competition as such is the main cause of the current plight of the SMEs. According to WTO (2008), Mauritius has successfully undertaken several trade policy reforms. In the move towards a 'duty-free island', the Mauritian government has considerably reduced tariffs rates. For example, the MFN tariff rate for all products had declined from 6.03% in 2005 to 1.06% in 2009. Further, the MFN tariff rate in the manufacturing has declined considerably from 19.23% in 2001 to 1.18% in 2009. Similarly, tariffs have been progressively reduced in a broad cross-section of industries, exposing such industries, and especially the small and vulnerable enterprises within them, to 'unfair' competition from cheap imports. In 2008, 79% of all tariff lines were duty free. However, the use of specific duties rose from two tariff lines in 2001 to 5.9% of total tariff lines in 2007, the AVEs varying from 0.1% to 277.5%. The number of bands (excluding advalorem tariffs equivalents) has been reduced from 9 in 2001 to 4 in 2007. In terms of protection, the following sectors are highly protected: footwear (50.7%), wearing apparel (34.3%), tobacco (27.9%), knitted and crocheted fabrics (27.7%), sugar products (25.7%), and beverages (23.6%).

On wearing apparel and footwear, the tariff cut appears less drastic – from about 80% each to 35% and 51.2%, respectively – but this is only because some specific duties were reinstated on these products amid protests by local producers following the 2005 wave of trade liberalization.

4.1 Case Study: Textile & Clothing and ITES – BPO

Two industries which have employed more women relative to men in Mauritius are the textile and clothing sector and the ITES-BPO sector. Box 1 and Box 2 present a case study of these two sectors.

Box One: Textile and Clothing Sector

It is since the 1960s that the textile and clothing sector has received considerable attention following the research conducted by James Meade on the Mauritian economy to find a solution for diversifying the sugar-based mono-crop economy. The establishment of the clothing industry has improved wage and create employment especially for women. In addition, during the early 1990's, the adoption of trade liberalization has allowed the textiles industry to expand rapidly. Conducive environment for investment, exogenous factors and preferential trade agreements were the three important factors behind the success of the textile and clothing sector (Joomun, 2005).

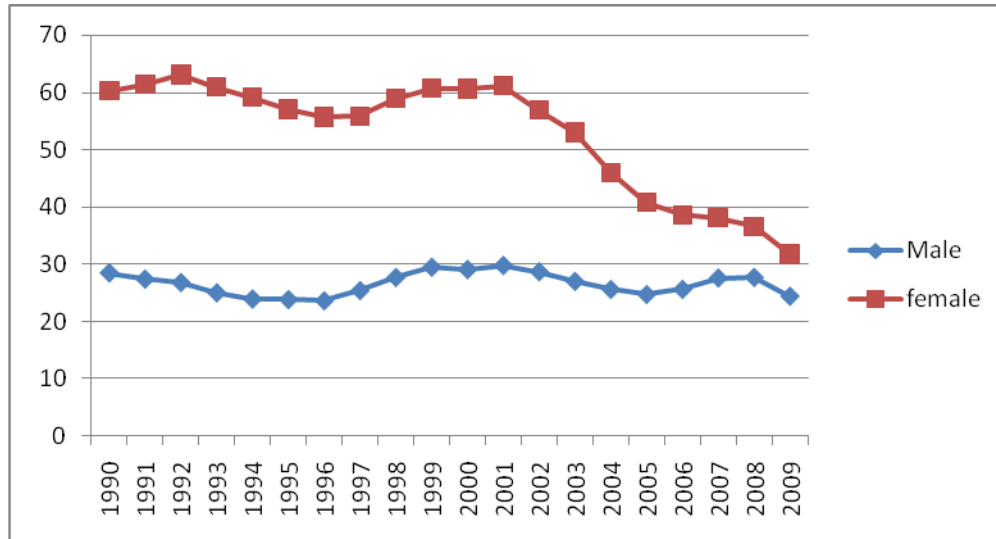
In Mauritius, the EPZ played a pivotal role in uncovering a latent demand for employment by women by providing them the right set of conditions to participate in economic activity. Garment making- the dominant EPZ activity- appeared as the ideal job for the typical Mauritian woman. It was relatively *light*, required little specialized skills and offered a new, hitherto unfamiliar and exciting work environment- the factory. The contribution of the EPZ to female employment is compelling: the number of women employed in the EPZ increased steadily from 18400 in 1983 to a peak of 61,200 in 2001. Female dominance of EPZ employment is well illustrated by the fact that there were twice as many women as men in the EPZ during the period 1990-2003 but four times as many men in the non –EPZ manufacturing sector.

The textile and clothing industry in Mauritius experienced a rapid growth in the 1980s up to the year 2000. An analysis of the data over the past decade shows that the industry, which was once thriving is now facing a slow downfall. Employment, enterprise creation, contribution to the national wealth, growth of the industry and foreign direct investment are all showing a negative trend. The figure below depicts the evolution of the textile industry since 1990 to 2010 with a gender analysis. The clothing sector has always encouraging for the women workforce, however since 2001 the women emancipation decrease with new trade reforms and agreement whereas men employability remains around then same range. In 2001, 61200 women were employed in the textile and clothing industry whereas in 2010, 24400. This represents a huge decrease. Male employment has remained more or less constant, 29,800 in 2001 and 24,400 in 2010.

This decline can be explained firstly by the phasing out of the MFA, secondly by the increasing labour cost for the production of clothing (labour costs in Mauritius are around

5 to 6 times higher than that of neighbouring countries in Africa) and by the relocation of Hong Kong owned firms that were initially the driving force of this sector.

Employment by sex in the EPZ



With the increase in labour costs, producers began to turn to foreign workers from China, India and other Far East Asian countries. These workers were considered more productive as they worked longer hours and were paid the same as local workers. This shift has led to an increase in foreign labour in the textile industry. In 1995, 6,145 foreign workers were employed in the textile and clothing industry. In 2004, it was estimated that around 15,000 foreign workers were working in the textile and clothing factories of Mauritius. In 2010, 16,363 foreign workers were employed in this sector (9,046 male and 7,317 female). However, the Mauritian EPZs have been considered a success story because they managed to achieve its primary goal of employment, export diversification and increasing FDI. The Textile and clothing industry has been the main source of employment creation in Mauritius, accounting for roughly one-third of total employment during the late 1980s and 1990s.

Box 2: ITES/BPO Sector

The IT Enabled Service Sector (ITES)/Business Process Outsourcing (BPO) industry is a new emerging industry across the globe. While the ITES sector aims to provide various services through the use of IT, the BPO sector involve the practice of outsourcing business activities to providers overseas to take advantage of skilled but relatively cheap labour.

Countries such as India, Canada and Ireland have captured around 75% of the realized market. In Africa, the market is still small but growing at an increasing rate. Countries such as Mauritius and Ghana have identified ITES as one of the key sectors to enhance and sustain economic growth. Mauritius is aiming at positioning itself as premier BPO destinations in Africa. The expansion of this sector will bring with it several benefits. Employment of women now accounts for a large percentage of the total professional and technical workers in the IT services and ITES, a much higher rate of female participation than in the service sector in general. Further, the sector might help to attract foreign investors as well as energise local exports

The expansion of the ITES-BPO sector can be attributed to the fact that Mauritius supports the idea of relative ease in doing business. The country offers a friendly business environment, government support and investment advice. Starting a business takes approximately six days and the acquisition of an occupation permit takes three days. Mauritius has strong competencies in financial, legal, IT and customer service because of the high proportion of these skills in the market. The limited labour pool, however, inhibits the growth of ITES-BPO sector. In addition, the rapid influx of providers operating in Mauritius has put a strain on available resources.

According to A.T Kearney Global Services Location Index, Mauritius is ranked 36th and 4th in Africa as a global outsourcing destination. Expansion in the ITES/BPO sector started in 2005 with value added (% of GDP) estimated at 5.3% and employment at 3,800 people. During the past five years the ITES-BPO industry has sustained an annual growth rate of 40% and the sector has contributed to 5.7% of GDP in 2009. Employment in this sector was valued at 12,000 people in 2009. According to the Board of Investment (BOI), it is forecasted that this sector will contribute to 7% of GDP in 2011 with employment about 29,000. Currently in Mauritius, there are about 401 companies operating in the ITES/BPO with equal distribution between local and international companies. Leading companies around the world have trusted Mauritius for its sound business climate, political stability and skill pool of labour. Examples of some of those companies are Accenture, Ceridian, Orange Business Services and Deutsche Bank among others.

Estimates indicate that women account for anywhere from 40-60% of IETS/BPO staff around the globe. The clean, air conditioned and sanitized environments offered by most BPO facilities have proven to be a strong magnet for young, educated women. For many, it is their first job after graduation and an opportunity to strive for economic independence at a crucial stage of their lives. In many developing societies, family pressure tends to push women into marriage at a relatively early age, often denying them

the opportunity for an economically productive career. A BPO job is increasingly sought by young women to keep parental pressure at bay and stake out a possible career (Suri, 2005). Some BPO companies are also consciously targeting mature women and housewives by offering those 'work from home' options to reduce the high attrition rates associated with younger workers.

The Mauritius ITES-BPO sector is dominated by companies providing BPO and call centre services. The BPO service providers account for 45% of the total sector, followed by software development providers at 20% and call centres at 18%. Further there has been a considerable expansion in the number of firms operating in the ITES-BPO sector. The ICT industry, including its contribution for the rest of the economy, performed well and has sustained its double digit growth pattern in 2010. The real growth is expected to reach 13.6 % in 2010 after a remarkable 13.1% during the Great Crisis. In current US\$ the value added for this segment reached 0.54 billion, representing 6.4 % of total GDP. For 2009, the figures were respectively 0.47 billion and 5.9%.

According to the 2008 Mauritius ICT BPO survey, in this sector 52% of the participants provide services as IT Service providers, 32% as BPO (other than Call Centre) and 20% as Call Centres. Further, the survey revealed that the median age of the workforce was 26 and 54% of the workforce consists of female workers. However, the percentage of female workers is as high as 88% for data entry operators and 69% for call centre agents. Further, 52% of the workforce had a secondary education certificate, 45% graduate degree and 3% postgraduate degree, However, in most cases the higher the academic level the higher the proportion of male employees. For example, in jobs which only secondary education is required, female workforce is estimated around 78% (School Certificate) and 63% (Higher School Certificate). Whereas in jobs which require a graduate degree the female labour force is estimated at 38%. Lastly, no women are employed for jobs requiring PhDs.

5. Trade and Job Creation

In this section we adopt econometric methodology to first analyse the impact of import competition on female employment and to identify the impact of trade on job creation, for both total employment and female employment. We use various model specifications and estimation procedures, including time-series analysis and panel data methods. We complement these findings with correlation analysis for added robustness.

5.1 Trade Liberalisation and Female Employment

To assess the impact of trade liberalization on female employment, a simple econometric model with different variations is used. The time period for the econometric analysis is 1983 to 2010. Following Nordas (2003), female share of employment is regressed on

log of exports and log of import using weighted least squares. A linear-log form captures the reasonable assumption that the marginal impact of trade on women's share declines as trade increases, while the weighted least squares form reflects the fact that women's share has to be between zero and one.

The test for stationarity (ADF and PP tests) reveals that all three variables are I (1) while the ADF test on the residuals reveals the presence of co-integration. The results of the LR equation and that of the SR equation are presented in Table 4 and Table 5 respectively (the results presented are free of multicollinearity and there is no specification bias).

Table 3: LR Equation: Share of Female Employment and Trade

Variable	Coefficient	Std Error	p-value
Constant	-0.9005	0.573	0.000
$LRIMP_t$	0.0137	0.009	0.170
$LREXP_t$	0.0432	0.001	0.083

$$R^2 = 0.9681; \text{Adj-}R^2 = 0.9576; F(2, 24) = 528.47; DW = 1.933; VIF = 9.4$$

Table 4: SR Equation: Share of Female Employment and Trade

Variable	Coefficient	Std Error	p-value
$\Delta LRIMP_t$	-0.0232	0.1258	0.077
$\Delta LREXP_t$	0.0232	0.1257	0.079
RES_{t-1}	-0.7641	0.1959	0.001

$$R^2 = 0.5741; \text{Adj-}R^2 = 0.5185; F(3, 22) = 10.33; DW = 2.0366; VIF = 2.05$$

$LRIMP$ denotes log of real imports, $LEXP$ denotes log of real imports, Δ denotes change and RES_{t-1} is the one-period lag of the regression residual.

We note from Table 3 that trade flows account for a large part of gender-related employment variation. There is evidence that, in the long run, export growth has caused the share of female employment to increase while import competition, reflected in higher rates of growth of imports, does not seem to have affected the female employment share. In the short run (see Table 4), however, the results confirm that the impact of imports on female employment has been negative.

An alternative econometric model is to regress changes in female employment on exports and imports, controlling for total employment. The results of the LR and SR equations are shown in Table 5 and Table 6, respectively. ADF tests reveal that all the variables are integrated of order one and a co-integrating relationship exists (ADF test on residuals is I (0)). The results are qualitatively similar to those of the first regression. An increase in exports by 1% raises female employment by about 0.1% in the short run and by 0.16% in the long run whereas imports have no effect on female employment in either period. Of even greater interest is the finding that female employment increases more than proportionately to total employment. In the long run, for example, every percentage

increase in total employment causes female employment to rise 2.3%. This elasticity may explain the sharp drop in female employment in the EPZ since 2001 due to MFA-induced consolidation of the clothing industry.

Table 5: LR Equation: Female Employment and Trade

Variable	Coefficient	Std Error	p-value
Constant	-5.2900	0.533	0.000
$LRIMP_t$	0.0252	0.009	0.132
$LREXP_t$	0.1697	0.001	0.000
$LTEMP_t$	2.2941	0.000	0.000

$$R^2 = 0.9797; \text{Adj-}R^2 = 0.9425; F(2, 24) = 4502.83; DW = 1.876; VIF = 8.967$$

Table 6: SR Equation: Female Employment and Trade

Variable	Coefficient	Std Error	p-value
$\Delta LRIMP_t$	-0.0316	0.3603	0.211
$\Delta LREXP_t$	0.0957	0.3271	0.008
$\Delta LTEMP_t$	2.9761	0.2831	0.000
RES_{t-1}	-0.7321	0.1866	0.000

$$R^2 = 0.9464; \text{Adj-}R^2 = 0.9367; F(3, 22) = 97.16; DW = 1.9107; VIF = 2.13$$

The above results can be explained by two hypotheses about female employment in developing countries. The first is that export-oriented industries are female labor-intensive while import-competing industries tend to employ predominantly men. Second, as an industry improves its export performance, it tends to employ more women; conversely when an industry faces more import competition, it tends to employ more men, or lay off women first. Thus, there might be variation *within* industries and *between* industries. An analysis of variation *within* industries over time and *between* industries will shed light on which of the above two hypotheses is more viable. Thus, a panel data analysis is deemed important.

The panel data analysis was performed for 9 SITC 2-digit-level sectors for the period 2000 – 2009, yielding a total of 81 observations.). The Hausman test favored the fixed-effect model. The results are reported in Table 7. It turns out that the variation is mainly *between* sectors and thus employment in export competing industries tend to be dominated by women while import competing industries tend to employ men. The results further confirm that exports have boosted female employment while import competition does not seem to have affected it.

Table 7: Panel Data Estimates: Female Employment and Trade

Variable	Coefficient	Std Error	<i>p</i> -value
<i>LRIMP_t</i>	-0.0195	0.0280	0.487
<i>LREXP_t</i>	0.0412	0.0092	0.000
<i>LTEMP_t</i>	0.3791	0.1260	0.000
Constant	3.5523	0.1261	0.000
Groups	9		
R ² within	0.5211		
R ² between	0.9618		
R ² overall	0.9554		

5.2. Exports and Employment

Correlation Analysis

The correlation between exports and employment in Mauritius is 0.9465. This suggests that there is a strong, statistically significant, symmetric, positive relation between exports and employment. This is true for both male and female employment as well as for total employment, as can be seen from Table 8 (*p*-values are provided in parentheses).

Table 8: Correlation Analysis: Export and Employment

Variables	Correlation
Total employment	0.9465 (0.000)
Female employment	0.9474 (0.000)
Male employment	0.9391 (0.000)

Regression Analysis

To further investigate the effect of trade on employment, we use the following reduced-form regression, which can be thought of as the macro version of a firm-level labor demand equation.

$$LEMPL_t = \alpha + LRGDP_t + \beta_1 INFL + \beta_2 INV_t + \beta_3 LREXP + u_t$$

where *LEMPL* is the log of employment; *LRGDP* is the log of real GDP; *INFL* is the CPI inflation rate – a proxy for wage increases; *INV* is domestic investment as a share of GDP and *LREXP* is the log of real exports. The variable of interest is *LREXP* while *INFL*, *INV* and *LRGDP* are control variables. The expected sign are as follows: *LRGDP* (+), *INFL* (-), *INV* (+) and *LREXP* (+). We estimate the equation using yearly data from 1982 to 2010.

Our methodological approach follows the Engle-Granger time-series procedure. As can be seen from Table 9, all the variables are integrated of stationary in levels. Thus, no ECM is estimated.

Table 9: Test for Stationarity

Variable	Optimal Lag	ADF Test		PP Test		Decision
		Z (t)	p-value	Z(t)	p-value	
LEMPL	2	-3.277	0.0160	-5.690	0.0000	I(0)
LRGDP	2	-3.437	0.0098	-3.725	0.0038	I(0)
INFL	1	-2.570	0.0993	-3.408	0.0107	I(0)
INV	4	-3.357	0.0125	-2.997	0.0500	I(0)
LREXP	2	-3.514	0.0076	-3.269	0.0163	I(0)

The OLS regression results are shown in Table 10.

Table 10: Regression: Exports and Employment

Variable	Coefficient	Std Error	p-value
Constant	2.0752	0.0869	0.000
LRGDP	0.1489	0.0512	0.008
INFL	-0.0008	0.0004	0.083
INV	0.0033	0.0005	0.000
LREXP	0.2224	0.0510	0.000

$$R^2 = 0.9897; \text{Adj-}R^2 = 0.9878; F(4, 22) = 528.82; \text{DW} = 1.733$$

As can be seen from Table 11, all the variables have the expected sign and are significant at the 1% level, except for inflation, which is significant at 10%. The results suggest that employment is more elastic to exports than either GDP or investment. Thus, a 1% increase in real exports generates a 0.22% increase in total employment compared to 0.14% and 0.003% for the same unit percentage increase in real GDP or investment, respectively.

5.3 *Export and Female Employment*

Next, we perform the same analysis for female, rather than total, employment. The regression equation is the following:

$$LFEMPL_t = \alpha + \beta_1 LRGDP_t + \beta_2 INFL_t + \beta_3 INV_t + \beta_4 LREXP_t + u_t,$$

Where $LFEMPL$ is the log of female employment, and all other variables are as previously defined. We noted earlier that $LFEMPL$ is I(1) whereas from Table 10, we know that all the independent variables are I(0). Thus, there is a combination of I(0) and I(1) variables. The appropriate econometric methodology to use in this case is the ARDL bound testing approach to cointegration.

The ARDL approach, also known as the ARDL-ECM, is a reliable way of determining the long-run (or co-integrating) relationship between the variables, in level form and short-run relationship in first differences of the variables. The ECM fundamentally assumes two variables to be integrated in order to observe causal movements between the two cointegrated processes. Cointegration exists if the long-run coefficients of all lagged level variables are jointly significant. The ARDL-ECM given in the following regression can be estimated using OLS in order to test for the existence of a long- run relationship between variables:

$$\Delta LFEMPL_t = \alpha + \beta_0 LFEMPL_{t-1} + \beta_1 LR GDP_{t-1} + \beta_2 INFL_{t-1} + \beta_3 INV_{t-1} + \beta_4 LREXP_{t-1} + \sum_{j=1}^p \phi_j \Delta LFEMPL_{t-j} + \sum_{j=1}^q \delta_j \Delta LR GDP_{t-j} + \sum_{j=1}^s \varphi_j \Delta INFL_{t-j} + \sum_{j=1}^r \eta_j \Delta INV_{t-j} + \sum_{j=1}^y \gamma_j \Delta LREXP_{t-j} + u_t,$$

where the terms under the Σ signs refer to lags of the corresponding variables.

In this specification, the coefficients of the contemporaneous variables are long-run multipliers whereas the coefficients of the change variables denote the short run impact. Once the appropriate lag structure is determined, an F-test is carried out to test the null hypothesis that $\beta_i = 0$ and against $\beta_i > 0$ hypothesis (i.e., test for cointegration).

The appropriate ARDL is found to be ARDL (1, 0, 0, 0). The F-test confirms the presence of co-integration. The ARDL estimates are reported in Table 11. All the variables have the correct sign and are statistically significant. The results show that exports are positively related to female employment whereas inflation has a negative but minimal impact on female employment. The long-run multipliers suggest that 1% increase in real export tends to increase female employment by 0.49% (Table 12). This finding bears testimony to the success of the export promotion strategy in Mauritius as a vehicle for job creation, especially for women.

Table 11: ARDL (1, 0, 0, 0): Exports and Female Employment

Variable	Coefficient	Std Error	p-value
Constant	0.2638	0.0731	0.002
LFEMPL _{t-1}	0.5081	0.0718	0.000
INV _t	0.0012	0.0045	0.000
LREXP _t	0.5965	0.0277	0.046
LINFL _t	-0.0079	0.0045	0.096

$$R^2 = 0.9734; \text{Adj-}R^2 = 0.9645; F(4, 21) = 156.57; DW = 1.887$$

Table 12: LR Coefficients ARDL Approach - Exports and Female Employment

Variable	Coefficient	Std Error	<i>p</i> -value
Constant	0.5362	0.1993	0.014
INV _{<i>t</i>}	0.0024	0.0085	0.011
LREXP _{<i>t</i>}	0.4914	0.0212	0.000
LINFL _{<i>t</i>}	-0.0161	0.0094	0.101

Figure 11: Export Share SADC, Import Share SADC and Female Employment Share

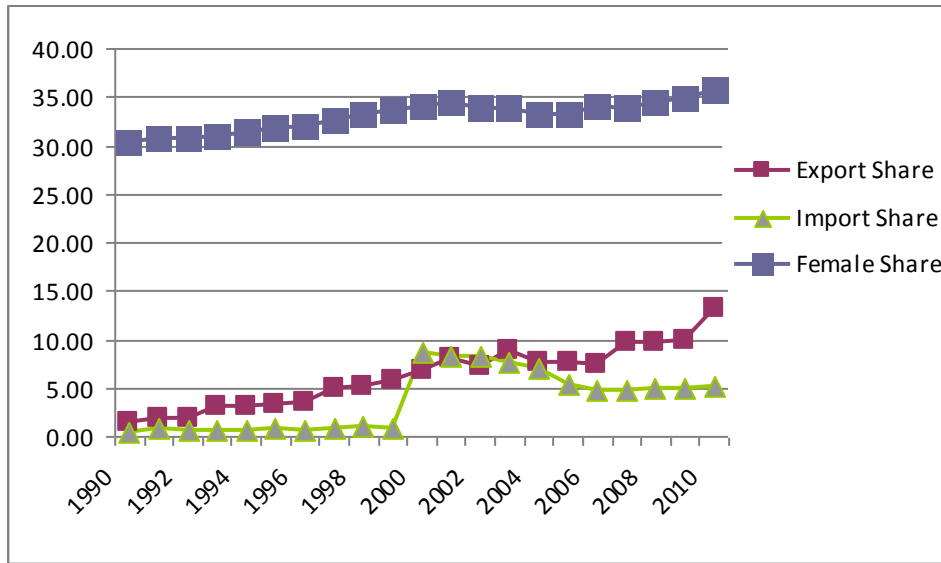
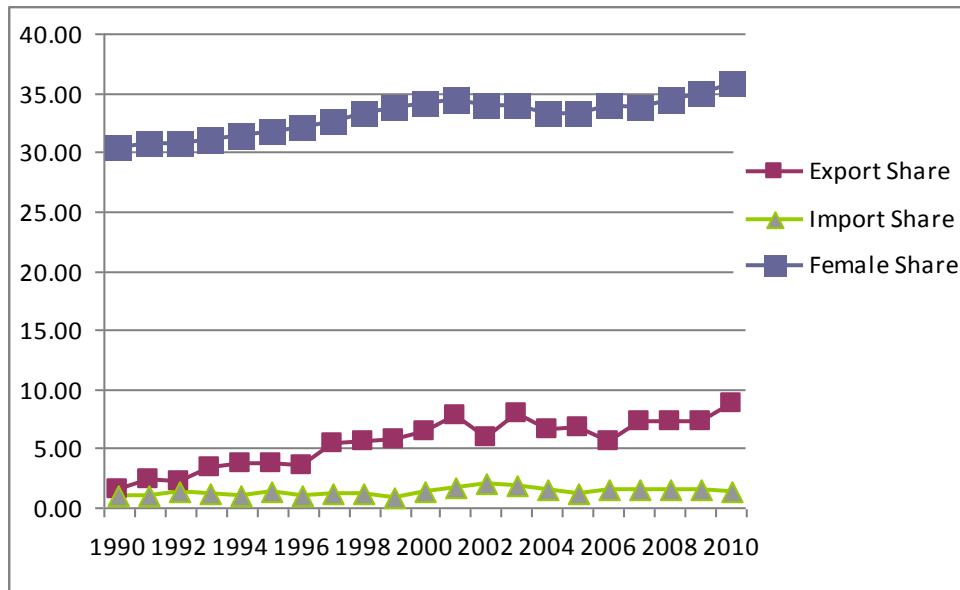


Figure 12: Export Share COMESA, Import Share COMESA and Female Employment Share



5.4 Regional Trade and Employment

As per section 3.3, the share of SADC and COMESA exports and imports has increased over the years. From Figure 11, we can see an interesting pattern between export share of SADC and the female employment share. These variables tend to move together. It thus appears that there is a positive relationship between the two.

From Figure 12, a similar positive relation between the female employment share and the export share is observed.

Correlation Analysis

Table 13 shows the results from the correlation analysis.

Table 13: Correlation: Regional Trade and Employment

Variable	Employment	Male Employment	Female Employment
Export COMESA	0.9661 (0.000)	0.9466 (0.000)	0.9619 (0.000)
Import COMESA	0.8894 (0.000)	0.9091 (0.000)	0.8479 (0.000)
Import SADC	0.8591 (0.000)	0.8301 (0.000)	0.8671 (0.000)
Export SADC	0.9799 (0.000)	0.9744 (0.000)	0.9613 (0.000)

Table 13 reveals high correlation between regional trade and employment, male employment and female employment. However, the correlation between exports and employment are higher (the figure in bold) than that between imports and employment.

Table 14: Causality: Regional Trade and Trade

Statement	Optimal Lag	Chi-Square	p-value
Female Employment causes Export (COMESA)	4	5.9557	0.015
Female Employment causes Import (COMESA)	1	0.3755	0.540
Export (COMESA) causes Female Employment	4	1.3476	0.246
Import (COMESA) causes Female Employment	1	3.0718	0.080
Female Employment causes Export (SADC)	4	9.1201	0.003
Female Employment causes Import (SADC)	1	0.9427	0.332
Export (SADC) causes Female Employment	2	1.3343	0.248
Import (SADC) causes Female Employment	1	5.454	0.020

Table 14 reveals causality between (1) female employment and regional exports, and (2) regional import and female employment. Women are employed in those sectors that tend to be export-oriented as we have seen earlier. Similarly, imports from the region are used in those sectors which tend to employ more women.

6. Conclusion and Policy Implications

The aims of this study were to document trends in employment and trade, including regional trade, in Mauritius and to investigate empirically the impact of trade on employment, with a focus on female employment.

The main findings can be summarized as follows:

1. While the manufacturing sector remains the backbone of the Mauritius economy, the country has managed to diversify its economy with the emergence of new sectors such as financial intermediation and ICT-BPO sector.
2. For the past two years, the male unemployment rate is higher than the female unemployment rate. This is a new phenomenon in the Mauritian labour market. However, female employment has been more volatile than male employment.
3. The manufacturing sector is still the driving force in terms of employment generation. However, over the past years, its share has experienced a general decline. Within this sector, the contribution of the EPZ has considerably declined over the past years. Several sectors have expanded in terms of employment,

- namely construction, wholesale and retail trade, financial intermediation and business activities.
4. A comparison of sectoral employment between men and women reveal that the female share of employment is higher in the following sectors: wholesale & retail trade;; EPZ; financial intermediation; real estate, renting and business activities; and education.
 5. Historically, import competition did not dislocate jobs of workers in Mauritius. However with the influx of Chinese cheap products, some firms (mostly SMEs) claim to have been negatively affected. It is suggested that policy of trade liberalization rather than Chinese competition as such is the main cause of the current plight of SMEs.
 6. When analysing the impact of trade liberalization on female employment, the econometric analysis reveals that employment in export-oriented industries tend to be dominated by men whereas import-competing industries tend to employ men.
 7. Econometric analysis shows a strong, positive relationship between female employment, both in aggregate and as a share of total employment, and real exports. This result is robust to various model specifications and estimation procedures, including panel data methods and co-integration analysis. There is similar a strong association between regional trade (particularly, exports to SADC and COMESA) and female employment.

In other words, this study finds that the export-led strategy that Mauritius embarked upon in 1970 with the setting up of an export-processing zone has proved an effective catalyst in driving employment, especially for women. Further, while regional trade is fairly minimal, it is found that regional trade is positively associated to employment. Thus, there is a clear policy lesson to boost trade as a means to creating jobs and reducing poverty.

Historically, male employment has been much higher than female employment in the Mauritian economy. However during the past two years the growth in female employment was higher than that of male employment. This is a new phenomenon in the Mauritian labour market. Over the past few years smaller employers has consolidated their importance as source of job creation. Employment growth in large establishments has fluctuated significantly with women being more subjects to volatility. However, this fluctuation in large establishment employments was compensated by employment outside large establishments, thus acting as a labour market stabilizer especially for women. Thus, a more balanced employment growth rate across gender is observed lately. This shift may be due to the fact that the government introduced the Business Facilitation Act in 2006 to encourage SMEs and self-employment in playing a dynamic and proactive role in creating jobs.

In terms of trade, Mauritius' traditional partners still dominate the scene. While, regional trade is found to be positively associated with job creation, regional trade share is still very minimal. Thus, there is a need to boost regional trade. Here, leadership in tackling

distortions of the trade regulatory environment can play a crucial role. Lately, with the help of the World Bank, UNCTAD and WTO, Mauritius has started a pilot initiative to launch a data collection exercise on Non-Tariffs Measures. It is believed that the information gathered can help in identifying and addressing bottlenecks that is hindering regional trade. In a similar context, Mauritius has already initiated efforts to collect information on its own non-tariff barriers, as some other countries in the region. It is important to have coordinated efforts to harmonise data collection. This will help to effectively implement actions across the region and provide an opportunity to advance regional trade.

References

CARR, M. AND CHEN, M.A., 2002. Globalization and the informal economy and how global trade and investment impact on the working poor. *Working Paper on the Informal Economy 2002/1, Geneva, ILO.*

CARR, M. AND CHEN, M.A., 2004. Globalisation, social exclusion and work with special reference to informal employment and gender. *Policy Integration Department Working Paper 20, Geneva, International labor organization (ILO).*

DOLLAR, D. AND KRAAY, A., 2001 . Trade, Growth and poverty. *Working Paper No.2615 World Bank.*

FONTANA, M., 2002. Modelling the effects of trade on women, at work and at home: A comparative perspective . paper presented at the SIAP workshop on methodological tools for assessing the sustainability impact of the EU's economic policies, with application to trade liberalization policies, Brussels 7-8 November 2002.

GLICK, P. AND ROUBAUD, F., 2004. Export processing zone expansion in an African country: What are the labor market and gender impacts? *Working Paper DT/2004/15, Paris, Developpement et insertion internationale (DIAL).*

HAOUAS, I. AND YAGOUBI M. AND HESHMATI, A., 2003. The impacts on employment and wages on employment and wages in Tunisian industries. *IZA discussion paper #688.*

ILO AND WTO 2007. *Trade and Employment: Challenges for policy Research.* Geneva: WTO Secretariat.

JOOMUN, G., 2006. The Textile and Clothing Industry in Mauritius .In: HERBERT JAUCH / RUDOLF TRAUB-MERZ ,ed. *The Future of the Textile and Clothing Industry in Sub-Saharan Africa.* Bonn: Friedrich-Ebert-Stiftung

JOEKES, S., 1999. *A Gender-Analytical Perspective on Trade and Sustainable Development.* In UNCTAD, Trade, Sustainable Development and Gender. New York and Geneva.

MILNER, C. AND WRIGHT P.,1998. Modelling Labour Market Adjustment to Trade Liberalisation in an Industrialising Economy . *The Economic Journal*, 108, 509–28.

NORDAS , H.k., 2003. Is trade liberalization a window of opportunity for women? *Staff Working Paper ERSD-2003-03, WTO.*

NICITA, A., 2006. Export-led-Growth: Pro-Poor or Not? A Case Study of Madagascar's Textile and Apparel Industry . *Policy Research Working Paper 3841, Washington , Dc : World Bank.*

OZLER, S., 2000. Export orientation and female share of employment: Evidence from Turkey. *World Development*, 28, 1239-1248.

Policy for Industrial Development: A Case Study of the Clothing Industry in Mauritius. *DPRU Policy Brief No. 02/P21 (2002), Industrial Strategy Project.*

Restructuring of the Mauritius Clothing Industry in light of New Trade Agreements. *Development Policy Research Unit (DPRU) Policy Brief No. 01/P10, (2001).*

SURI, N., 2005. Outsourcing and Development, Intergovernmental Expert Meeting on New and Dynamic Sectors of World Trade, Geneva (*UNCTAD*).

MCJ CALLUM, J.K., 2011. Export processing zones: Comparative data from China, Honduras, Nicaragua and South Africa, International Labour Office. *Working paper* , 21.

ANCHARAZ, V.D., 2004. The Effect of Trade Liberalization on Export-oriented Output and FDI: A Case Study of the Mauritian EPZ, 1971-1998. *University of Mauritius Research Journal*, 5 , 1-30.

ANCHARAZ, V., 2009. David versus Goliath: Mauritius Facing Up to China. *European Journal of Development Research*, 21.

Table A1: GDP by Industry Group, percentage (2000, 2007-2010)

	2000	2007	2008	2009	2010
Agriculture, hunting, forestry and fishing	6.2	4.3	4.2	4.5	4.2
<i>Sugar Cane</i>	3.2	2.3	2.4	2.7	2.6
<i>Other</i>	3.0	3.5	3.5	3.7	3.8
Mining and quarrying	0.1	0.0	0.0	0.0	0.0
Manufacturing	20.0	16.5	16.1	16.0	15.7
<i>Sugar</i>	0.8	0.5	0.6	0.7	0.6
<i>Food excl Sugar</i>	3.5	5.8	6.2	6.5	6.8
<i>Textiles</i>	10.2	9.1	9.1	9.1	9.1
<i>Other</i>	5.5	6.1	6.3	6.4	6.5
Electricity , gas and water supply	1.3	1.3	1.3	1.3	1.3
Construction	4.8	5.5	5.8	5.9	5.9
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	10.2	10.8	10.7	10.5	10.5
<i>Wholesale & retail trade</i>	9.8	13.1	13.7	13.8	14.3
<i>Other</i>	0.4	1.1	1.2	1.3	1.4
Hotels and restaurants	5.7	6.3	6.0	5.5	5.6
Transport , storage and communications	10.9	13.9	14.0	14.2	14.4
Financial intermediation	7.5	7.7	8.0	8.1	8.1
<i>Insurance</i>	2.0	2.8	2.9	3.0	3.2
<i>Bank</i>	4.8	5.7	6.4	6.6	6.9
<i>Other</i>	0.7	1.6	1.8	1.9	2.0
Real estate, renting and business activities	7.4	9.3	9.6	9.8	10.0
<i>Owner occupied dwellings</i>	3.7	5.1	5.2	5.3	5.3
<i>Other</i>	3.7	7.0	8.0	8.7	9.6
Public administration and defence; compulsory social security	5.5	5.6	5.3	5.2	5.2
Education	3.8	3.9	3.8	3.8	3.7
Health and social work	2.4	3.0	3.0	3.1	3.1
Other community, social and personal service activities and private households with employed persons	2.8	3.4	3.4	3.6	3.7

Table A2: Sectoral Employment as a % of Total Employment

Items	1995	2000	2006	2007	2008	2009
Agriculture & Fishing	14.66	12.14	9.30	9.03	8.51	8.46

<i>Sugar cane</i>	7.49	6.05	3.53	3.38	2.95	2.84
<i>Agriculture(Non-Sugar)</i>	7.17	6.09	5.76	5.63	5.56	5.62
Mining & Quarrying	0.35	0.27	0.08	0.04	0.04	0.04
Manufacturing	29.51	28.65	25.73	23.49	22.71	21.22
<i>Sugar</i>	1.28	0.68	0.39	0.38	0.31	0.33
<i>EPZ</i>	17.57	18.48	12.46	12.55	11.84	10.28
<i>Manufacturing (Non-EPZ & Non-Sugar)</i>	10.66	9.49	10.62	10.75	10.55	10.64
Electricity, Gas & Water	0.74	0.62	0.58	0.57	0.57	0.60
Construction	9.27	9.28	9.39	9.45	9.48	9.58
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	12.49	12.92	14.81	14.97	15.03	15.54
Hotels & Restaurants	3.65	4.86	6.13	6.11	6.69	6.56
Transport, Storage & Communications	6.51	6.48	7.16	7.14	7.18	7.33
Financial Intermediation	1.43	1.48	1.82	2.00	2.19	2.31
Real estate, renting and business activities	1.74	3.00	4.09	4.72	5.23	5.75
Public administration and defence; compulsory social security	7.10	7.22	7.68	7.47	7.29	7.22
Education	4.69	4.53	5.51	5.50	5.41	5.51
Health & Social Work	2.54	2.74	2.91	2.96	3.02	3.06
Other services	5.32	5.80	6.60	6.57	6.67	6.78

Table A3: Sectoral Male Employment as a % of Total Male Employment

	1995	2000	2006	2007	2008	2009
Agriculture & Fishing	15.95	12.93	10.34	10.14	9.39	9.34
<i>Sugar cane</i>	7.80	6.71	4.43	4.29	3.82	3.72
<i>Agriculture(Non-Sugar)</i>	8.15	6.22	5.90	5.82	5.57	5.63
Mining & Quarrying	0.48	0.37	0.06	0.06	0.06	0.06
Manufacturing	21.80	21.63	19.47	19.91	19.68	18.89
<i>Sugar</i>	1.85	1.02	0.59	0.58	0.48	0.51
<i>EPZ</i>	7.57	9.00	7.52	7.95	7.79	6.87
<i>Manufacturing (Non-EPZ & Non-Sugar)</i>	12.38	11.60	11.37	11.38	11.41	11.57
Electricity, Gas & Water	1.02	0.87	0.82	0.81	0.82	0.87
Construction	13.49	13.77	13.98	14.00	14.25	14.49
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	12.95	13.30	13.98	14.46	14.25	14.52
Hotels & Restaurants	4.04	5.29	6.55	6.48	7.00	6.87
Transport, Storage & Communications	8.72	8.82	9.49	9.42	9.53	9.60
Financial Intermediation	1.34	1.33	1.50	1.61	1.80	1.86
Real estate, renting and business activities	1.97	3.34	4.14	4.49	4.95	5.21
Public administration and defence; compulsory social security	8.82	8.76	8.99	8.70	8.60	8.53
Education	3.60	3.50	3.73	3.72	3.51	3.55
Health & Social Work	2.07	2.17	2.20	2.25	2.25	2.22
Other services	3.76	3.93	4.02	3.98	3.94	3.94

Table A4: Sectoral Female Employment as a % of Total Female Employment

	1995	2000	2006	2007	2008	2009
Agriculture & Fishing	11.89	10.57	7.31	6.85	6.83	6.82
<i>Sugar cane</i>	6.83	4.73	1.78	1.59	1.28	1.21
<i>Agriculture(Non-Sugar)</i>	5.06	5.84	5.52	5.27	5.55	5.62
Mining & Quarrying	0.07	0.06	0.12	0.00	0.00	0.00
Manufacturing	46.07	42.59	38.15	30.52	28.46	25.56
<i>Sugar</i>	0.07	0.00	0.00	0.00	0.00	0.00
<i>EPZ</i>	39.02	37.31	22.21	21.57	19.54	16.64
<i>Manufacturing (Non-EPZ & Non-Sugar)</i>	6.98	5.29	9.21	9.51	8.92	8.92
Electricity, Gas & Water	0.14	0.12	0.12	0.11	0.11	0.10
Construction	0.21	0.37	0.46	0.51	0.43	0.42
Wholesale & retail trade; repair of motor vehicles, motorcycles, personal and household goods	11.48	12.17	16.51	15.97	16.50	17.43
Hotels & Restaurants	2.80	4.00	5.35	5.38	6.09	5.98
Transport, Storage & Communications	1.78	1.84	2.65	2.66	2.72	3.10
Financial Intermediation	1.64	1.78	2.47	2.77	2.94	3.15
Real estate, renting and business activities	1.23	2.34	4.03	5.15	5.77	6.77
Public administration and defence; compulsory social security	3.42	4.18	5.18	5.04	4.81	4.78
Education	7.04	6.58	9.03	9.00	9.02	9.19
Health & Social Work	3.55	3.87	4.32	4.36	4.48	4.62
Other services	8.69	9.53	11.68	11.66	11.85	12.07

Table A5: Export by Category SITC 2 (% Share)

Year	0	1	2	3	4	5	6	7	8	9
1990	31.59	0.23	0.73	1.37	0.04	0.91	5.75	1.44	57.71	0.22
1991	30.94	0.08	0.65	1.72	0.01	0.93	5.82	1.92	57.61	0.32
1992	30.72	0.15	0.63	1.92	0.04	0.97	5.45	1.54	58.26	0.32
1993	29.03	0.03	0.70	0.00	0.02	0.98	5.98	1.04	62.01	0.20
1994	28.52	0.05	0.73	0.01	0.03	0.76	6.68	2.24	60.64	0.35
1995	28.45	0.12	0.86	0.01	0.03	0.80	7.65	2.29	59.42	0.38
1996	30.80	0.06	0.75	0.00	0.01	0.57	7.53	0.37	59.47	0.44
1997	27.44	0.06	0.97	0.03	0.03	0.57	8.07	1.37	61.04	0.43
1998	25.57	0.24	0.90	0.05	0.04	0.68	7.64	1.62	62.67	0.60
1999	23.76	0.04	0.88	0.00	0.03	0.74	8.56	1.04	64.37	0.58
2000	17.68	0.10	0.72	0.01	0.03	0.90	9.06	1.29	69.54	0.67
2001	24.07	0.29	0.72	0.01	0.05	0.80	9.51	1.74	62.14	0.66
2002	25.60	0.27	0.66	0.04	0.18	1.23	7.46	4.12	59.80	0.63
2003	24.14	0.59	0.66	0.05	0.09	1.71	8.05	4.35	59.52	0.84
2004	25.53	0.29	0.81	0.09	0.06	1.65	8.36	4.51	53.57	5.12
2005	25.18	0.32	0.73	0.08	0.05	1.32	7.95	15.12	40.93	8.31
2006	26.15	0.39	1.16	0.10	0.04	1.12	7.47	16.29	39.21	8.06
2007	26.73	0.67	1.23	0.15	0.07	1.85	8.22	5.78	46.00	9.30
2008	25.69	0.88	1.43	0.03	0.07	2.63	7.75	5.46	41.44	14.61
2009	31.68	0.84	1.55	0.03	0.17	3.45	9.12	2.29	49.33	1.53

Table A6: Imports by Category SITC 2 (% Share)

Year	0	1	2	3	4	5	6	7	8	9
1990	10.93	0.49	2.98	7.82	0.93	6.32	33.98	28.07	7.69	0.79
1991	10.79	0.55	2.85	10.48	0.94	6.41	32.86	26.30	8.25	0.56
1992	11.44	0.62	2.59	8.73	0.99	6.91	33.94	25.21	8.77	0.78
1993	12.34	0.50	3.01	6.98	0.96	7.07	36.80	22.41	9.34	0.60
1994	12.32	0.58	2.84	6.23	1.20	6.88	34.60	25.70	9.01	0.65
1995	14.65	0.64	3.34	6.94	1.27	7.50	36.51	19.07	9.30	0.78
1996	14.49	0.52	3.77	7.90	1.14	7.53	33.87	21.80	8.01	0.97
1997	13.22	0.57	3.36	7.58	1.06	7.04	32.81	25.36	8.12	0.89
1998	13.83	0.63	3.82	6.38	1.22	7.56	35.18	22.77	8.23	0.39
1999	11.78	0.92	2.82	7.08	1.01	6.53	30.08	31.09	8.41	0.27
2000	12.67	0.67	2.92	11.77	0.84	7.51	32.36	22.51	8.60	0.15
2001	14.24	0.63	2.95	11.22	0.82	7.99	30.73	22.52	8.67	0.23
2002	17.17	0.76	2.69	10.38	0.96	7.52	29.24	21.24	9.82	0.23
2003	15.49	0.94	2.30	10.94	0.96	8.44	28.73	22.25	9.67	0.27
2004	15.60	0.91	2.47	13.14	0.93	8.15	26.35	23.51	8.67	0.27
2005	14.81	0.90	2.06	16.45	0.90	7.61	21.04	28.03	7.92	0.27
2006	14.97	0.82	2.22	16.80	0.62	6.80	19.24	31.04	7.17	0.32
2007	16.55	1.26	2.56	18.35	0.95	7.57	20.75	22.63	7.71	1.67
2008	18.01	1.60	2.68	21.42	1.19	7.67	19.31	19.73	8.17	0.22
2009	18.61	1.78	2.51	15.75	1.12	8.83	18.52	23.21	9.37	0.31

- 0: Food and Live Animals
- 1: Beverages and Tobacco
- 2: Crude Materials, inedible, except fuels
- 3: Minerals fuels, lubricants and related materials
- 4: Animals and vegetables oils, fats and waxes
- 5: Chemicals and related products, not included elsewhere
- 6: Manufactured goods classified chiefly by materials
- 7: Machinery and transport equipment
- 8: Miscellaneous manufactured Articles
- 9: Commodities and transactions, not included elsewhere