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Can the Mauritian Miracle continue?

The role of financial and ICT services as prospective growth drivers

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Can the Mauritian Miracle continue? - The role of financial and ICT services as prospective growth drivers

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Abstract

This paper presents the prospective sectors for further economic growth in Mauritius. We approach this by firstly tracing the historical development of Mauritius and providing explanations for the growth experienced. This is used as the basis for the analysis of the country's current economic situation from which we infer that future growth may not be as promising as the historical growth path, thereby, implying that there may be a real threat of the 'middle income trap'. However, through the analysis of the current situation two potential strategic growth sectors are identified: financial intermediation and information and communications technology. These two sectors are presented with their main components and their present and prospective contribution to economic growth in Mauritius is explored. Our conclusion from the discussion presented is that, although, the growth prospects are clear for the two identified sectors, their impact might be limited and the hindrance to further economic growth may extend beyond these two strategic sectors. Ultimately, it is the continued current account deficit and key structural problems which can severely impact the sustainable growth of the island state.

Dedication

Several individuals and organizations have given invaluable contributions to this paper. The authors benefited from the general instruction and guidance from Prof. Dr. Jan Priewe of HTW Berlin, whose critical input provided useful suggestions and comments. The department of Economics and Statistics at the University of Mauritius, our hosting academic institute and its faculty members Prof. Dr. Sanjeev Sobhee and Dr. Verena Tandrayen-Ragoobur provided the additional local academic and administrative support to facilitate the research process. Useful comments were provided by various national agencies, whose representatives willingly gave information and offered further assistance, namely, The Board of Investment, Mauritius Chamber of Commerce, National Computer Board, Mauritius Commercial Bank, The Ministry of ICT, The Financial Services Commission and Statistics Mauritius. Furthermore, the authors are grateful to the numerous individuals who assisted at the academic, administrative and financial level to make this paper a reality.

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Abbreviations and Acronyms

AGOA	African Growth and Opportunity Act
AMSP	Accompanying Measures for Sugar Protocol countries
BoM	Bank of Mauritius
BOP	Balance of Payments
BPO	Business Process Outsourcing
CPIS	Coordinated Portfolio Investment Survey
CSO	Central Statistical Office (Mauritius)
СТ	Communication Technology
DC	Development Certificate
DTAT	Double Taxation Avoidance Treaty
EAP	East Asian Pacific
EASsy	Eastern African Submarine Cable System
EEC	European Economic Community
EPZ	Export Processing Zone
FDI	Foreign Direct Investment
FSC	Financial Service Commission
GCB	Global Business Category
GDFCF	Gross Domestic Fixed Capital Formation
GDP	Gross Domestic Product
GSP	Generalized scheme of preferences
HDR	Human Development Report
HNWI	High-Net-Worth Individuals
ICT	Information and Communication Technology
ICTA	Information and Communication Technology Authority
IDI	ICT Development Index
IFI	International Financial Institution
IIP	International Investment position
IMF	International Monetary Fund
IHS	Investment in Hotel Schemes
IRS	Integrated Resort Schemes
IT	Information Technology
ITES	Information Technology Enabled Services
ITO	Information Technology Outsourcing
ITS	Information Technology Services
JEC	Joint Economic Council
КРО	Knowledge Process Outsourcing
LION	Lower Indian Ocean Network
MAAS	Mauritius Multi-Annual Adaptation Strategy
MBA	Mauritius Bankers Association
MCB	Mauritius Commercial Bank
MEF	Mauritius Employers' Federation
MFA	Multi-Fiber Arrangement
MFPA	Mauritian Freeport Authority
MICT	Ministry of Information and Communication Technology
MITIA	Mauritius IT Industry Association
MOBAA	Mauritian Offshore Business Activities Authority
MRC	Mauritius Research Council

NCB	National Computer Board
NICTSP	National Information and Communication Technology
	Strategic Plan
NRI	Networked Readiness Index
NSIC Rev 2	National Standard Industrial Classification Revision 2
OTAM	Outsourcing and Telecommunications Authority of Mauritius
PPP	Purchase Power Parity
RES	Real Estate Schemes
SAFE	South Africa Far East Submarine Fiber Optic Cable
SAT3/WASC	South Atlantic3/West Africa Submarine Cable
SBM	State Bank of Mauritius
SDR	Special Drawing Rights
SSA	Sub-Saharan Africa
TFP	Total Factor Productivity
WDI	World Development Indicator
WEO	World Economic Outlook
WTO	World Trade Organization

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I. Introduction

The Republic of Mauritius, an island state in the Indian Ocean and allocated to the geographical region of Africa is an exceptional example of a successful development path. Characterized by the transition from a purely sugar exporting economy to a now service sector dominated economy, Mauritius became a prominent object of investigation for economists. In accordance with the well-known growth story of several East Asian economies, some name the economic development of the island the "Mauritian miracle".

Undoubtedly, given initial conditions around the time of independence in 1968, a positive outlook for the Mauritian development was hardly foreseeable. Factors like the geographical remoteness, ethnic fragmentation and potential conflicts, the population density and the monocrop economy are usually associated with limited GDP growth prospects. Furthermore Mauritius does not possess natural resources like other countries in Sub-Saharan Africa (SSA). However, the impressive development of the small economy proved all skeptics wrong, among them the Nobel Prize winners V.S. Naipaul and James Meade. Pushed by the preferential income from sugar exports and smart trade policies, textile production and tourism could be initiated already in the 1970s. Later on, a financial banking and offshore center and the sector for information and communication technology (ICT) were established as the third and fourth pillar of the Mauritian economy. Today the economic structure is even more diversified including sectors like real estate, health activities and seafood. An indicator for the successful development is the ranking in World Bank's Ease of Doing Business Index which lists Mauritius as number 19 out of 185 countries in 2012.¹

However, the economic growth prospects for the upcoming years might not be as bright as the past experience. Globally, this slowdown in GDP growth rates at a certain level of per capita income is known as the 'middle-income trap'. In the case of Mauritius, the country might have taken the right measures to counteract this trap, but the real threat for growth stagnation might be the contraction of goods exports in the 2000s and the associated balance of payment constraints. Nevertheless, Mauritius wants to benefit from its geographical location between Asia and Africa and its historical achievements and sees its growth potential as a hub for financial and communication services. Hence, the growth prospects of these two strategic sectors, financial industry and ICT, will be analyzed in this paper.

¹ Doing Business - Economy Rankings, accessed January 2013, <http://www.doingbusiness.org/rankings>

The outline of this paper is as follows. We start with the historical development path of Mauritius from its independence in 1968 to 2005. The reasons for the exceptional economic growth will also be highlighted in chapter II. Thus, we have a detailed look at the current economic situation from 2005 to 2012 and identify the sectors that were drivers of growth during that period (chapter III). In chapter IV, the risk of a potential middle-income trap is discussed with regard to the latest economic condition before the two strategic sectors, the financial industry and the ICT sector are evaluated in terms of their potential as future growth drivers of the Mauritian economy (chapter V.) Finally, a summary of our findings and a conclusion is provided in chapter VI.

II. Historical development path

The initial factor for the development of Mauritius is still visible everywhere on the island: sugar cane. Introduced by Dutch traders who discovered the uninhabited island in 1639, the climatic conditions in Mauritius turned out to be very favorable for this plant. The expansion of the sugar industry was supported by all following colonial powers, the French and the British. Although in the early 1960s the industrial processes, management and research in this particular sector were modern and highly developed, other agricultural goods and manufacturing merely existed or were at a primitive stage of development. In a report for the Governor of Mauritius, the British Nobel Prize winner James Meade (1961, p.14) stated that "...no other country in the world [...] is so exclusively dependent upon the export of one single product", as sugar accounted for 99 per cent of exports and 35 per cent of the national income at that time. Due to the massive population growth (46 per cent between 1944 and 1958), the multi-ethnic composition and the monocrop based economy, Meade (1967, p.250) made his often cited statement about the poor outlook for a peaceful development of Mauritius. However, Meade emphasized in his early report the need for economic diversification in order to absorb the increasing labor force and to avoid potential social tensions. His recommendations can be seen as the initial impulse for the transformation of the Mauritian economy.

Indeed, the GDP growth performance of the Mauritian economy since its independence in 1968 is impressive (see Figure 1).

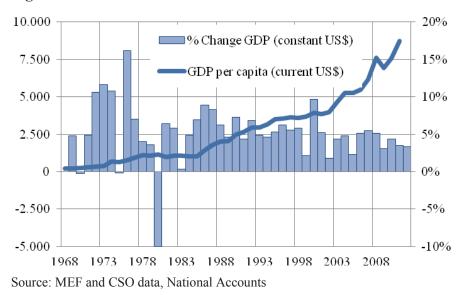


Figure 1: GDP Growth in Mauritius 1968 to 2012

Starting from 217 current US Dollars in 1968, the GDP per capital increased to 8,755 US Dollars in 2011. During that period, the real GDP growth rate averaged 5.2 per cent. Especially between 1984 and 2001, Mauritius experienced real GDP growth rates of more than 6.0 per cent on average. In comparison, Mauritius' GDP per capita measured in PPP terms (current international dollar) more than seven-folded since 1980 while Sub-Saharan Africa (SSA) economies' GDP had not even doubled. Mauritius is now classified as an upper-middle income country with the fifth highest GDP per capita (PPP, current international dollar) in SSA (WDI database). Mauritius' GDP growth rates also exceeded the global average and even the growth rates in East Asian Pacific countries especially in the 1990s (see Table 1).

	1970s	1980s	1990s	2000s *
Mauritius	6.8%	4.2%	5.3%	4.7%
World	3.9%	3.1%	2.7%	3.0%
Sub-Saharan Africa	4.1%	2.1%	2.1%	4.4%
Upper middle Income	5.8%	3.2%	3.4%	5.5%
East Asian Pacific	4.6%	4.9%	3.2%	3.6%

 Table 1: Average Real GDP growth rates 1970 - 2005

* 2000 to 2005 only

Sources: MEF, CSO and WDI

Besides the economic success, Mauritius achieved improvements in human development. Between 1980 and 2011, indicators such as life expectancy (from 67.1 to 73.4 year) and combined gross enrolment in education (from 32.1 to 76.2 per cent) improved significantly (International Human Development Indicators²). Inequality measures like the Gini-coefficient fell simultaneously from 0.5 in 1962 to 0.38 in 2008³ (Zafar, 2011). Consequently, the Human Development Index improved from 0.525 to 0.728 between 1980 and 2011 and Mauritius climbed 22 ranks up to number 77 out of 187 countries in 2011 (International Human Development Indicators).

1. Phases of economic development

A review of the economic development of Mauritius provides insights into the determinants of growth. Starting in 1960, roughly every decade is characterized by emergence, maturing or downturn of specific sectors. For instance, the textile industry was established in the early 1970s and boomed in the two consecutive decades before the growth declined after 2001.

Figure 2 illustrates the path of diversification from a monocrop economy to a business platform dominated by service sectors.

The 1960s: Initial steps for transition

With the upcoming independence of Mauritius from the United Kingdom (UK), the outlook for Mauritius in the early 1960s was challenging. It was unlikely that the dominating sugar industry would be able to absorb the impending increase in total labor force caused by high birth rates and the successful fight against malaria in the preceding decades. Based on a report by James Meade (1961, pp. 28-31), that includes 129 detailed recommendations, first industrial policies were introduced in order to establish other agricultural goods and manufacturing on the island. Given the lack of capital and of a skilled labor force, Meade (1961) advised Mauritius to use import substitution to establish the production of mainly labor intensive goods as an initial developmental step. The infant industries should be protected by selective quotas and enjoy tax holidays and subsidies to labor costs.

² International Human Development Indicators, accessed January 2013, <<u>http://hdr.undp.org/en/statistics/</u>>

³ Latest available data of Gini-Coefficient

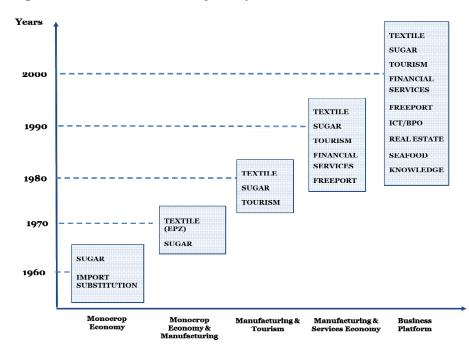


Figure 2: The Economic Trajectory of Mauritius

In 1963, a Development Certificate (DC) Scheme was adopted that granted selected companies monopoly-like situations either via quantitative import restrictions or high tariffs. Furthermore, these importers benefited from tax holidays and duty free import of raw materials and capital goods. Companies founded under that scheme engaged in various fields like food processing, production of fertilizers, footwear or cosmetics (Wellisz and Saw, 1993, pp.232-233). With 100 DCs granted and fewer than 5000 workers employed in the 1960s, the DC program had a limited impact on growth also due to a high wage level (Chernoff and Warner, 2002 and Mistry and Treebhoohun, 2009). However, import substitution seemed to be a more promising way than a direct export orientation due to the lack of process and marketing knowledge in non-sugar manufacturing. As recommended by James Meade, the Mauritius Agricultural Bank was renamed and established in 1964 as the Development Bank of Mauritius in order to provide long-term financing for non-sugar industries.

Around 1968, the country experienced social tensions during the process of independence (Frankel, 2010, p.8) and the unemployment rate reached 20 per cent. Furthermore, the important sugar sector was dominated by only 19 large plantations owned by a Franco-Mauritian minority causing economic power concentration contrary to the political dominance of the Hindu-Mauritian majority (Vandemoortele and Bird, 2011). Indeed, the starting conditions for Mauritius' independence indicated a rather poor outlook. Nevertheless,

Source: Makoond (2006) and authors

elements for upcoming industrial policies like tax holidays, no tariffs on raw material and intermediate products and the mindset for diversification towards new sectors and education was established within the 1960s. Furthermore, the idea of boards or corporations to promote specific industries and attract investors was also initiated in the Meade Report in 1961. These boards like the Board of Investment (BOI) and others are still an important part of Mauritius' current economic and political system.

The 1970s: The first boom

Mauritius experienced exceptionally high real GDP growth rates until the end of the 1970s peaking in 1976 with a 16.1 per cent increase in real GDP. The main driver for this growth was the booming world market price for sugar, Mauritius' major exporting good. It is important to note that the Mauritian sugar industry did not act in a free market environment but instead used trade policies and arrangements for preferential access to its export markets. Since 1951, Mauritius participated in the Commonwealth Sugar Agreement that established guaranteed sugar prices and allocated quotas to Commonwealth countries. With the entry of the UK into the European Economic Community (EEC) in 1973, this arrangement was renegotiated as part of the Lomé Convention. Despite high world market prices for sugar, Mauritius ensured its preferential access to the European market with the highest quota of all former European colonies (Bräutigam, 2005, p.68). The so called Sugar Protocol with the EEC turned out to be a major source of foreign exchange and investment. The sugar exports within the quota were priced at EEC's internal prices, which were two or three times higher than world market prices. The extra-rents for the Mauritian sugar industry, the difference between European sugar prices and world markets prices, added up to 6.1 per cent of annual GDP during 1975 and 2000 and thus moderated current account deficits. Remarkably, the owners of the sugar plantations, also called 'Grand Blanc' due to their Franco-Mauritian heritage, invested their benefits mainly into the upcoming domestic textile industry and tourism sector and supported the diversification of the economy (Sacerdoti et al., 2005, pp.21-22). Additionally, the policies and negotiations around the sugar trade established a long-term cooperation between the government and private sector and gave the example that rules of global trade can be used or even influenced for the economic advantage of Mauritius (Bräutigam, 2005, p.69).

With the concept of Export Processing Zones (EPZs), the government adopted in 1970 a new outward oriented strategy *parallel* to the inward looking Development Certificates scheme.

The idea to segregate export and import sector and to provide incentive for local and foreign investors was initiated by Prof. Sir Edouard Lim Fat, a Mauritian with roots in China and Taiwan. He established one of the first EPZ factories and launched the first foreign investments from Hong Kong and Taiwan, mainly in textile manufacturing. Thus, the lack of technical and management skills in Mauritius could be overcome by the cooperation with experienced Asian textile entrepreneurs. Bräutigam (2005, pp. 69-71) emphasizes the importance of the family and business networks between Mauritians with Asian heritage and potential Asian investors. In the spirit of Meade, the companies in EPZs enjoyed preferences like duty free access to imported inputs, tax holidays, free repatriation of capital and profits, preferential interest rates and lower wage levels compared to the rest of the economy (Subramanian and Roy, 2001). The success of the EPZ concept was certainly a factor for the boom in the 1970s. Local sugar producers invested in joint ventures with foreign investors and created employment especially for the abundant low-skilled labor force. In 1977, 88 enterprises where operating in EPZs with more than 18,100 employees and 20 per cent of total exports (Nath and Madhoo, 2003 and CSO data). Overall, the unemployment rate declined to a low of 5.7 per cent in 1977, compared to more than 20 per cent in 1968. Between 1975 and 1977, employment grew by 30,000 persons, equal to an increase of 18 per cent. One third of new employment was created in EPZs (CSO and MEF data).

Although Subramanian and Roy (2001, p.9) highlight the early established, OECD-type social protection in Mauritius, the initial government actions in the 1970s are heavily criticized. The "Keynesian-type demand management policies" (Sobhee, 2009, p.30) including subsidies, social services and infrastructure projects generated rising public spending and large budget deficits. Furthermore, Ancharaz (2003) associates the upcoming problems at the end of the decade as Dutch Disease-type symptoms as GDP growth and government spending was fueled by sugar exports. Simultaneously, inflation rates increased and the currency appreciated. In combination with higher demand for imports and the oil price hike in 1978/79, the current account deficits and the economic outlook worsened significantly.

The first economic boom phase with GDP growth rates at record levels in the mid-1970s was driven mainly by sugar prices and government spending. Hence, the upturn was seen as unsustainable, also due to non-concessionary foreign borrowings. When economic conditions eroded from 1978 onwards, the country was supported with structural adjustment programs and standby arrangements of the International Monetary Fund (IMF) and the World Bank.

Nevertheless, Mauritius laid the foundation for future growth already in the 1970s. Especially trade arrangements that guaranteed preferential access to export markets (the Sugar Protocol in 1975 and the Multi-Fiber Arrangement (MFA) in 1974) and the EPZ system unfolded its benefits in the upcoming decades.

The 1980s: Contraction followed by export-led boom

Starting in 1978, the economic situation in Mauritius deteriorated massively and reached rock bottom in the years 1980 to 1982 with inflation rates up to 42 per cent, a decline in real GDP by more than 10 per cent, a current account deficit of 13.8 per cent of GDP and unemployment rates up to 23 per cent (WEO, WDI and CSO data). Moreover, the government expanded external debt in order to finance infrastructural projects before 1980, causing a balance of payment crisis. Consequently, IMF and World Bank had to stabilize the risky economic situation. After two incomplete macro policy agreements in 1978 and 1979, the IMF implemented successfully four stand-by arrangements between 1980 and 1985. Additionally, the World Bank granted two structural adjustment loans to Mauritius in June 1981 and June 1983 (Gulhati and Nallari, 1990). As part of the agreements with the IMF, the Mauritian Rupee was devalued in 1979 by 23 per cent and in 1981 by 20 per cent against IMF's Special Drawing Rights (SDR). Further measures like reduced tax rates, liberalized interest rates, moderate wage policies and trade reforms were set in place to promote the export-oriented industries and the tourism sector and thus lift Mauritius back on a growth track (Gulhati and Nallari, 1990 and Mistry and Treebhoohun, 2009).

Indeed, from 1984 onwards the real GDP growth rates averaged more than 6.9 per cent for the rest of the decade. IMF and World Bank claim this success and argue that policies following the "Washington Consensus" enabled the export-driven growth (World Bank, 1989 and Bräutigam, 2005). Certainly, policies to ensure a competitive exchange rate and to control wages stabilized the macro-economic framework significantly and enhanced the conditions for the drivers of the upcoming growth, EPZs and tourism. However, the basic structures in both sectors were established in the 1970s. For instance, firms in EPZs already enjoyed tax holidays and duty-free imports. During the crisis, the real output in EPZ companies grew on average by 11.7 per cent per year despite some drawbacks in 1982 (CSO, National Accounts). The breakdown of annual real GDP growth rates by sectors also shows that the 10.1 per cent decline of real GDP in 1980 was caused by the drop in sugar production as a cyclone had hit the island in that year. As sugar still accounted for 64.9 per cent of all

exports in 1980, the decline in sugar sales caused a reduction of GDP of 8.58 per cent while the EPZ sector added 0.44 per cent to real GDP. Additionally, the stabilized political situation after two elections in 1982 and 1983 might have been a trigger for more foreign direct investment and consecutive growth from 1984 onwards. Therefore, Bräutigam (2005, p.65) states that policies for more liberalization itself had a limited impact on Mauritius' industrial transformation.

Besides the textile industry in the EPZs, the tourism sector performed well in the 1980s. The number of tourist arrivals and the number of hotels doubled in that decade due to tourists mainly from the former colonial powers France and UK that enjoyed Mauritius as a bi-lingual holiday destination. The sector did not only provide more employment but served as a major source of foreign exchange as gross tourism earnings increased from 42 million US Dollars to 244 million US Dollars between 1980 and 1990 (Sacerdoti et al., 2009). With an average output growth rate of 13.0 per cent per annum, 'Restaurants and Hotels' was the second best performing subsector from 1984 to 1989, only topped by the EPZs with an annual growth of 23.0 per cent on average (CSO data, National Accounts).

Compared to other economies in SSA, Mauritius could continue its development path after the crisis in the early 1980s. Although the structural adjustment programs by the IMF and the World Bank enabled Mauritius to regain stability and competitiveness, a major reason for the successful economic expansion was the structural changes and the trade agreements of the 1970s that proved to be resilient to the crisis.

The 1990s: Continued diversification and further growth

The achievements in the booming sectors of the 1980s proved to be fruitful throughout the 1990s. Due to the booming economic situation and decreasing growth rates in total labor force, the unemployment rate declined to a low of 2.7 per cent in 1992. Especially, EPZ firms created jobs and employed up to 20 per cent of total labor force in the late 1980s and early 1990s (CSO data). Additionally, the tourist sector continued its extraordinary growth. The number of tourist arrivals doubled from 291,550 to 578,085 between 1990 and 1999 and tourism receipts increased in US Dollar terms by 122 per cent as the sector successfully concentrated on high-spending Europeans (Sacerdoti et al., 2009 and CSO data, Tourism).

In the early 1990s, an offshore banking sector was established that increased massively in the upcoming two decades. At the same time the Stock Exchange of Mauritius was set up and the

financial industry with a distribution of 5.0 per cent to GDP in 1990 developed to a significant pillar for the Mauritian economy. In 2000, the share of financial intermediation⁴ reached almost 10 per cent of total GDP (see Section IV for more details).

In 1994, Mauritius followed the example of Singapore and opened up the Mauritian 'Freeport', two duty-free areas at the seaport and the airport. The initiator of the EPZ system Prof. Sir Edouard Lim Fat was also chairman of the Mauritian Freeport Authority at that time and promoted again Asian investments in the Freeport areas (Bräutigam, 2005). The aim was to establish Mauritius as a logistic, distribution and marketing hub for trade flows between Africa and Asia. The Freeport facilitated processing and assembly activities and the export of textiles and clothing, which accounted for two thirds of exported goods in the 1990s (CSO data).

At the end of the 1990s, the development path of Mauritius – the transformation from a monocrop economy to an economy with substantial manufacturing and service sectors - made Mauritius the economy with the highest capacity to achieve sustained economic growth of all SSA countries according to the Growth Competitiveness Ranking of the World Economic Forum in 1999.⁵ Mauritius was ranked number 29 ahead of countries like Thailand (rank 30) or China (rank 32) (World Economic Forum, 2000).

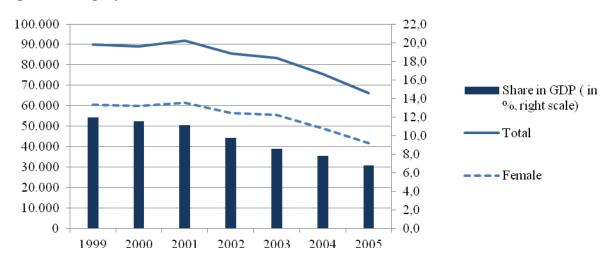
The 2000s: The End of Trade Preferences and New Sector Development

Although the real GDP increased by 10.2 per cent in 2000 and the current account surplus averaged 4.2 per cent of GDP from 2001 to 2003 (WEO data), the economic conditions changed quickly within the first five years of the new millennium. In 2005, two treaties that guaranteed preferential access to the European and the U.S. markets, the Sugar Protocol and the MFA phased out. The sugar and the textile and clothing sector had to adjust to the upcoming more competitive situation. Although the African Growth and Opportunity Act (AGOA) from 2000, a trade agreement between the USA and Sub-Saharan African countries, provided Mauritius quota-free access for its apparel exports to the US market, Mauritius lost

⁴ The term financial intermediation includes Banks, Insurance and other financial businesses

⁵ For the Growth Competitiveness Index the structures, institutions, and policies in place to achieve economic growth over the medium term (5 years) are analyzed (World Economic Forum, 2001, p.28). Due to changes in the methodology for the 2000 ranking, Mauritius was rank at position 36, still ahead of China (rank 41).

market share to other SSA countries like Lesotho or Swaziland in the early 2000s.⁶ Many Mauritian textile companies had already invested in SSA countries in the 1990s, for example in Madagascar (Jamoon, 2006, pp.203-205) to diversify and benefit from regional and international trade agreements. Consequently, the domestic textile production in Mauritius declined significantly and mainly women lost their jobs between 2001 and 2005 (see Figure 3). Overall, the distribution to GDP from the EPZ sector decreased from 11.9 per cent in 1999 to 6.8 per cent in 2005 and the sector contributed negatively to the real GDP growth rate from 2002 to 2005 by -0.71 percentage points annually on average.





In addition to this, the sugar sector suffered from the upcoming removal of preferences, as production costs had to be lowered compared to competing sugar exporters like Brazil. In a voluntary retirement scheme, the number of employees was reduced by 7,900 and salary costs declined by 30 per cent (Sacerdoti et al., 2005, p.25). With the Sugar Protocol still valid, the sugar industry contributed between 3.8 and 4.9 per cent to GDP between 2000 and 2005 (CSO data, National Accounts).

With the changing trade conditions, Mauritius' economic health worsened significantly. In 2005, the unemployment rates peaked at 9.6 per cent for both sexes and 16.2 per cent for the female labor force. The current account switched from a surplus of 5.9 per cent of GDP in 2001 to -5.0 per cent in 2005 and the budget deficit widened to 5.5 per cent on average

Source: CSO data

⁶ Least-developed counties in SSA were excluded from the rule-of-origin and were allowed to use third-country (mainly Asian) inputs for the apparel production. Mauritius, as mid-income country had to use usually higher priced inputs with origin from other SSA counties (Sacerdoti et al., 2009).

between 2000 and 2005. However, the overall GDP growth performance was still positive. The low in real GDP growth rates was reported in 2005 with 1.6 per cent as the textiles and sugar sector contributed negatively to GDP growth⁷. Overall, Mauritius still recorded average real GDP growth rates of 3.9 per cent per year between 2001 and 2005. Especially, the two other pillars of the economy, tourism and financial intermediation could more than compensate the downturn in other pillars. But also new sectors like the Information and Communication Technology (ICT) and the seafood hub showed strong performance during those years. Hence, the successful diversification made the Mauritian economy resilient against external economic shocks and guaranteed sustainable growth (Sobhee, 2009).

2. Explaining the economic development

A number of publications evaluate possible explanations for the successful development among them: prominent papers by Arvind Subramanian (2001 with Devesh Roy and 2009) and Jeffrey Frankel (2010). One reason for extraordinary growth was certainly the sectoral transformation of the economy as illustrated in the changing distribution of GDP in Table 2.

	1976	1980	1985	1990	1995	2000	2005
Agriculture, forestry and fishing	22.5	12.4	15.3	12.9	10.4	6.5	5.7
Sugarcane	17.8	8.1	11.1	8.0	5.7	3.3	3.0
Manufacturing	15.2	15.2	20.6	24.4	23.0	22.5	19.2
Sugar	5.5	2.4	3.2	3.4	1.6	0.8	0.8
Food	-	-	-	-	-	3.9	4.9
Textiles and Clothing	2.6	4.3	9.5	12.0	11.5	11.5	6.8
Construction	8.0	7.6	5.6	6.7	6.4	5.3	5.4
Wholesale and Retail	11.3	14.2	13.2	13.0	12.8	11.5	11.9
Hotels and restaurants	1.8	2.3	2.4	3.9	5.1	6.0	7.1
Transport, storage and							
communications	8.5	11.3	10.9	10.4	11.4	12.7	11.9
Financial intermediation	5.7	5.0	4.7	4.9	6.5	8.8	9.2
Insurance	4.2	3.3	2.9	1.5	2.1	2.3	2.8
Banks	1.5	1.7	1.8	3.5	4.4	5.7	5.1
Other	-	-	-	-	-	0.8	1.2
Real estate, renting and business activities *	10.2	12.7	11.1	8.9	8.5	8.4	9.8
Other activities	18.6	21.6	18.6	18.8	21.0	24.3	26.9

Table 2: Percentage distribution to GDP by industry group

* Includes real estate activities as well as other business activities like consultancy or services in the offshore

sector not related to the real estate sector.

Source: CSO, National accounts

⁷ The GDP growth rate without sugar would have been 3.0 per cent (CSO data, national accounts).

In a first step, a manufacturing sector producing labor-intensive, low-cost goods was established apart from the sugar-dominated agriculture in the 1970s and 1980s. These manufactured products, mainly textiles, were competitive on world markets and the share of manufacturing in GDP increased from 15.2 per cent in 1976 ⁸ to 24.4 per cent in 1990 but declined thereafter to 19.2 per cent in 2005 (see Table 2). During the same period, the percentage contribution of agriculture shrunk significantly from almost one quarter in the 1970s to less than 6 per cent in 2005. In contrast to many countries that also followed this development strategy, Mauritius was able to do a second step and establish service sectors like tourism and financial intermediation. These sectors increased their contribution to GDP from the 1980s onwards. Banks, for instance, contributed only 1.8 per cent to GDP in 1985 but 5.1 per cent in 2005.⁹

Overall, Mauritius was not only able to have a structural transformation but "on top", the single sectors that emerged during the last decades were very successful compared to other developing countries in SSA. As indicated in the description of the historical development path, several underlying reasons for the transformation and the success of the sectors have to be identified.

- Sugar wealth

To emphasize the influence of the sugar sector¹⁰ the CSO calculates the real GDP growth rates including and excluding this sector from 1990 onwards. When this approach is extended to the period between 1976 and 1989, the historical pattern shows that the influence of sugar has only disappeared in the 2000s. Especially, in the last years of the 1970s and the 1980s, the real GDP growth rates without sugar differ significantly from the overall growth rates (see Table 3)Table 3: The influence of sugar on real growth rate of GDP. ¹¹

⁸ The Mauritian Central Statistical Office (CSO) provides a breakdown by industries from 1976 onwards

⁹ Other activities include sectors like Health and Education that increased their contribution to GDP. However, CSO Mauritius uses changing accounting standards in its historical data on National Accounts. A clear breakdown is therefore problematic.

¹⁰ Includes sugar in agriculture and in manufacturing (industrial process)

¹¹ For the calculation of GDP growth rates excluding sugar, the sugar production and sugar manufacturing is excluded from the GDP at constant prices and the percentage changes of the remaining sectors are weighted with the distribution without the sugar sector.

	1970s *	1980s	1990s	2000s **
GDP at basic prices	4.9%	4.2%	5.3%	4.9%
excluding sugar	6.1%	5.3%	6.0%	4.9%

Table 3: The influence of sugar on real growth rate of GDP

* 1977-1979 ** 2000-2005

Source: CSO, National Accounts and own calculation

Although the data indicate that the rest of the economy had higher growth rates and also less volatility excluding sugar (for example in the year 1980), the textile and the tourism industry were only established due to the re-investment of extra-rents from the sugar production. The textile and clothing industry was initialized by Asian investors in the early 1970s but local investors were included via joint ventures and at the end of the 1980s, half of the equity in this sector was held by Mauritians (Bräutigam, 2003 and 2005). The tourism sector can even be described as 'homegrown' as most hotels chains and resorts are owned by Mauritian investors mainly from the sugar sector (Sacerdoti et al., 2005, p.36).

Besides its function as source of investment, the export of sugar also produced income in foreign currency and employment, dampened current account deficits and generated tax revenues via export taxes on sugar.

- Trade Preferences

The sugar industry is also one of the sectors that benefited from preferential access to export markets, mainly to the EU and the US. The estimated benefits from the Sugar Protocol differ: Subramanian and Roy (2001) calculate rents as high as 5.4 per cent per year between 1977 and 2000, other studies like McDonald (1996) and Milner et al. (2004) estimate transfers to Mauritius between 1.8 and 5.2 per cent of GDP and 4.0 to 8.0 per cent of total exports due to the sugar protocol. Similarly, the textile and clothing sector benefited from quota-free access to the European Union that was already guaranteed with the Cotonou Agreement, in 1972. When the MFA was signed in 1974 and restricted the exports of low-cost textile producers in Asia to the EU and US markets, Mauritius could build up its garment and textile companies based on the preferential access to the European markets. Under the US AGOA, signed in 2000, Mauritius had favorable conditions for its apparel exports to the US Markets. Subramanian and Roy (2001, p.21) estimate that rents from apparel exports to Mauritius added up to 2.9 per cent of GDP in 1996 and to 3.5 per cent in 1999.

Besides the trade agreements with the EU and the USA, Mauritius participates in regional integration. The country is a member of the Southern African Development Community (SADC, signed in 1980) and the Common Market for Eastern and Southern Africa (COMESA, signed in 2000). Mauritius is also connected to Asian countries via the Indian Ocean Rim, an association of 20 countries including India and Australia.¹² Furthermore, Mauritius negotiated bi-lateral Double Taxation Avoidance Treaties (DTATs) with a wide range of countries including India and China and African countries. In combination with the regional trade agreements, the DTATs stimulated the expansion of Mauritian companies to countries like Seychelles (tourism, banking), Mozambique (sugar) and Madagascar (textiles). Additionally, these tax and trading agreements attracted investors from third countries to invest in Mauritius' DTAT partner countries. Especially the Mauritian financial industry benefited from investment flows rooted via Mauritius (see in more detail in chapter V).

- Trade Strategies

According to Frankel (2010, p.28) one lesson from the Mauritian experience is that "...trade is the key to growth, especially for a small country". Although UNIDO (2009, p.16) describes Mauritius as "super-exporter" of garments and Sachs and Warner (2005) classify Mauritius as open to trade since independence, the definition of Mauritius' trade regime is not clear-cut. Especially the aspect of trade liberalization and openness leads to different conclusions in the literature. In contrast to Frankel (2010), Subramanian and Roy (2001, pp.35-36) rank Mauritius' trade performance as average and not as a reason for the exceptional growth performance.

Historically, Mauritius used an inward-oriented trade strategy in the 1960s, but already in 1970 an outward-looking strategy with EPZs was set up and the contrary strategies were promoted simultaneously. In total, the Mauritian trade regime included three components: (1) an export tax on sugar¹³, (2) incentives for the exports of manufactured goods via the EPZ scheme and (3) the protection of local production. Referring to the latter two components, Rodrik (1997 p. 29) names this a "two-track strategy", others call it heterodox trade strategy (Frankel, 2010) or heterodox opening (Subramanian and Roy, 2001). The essential point why this regime worked out despite the contrary elements can be seen in the strict separation of export and import sector, for instance via segmented labor markets. Hence, the import regime

¹² Mauritius is also part of the ACP countries, the Commonwealth and the African Union.

¹³ Export taxes on sugar was also one of Meade's recommendations (1961, p. 231) to control the expansion of the sugar production, the tax was gradually reduced in the 1980s and eliminated in 1993 (Ancharaz, 1993)

was not biased against exports and the import taxes in the 1980s and 1990s could be balanced by the implicit export subsidies, proven by Subramanian and Roy (2011, p.22). Especially the extra-rents from trade preferences contributed to that effect.

The trade regime in the 1970s could also be interpreted as social and political compromise. On the one hand, the Franco-Mauritian minority, holding the economic power, enjoyed the benefits of trade preferences and export promotion. On the other hand, the majority of Mauritians with Indian heritage, holding the political power via the Labour Party, could sustain the import substitution system as part of their Fabian-socialist inspired policies and thus contrary interests could be balanced. Although, the International Financial Institutions (IFIs) pushed for a liberalization of the import trade regime, for instance, by replacing quantitative restrictions by tariffs in 1984, the protection for the import sector remained high with an average effective rate of protection of 127 per cent in the 1980s (Subramanian and Roy, 2001). Another reason for the strong consensus throughout all political parties about protectionism¹⁴ was certainly the importance of import duties for government revenue. Even after two major reductions of nominal tariffs in 1984 and 1994, that were offset by the introduction of value added tax, import duties still accounted for 34.6 per cent of budget revenues in 1998 (Ancharaz, 2003). Hence, the Mauritian governments avoided radical changes in their trade strategies, although import substitution was certainly costly and lobbied heavily by its beneficiaries, but created a stable and socially balanced environment.

In order to assess the seemingly converging quotations of Subramanian and Roy (2001) and Frankel (2010) one might argue that the two publications are individually correct. Both highlight different aspects of the Mauritian trade regime that need to be combined. Firstly, Subramanian and Roy (2001) correctly assess that trade performance is not the reason for exceptional growth performance. In Figure 4, the real GDP growth rates are segmented by the expenditure approach of GDP from 1977 to 2005. The major part of GDP growth can be ascribed to final consumption expenditure (74.0 per cent on average), followed by gross domestic fixed capital formation (GDFCF) with 26.3 per cent on average.¹⁵ The effect of net exports in this approach with -0.8 per cent on average is trivial.¹⁶

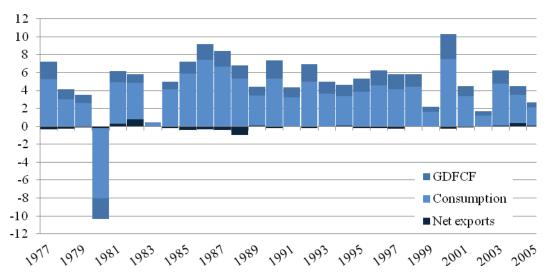
¹⁴ At the period from 1979 to 1984 when IMF and World Bank assisted Mauritius with structural adjustment loans, Mauritius had two elections including a change in prime minister in 1982 and coalitions.

¹⁵ Government spending is included in final consumption expenditure (with 12.1 per cent of total GDP on average) and GDFCF (8.3 per cent).

¹⁶ The fourth component changes in inventories with an average share of 0.5 per cent is neglected here.

Secondly, as Frankel (2010, p. 16) argues, the influence of trade and trade regimes for the Mauritian development process should not be neglected. The EPZs enabled investments and the export of manufactured goods, leveraged by trade preferences, was an essential strategy for Mauritius to receive foreign currency. Additionally, EPZs attracted FDI. Following Romer (1993), ideas from foreign investors associated with FDI inflows enabled the domestic textile sector to expand. Also the importance for the labor market (companies in EPZs held 30.8 percent of total employment from 1981 to 1986) and the financing of import protection had an essential economic and social aspect. Overall, the success of Mauritius in trade was not based on pure liberalization but on balanced and well managed trade regimes.

Figure 4: Contribution of the Three Components of GDP by Expenditure Approach to the Growth of GDP in % (1977 to 2005)



Source: Authors' calculation with CSO data, National Accounts

- Institutions

The type and the quality of Mauritius' institutions might be seen as further reasons for the successful economic development. Institutions, defined by North (1990, p. 3) as "...the rules of the game in a society or, more formally, [...] the humanly devised constraints that shape human interaction" are recognized as deeper or key determinant of economic development in parts of the literature.¹⁷ More specifically, Acemoglu and Robinson (2008, p. 25) see differences in economic institutions, for instance property right or entry barriers, as main reason for cross-country differences in income per capita. Economic institutions are set again by political institutions according to the authors' reasoning. For the case of Mauritius,

¹⁷ For instance, Acemoglu, Robinson and Johnson (2001), Rodrik, Subramanian and Trebbi (2004) and Acemoglu and James (2008)

Subramanian and Roy (2001, p.32, Table 11) argue in the same manner as they identify strong participatory institutions as a unique feature compared to other developing countries. These institutions would explain the success of EPZs and trade regimes, policies that were adopted also by other countries but failed there. The authors also provide econometric evidence that institutional quality added to Mauritius' growth compared to African and other fast growing economies. Furthermore, Sacerdoti et al. (2005, p.42) and Sobhee (2009, p.35) emphasize Mauritius' positive scores and rankings in indicators and indices of institutions, governance and democracy compared to countries in SSA but also to other fast growing developing countries.

Indeed, Mauritius owes unique characteristics of political institutions. Besides Botswana, Mauritius is the only country in SSA that is democratic since independence. It is obvious that political democracy is not a factor for development per se, nevertheless Rodrik and Subramanian (2003, p. 33) find evidence that sustained economic development appears to be positively influenced by democracy. As part of the electoral system, Mauritius has adopted the so called "best-loser" system which allows the Supreme Court to appoint additional members of the National Assembly in order to strengthen underrepresented communal groups. Given the multi-ethnical population and the majority of Mauritians with Indian heritage, this system should ensure the representation of all ethnic groups in the parliament (Kasenally, 2011). In the more than four decades since independence, the Republic of Mauritius had four prime ministers and nine governments with different ruling parties and coalitions. Despite different political view, basic policies like property rights and the social security systems were supported by all political parties. Following Acemoglu and Robinson (2008), these stable political institutions enable a country to make collective choices which consequently result in positive economic institutions that are crucial for development.

In the history of Mauritius several examples in the development process can be found that are compatible with that argumentation, also described by Subramanian and Roy (2001) and Frankel (2010). In both publications, the success of the sugar sector and its characteristics are emphasized. Given the dependence on sugar in the time of independence, the interaction between the government and the private sugar industry, mainly represented in the Mauritius Sugar Authority (MSA) was essential. The government used its international diplomacy to negotiate preferential export prices first to the UK and the EU but the resulting extra-rents were taxed only moderately and rooted to the privately owned sugar industry. Thus, Subramanian and Roy (2001) argue that Mauritius did not make the mistake to kill its cash

cow and in return benefited from investments into other sectors of the economy also due to the stable property rights.¹⁸

Further historical evidence for the political and social consensus building in Mauritius can be seen in the handling of the economic crisis in the early 1980s. The agreements with the IMF and World Bank were discussed broadly also in the media and the strong political institutions were able to reduce the influence of the IFIs and stabilized the existing economic institutions (Guhati and Nallari, 1990, p.58). Furthermore, the tripartite salary negotiations that involve unions, the private sector and the government contributed to social stability and enabled the separation of an EPZ labor market. Also, the numerous supportive institutions for specific sectors like the Mauritian Offshore Business Activities Authority (MOBAA), the Mauritian Freeport Authority (MFPA) or the National Computer Board (NCB) are examples for the cooperation between the public and the private sector (Mistry and Treebhoohun, 2009,pp.24-28).

The Mauritian institutions can be regarded as one of the deeper determinants of the development process, especially after independence. Nevertheless, good governance and the rule of law are no reason for economic development per se. The example of Mauritius clearly shows that there are country-specific reasons why and how political and economic institutions contributed to Mauritius growth story. Consequently, recommendations for other economies to learn from the Mauritian experience cannot be drawn easily. Beyond the positive examples there are also negative side effects. For instance, the existing social and economic exclusion of the creole minority, also known as 'le malaise créole', creates pockets of poverty despite the participatory democratic system. Also the dependence on governmental intervention and support to establish new sectors might result into lack of entrepreneurial spirit on the island.

Besides the described reasons for Mauritius' economic success after independence, there are numerous other reasons listed in the literature: the transnational business networks and strategic investing in Africa (Bräutigam, 2005), fiscal policies (Sobhee, 2009 and Zafar, 2010), human resource development and labor markets (Mistry and Treebhoohun, 2009) or competitive exchange rates and FDI (Subramanian, 2009 and Frankel 2010). Certainly, all

¹⁸ The Hindu-dominated Labour party initially planned to nationalize sugar plantations but moderated in the 1960s under the leadership of Seewoosagur Ramgoolam, who was then elected as first Mauritian prime minister in 1967 (Frankel, 2010, p. 7).

determinants interact as illustrated in the importance of Asian business networks for EPZs or the societal consensus about the trade regime.

III. Analysis of current economic situation

In the following section, the economic development since 2005 is evaluated in order to identify sectors that are current growth drivers and might be potential strategic sectors for future economic growth of the island state.

1. Recent developments since 2005

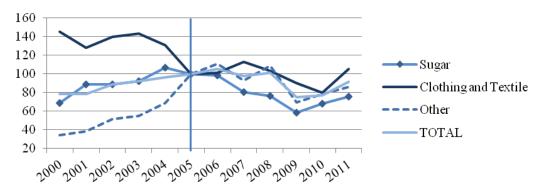
The current situation of the Mauritian economy should be analyzed with regard to the end of trade preferences in 2005. Together with the global financial and economic crisis starting in 2008 and the volatile import prices for commodities, the Mauritian economy faced several challenges. Despite these external shocks, the island economy proved to be quite resilient. In the period between 2006 and 2011, the real GDP growth averaged 4.7 per cent per year, compared to an average annual growth rate of 2.4 per cent globally, 3.8 per cent in East Asian Pacific (EAP) nations and 4.9 per cent in SSA economies. Yet, a number of problems like a higher level of unemployment, the rising current account deficits or high budget deficits remain unsolved.

With the phase-out of the MFA at the end of 2004 and the removal of the EU Sugar Protocol in 2005¹⁹, Mauritius experienced two exogenous shocks simultaneously in its crucial export sectors. As of 2005, sugar (16.4 per cent) and clothing and textile (35.5 per cent) exports still accounted for more than half of total goods exported (UN Comtrade data)²⁰. After the change in external trade conditions, the exports of sugar decreased in real terms²¹ by 24 per cent by 2011 (see Figure 5). In the case of clothing and textiles, the exports declined by 20 per cent by 2010 but recovered in 2011. Although other exported goods, especially fish products could over-compensate the downturn in exports of apparel between 2000 and 2005, the exports of these other goods followed a similar trend thereafter.

¹⁹ In 2005, prices of sugar exports into the EU declined by 36 per cent.

²⁰ Retrieved from http://comtrade.un.org/

²¹ UN Comtrade Data in current USD are deflated by US-CPI (2005=100)





Source: UN Comtrade data, devaluated by US CPI (2000=100)

In the clothing and textile sector and in the sugar industry, the structural adjustments started before 2005. The trade agreements phased out over a long period of time²² in order to provide scope for sectorial adjustments and to re-gain competitiveness. Additionally, both sectors still enjoyed alternative trade preferences (AGOA, GSP) and supportive measures by the EU and the Mauritian government beyond 2005. Especially the government's 'Mauritius Multi-Annual Adaptation Strategy' (MAAS), for the restructuring of the sugar sector into a sugar cluster with ethanol production and electricity generation by 2015, is heavily subsidized by the EU.²³ The textile industry is supported by the government in order to upgrade its production and it benefits from the extended AGOA treatment (up to 2015) and the removal of the 'rules of origin' in 2008. Consequently, textiles and apparel exports to the USA picked up by 60% between 2009 and 2011.²⁴

By using the 'traditional Mauritian' way, fishery could partly off-set the diminishing exports in textiles and clothing. The export of fish and fish products like canned tuna benefits from preferential access to the EU that allows the processing of fish from third countries in Mauritius, the industry also uses the favorable business conditions in Mauritius' Free Port. Between 2000 and 2012, the real export value of fish and fish products seven folded and represented 14.8 per cent of all goods exported in 2012.

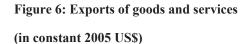
²² In the case of MFA, the end of the agreement was decided at the Uruguay Round in 1995.

²³ The Mauritian government received more than 141 million EUR for the period between 2006 and 2010, equal to 20 per cent of all EU funds, and additional 140 million EUR for the years 2011 to 2013 (EU, 2011). In comparison, Mauritius' sugar exports in 2011 summed up to around 230 million EUR (UN Comtrade data).
²⁴ AGOA Country Information - Mauritius, accessed January 2013,

<http://www.agoa.info/index.php?view=country_info&country=mu#>

Although the IMF (2011) observed that the number of goods exported²⁵ as well as the number of export destinations has increased over time, the bulk of exported goods sugar, textile and fish still represents a low degree of sophistication. Hence, it seems unlikely that Mauritius' negative current account from trading in goods will turn positive soon. In contrast to that the trading in services is a major source of foreign exchange mainly due to the tourism sector that accounts for 45.6 per cent of all service export income and 24.2 per cent of total exports in goods and services in 2011 (UN Comtrade data).

Overall, the distribution of service and goods exports switched due to the reduction in goods exports mainly in sugar and clothing. From 2007 on, the real value of service exceeded the value of goods exported mainly driven by earnings from tourism (see Figure 6). While trade in services traditionally shows surpluses, the balance of trade with goods is usually negative as Mauritius is a commodity importer (see Figure 7). However, the combination of high commodity prices and lower exports in goods caused a negative net export of goods of more than -20 per cent of GDP in 2008, compared to -4.4 per cent in 2002 (WDI data).



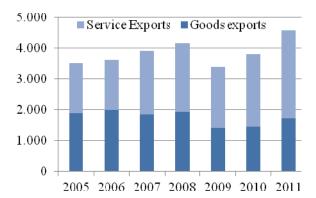
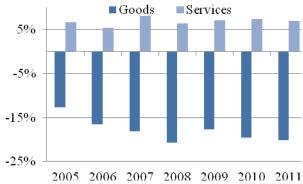


Figure 7: Net exports of goods and services (% of GDP in current USD)



Source: UN Comtrade data

Source: WDI data, authors' calculation

Consequently, the contribution of net exports to GDP (in constant 1999 prices) in the period between 2009 and 2011 was negative with -2.7 per cent on average (CSO data). Therefore, the growth drivers of the Mauritian economy after 2005 can be found in sectors other than the traditional sectors.

²⁵ For instance exports of jewelry and medical devises

The development in exports is also reflected in the distribution of GDP after 2005. Despite the supportive measures, the contribution to GDP of the sugar industry and the textile and clothing sector diminished significantly. In 2012, the sugar sector added only 1.4 per cent to GDP²⁶, compared to 4.9 per cent in 2001. The textile and clothing industry accounted for 4.9 per cent of GDP in 2012, a reduction of 1.9 percentage points compared to 2005 (see Table 4). These developments had a large impact on the labor market. From 2000 to 2010, the employment in the sugar sector dropped by more than 62 per cent to 10,500 employees. Over the same time period, more than 32,500 jobs were cut in the textile and clothing industry affecting mainly unskilled women who represent approximately 60 percent of total employment in EPZ companies²⁷ (CSO data).

	2005	2006	2007	2008	2009	2010	2011	2012
Agriculture, forestry and fishing	5.7	5.2	4.5	4.1	3.9	3.7	3.7	3.5
Sugarcane	3.0	2.6	2.0	1.8	1.4	1.2	1.3	1.1
Manufacturing	19.2	19.5	19.2	19.4	18.8	18.0	17.7	17.5
Sugar	0.8	0.7	0.5	0.5	0.4	0.3	0.4	0.3
Food	4.9	5.4	5.7	6.6	6.4	6.3	6.2	6.3
Textiles and Clothing	6.8	6.9	6.8	5.7	5.6	5.1	5.2	4.9
Construction	5.4	5.4	6.2	6.8	6.9	6.9	6.5	6.3
Wholesale and Retail	11.9	12.1	11.9	12.0	11.4	11.8	11.9	12.1
Hotels and restaurants	7.1	7.8	8.7	7.9	6.7	7.0	7.1	6.8
Transport, storage and								
communications	11.9	11.3	11.0	9.8	9.6	9.5	9.2	9.0
Financial intermediation	9.2	9.3	9.8	9.8	10.4	10.0	10.1	10.2
Insurance	2.8	2.8	2.7	2.7	2.9	2.9	3.0	3.1
Banks	5.1	5.3	5.7	5.8	6.1	5.7	5.7	5.7
Real estate, renting and business activities	9.8	10.2	10.6	11.2	11.8	12.3	13.0	13.4
Owner occupied dwellings	4.6	4.6	4.5	4.4	4.4	4.4	4.5	4.4
Business and other real estate activities	5.2	5.6	6.1	6.8	7.4	7.9	8.5	9.1
Other activities	19.8	19.2	18.1	19.0	20.5	20.8	20.8	21.2
Gross Domestic Product at market prices	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 4: Percentage distribution of GDP by industry group 2005 to 2012

Source: CSO, national Accounts

²⁶ Sum of sugar in the industry groups agriculture and manufacturing

²⁷ Employment data of large establishments in EPZs is used as approximation for the textile and clothing industry.

Due to the higher exports of fish and fish products the contribution of manufactured food to GDP increased to 6.3 per cent in 2012 (see Table 4) and became an important sector for the economy.

The direct contribution of tourism to GDP is captured by the CSO in a Tourism Satellite Account and includes also transport services and retail expenditures by tourists. In 2007, tourism accounted for 13.0 per cent of GDP, hotels and restaurants alone represented 8.7 per cent (see Table 4). However, the sector was hit by the financial and economic crisis from 2008 onwards due to its bias towards high-spending European tourists. In 2009, the number of tourist arrivals decreased by 6.3 percent and tourist earnings fell by 13.4 per cent. Consequently, the contribution of tourism to GDP declined to 10.1 per cent. Nevertheless, export earnings from tourism in real terms²⁸ increased by 50 per cent between 2005 and 2011 and the sector is regarded as further driver of growth. The government estimates the number of tourists to increase to 2 million by 2015 compared to 965,000 arrivals in 2011 also boosted by the new airport. However, the estimations, made in the booming years before 2009, seem to be too optimistic with regard to the stagnating economic situation in most European countries.

While the traditional growth drivers of the Mauritian economy, sugar and textiles diminished, other sectors could more than compensated the down-turn in GDP growth but not in exports. In the next section these growth drivers are identified in order to analyze their potential for future economic growth in more detail.

2. Current sector distribution and potential growth sectors

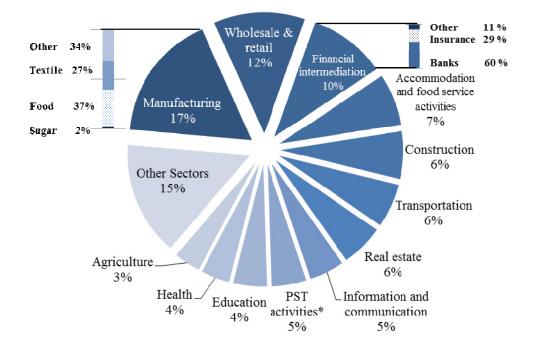
With the change in accounting standards to National Standard Industrial Classification Revision 2 (NSIC Rev 2) in 2012 more details available on the economic activities of different sectors.²⁹ For instance, the former 'real estate, renting and business activities'-sector included business activities like consultancy or services for the offshore sector. Also transportation and communication activities were combined in one sector under the former accounting standard. In Figure 8 the detailed GDP distribution in 2012 is illustrated.

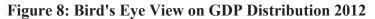
The largest sector of the Mauritian economy with 17 per cent of GDP is manufacturing which is dominated by food and textile production. In third place is financial intermediation with 10

²⁸ UN Comtrade data deflated by US CPI

²⁹ Data with the NSIC Rev 2 standard are recalculated back to 2009

per cent followed by several sectors with a contribution of 5 to 6 per cent which also include information and communication and real estate activities. Interestingly this GDP distribution is quite similar to the one in Singapore except for information and communication and accommodation and food services.³⁰





In the period from 2009 to 2012, the Mauritian real GDP increased by 3.55 per cent annually. When sectors are ranked by their contribution to GDP growth, Information and communication is the leading sector with 0.48 percentage points or 13.4 per cent of average GDP growth followed by Financial intermediation (0.35 percentage points or 9.9 per cent) and Whole and retail sale (0.33 percentage or 9.2 per cent). But also the sector Professional, scientific and technical activities that includes management consulting and legal and accounting activities added 0.3 percentage points to the 3.55 per cent average annual growth. This is also associated with the importance of the financial and offshore sector in Mauritius.

In order to identify the growth drivers between 2009 and 2012 the average contribution to the real GDP growth is related to the average sectoral distribution of GDP during the same

^{*}Professional, scientific and technical activities Source: CSO Data, National Accounts, December 2012 estimates

³⁰ In 2012, Singapore has the following distribution by sectors: Manufacturing 19%, Wholesale 16%, Financial services 11% and Information and communication 3% and Accommodation and food 2%. Data: *Statistics Singapore, National Accounts,* accessed February 2013 at

<http://www.singstat.gov.sg/statistics/browse_by_theme/national_accounts.html>

period. Sectors that add more to GDP growth than their share of GDP would indicate are therefore seen as growth drivers.³¹ In Figure 9 growth drivers are sectors above the black line. Consequently these sectors also increased their share in GDP over the last years (see also Table 4).

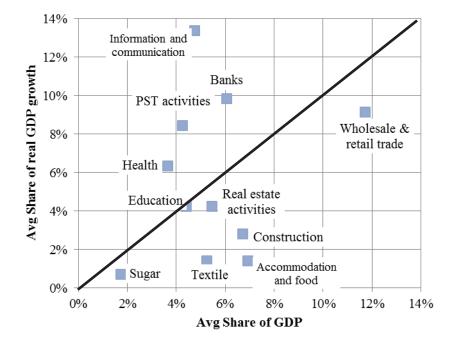


Figure 9: Share of real GDP versus share of GDP growth (2009 to 2012)

Source: Authors' calculation, CSO data, National accounts, December Estimates for 2012

While the importance of the traditional growth sectors sugar, textile and tourism deteriorated over the last years, especially the ICT sector (here information and communication) and the financial sector (including the PST activities and banks) pushed GDP growth. Thus, these two sectors will be analyzed in detail in order to evaluate the future growth perspectives of these industries.

One of the identified growth drivers is also reflected in the distribution of FDI inflows by sectors. From 2006 on, the total FDI inflows to Mauritius surged (see Figure 10) especially in the growth sector financial and insurance activities.³² In Figure 11, the distribution of inflows by sectors illustrates that also the real estate (here: IRS, RES and IHS) and the construction sector received large inflows between 2006 and 2012. The inflows into the tourism sector

³¹ Results are similar in the period from 2005 to 2012, however the detailed sectorial breakdown is only available from 2009.

³² The peak in FDI in the year 2000 was caused by a single deal in the telecom sector.

(here named as accommodation and food services) diminished after 2009 as the global economic crisis hit this sector.

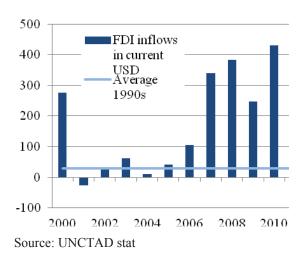






Figure 11: FDI Inflows by sectors, in million MRs



From 2006 to 2012, the flows to real estate account for more than one quarter of FDI. Both sectors contributed significantly to GDP growth in the 2000s but since 2009 these sectors are not identified as growth drivers (see Figure 9) anymore.³³ However, the massive inflows from foreign investors have influenced the economic health of Mauritius.

The reasons for the inflows are the specific investment schemes for foreign investors into the real estate sector as part of the National Physical Development Plan in 2002. The so called Integrated Resort Schemes (IRS) and the Real Estate Schemes (RES) enable local land owners to develop and to sell residential housing including leisure and recreation facilities to non-citizen investors. Additionally, the Investment in Hotel Schemes (IHS) provides participation in hotel projects for foreign investors, but also investment in shopping malls and business parks are promoted. The government expected positive side-effects for the financial industry and the retail and tourism sectors as buyers of properties worth more than 500,000 USD are entitled to a resident permit (BOI, 2012). Therefore, the target group is mainly high-net-worth individuals (HNWI) from Europe and South Africa looking for a second home spending time on Mauritius.

The success of this investment promotion is visible on the island, especially near the coastal line in the north and the west of the island where large residential and shopping malls have been constructed. Consequently, the employment in both sectors increased from 2006 on by

³³ From 2000 to 2009 the construction and the real estate sector (only Owner occupied dwellings) accounted for 11.6 per cent of annual real GDP growth (CSO data, National Accounts)

35 per cent to 38,000 employees in 2010 (CSO data). However, the large inflows and the characteristics of the investments scheme have also caused negative side effects that bear some risk for the future development:

(1) Although there are no official data on land or real estate prices, experts estimate that real estate prices, also for local properties, have risen at double-digit rates in the recent years, mostly in areas with IRS, RES and IHR properties (see also Grynberg, 2012). Newspaper often report about speculation with land at or close to the coast that are most attractive for land developers. As an indicator for the price development the comparison of real and nominal values of building and construction work as part of the Gross Domestic Fixed Capital Formation (GDFCF) might be used (CSO data, National Accounts). The underlying price index shows that prices for residential and commercial buildings rose by 90 per cent based on 1999 prices (see Figure 12). According to this measurement, the largest price hikes happened in 2007 and 2008 but prices stabilized in 2009 and 2010 and rose thereafter despite the global financial crisis. This is also in line with the number of permits issued for residential and for non-residential building that both peaked in 2007 but slowed down thereafter.



Figure 12: Building and construction work prices, index (1999=100)

Source: Authors' calculations from CSO data, National Accounts

However, without official data, the analysis of the real estate markets and the interpretation with regards to economic stability is difficult. Actual paid rents as part of the CPI calculation saw only a moderate increase of five per cent between 2002 and 2007 contrary to the presented price index here (CSO data, CPI). Also the impact of foreign investments on the

local real estate market has to be assessed further given the fact that foreign investments are only limited to specific investment schemes. It might be argued that the investment inflows only affected a limited high-level real estate market.

(2) The further development of real estate prices has also an impact on the stability of banks. Within the last decade the distribution of the credit portfolio of Mauritian banks has shifted towards a concentration of loans on the construction and the tourism sector. In 2001, the construction sector accounted for 14.2 per cent of all credits from banks, with 8.1 per cent of total credits in housing. The tourism sector received 6.9 per cent at that time. By the end of 2011, the share of the construction sector increased to 24.2 per cent, including 13.9 per cent to housing. Property developers account now for 5.9 per cent of all credits, the tourism sector for 19.0 per cent. In comparison, credits to manufacturing, still the largest sector of the whole economy, added up to only 8.0 per cent. The ICT sector received only 0.5% of the total credit volume (BoM data, Monthly Statistical Bulletin Dec 2001 and Dec 2011). Although the overall number of non-performing loans remained low, the Bank of Mauritius noticed in its minutes to the monetary policy meeting in September 2012, that non-performing loan in the construction and the tourism sector have increased. In total the ratio of non-performing loans in the construction sector reached 7.9 per cent from 5.4 per cent in 2011.³⁴ Also the largest Mauritian private Bank, the Mauritian Commercial Bank (MCB) reported in its 2012 annual report that 12 per cent of loans to the construction sector were non-performing (MCB, 2012a). Hence, a sudden drop in construction activities might also destabilize the local banking sector given the high share of total credits to the construction sector.

(3) Besides the economic concerns about the investment schemes in real estate, there are also social problems associated with the characteristics of the constructed properties. As IRS and RES buildings are usually in exclusive gated communities and constructed on the most attractive land near the coastline, the projects are not considered as an integrated part of the Mauritian economy but as a capitalist enclave (Greig and Turner., 2011, p. 168, Kasenally, 2011). Furthermore, the projects are also blamed for higher property prices, land shortages and higher construction costs for all Mauritians on the island (Republic of Mauritius, 2010).

Overall, the limited opening of the real estate sector has until now paid off for Mauritius. The real estate and the construction sector were one of the growth drivers of the last decade and

³⁴ Bloomberg- Mauritius Central Banks to Monitor Rise in Non-Performing Loans, accessed February, 2013 http://www.bloomberg.com/news/2012-09-25/mauritius-central-bank-to-monitor-rise-in-non-performing-loans.html

the FDI inflows eased the pressure of rising current account deficits. However, this strategy is a very risky one as the real estate sector might run into a price bubble fueled by large foreign investments into a limited market.

IV. The potential middle income trap

A current aspect of the Mauritian growth story is the potential 'middle-income trap'. The concept of 'middle-income traps' refers to a situation when countries are able to develop from a low-income to a middle income level but "...seem not to make it into the high-income group" (Filipe, 2012, p.2). Officially, the World Bank classifies Mauritius as upper-middle income country. Thus, the questions that have to be answered with respect to Mauritius are: (1) Is Mauritius really in danger of potential 'middle-income' trap? and (2) If yes, how can this trap be avoided?

Some authors rank Mauritius already in the high-income class. When per capita income is measured relative to the USA, Mauritius is one of only 13 countries, mainly European and Asian economies, that upgraded from the middle-income group in 1960 to the high income group in 2008 and thus escaped the 'middle-income trap' (World Bank and Development Research Center of the State Council of the People's Republic of China, 2012, p.12). Filipe (2012) uses the number of years a country stays in one of the specific income classes³⁵ to define the trap. For instance, countries that remain longer than 14 years in the upper-middle income group (equal to median of year in that class) are in danger to be trapped. As Mauritius was only 12 years in the upper-middle income group (between 1991 and 2003), the country already escaped the middle-income trap by this definition.

Contrary, Eichengreen, Park and Shin (2012 and 2013) analyze patterns in growth slowdowns that appear when countries reach a certain level of per capita GDP. In their updated publication in 2013, the authors find two ranges when high growth periods often come to an end, one at a per capita GDP in 2005 PPP US Dollar of 10,000 to 11,000 and a second at 15,000 to 16,000 US Dollar. The analysis includes only countries with per capita GDP above 10,000 US Dollar before a potential 7-year slowdown period in order to capture only middle income countries. As Mauritius hits this criteria only in 2010 (10,163.74 USD per capita

³⁵ Filipe (2012) defines income classes based on GDP per capita in 1990 PPP dollars in order to extend the classification for the 1950 to 2010. This method differs from the World Bank classification that uses GNI data but is only available from 1987 onwards.

GDP), the island economy is not considered (data source is PWT 7.1).³⁶ However, for the case of Mauritius the results of Eichengreen, Park and Shin (2013) imply that Mauritius has now reached an income level associated with a high risk of a slowdown in economic growth, also given that the island had annual growth rates close to the authors' definition of high-growth before 2010 (on average ≥ 3.5 per cent p.a.). Hence, the question if Mauritius has already jumped over the barrier to be a high income country is not yet decided and depends on the methodology and the data used. Yet, the level of level of income per capita still indicates a potential risk of a middle-income trap.

Eichengreen, Park and Shin (2012) also provide a growth accounting approach to determine the reasons for the observed slowdowns. In a growth accounting approach, the GDP growth rates are broken down into growth rates of capital (K), labor input (L) and human capital (H). The total factor productivity is then computed as residual and includes the influence of other factors like institutions, technological progress or infrastructure (IMF, 2011, p. 29). Eichengreen, Park and Shin report that "... 85 per cent of the slowdown in the rate of growth of output is explained by the slow-down in the rate of TFP [total factor productivity] growth" (2012, p. 54). Consequently, the crucial factors to avoid slowing GDP growth rates are institutions, technological progress and infrastructure and simultaneous improvements in human capital.

The authors' findings support the potential growth limitations in a globally identified development process described by Canuto (2011), which can also be applied for the case of Mauritius. The underlying process typically starts with the employment of a large pool of unskilled labor in simple manufacturing and service activities that requires capital and technology easily available from richer countries. For Mauritius, the historical decomposition of the real GDP growth rate by the IMF (2011) shows that the main driver of growth in the 1970s and 1980s was the increase in capital and labor inputs, mainly associated with the establishment of the textile and tourism industry (see Table 5). In a second stage, the adopted technologies are typically adjusted to local circumstances leading to growth rate picked up in the

³⁶ In the primary publication, Eichengreen, Park and Shin (2012) used PWT 6.3 and a growth slow-down was registered in 1992. However, the per capita GDP in PPP 2005 USD was revised drastically in the PWT 7.0 and is now closer to data from other sources like WDI. Still, the PWT data are questionable in the case of Mauritius.

1990s and the 2000s.³⁷ This development was also described in detail by Subramanian and Roy (2003, p.24) for the example of the EPZ sector. The sector specific TFP accounted negatively to growth in the 1980s (-0.8 per cent) but surged up to 5.4 per cent in the 1990s when the available pool of labor was exhausted (lowest unemployment rate in 1992) and higher wage costs forced the textile companies to improve their efficiency (Sacerdoti et al., 2005, p.30). Simultaneously, the diversification of the Mauritian economy into service sectors like the financial sector was pushed forward, similar to a third step in the common global development process. This step requires higher technological and institutional standards as well as improvements in human capital. Thus, the share of GDP growth related to human capital and TFP increased in the 1990s and 2000s.

	1960s	1970s	1980s	1990s	2000s
GDP growth rates:	2.4	6.0	4.5	5.2	4.4
Contribution of:					
Capital	0.7	2.3	1.7	2.5	1.8
Labor	1.7	2.6	2.1	1.1	0.8
Human Capital	0.9	0.9	0.7	0.7	0.9
TFP	0.7	0.3	-0.1	0.9	0.9

 Table 5: Decomposition of real GDP growth (in percentage points)

Elasticity of 0.35, H is extracted from the data source Source: IMF (2011)

The policies to maintain high GDP growth rates in order avoid the potential middle-income trap focus on contributors to growth beyond capital and labor inputs. For instance Agénor and Canuto (2012) identified three major policy implications: the access to advanced infrastructure, enhanced protection of property rights and open labor markets. As shown before, Mauritius has proven to protect property rights with stable political and economic institutions. Additionally, Mauritius has done an important step to avoid growth slowdowns by investing in ICT infrastructure which is important for the prospects of the ICT sector itself and the financial industry. However, this has to go along with improvements in the educational system in order to have higher skilled people that can be employed in these new service sectors. Eichengreen et al. (2013) provide evidence that a higher number of graduates of secondary schools and universities reduces the likelihood of growth slowdowns as this

³⁷ The use of growth accounting approach is controversial as it is usually based on a Cobb-Douglas production function and highly dependent on the author's estimations for elasticities, share of labor, inclusion of human capital and on the start and the length of the data period. Hence, other publication like Rojid and Seetanah (2009) find that TFP has reached a plateau and contribution decreased between 1980 and 2007 (see also Zafar, 2011).

enables the production of more technologically sophisticated goods and services. Contrary to this, Mauritius still has a high drop-out rate of one third after the primary school and a tertiary enrollment rate of only 40 per cent. Therefore the IMF (2011, p.32) recommends further investment in education and an education reform, and improvements in public utilities and transport infrastructure and a better access of women to the labor markets³⁸ in order to enhance contribution of TFP and human capital to growth.

Besides the constraints in human resources, the major threat for further development of the Mauritian economy might be the risky situation in international trade, a problem that is rather independent from the discussion about middle-income traps. The Mauritian economy diversified into various new sectors but the crucial export sectors sugar and textiles could not move up significantly in the value chain. With the end of trade preference in 2005, the external trade conditions changed drastically and lead to a significant current account deficit of more than 10 per cent of GDP, a level only experienced in the economic crisis of the late 1970s and early 1980s (see Figure 13). Although service exports increased and account for the majority of all exports from 2007 onwards, the downturn in goods exports could not be compensated. Moreover, the contribution of the identified growth drivers financial mediation and ICT to total exports is currently marginal. This situation is also contradictory to the experience of Asian economies like Korea or Singapore that escaped the middle- income trap due to export-led growth.

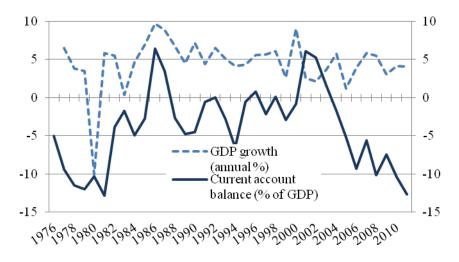


Figure 13: GDP Growth and Current account balance 1976 to 2011

Source: WDI data

³⁸ Similar to the policy implications of Agénor et al. (2012)

Based on the discussion about middle-income traps, the strategies and policy recommendations to continue the high growth performance of the Mauritian economy seem to be clear. Besides higher contribution of capital inputs to GDP growth via FDI and domestic savings, the scope for upgrades are clearly given in the Mauritian educational system and the infrastructure leading to higher TPF and improved human capital. Especially the further development of the prospective growth sectors financial intermediation and ICT depends on such improvements. Although the Mauritian GDP growth was not driven by net exports, as shown in chapter II, the magnitude of the current account deficit might cause lower growth path due to balance of payment constraints in the medium run. Hence, the prospects of these two potential growth sectors, the financial industry and ICT will be analyzed in chapter V, also with regard to their potential to avoid such a balance of payment constraint growth scenario.

V. Evaluation of the potential growth sectors

1. The financial sector

For the Mauritian economy, the financial sector became a major contributor to economic growth especially from the 1990s onwards and is seen as one of the four main economic pillars of Mauritius besides sugar, manufacturing and tourism. The percentage contribution to GDP of financial intermediation including banking, insurance and other services increased significantly from 4.5 per cent in 1990 to an estimated level of 10.2 per cent in 2012 (see Figure 14). On average, the sectoral growth rate was 7.6 per cent per year during that period.

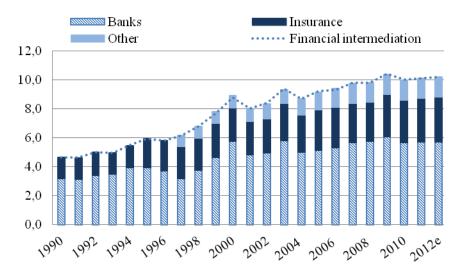


Figure 14: Percentage contribution to GDP by financial intermediation

The financial sector is characterized by the dominance of domestically and foreign controlled banks, generating 5.7 per cent of GDP in 2012 and by large financial flows routed via Mauritius. Since the early 1990s, Mauritian tax-beneficial schemes are used especially for investments into India. In this context a discussion about Mauritius as potential tax haven is still ongoing despite the fact that Mauritius has always been an official white listed jurisdiction. Although more than 37 per cent of all FDI inflows into India between 2000 and 2012 were routed via Mauritius³⁹, the benefits from these flows for the Mauritian economy are still limited. The financial industry is still a net importer of services, mainly in the

Source: CSO, national accounts

³⁹ Fact Sheet on Foreign Direct Investment - Indian Ministry of Commerce and Industry department of industrial policy and promotion, accessed November 2012,

<http://dipp.nic.in/English/Publications/FDI_Statistics/2012/india_FDI_August2012.pdf>

insurance sector. Nevertheless, the financial sector is recognized as "the Linchpin" of the economy (Budget Speech - Minister of Finance, 2011) and as sector with long-term growth prospects if it is possible to generate more substance and value addition. A detailed overview on the financial sector is followed by a SWOT analysis and potential growth fields in the sector.

i. The history of the financial sector

The roots of the banking business go back to the first half of the 18th century⁴⁰. However, at the time of independence in 1968 the financial sector was still limited with five, mainly foreign controlled commercial banks, some parastatal financial institutions like the Development Bank of Mauritius, a housing finance cooperation, a cooperative bank, various insurance companies and other small participants operating. The main tasks of banks included financing for the sugar industry and for import trade, as already described in Meade's report (1961, p.189). From 1964 on, only the Development Bank provided longterm finance. However, with the upcoming change from a monocrop economy to an industrializing economy, the need for productive capital and alternative ways of financing increased significantly in the first years after independence. These changes in the domestic economy were accompanied by shifts in the legislative framework. The Bank of Mauritius (BoM) was established as central bank in 1967 and was endowed with the power to supervise and license banks in 1971. Consequently, the number of participants on the domestic financial markets increased during the 1970s. For instance, the number of commercial banks doubled from five to ten banks in the five-year period from 1970 to 1975 including the establishment of the now second largest domestic bank, the State Bank of Mauritius (SBM) in 1973⁴¹ and increased further to twelve licensed commercial banks in 1980. Sacerdoti et al. (2005, p.72) report that savings accounts doubled between 1969 and 1972 and time and savings deposits even increased by twelve times over the period from 1967 to 1974. Mauritius also experienced a boom in non-bank financial institutions and insurance companies in the second half of the 1970s and the early 1980s (Nowbutsing, 2010, p.4). Still, the development of the financial sector up to the mid-1980s was focused on the domestic market. But already in the early 1980s first plans to establish Mauritius as an offshore financial center (OFC) were discussed (Mistry and Treebhoohun, 2009, p.49).

⁴⁰ Bank of Mauritius was founded in 1813 – but failed 1825, Mauritius Commercial Bank was established 1838

⁴¹ SMB Corporate Profile, accessed November 2012, <http://www.sbmgroup.mu/au.php?suf1=au&lang=en>

Mauritius as offshore finance center

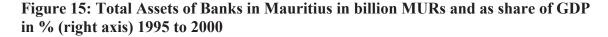
With the establishment of an offshore financial center, Mauritius followed an international trend. Mainly small island economies, from the 1960s onwards, used OFCs to diversify their economic structure. Besides this diversification effect, the build-up of OFCs promised direct effects like license fees, job creation and foreign exchange earnings as well as indirect effects like skills and technical spillovers (Doyle and Johnson, 1999; Suss et al. 2002). The IMF (2000) defines offshore finance as "...the provision of financial services by banks and other agents to non-residents" and relates the term OFC with the some or all of the following attributes:

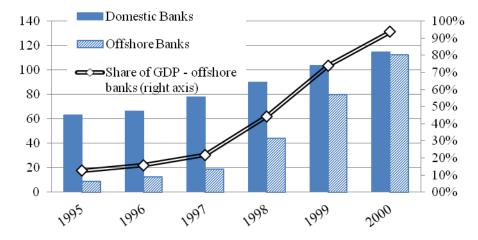
- Relatively large numbers of financial institutions engaged primarily in business with non-residents
- External assets and liabilities out of proportion to domestic financial intermediation designed to finance domestic economies
- Services like low or zero taxation, moderate or light financial regulation, banking secrecy and anonymity.

The characteristics of OFCs differ significantly across the world. Economies like Hong Kong or Singapore were able to create high value generating offshore banking that attracts major international financial players, while mainly small island economies in Europe, the Caribbean and the South Pacific engaged in low value adding business based mainly on tax incentives. Often this second group of OFCs was associated with tax evasion and fiscal crime like money laundry, including the Seychelles in the 1980s (Mistry and Treebhoohun, 2009, p.49). Hence, it was the task of the government to set up a suitable legislative framework and tax regime for a financial offshore business that would be suitable for international financial companies and simultaneously avoid reputational risk for Mauritius.

The first step was a renewed Banking Act in 1988 that introduced two different licenses granted by the Bank of Mauritius with Category 1 -banks as domestic banks and Category 2 - banks that conduct their business in other currencies than the Mauritian currency. Hence, there was a clear separation between the offshore and the onshore banking sector in the beginning. The first bank to be granted an offshore banking license including a specific tax regime was Barclays in 1989 (Mauritius Bankers Association (MBA) 2012; Mistry and Treebhoohun, 2009, p.49) followed by a number of international banks in the 1990s. In the year 2000, 10 banks used Mauritius as a base for their offshore activities. Already in the

1990s, the success of the offshore banking sector was remarkable, which is indicated by the increase of total assets (absolute and relative to GDP) from below 500 million USD (or 12.6 per cent of GDP) in 1995 to 4,025 million USD (or 93.7 per cent of GDP) in 2000 (see Figure 15).





Source: Computed with data from BoM Annual Reports (1998/99 to 2011) and IMF's Financial Soundness Indicators on Mauritius (2009 to 2011) and World Bank Indicators

In addition to the offshore banking sector, other offshore activities like insurances, fund management, investment holdings and operational headquarters were approved and regulated by the Mauritian Offshore Business Act in 1992. The newly founded Mauritius Offshore Business Activities Authority (MOBAA) was responsible for licensing, monitoring and supervising and also for promoting the offshore business sector. The authority issued two types of licenses: one for 'Offshore Companies' defined as tax resident with access to Mauritius' Double Tax Avoidance Treaties (DTAT) and a second one for 'International Companies' that were seen as non-residents and therefore tax-exempted to the Republic of Mauritius.

As OFCs are mainly used by trans-national companies and world's wealthiest individuals, also called high-net-worth individuals (HNWI) (Hampton and Christensen, 2002), the competition from established OFCs like Luxembourg, Cayman Islands or Singapore that served the European, American and Asian markets for these customers was high in the early 1990s (Mistry and Treebhoohun, 2009, p.50). But Mauritius was given a unique comparative advantage when India opened up its market for international capital inflows in 1992. FDI inflows to India and especially portfolio inflows multiplied within the following years and

also foreign corporate debt inflows, a major business for offshore banks, increased significantly (see Athreye and Kapur, 1999). Due to the Double Tax Agreement (DTAT) between India and Mauritius, negotiated in 1983 and in force since 1985, it was very attractive for foreign investors to use the Mauritian tax regime for licensed offshore companies with no tax on capital gains for investments into India. Consequently, the amount of capital flows routed through Mauritius increased drastically. Furthermore, bilateral DTATs were signed with countries like Kenya (1992), China (1995) and South Africa (1997). In total, 24 out of the 37 currently valid DTATs with different specifications were initiated in the 1980s and 1990s.⁴² The success in the offshore sector can be illustrated by the number of companies that were registered at the MOBAA: in the 5-year period from 1995 to 2000 registrations rose from 3,193 to 14,069. Among those, Collective Investment Schemes (CIS) and Closed-end Funds holding increased from 61 with net asset values of 2.2 billion US Dollar to 216 and 8.98 billion US Dollar invested over the same period.⁴³ With the success in the offshore business, the exports of insurance and financial services increased drastically in the second half of the 1990s. Starting from a negligible level in 1995, these exports jumped to 6.7 per cent of service export in 2001 (WDI data).

Although the offshore sector showed impressive growth rates, the major challenge was the development of a modern legislation for new types of financial structures and companies and effective regulation and supervision of the offshore sector. The two main reasons for these improvements were firstly, the need to attract international investors with up-to-date services and products. Consequently, the various innovations like protected cell companies (1999) or the Trust Act (2001) and the Insurance Act (2005) were pushed forward or renewed. Secondly, at the end of the 1990s international organizations like the OECD or the Financial Action Task Force (FATF, set up by the G7) called for stricter rules against money laundering and - even more crucial for Mauritius – for the abrogation of harmful tax competition. In 1998, the OECD defined the key factors to identify harmful tax regimes as (1) no or low effective tax rates, (2) "ring fencing" of regimes which is the existence of an offshore tax system isolated from the domestic economy, (3) lack of transparency and (4) lack of effective exchange of information (OECD, 1998, p.27). Based on these criteria, Mauritius was accused to have a harmful tax system but was not black-listed in 2001 due to

⁴² Board of Investment – DTA, IPPA and Bilateral Treaties, accessed November 2012,

< http://www.investmauritius.com/Resources3a.aspx>

⁴³ FSC Annual Reports 2002 and 2003

the high level of political commitment to eliminate these practices (OECD, 2000, p.29).44 Already in 1998, the Mauritian government has set the income tax rate for offshore companies to 15 per cent⁴⁵, similar to the tax rate for domestic companies in order to eliminate "ring fencing". In the Companies Act of 2001 domestic and offshore companies were regulated under a single legislative act and the offshore sector was re-labeled as 'Global Business'. In 2004 then, a single license system for banks was introduced in the Banking Act. With improvements in anti-money laundering and prevention of related financial crimes in the years 2000 to 2002, the Mauritian government made an effort to cooperate with the FATF and other international organizations. Furthermore, the supervision of financial markets was changed when the Financial Services Commission was created (Financial Service Development Act 2001) to monitor and supervise the non-bank financial sector. Hence, Mauritius was able to avoid black-listings as tax haven but due to this discussion the insurance and financial service exports dropped from close to 7 per cent of service exports in 2001 to only 1.7 per cent on average between 2002 and 2004 (WDI Data, Mistry and Treebhoohun, 2009, p.60). Also some organizations like the Tax Justice Network (2007) and the Norwegian Government Commission on Capital Flight from Poor Countries (NOU, 2009) still classify Mauritius as tax haven.

ii. The recent developments and current structure

In order to illustrate the links and dynamics within the financial sector, a basic cluster approach is applied in the following section that includes broad and narrow sub-sectors of the financial industry. According to the Board of Investment (BoM), the Mauritian financial system is classified by five functional groups, shown in Table 6. As the financial sector combines domestic and international financial services, most sub-sectors are separated into domestic companies and offshore companies that are classified by Global Business Categories (GBC)⁴⁶. Due to the single banking license for all banks, there are only domestic companies listed although some banks are foreign controlled.

⁴⁴ Mauritius reached an agreement with the OECD for more transparency and tax information exchange until 2005

⁴⁵ The effective tax rate can be reduced to 3 per cent as foreign tax credit for up to 80 per cent of the Mauritian tax rate can be used - LowTax Global Tax & Business Portal, accessed November 2012, <http://www.lowtax.net/lowtax/html/jmuoltr.html>

⁴⁶ The relevant companies here fall into the Global Business Category 1 (GCB1), more details on the categories later on.

Functional Group	Main functions	# of domestic companies	# of GBC1 companies	Other details	
Banking	Retail and Corporate Banking. Wealth Management, Investment Banking, Global Business Banking, Islamic Banking	19	-	7 local banks, 6 foreign owned subsidiaries, 1 joint venture and 4 branches of foreign banks	
Global Business	Investment Holdings, Global Funds, etc.	-	9,409	Additionally 15,725 GBC2 companies	
Insurance	General Insurance, Long-term insurance, Reinsurance	1,482	31	Domestic companies include 1,257 Salespersons	
Capital Markets	Equity Markets, Commodity Trading Platform, Listing of GBC1s	166	86	# of companies listed as Securities or Capital Market Intermediaries (FSC)	
Other Financial Services	Brokerage, Accounting, Tax and Investment advisory, International Law firms, Leasing	64	7	# of companies listed as Financial Services and Specialized Financial Services (FSC)	

Table 6: Financial sector by functional groups (number of companies as of 2010)

Source: BOI (2012) and FSC (2011)

The number of companies in the functional groups insurance, capital markets and other financial services are based on statistical data by the FSC (2011) that supervises business activities in the non-banking financial services and global business sector. However, the FSC data for capital markets and other financial services contain only specific companies; other associated companies like international law firms are not included here.

For an illustration of the interconnections within the sector, Figure 16 contains the subsectors besides banking and global business according to the more detailed breakdown of the FSC. The data on total assets of the sub-sectors are based on 2010 data⁴⁷ and are illustrated by the size of the squared areas around banks, insurances, non-bank deposit taking institutions (NBDTI), financial services, specialized financial services and capital market intermediaries. Global business and capital markets are shown as functional areas, as well as the related services for the whole financial sector. Furthermore, the darker areas are associated with activities in the global business sector. The interrelations within the sector are described in detail in the following.

⁴⁷ Latest data for FSC supervised subsector in FSC Annual Statistical Bulletin 2011.

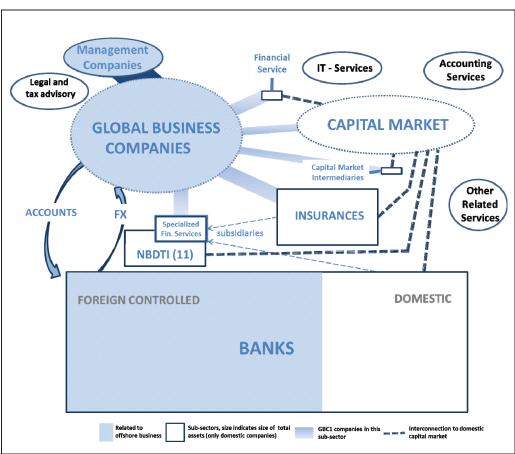


Figure 16 : The Mauritian financial sector

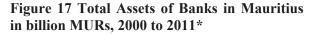
Source: authors' concept

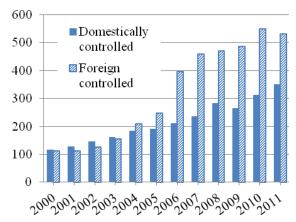
Banks

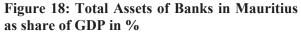
The main players on the Mauritius financial market measured by total assets are commercial banks. In 2011, 20 banks ⁴⁸ were licensed in Mauritius accounting for total on-balance sheet assets of 272 per cent of GDP. Although all banks can now undertake domestic as well as offshore transactions and are registered under a single banking license since 2004, a separation between the business models of local banks and foreign controlled banks is still valid. Most banks of the former offshore category engage in investment banking, global transaction banking and wealth management and have limited activities in the Mauritian market. Hence, we might still differentiate by banks that are engaged mostly in domestic or non-domestic (offshore) business by assuming that domestically controlled banks hold the majority of domestic assets, while foreign controlled banks hold mainly foreign assets. As data base, reports of the Bank of Mauritius on total assets in the banking sector and assets of

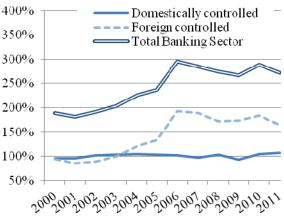
⁴⁸ 6 local banks, 7 foreign owned subsidiaries, 1 joint venture and 6 branches of foreign banks (MBA, 2012)

local banks from 2006 onwards are used⁴⁹ Before 2006 separate data were reported for both types of banks. This separation is graphically represented by the darker and lighter areas in the subsector 'Banks' in Figure 16. Both, total assets of domestically and foreign controlled banks increased significantly in absolute terms from 2000 onwards (see Figure 17).









* 2000 to 2005 Data on domestic and offshore banks, after 2005 domestically and foreign controlled banks

Source: Computed with data from BoM Annual Reports (2001 to 2011) and IMF's Financial Soundness Indicators on Mauritius (2009 to 2011) and World Bank Indicators

The change in assets of domestic banks in the period from 2006 to 2011 (+ 139 billion MURs) is mainly due to the increase in credits to the domestic private sector (+95 billion MURs). Hence, the hike in total assets of the rest of the banking sector was mainly based on offshore banking activities. Especially the surge in total assets by 38.5 per cent⁵⁰ from 2005 to 2006 is caused by a change in foreign assets or more specifically in loans outside Mauritius and balances with banks abroad. The measurement of total assets as a share of GDP underlines the importance of assets hold in foreign controlled banks as assets of domestically controlled banks remained at a level of 100 per cent of GDP (see Figure 18). One reason for the growth of foreign assets is the increasing need for capital in the main markets targeted by offshore banks in Mauritius, India and Africa. Indian companies, for instance, can have better access to foreign exchange loans via international banks licensed in Mauritius as these banks are funded in foreign exchange. Even more importantly, the Indian companies benefit from lower funding costs of these banks as there is no interest withholding tax for banks, due to the DTAT between Mauritius and India. The same is true for other countries where interest

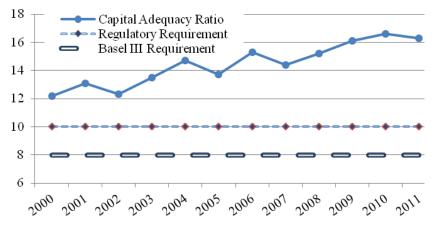
⁴⁹ BoM Annual Reports for local banks, Monthly Statistical Bulletins (also BoM) for total banking sector, assets of foreign controlled banks as difference of both data source

⁵⁰ Computed with data of Bank of Mauritius, Monthly Statistical Bulletin January 2007

withholding tax is reduced or set to be zero in DTATs (for example with Rwanda, Senegal or South Africa). The net interest income out of this business is by far the major source of income for the three largest foreign controlled banks, HSBC Mauritius, Barclays and Standard Chartered in the years 2008 to 2010 (MBA, 2012). Besides that, the requirement for GBC1 companies to hold a bank account with a Mauritian bank creates additional banking activities like foreign exchange, transaction and trade financing services for the banking sector. Although, local banks offer these services for GBC1 companies as well, the former offshore banks still dominate these activities. For instance, HSBC claimed in 2007 that more than half the GBC1 companies hold their accounts with them.

In the 2008, the IMF certified that "Mauritius has a relatively well-developed financial system..." (IMF, 2008, p.9) including high profitable banks that are comfortably capitalized. Indeed, the average data on capital adequacy and return on equity are constantly on a high level. With up to 16.6 per cent in 2010, the capital adequacy ratio exceeded the regulatory requirement by the Bank of Mauritius of 10 per cent and the 8 per cent requirement in the upcoming agreement of Basel III (see Figure 19).





*Data after 2005 include former offshore banks Source: Bank of Mauritius, Banking Supervision Reports

The return on equity (ROE) in the banking system was on average as high as 22.2 per cent between 2006 and 2011. Interestingly, both offshore banks and domestic banks were highly profitable (both close to 20 per cent) in the years before they were registered under one license in 2004, although the business models were different. One explanation for the profitability of domestic banks might be the spread between interest earned in advances and cost of deposits that was on average at 4.07 per cent between 2006 and 2009 and decreased recently to the level of 2.7 per cent in 2011. However, the performance figures might be

biased due to the high level of concentration in the banking sector. Especially, the local banking market is dominated by two banks, with MCB and SBM representing 81.9 per cent of total assets of local banks in 2011.⁵¹ The foreign controlled banks are also concentrated with total assets of HSBC Bank Mauritius Ltd. and Barclays Bank PLC adding up to 44 per cent of total assets in this sub-group in 2011 (data from MBA, 2012). Hence, these four banks represent more than 58.2 per cent of the total banking sector and therefore dominate the total financial sector.

Although the business models of domestic and foreign controlled banks still differ, local banks have diversified their activities also by the extension to international markets. Hence, there is potential for further growth of domestic banks outside of Mauritius. Certainly, spillover effects from foreign to local banks via knowledge and technology transfers or staff rotation to train local staff have opened opportunities for local banks that can be realized in future strategies.

Insurances

The market for insurance companies can also be divided into a domestic and an offshore section. The companies that are active on the domestic markets run mainly long-term insurance and general insurance business. Furthermore, a number of insurance brokers and insurance sales people are acting on the domestic insurance market. The offshore insurance market includes 13 general and long-term insurances companies as well as four re-insurers using the GBC1 schemes. The insurance sector also showed significant growth with 5.8 per cent annual growth between 1990 and 2012. However, the success in the offshore insurance markets is limited with only a few insurance companies using Mauritius as international platform. The sector is also a net importer of insurance services accounting for 1.5 per cent of all service exports and 3.2 per cent of all service imports in 2010. In comparison with the banking sector, the insurance sector is small with one 10th of the total assets of banks in 2010 (FSC Data).

Non-bank deposit taking institutions and Financial Services

The activities in the non-banking sector is regulated and supervised by the FSC. In 2010, eleven companies are listed as NBDTIs including six leasing and two lending companies.⁵² Among those eleven NBDTIs, five are subsidiaries of domestically controlled banks or

⁵¹ Including the joint-venture Bank One

⁵² In September 2012, only eight companies were listed as NBDTIs in BoM Statistical Bulletin

insurers. Additionally, FSC records financial services including asset and treasury management and specialized financial services including factoring and credit financing. With total assets of 44.2 billion Rupees in NBDTIs (BoM data, annual report 2010/11), 21.1 billion Rupees in specialized financial services and 2.6 billion Rupees in financial services (data FSC Annual Statistical Bulletin), all three sub-sectors play a minor role on the overall financial market. Also, the number of GBC1 companies in this area is limited.

Capital Markets

The IMF reports that despite an overall well-developed financial system in Mauritius "security markets are shallow" (IMF, 2008, p.9). Nevertheless, the capital markets connect different actors in the financial markets. Especially the Stock Exchange of Mauritius (SEM), founded in 1989, with its 87 companies listed and a market capitalization as high as 70.9 per cent of GDP in 2011 is a key operator in the sector. Domestic banks and insurer as well as investment funds and global business companies are listed here. The SME also offers opportunities for international companies to list and trade equity and debt securities in USD, Euro and GBP and could be a gateway for African companies to foreign currency funding. In addition, a private trading platform for commodity and foreign exchange derivatives is being established in Mauritius. Further scope for the growth of the capital markets is given by the build-up of a well-functioning bond market on the island which has often been advised recently (Sacerdoti, 2005 and IMF, 2008).

Global Business

The current structure of the global business sector is mainly based on the Company Act and the Financial Service Development (FSD) Act of 2001 and is in the latter being defined as "... business or other activity (...) which is carried on from within Mauritius with persons all of whom are resident outside Mauritius and which is conducted in a currency other than the Mauritius currency...". The initial types of offshore companies - offshore and international companies - were continued but renamed as Global Business Category 1 and 2 (GBC1 and GBC2).⁵³ Because GBC1 companies are regarded as tax residents, they enjoy the benefits of

⁵³ Specified activities for GSC1: aircraft financing and leasing, assets management, consultancy services, employment services, financial services, funds management, information and communication technology services, insurance, licensing and franchising, logistics and or marketing, operational, headquarters, pension funds, shipping and ship management and trading (FSD act, 2001)

For GBC2: other than banking, financial services, investment holdings, trusteeship services or other services for companies like office facilities. Source: *FSC – Being Licensed*, accessed November 2012, <http://www.fscmauritius.org/being-licensed/applying-for-a-licence/global-business-licence.aspx#gbc1>

Mauritius' DTATs and Investment Promotion Protection Agreements (IPPAs) and are therefore attractive for investment holdings and funds (see Appendix I for a typical investment scheme in Mauritius). Also Protected Cells Companies (mainly insurances) and trusts can use the GBC1 scheme. Out of the 9,409 registered GBC1 companies in 2010, 74 per cent were investment holdings and further 8 percent were collective investment schemes (CIS) or closed-end funds. Contrary, GBC2 companies are defined as non-residents and are therefore excluded from the DTATs but also exempted from taxes in Mauritius. The main objective of GBC2 is the holding of foreign assets. From 2001 to 2008 the number of Global Business companies grew with an average rate of almost 10 per cent per year. While the number of GBC2s declined by one third since 2008, the number of GBC1s including CIS increased further (see Table 7). The reason for the large decrease in GBC2 companies is seen in the financial crisis.

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GBC1	6,142	6,546	6,847	7,261	7,733	8,706	8,761	9,498	9,581	9,409	9,758
off these CIS	221	257	271	293	334	358	478	641	648	741	829
GBC2	10,368	12,803	14567	16334	18,167	20,285	20,999	22,386	18,548	15,725	14,166
Total	16,510	19,349	21,414	23,595	25,900	28,991	29,760	31,884	28,129	25,134	23,924

Table 7: Number of registered Global Business Companies

Source: FSC Annual Reports and Statistical Bulletins

GBC1 enterprises are required to have substance in Mauritius to obtain their tax residency status with at least two directors, a local bank account, accounting records and statutory financial statements audited in Mauritius. Contrary, GBC2 companies can only use management companies as a resident agent.

These schemes are subject to criticism by various international organizations due to many exemptions for GBC companies compared to local companies, low penalties and fines when companies fail to comply with requirements and non-public data of accounts reported to the FSC. Especially, GBC2 companies are seen as critical as regulations are low, secrecy is high and taxes are zero in Mauritius (NOU, 2009).

As indicated before, the trigger and the driver for the growth in the global business sector were DTATs, especially with India. However, a correct evaluation of financial flows from Mauritius to third countries was difficult in the past as data were not consistent throughout different data sources. Therefore the IMF (2012) reports that Mauritian statistics like balance of payments (BoP) and international investment position (IIP) statistics need further

improvement. Both statistics showed large discrepancies due to the unclear inclusion of the global business companies in the past. For instance, the balance of payments states for the calendar year 2010 FDI flows of 4,009 million MUR or 130 million USD from Mauritius to abroad and excludes all activities of GBC companies.⁵⁴ Contrary, the Indian Ministry of Commerce and Industry includes these activities and published that in their financial year from April 2010 to March 2011, the FDI inflows from Mauritius summed up to 6,987 million USD or 32.2 per cent of all FDI inflows to India.⁵⁵ In a first step for higher data quality, the BoP data from 2011 onwards include estimates for cross-border transactions of GBC1 companies and provide a more realistic picture plus a quarterly breakdown. Hence, for the financial year April 2011 to March 2012 the FDI outflows from Mauritius are reported as high as 811,886 million MUR or 28,283 million USD⁵⁶ of which 99.7 per cent were sourced in GBC1 companies. Out of this amounts, 9,942 million USD or 35.1 per cent were routed to India. The same tendency is valid for flows and stocks of portfolio investments. The data in the Coordinated Portfolio Investment Survey (CPIS) include the offshore sector as the IMF emphasized the importance of this sector for small island states when the survey was reissued in 2001 (IMF, 2002). Hence, the data for Mauritius show that portfolio activities are clearly directed to Asia, especially to India with 65.4 per cent of all portfolio stocks in the period from 2002 to 2011 compared to China with 4.8 percent and whole SSA with only 3.6 per cent on average (see also Table 8). The majority of portfolio investments were held in equity securities (85.5 per cent)⁵⁷, this is also a reason for the large fluctuations in the data. The growth trend peaked in 2009 and the value of holdings especially in India declined thereafter.

⁵⁴ BoM, Monthly Statistical Bulletin Jan 2012

⁵⁵ Fact Sheet on Foreign Direct Investment - Indian Ministry of Commerce and Industry department of industrial policy and promotion, accessed November 2012,

http://dipp.nic.in/English/Publications/FDI_Statistics/2012/india_FDI_August2012.pdf

⁵⁶ Exchange rate of 2011, WDI data

⁵⁷ Many mutual funds investing in the Indian equity market are registered in Mauritius.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total	17,128	26,612	39,030	54,834	81,550	154,645	131,078	181,584	176,948	128,886
change in %	-	55%	47%	40%	49%	90%	-15%	39%	-3%	-27%
in India	7,309	14,530	22,974	39,136	61,779	110,686	101,206	140,733	120,026	73,319
in China	432	1,124	1,111	4,887	6,148	4,159	5,809	10,569	5,722	7,399
to SSA	2,078	702	1,654	647	1,447	5,198	3,414	8,126	3,295	2,480

Table 8 : CPIS Total Portfolio Stocks in million USD

Source: CPIS Data

Similar to FDI flows, BoP and IIP were not consistent with these data on portfolio investments⁵⁸ as global business was not included, although in CPIS data 98.5 per cent of total foreign portfolio investment came from the global business sector in Mauritius (BoM Annual report 2010/11).

The renewed BoP data in 2011 and 2012 show the magnitude of financial flows that are routed via Mauritius but also the limited impact of these flows on the domestic economy. FDI inflows to Mauritius in 2011 totaled to 273 million USD or 2.42 per cent of GDP. The FDI inflows to GBC1 companies were estimated at 37,487 million USD or more than three times the annual GDP. Also the total CPIS assets in 2011 account for more than 11 times the domestic GDP of Mauritius. Obviously the tax incentives are a major driver for the sector and so the tax revenue from global business is a minimal fraction of the total financial flows. The IMF (2008) estimates that 25 per cent of corporate tax comes from global business which is equal to approximately four per cent of Mauritius' total tax revenue in 2009 and 2010. Furthermore, the distribution of the global business sector to GDP was estimated to be around 3 per cent in the last years (BOI, 2012). In the updated national accounting standards services in the offshore sector are included in the sector Professional, scientific and technical activities that accounts for 4.6 per cent of GDP in 2012 (CSO data, National Accounts). Although this sector can be seen as growth driver since 2009, the impact is still small compared to the magnitude of financial flows. The same is true for the employment effects associated with the global business sector. So far, only the employment of 2,216 persons in management companies in 2010 can be used as direct effect. According to FSC, a detailed analysis of

⁵⁸ Technically IIP portfolio data and CPIS data should be the same. However, in the IIP of 2010 portfolio holdings of 2,559 million USD (BoM Annual report 2010/11) were reported in contrast to CPIS with 176,948 million USD.

employment effect is currently conducted.

These limited effects of global business on the domestic economy are indicators that the global business is mainly characterized by administrative operations and passive investments. Hence, a future strategy for the financial sector needs to seek for potential upgrades to business activities with high value addition, especially in the global business section.

Overall, the financial sector is dominated by commercial banks. Especially foreign controlled banks increased their offshore activities targeting mainly the African and Indian market. But also domestically controlled banks expanded their business activities towards international transactions. Consequently, the contribution of banks increased from 5.1 per cent of GDP in 2005 to 6.1 per cent in 2012. Other domestic financial sectors lag behind that development: the insurance industry, for instance, could only increase its contribution to GDP from 2.8 per cent in 2005 to 3.0 per cent in 2012 (CSO data, National Accounts). Also the global business sector and the associated tremendous financial flows still have a limited impact on domestic economic performance and on service exports.

Although the exports of insurance services increased by 770 per cent in real terms from a low base between 2005 and 2010 (UN Comtrade data), the insurance sector is still a net importer of services. Contrary, Mauritius is a net exporter of other financial services. However the amount of the surplus is small relative to other service exports. In 2009, the net surplus summed up to 40 million US Dollar compared to surplus in the tourism sector of 740 million US Dollar. Hence, the task for further development of the financial industry is also the increase in financial service exports. All financial sub-sectors certainly have scope for higher value addition in the future. The major potentials and risks of such a growth strategy will be analyzed in a SWOT analysis.

iii. SWOT Analysis

Based on the sectoral overview on the financial industry and the interactions between the participants in the markets, we continue the analysis with the discussion of strengths and weaknesses of the Mauritian financial sector. The analysis is with regard to the major strategy for the financial sector by the government that see Mauritius as platform for financial flows from Asia to Africa and vice-versa.

Table 9: SWOT diagram financial sector

Strengths	Weaknesses				
 Experienced and proven jurisdiction No restrictions on capital flows and exchange rates Good regulatory and institutional base Network of DTATs and IPPAs Fiscal incentives for GBC companies Convenient time zones Compliance with international standards Long-term good relation to Asian and African countries 	 Limited expertise and lack of skilled work force Connectivity (ICT infrastructure and flights) Limited securities markets Dependence on India's tax regulations Highly concentrated domestic banking market 				
Opportunities	Threats				
 Hub for trade and financial flows from Asia to Africa and vice versa DTATs with potential growth markets (India, China and many African economies) More DTATs and IPPAs with African countries More spillover effects from Global Business to domestic players Links to other sectors (ICT, Real Estate, Tourism, etc.) International expansion of domestic financial 	 Cancellation of DTATs and IPPAs Critique on fiscal incentives Insufficient regulation and supervision and associated reputational risks Competition from other countries Competition for local companies from international companies Limited growth of markets in Asia and Africa 				

players

• Improve reputation as IFC

Certainly, Mauritius is an international financial center with unique strengths that bears a long-term growth potential for the whole economy. Firstly, several specifications like the cultural and economic ties to India, China and parts of Africa and the geographical position as connection point between Africa and Asia create a precondition for a gateway for trade and financial flows from and into these regions. The experience of the past proofs that these linkages have help Mauritius to grow, for instance in the textile industry. Secondly, Mauritius actively promoted its reputation as a stable and reliable location for offshore banking and as low-tax platform for investment in emerging markets for more than two decades. The legal and regulatory framework was continuously updated also inspired by liberal examples from New Zealand and fulfills international standards to a high degree. This investor friendly environment is further accompanied by no restrictions on capital flows and exchange rates and fiscal incentives. Mauritius has a flat tax system with a tax rate of 15 per cent for residents with several exemptions like no taxes on capital gains and dividends. These tax benefits are also valid for foreign owned global business companies and applicable in bilateral DTATs. The prominent example is certainly the agreement with India but Mauritius has also a growing number of treaties with African countries including South Africa, Senegal and Kenya. Additionally, Mauritius offers 22 IPPAs that protect investments by Mauritian residents from expropriation in the contracting countries.

However, there are major concerns about the possibility for Mauritius to upgrade their financial sector. As current weakness, the limited expertise and the related lack of skilled work force can be named. Especially, the fact that global business activities resulted mainly in low-value-added services like accounting or administration is associated with limited expertise. The missing highly skilled work force can limit the speed of potential growth (IMF, 2008, p 18). This situation in the financial industry can be related to the general discussion about 'middle-income' traps that were also related to the quality of the education system (see chapter IV). Moreover, experts see the limited connectivity with regards to costs and reliability of telecommunication and inadequate flight connections to African trading partners as a restriction for the financial industry (MCB, 2012b). As indicated before, the securities markets in Mauritius need further improvement and more expertise with multi-asset trading platforms and derivatives trading to attract businesses like fund and asset management and to increase service exports in that sector. Also the dependence on the DTAT

with India and highly concentrated domestic banking sector can be identified as major current weaknesses.

The strategic track for the financial sector in Mauritius is inter-connected with the growth prospectus of East Asian, South Asian and African economies as Mauritius sees itself is an investor into these markets (mainly domestic banks) and a platform that enables financial flows into these regions. Besides the positive outlook for the major Asian economies, the focus for Mauritius lies on Africa due to the close relationship to African economies and the high expectations towards the growth prospects. As the World Bank estimates in 2010 "that Africa could be on the brink of an economic takeoff, much like China was 30 years ago, and India 20 years ago", Mauritius could be a complementary part of Africa as gateway for investment. The existing and future DTATs and IPPAs could be used as a catalyst for these international financial flows. Current data indicate the orientation towards Africa as in the first half of 2012 47 per cent of newly registered GBCs in Mauritius had an African investment mandate.⁵⁹ The crucial task for the Mauritius financial sector is to upgrade its reputation as international financial center and to generate high-value-adding services in Mauritius like private banking, asset management or investment banking services. The high quality of Mauritian institutions could give the country a long-term comparative advantage especially compared to other SSA economies. Moreover, the financial sector has also potential inter-connections with other local sectors like the ICT sector and with real estate and tourism that can both profit from asset management activities for high-net-worth individuals (HNWI). Also the further international expansion by domestic companies into the Asian and African countries could lead to future growth of the sector and financial advisory services in other developing economies could boost financial service exports.

However, the major threat for the growth potential of the financial sector is the cancellation or changes of the DTATs. Although the Mauritian government protects the DTAT with India with the argument that it is beneficial for both parties (Budget Speeches 2011 and 2012), there is continuous bilateral discussion about the agreement due to negative impacts like "round-tripping" – money from India is re-invested via Mauritius into India – and problems

⁵⁹ Board of Investment – Mauritius National Budget 2013 Highlights, accessed November 2012

<http://www.investmauritius.com/Budget2013/financial.html?utm_source=edirectpost_marketing_system&utm _medium=email&utm_content=17388327&utm_campaign=Mauritius%2520National%2520Budget%25202013 %2520Highlights>

with black money appear. Also the fact that due to the DTAT an estimated 600 million USD of profits flow tax free to international investors each year, might lead to changes in the agreement in the future (Rizwan, 2012).⁶⁰ Recently, India introduced a General Anti-Avoidance Rule into their Finance Bill 2012 stating that Indian tax authorities can deny double taxation treaty benefits to foreign investment funds if their intermediate holding companies have the only objective of tax avoidance (KPMG, 2012). The consequences are not clear so far as GBC1 companies could be accepted to have commercial substance in Mauritius, but there is already news that funds based in Mauritius were switched to Singapore.⁶¹ Still, the political will on both sides seems to be very high to maintain the treaty based on the traditional business network between the two countries. These negative side effects might also affect current and future DTATs with other countries and lower the incentives for foreign investors to use Mauritius as a platform. Furthermore, the low-tax environment and the structure of the global business sector with the tax-free GBC2 companies might re-start a discussion about Mauritius as a tax-haven and lower its reputation as an international financial center. Moreover, Mauritius is in competition with other countries like South Africa that offer similar schemes for investments into Africa, like regional headquarter schemes or Singapore that has similar DTATs with India and China. Still, the long run lower as expected growth or social unrests in Asian and African countries could negatively affect international financial flows into these regions and limit the prospects of the domestic financial sector.

Overall, the major challenge for Mauritius remains the task to upgrade its services to highvalue-added activities. In the next section, possible business fields are discussed.

iv. Potential growth strategies

Several publications discuss possible actions and business fields that could be considered to make a shift form "passive, low value-added account management to productive, substantive high-value added international financial services" (Mistry and Treebhoohun, 2009, p.62) in the Mauritian financial sector.

⁶⁰ By applying an "ad hoc" method used by the NOU (2009), the estimated volume invested in India via Mauritius is equal to CPIS data plus the FDI inflows since 2000 and adds up to 140 billion USD. When an annual return of 10 percent is assumed, the profits from investments in India would account to 14 billion USD per year. Parts of these profits would not be taxed in India and only to a low extent, if at all, in Mauritius.

⁶¹ *The Economic Time,* accessed November 2012, <http://articles.economictimes.indiatimes.com/2012-04-25/news/31398993_1_india-mauritius-dtaa-private-equity-funds-capital-gains-tax>

Sacerdoti (2005) and UNCTAD (2008) emphasize opportunities for Mauritian domestic banks and other financial service companies to increase their presence especially in African countries. Hence, these financial players could then benefit from the increasing trade and financial flows in the region and further inter-connect other Mauritian companies from sectors like textiles or tourism to the region. Especially MCB and SBM follow already such a strategy and both or one of them have subsidiaries in India, Mozambique, Madagascar, Seychelles and other countries in the region. In 2011/12 for instance, SBM generated 30 per cent of revenues from international business (SBM, 2012). Additionally, domestic banks can diversify their portfolios internationally in order to avoid high concentration of credit with few domestic borrowers or sectors.

One of the most promising developments for the financial sector could be services for HNWI in the form of wealth management which includes investment advisory and asset management. Especially, the interconnection with security markets, global business, real estate and tourism could generate a broader impact on the economy. Although management companies and banks offer several services in this area, there are possibilities for Mauritian companies in regard to the growing global wealth management industry.

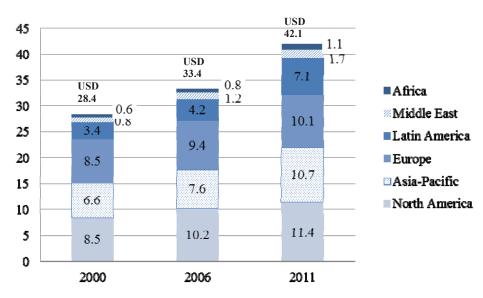


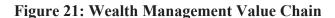
Figure 20: Wealth of HNWIs by regions in trillion USD

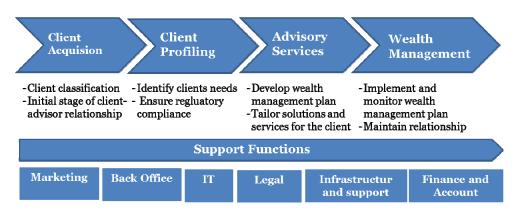
Source: Cap Gemini Wealth Report 2006 and 2012

Overall, the global wealth is expected to growth in the up to 2016 by 4.3 per cent per year (BCG, 2012). The financial wealth of HNWIs is even estimated to grow by 6 per cent, the wealth of Ultra High-Net-Worth Individuals (UHNWI) by 8 percent annually. In total the financial wealth in the hands of HNWI could increase from 49 trillion USD or 40 per cent of

global wealth to 66.5 trillion USD or a share of 44 per cent (calculated with BCG data, 2012). Especially the Asian-Pacific region will see an increase in financial wealth and a number of HNWIs even after the region caught up to the level of established regions Western Europe and North America in the last decade (see Figure 20). Given the historical ties to India and China, Mauritius might benefit from the surge in private wealth in these economies as China will account for 35 per cent and India for 10 per cent of increase in global wealth between 2011 and 2016 (BCG, 2012). Especially the number of millionaire and UHNW households should increase further in these regions. As argued before, HNWIs often used offshore centers for the management of their financial investments. While Switzerland, the largest offshore center declines due to new transparency and withholding tax agreements, the major beneficiaries of the changes in wealth growth and distribution were Hong Kong and Singapore where mainly private financial wealth from Asian-Pacific customers is managed (BCG, 2012). These two centers have already established a substantial financial community and offer similar low-tax investment schemes like Mauritius. Nevertheless, Mauritius could find its own niche in the wealth management industry by specializing in the African investments also for Indian and Chinese investor based on its various DTATs and IPPAs, and the service for the growing number of African HNWIs.

In the value chain of the wealth management business (see Figure 21) Mauritius is mainly active in support functions like finance and accounting or back office services. Although a number of banks offer full wealth management and management companies provide tax planning and other advisory services, further measures seem necessary to establish a broader wealth and asset management industry with full services. Currently, FSC registers only five asset management companies including three GBC1 companies (FSC, 2011).





Source: Gap Gemini and RCB World Wealth Report 2012, p. 32

Two different ways are possible to enforce such a path for wealth management in Mauritius. Firstly, more international financial firms could be attracted to provide their services from Mauritius. Indeed, many leading global wealth managers have already subsidiaries in Mauritius but mainly as passive investment holdings due to tax reasons that have only limited economic impact for Mauritius. In 2008, the United States Government Accountability Office (GAO) published a list of subsidiaries in tax havens or tax privacy jurisdictions owned by the 100 largest publicly traded U.S. companies, including the banks that are the top U.S. wealth management firms ⁶² like Bank of America/Merrill Lynch, J.P. Morgan and Morgan Stanley. These companies have subsidiaries in Mauritius, even as many as in Singapore or Hong Kong. However, it is uncertain if these companies are willing to operate more visible from Mauritius. Secondly, alternative business models like external wealth managers could be applicable in Mauritius. In a report BCG (2012) also describes different business models like family offices to serve a few specific customers or online wealth managers. These independent advisors could use the existing services of local and international banks plus the support services already offered in Mauritius in the global business sector. Furthermore, the customer acquisition could be combined with the fact that Mauritius is a high end holiday destination that also offers real estate investment schemes for HNWIs.

Mauritius has the potential to be platform with full wealth and asset management services as the legal and regulatory framework provides various possibilities for wealth managers including trusts or foundations. Especially, the niche for investments into Africa including a number of tax benefits could attract wealth managers. However, it is necessary to ensure that the full value chain in wealth management should be offered. For that reason, investment into the infrastructure and the avoidance of reputational risk is necessary.

Overall, the financial sector has multiple fields to develop like treasury and risk management for multi-national companies, investment banking services or Islamic banking and finance – mostly in association with the access to African markets. Given the stable and reliable environment, Mauritius can be used as low-risk entry point to these emerging economies.

⁶² Barron's Top Wealth Management Firms 2011, accessed December 2012,

<http://online.barrons.com/article/SB50001424052748704429004576601890176191146.html>>

v. Conclusion

Since the early 1990s, the financial sector in Mauritius has seen an impressive development and is an important contributor to the GDP growth in the recent years. Especially, the former offshore banks and the global business increased significantly and had a positive influence on the growth of local financial firms. Due to bilateral DTATs with several emerging markets many of them already negotiated in the 1980s - made Mauritius a major destination for international financial flows. Like in the successful international financial center Singapore, financial intermediation has already a high share of GDP of more than 10 per cent. However the main difference to successful financial centers like Singapore is that Mauritius is often only a pass-through station for these flows with limited impact on the local economy. Hence, the financial industry is also still a net importer of financial services and is thus not able to balance the current account deficit of Mauritius. Therefore it is crucial for the financial sector to upgrade from low value-added services to more sophisticated activities. The limitations for growth in the long-run are the dependence on DTATs, the reputational risks and the limited experienced work force in the country. Additionally, the financial industry might adopt structures in the financial sector that is very risky and unstable and the whole economic structure might be to biased towards financial services.

Overall, the Mauritian financial sector still offers growth opportunities in the near future especially in the securities markets and the domestically controlled banks but long-term growth also depends on external factors like international financial flows and the growth potential of Africa.

2. The Information and Communication Technology Sector

Changes in the technological landscape have brought about the integration of information technology (IT) and communications technology (CT), which is now referred to as the field of information and communications technology (ICT). The World Bank describes the field of ICT as consisting of "hardware, software, networks, and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services"⁶³. With the increasing volumes of cross border trade in services, the novel fields of IT enabled services (ITES) and IT services (ITS) have become major elements of the ICT sector. ITES span a broad spectrum of services which are offered remotely facilitated by communication networks, these range from contact centers, technical support services, accounting services to other professional services. On the other hand, ITS are linked to electronic networks and pertain to services falling under the broad categories of IT applications and engineering services (Sudan et al., 2010, p.2).

Today, the ICT sector has become increasingly important in both developed and developing countries. Globally, governments have noted the potential for their countries to advance with the proper use of this sector. According to the World Bank (WB) there are great prospects for economies to progress through higher productivity, competitive industries, increased employment, enhanced export markets and gains from decreasing poverty levels (WBG, 2012). Moreover, several developing countries (such as India, Philippines and El Salvador⁶⁴) have benefited from the expansion of the subsector of ITES and ITS. The potential of the IT-based services market is estimated to be approximately 800 billion US Dollars annually of which there is still a third to be explored and captured by existing or new market entrants (WBG, 2012, p.16). Thus, the magnitude of benefits which could be derived from this sector quantifies it as a modern viable engine of economic growth for countries willing to adequately tap into the possibilities it presents.

The Mauritian government has also realized the benefits of the focus on the digital society, and in the late 90s identified it as a new sector to develop in order to sustain economic growth and to bring about the so called "new economy" (MRC, 2001, p.2). This was with the vision

⁶³ World Bank ICT Glossary Guide – 100 ICT Concepts, accessed January 2013,

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTINFORMATIONANDCOMMUNICATIONA NDTECHNOLOGIES/0,,contentMDK:21035032~menuPK:282850~pagePK:210058~piPK:210062~theSitePK: 282823~isCURL:Y,00.html>

⁶⁴ According to the WB it was traditionally developing countries like India and Philippines which benefitted from IT services and ITES global market, however new smaller countries such as El Salvador, Dominican Republic and Mauritius are taking advantage of the opportunities presented by this industry (WBG, 2012, p.17).

that this emerging sector would revolutionize the traditional economic model, which would then lead to greater prosperity in all areas of society and release the potential to ascend the value chain (ICTA, 2009). For Mauritius, tapping into the ICT sector would provide for gains in not only in employment but in GDP and exports. Additionally, it was meant to build a spirit of innovation and entrepreneurship, and most importantly, it would capitalize on the country's main resource, that of its human capital. In 2012, it was reiterated by the Mauritian government that even though the economy had already experienced and achieved considerable economic and social progress, the need to grow beyond a middle income economy required the search for new potential avenues to leverage greater economic gains (GOM, 2012, p.7). It is with this in mind that Mauritius is keen on placing itself as a top ranking regional ICT hub and as such has created and continues to improve a dynamic framework for it to achieve such ranks.

Today, ICT is one of the island's youngest sectors; however despite its nascent nature, its energy and potential are not ignored. It is now considered as an important pillar of the Mauritian economy contributing an estimated 6.5 per cent of value added to GDP in 2012 (BOI, 2012). In addition to this, it is considered as a real driver for growth with an annual growth rate sustained at double digits over the past 8 years, with estimates of the CSO claiming this to be at a rate of 13 per cent annually (CSO, 2012; BOI, 2012).

The sector is therefore worthy of analysis as a potential strategic sector for further growth in Mauritius. Amidst the positive trend of the sector challenges have presented themselves which can affect its future possibilities. As such, the review of the sector will examine its brief history, the conditions of its enabling environment and its current situation. Finally, in order to explore the prospects of the sector as a strategic pillar of Mauritius' economy a SWOT analysis will be applied.

i. The history of the ICT sector

The Mauritian ICT industry can trace its beginnings to 1883, when the first telephone line became available on the island (ICTA, 2004, p.1). However, the convergence of telecommunications, information technology and broadcasting was only realized with the establishment of a Ministry of Information and Communication Technology (MICT) in 1997. At this time there was already an existing National Computer Board (NCB)⁶⁵ which was

⁶⁵ Since 1988

primarily focused on the development and support of information technology (IT). Nonetheless, the creation of the ministry afforded the opportunity to oversee at a sectoral level the combined elements of telecommunications and IT. Hence, the ministry's main goal was to enrich the lives of citizens and the economic health of the nation through the merger of these two elements (MICT, 1997, pp.16-20).

Why the focus on this new sector? The impetus can be linked to 1994. With the impeding effects of the WTO regime, it was acknowledged that there was a real threat to the trade preferences enjoyed by the existing pillars of the Mauritian economy. This potential threat combined with 'the island's limited resources, the international pace of technological progress, the rise of new low-cost competitor countries, the implementation of further global non-tariff barriers and alterations to commodity and financial markets', were all forces which required an appropriate response by Mauritius (ICT Policy, 2007, p.5). Consequently, a new way forward was sought by both the public and private sector. The result of this was the transformation of ICT into a critical element in the economic landscape of the island to ensure that Mauritius could survive the challenge of sustainable development. To this end, Mauritius developed a clearly focused strategy on the development of ICT and its promotion.

The government in the initial stages was keen on promoting the island as an 'information based' economy by using IT to leverage the competitive advantage of existing sectors. In order to do this, the establishment of the MICT was not done in isolation; the government simultaneously developed a policy guide in the form of a national strategic plan. Thus, by 1998 the government was equipped with a plan for the next six years with the aim to become an information-based economy. The focus at that time was to position the country as a regional ICT hub; and to establish the island as both an IT exploiter and exporter (MICT, 1997, p.16). For Mauritius, it was important that IT would allow the island to remedy one of its main economic disadvantages: its geographical remoteness (MICT, 1997).

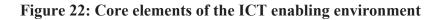
One of the first milestones to be achieved for the sector was the full liberalization of the telecommunications market which took place in 2003. This date is crucial for the sector as most developments and tracking of changes are measured from 2004, the year subsequent to liberalization (Oolun et al., 2012). The government with its new focus on ICT, acknowledged that the sector required a reform and that the success of ICT relied in a major part on telecommunications being competitive. It was noted that a competitive telecommunications

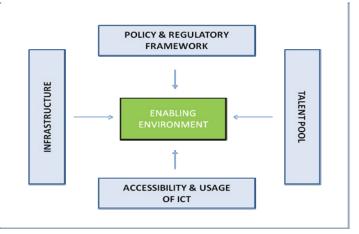
market would lay the foundation for better market conditions and allow the development of the entire industry (MRC, 2001, p.3).

Since 2003, the government has placed a concerted effort on the establishment of ICT as contributor to the economic health of the country. The government has thus focused on creating a solid regulatory framework, implementing appropriate legislation, providing technical infrastructure and capacity building. Mauritius has therefore profited from many changes to its ICT environment which promote ICT acceptance, ease of operation and attractiveness to foreign investors.

Building an enabling environment for ICT

According to the World Bank (2012, p.ix), the enabling environment is one that is characterized by the necessary elements which act as support structures to attract investors. By extension, for a country to fully benefit from ICT or to establish itself as an ICT hub the environment should be conducive for the efficient operation of the sector. By means of a process deliberately undertaken by the Mauritian government the environment for ICT has evolved considerably since the establishment of the MICT. Core elements of this so-called "enabling environment" can be considered to be a robust policy and regulatory framework, appropriate technical infrastructure, accessibility and usage of ICT and features of the available talent pool. This is represented in Figure 22.





Source: Adapted from WEF and INSEAD, 2012

Mauritius is considered to have a fairly sophisticated ICT environment and more impressively, one that has rapidly developed in less than 20 years. Already, in 2012 Mauritius was considered the leader in its region placing 53rd on the global Networked Readiness Index

(NRI) and the only African country to have a place in the top half of the rankings (WEF and INSEAD, 2012). The next African nation to follow Mauritius was South Africa which ranked at 72nd place. This index measures the degree to which economies across the world leverage ICT for enhanced competitiveness based on four core factors such as usage, impact, environment and readiness (WEF and INSEAD, 2012, p.3)⁶⁶. When comparing Mauritius to other competitor developing nations such as India. Philippines⁶⁷ and Malavsia, it is only Malaysia at place 29 which ranks higher than Mauritius on this ranking (WEF, 2012, p.xxiii). Mauritius also ranks on the ICT development Index (IDI), which is the 'composite index that combines 11 indicators into one measure that compares and monitors developments in ICT across countries' (ITU, 2012, p.15). Similar to the NRI, the IDI is based on a three-stage model, which consists of the (i) level of infrastructure and access to ICTs, (ii) level of society's usage of ICTs and (iii) impact of proper usage of ICT. On this indicator Mauritius still ranks moderately well at 74th place in 2011 and compared to its regional counterparts it is only surpassed by Seychelles which ranked at 70th. Similarly on this index it has a better position than major competitors like South Africa and India⁶⁸ (ITU, 2012, p.21).

- Policy and regulatory framework

With respect to the policy and regulatory framework, Mauritius ranks in the top 50 of the NRI with a place at 39. Also, the general environment for entrepreneurship and innovation are well satisfied as it ranks as well in top 50 on this sub-index of the NRI (46th). The policy and regulatory framework has been driven by well laid out plans of the Mauritian government. Since the realization of the need to explore this sector the government has developed three national strategic plans (NITSP 1998-2005, NICTSP 2007-2011 and NICTSP 2011-2014) which provide a guide for the policy actions of the industry. In addition to this based on the ICT Act 2001, the ICT Authority (ICTA) was established as the general regulatory body of the industry. Subsequent to the first two NICTSPs, the latest NICTSP 2011-2014 highlights the challenges the industry faces and gives direct policy guidance to ensure that the government can achieve its goal to elevate the island to a high-income economy with ICT as an enabler of this process. There have been several policies implemented, various acts and regulations developed which have strengthened the Mauritian ICT environment. These policies range from the outlay of guides for the telecommunications

⁶⁶The Network Readiness Index is developed from four sub-indexes namely 1) environment for ICT 2) the readiness (based on affordability, skills and infrastructure) of society to use ICT 3) usage of ICT by primary stakeholders 4)economic and social impacts of ICT (WEF and INSEAD, 2012, p.6) ⁶⁷ India ranks 69th whilst Philippines ranks 86th on the Networked Readiness Index ⁶⁸ South Africa ranks 91st and India 119th on the ICT development Index

market, internet service providers, open access and the latest related to the use of broadband. The legislative construct also exists to maintain Mauritius as a viable and safe location to conduct business. This is illustrated through the adoption of acts such as the electronic transactions act (2002), the computer misuse and cybercrime act (2003) and the data protection act (2009). Over the past 24 years there have been more than 20 acts and regulations developed directly concerning the sector which positions Mauritius well with regard to international best practices.

The government also acts in providing an environment to promote both local and foreign participation in the market. This can be illustrated by two main schemes, the ICT incentive scheme implemented in 2002 and the ICT incubator program which came into operation in 2003. The ICT incentive scheme 2002, provided firms in various segments of the ICT sector with benefits in the form of 'reduced corporate tax, duty free import of equipment, tax exemption on dividends and reduced tariffs for electricity' (MICT, 2000, p.15). The incubator program on the other hand, with its focus on the promotion of local ICT start-ups, facilitates those interested in starting an ICT related business with the necessary advice, infrastructure, logistics and capacity building support required in their early operational stages⁶⁹. The many strategies and activities of the government are extensive and thus, demonstrate the continuous attempt to provide the appropriate environment for the sector.

- Infrastructure

For ICT to be successful the necessary infrastructure and connectivity needs to be developed and maintained. Namely, infrastructure such as ICT industrial parks: this is exemplified in Mauritius by the Ebene Cyber City which towers the plains of central Mauritius and became operational in 2004, now occupying a space of 152 acres with 33 intelligent buildings containing 387,000m² of office space. The entire Cyber City has access to high bandwidth international connectivity essential for ICT operators. This connectivity is through advanced broadband architecture that is a gigabit-capable passive optical network-fiber-to-the-business (Oolun et al., 2012, p.163). With respect to international connectivity, Mauritius benefits from two international bandwidth gateways⁷⁰. The island was first connected to the South Africa Far East (SAFE) submarine fiber optic cable in 2002. This links the island to Europe via South Africa by connecting to the South Atlantic 3/West Africa Submarine Cable

⁶⁹ Sourced from ICT incubator homepage, accessed December 2012,

<http://www.gov.mu/portal/sites/incubator/About.jsp>

 $^{^{70}}$ International bandwidth refers to the maximum quantity of data transmission from a country to the rest of the world (ITU, 2012)

(SAT3/WASC). SAFE also provides connection to Asia via India and Malaysia. In 2012, yet another milestone for ICT infrastructure as Mauritius connected to Lower Indian Ocean Network 2 (LION2), the extension of the LION1 which the country had previously connected to in 2009. The LION2 with its landing station in Kenya links to the Eastern African Submarine Cable System (EASSy), thereby allowing for further capacity on the internet gateways⁷¹. This connection to two gateways gives operators a sense of security as connection possibilities are no longer only limited to the SAFE connection but an alternative gateway is now available. Despite these achievements, there is still need for improvement with respect to infrastructure. Based on the NRI 2012, infrastructure in Mauritius was ranked in the 73rd position out of the 142 countries. This mediocre ranking implies that although developments have taken place, improvements are still necessary for the country to boast of world class ICT infrastructure.

- Accessibility and ICT usage

The accessibility and usage of ICT is most commonly measured by the mobile penetration and internet penetration. The internet penetration rates in Mauritius have improved with subscription rates increasing from 6.3 per cent in 2004 to 28.7 per cent by the end of 2011^{72} . This signaled an increase, however, there is considerable room for improvement on the indicator. This is also partly responsible for the low individual usage of the internet with just 30 per cent of persons being recorded as using the internet⁷³. Nevertheless, broadband internet⁷⁴ subscriptions have been on the rise with subscriptions per 100 inhabitants increasing to 21.7 in 2011 and the majority of which originate from mobile subscriptions. The trend of broadband internet subscriptions illustrates the fact that there has been a rapid adoption of mobile services on the island; mobile subscriptions have increased from a mere

⁷¹ This is as per details outlined on both the Mauritius Telecom homepage, Orange news report and the Board of Investment's page, accessed February 2013,

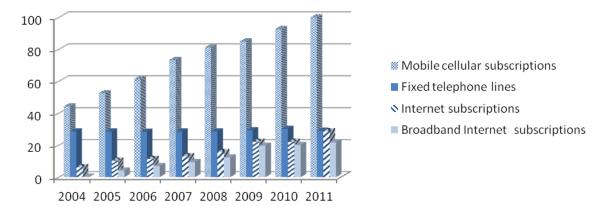
<http://www.mauritiustelecom.com/wholesale_services/upcomings.htm>;

<http://www.orange.com/en/news/2012/juin/LION2-cable-arrives-bringing-broadband-to-Mayotte> and <<u>http://www.investmauritius.com/ICT2.aspx</u>> ⁷² ICTA figures

⁷³ 2010 figure from Continuous Multi Purpose Household Survey (CMPHS)

⁷⁴ Broadband internet in Mauritius as recorded by the CSO is defined as 128kbps for the reporting period of 2004 to 2006 and then redefined in the latest statistics from 2007 to 2011 to 256kbps. This change in the definition reflects conformity to the prescribed speed by the International Telecommunication Union (ITU) and adheres to international references to broadband.

44 per 100 inhabitants in 2004 to 100 in 2011.⁷⁵ The trend of ICT access in Mauritius from 2004 to 2011 is shown graphically in Figure 23.





Overall on the NRI usage sub-index which is a score from 1 to 7 (7 being the best), Mauritius scored a mere 3.6 (ranking 64th) in 2010 indicating that the issue of usage is still a challenge. The government through the NCB has set up several initiatives to address this, namely, cyber-caravans, public internet access points and computer clubs to inform and sensitize the public of the purpose and benefits of ICT.

- Talent pool capacity building

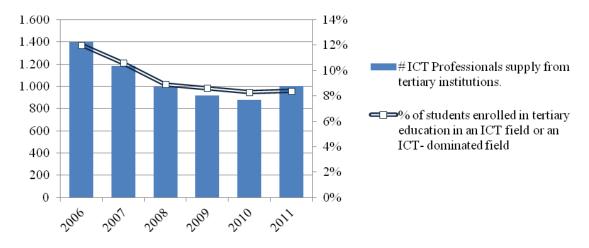
Combined with the other elements of the enabling environment, the availability of potential employees with sector specific skills has significant influence on the success of ICT and its subsectors. Unfortunately the case for Mauritius is that this element of the environment has ranked poorly. The situation is aggravated as there is the natural limitation of a small population, coupled with the limited number of graduates in the field of ICT. Both the Gartner report (2010) and the NRI (2012) give the island state a merely satisfactory ranking concerning the labor force. As

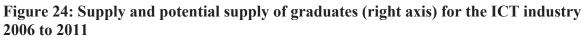
Figure 24 illustrates, since 2007 the estimated percentage of students enrolled in ICT or an ICT dominated field at tertiary level has progressively declined. During the period of 2005-2007 this rate was above 10 per cent, however, since then it has not crossed 9 per cent, with the value being 8.4 per cent in 2011. Although, in 2011 the overall enrolment of 3,878 showed an increase from previous years and surpassed the value from 2007 which was 3,700,

Source: CSO

⁷⁵ The data may be misleading as SIMS sold is equated to the number of users, however there is multi-sim usage in Mauritius, thus meaning penetration rates may be overstated.

all years prior to 2011 showed a real decrease in enrolment. Enrolment rates also affect the potential supply of professionals to the market, which followed a similar trend to enrolment rates, experiencing the same minor increase in 2011 which may be a signal of another spurt of greater interests in the field.





Although general tertiary level enrolment rates have improved⁷⁷, Mauritius when compared to countries of a similar income classification performs at the lower end of the spectrum. The Joint Economic Council (JEC), the main private sector representative body already identified in 2001 that education would pose a threat to the potential of the so-called available talent pool for the industry. However, according to Everest (2009) it is possible for Mauritius to supplement this drawback of low tertiary level graduates, by taking advantage of its secondary school leavers as these persons can be trained to attain industry standard. Based on this assumption, one of the most critical characteristics of the talent pool is thus its trainability. One essential attribute of the talent pool to which attention must be drawn is its bilingual nature, as a result of the historical development of Mauritius both French and English are spoken and as such markets where either one of these language skills are required can be served.

In an attempt to address the inefficiencies of the Mauritian human capital, the government has proceeded to transform education and training possibilities. The ICT skills development

Source: NCB Indicators Portal, 2012⁷⁶

⁷⁶ INCB Indicators Portal, accessed November

^{2012,&}lt;http://www.gov.mu/portal/sites/indicators/stats_Manpower.html>

⁷⁷ Tertiary enrolment rates in 2011 were 32 per cent compared to 10 per cent in 2000 (WB Databank, 2012)

program⁷⁸ which aims to provide work experience and training to both unemployed young people who have secondary level education or higher and university students, is one such program. This initiative also requires firms to retain at least 50 per cent of those completing the traineeship. In addition to this, the ICT Academy which was envisioned by the government to act as a coordinating body for industry training launched in 2012 an online training program for potential software developers in collaboration with Accenture and the Massachusetts Institute of Technology (MIT). The program is fully subsidized and targets young unemployed individuals, who are deemed by the government as the potential cohort to fill the existing skills gap. This again is driven by a deliberate government intention to promote Mauritius as an incubator for application developers (Budget Speech – Minister of Finance, 2013, p. 11).

The enabling environment in Mauritius is one that is complex and its enhancement is facilitated by several government initiatives. The four identified components of the enabling environment have varying levels of achievement. The regulatory and policy framework seems to be the strongest aspect. By contrast, the other three factors still require the necessary improvements that will render Mauritius as a true world class ICT hub.

ii. Overview and current structure

Today the Mauritian ICT sector is one of the major pillars of the economy and has caught the attention of both local and international observers. In 2009, Doniger and Sudan (p.112) described Mauritius as a benchmark for other developing countries when considering the progress made in the ICT sector. Additionally, in 2010 Gartner placed Mauritius for the first time on its list of top 30 locations for IT offshoring. According to the Minister of ICT, the progress of the sector will continue and it is the goal of the ministry to consolidate ICT as a true economic contributor by facilitating its ascension to the first pillar of the economy. This goal is seemingly over-ambitious, yet it is based on the current momentum witnessed in the sector. This then brings the discussion to what is referred to as ICT in the Mauritian concept.

In order to properly evaluate the current state of the sector, the definition of ICT as employed in Mauritius should be understood. Based on all references the official definition of ICT conforms to international standards. The ICT sector in Mauritius as described by the ICTA includes "manufacturing and services industries, whose products capture, transmit or display

⁷⁸ICT Skills development program, accessed December 2012,

<http://www.gov.mu/portal/sites/manpower/index.jsp>

data and information electronically. It includes related activities of manufacturing, wholesale and retail trade, communications and business services such as call centers, software development, website development and hosting, multimedia, IT consulting and disaster recovery" (ICTA, 2009). Although this definition is in conformity with international nomenclatures, there may be a lack of a comprehensive overview of the statistics of the ICT sector in Mauritius. This issue arises especially when dealing with the ITES subsector and its related business process outsourcing (BPO) aspects. Due to the fact that BPO activities such as shared offices and back offices are activities that are either of a general service type (e.g. human resources, finance, logistics) or sector specific (e.g. travel, banking, insurance), these activities may not be represented by the ICT statistics provided by the CSO. Already in the NICTSP 2011-2014 (p.31), it was recognized that some BPO activities were excluded from the CSO's ICT statistics and were in some part included in the general services sector. To supplement this apparent gap, the Board of Investment (BOI) through its IT and BPO department has tracked independently the statistics related to ITES and ITS, in an attempt to better assess the contribution of this sub-sector. This issue although critical to the evaluation and determination of ICT progress is not one that is unique to Mauritius. Official statistics for ITES and ITS are generally difficult to source or inaccurate, mainly due to "definitional issues and the relative novelty of the field" (Doniger and Sudan, 2009, p.103). ICT statistics for Mauritius are scattered throughout different reporting agencies, ranging from the CSO, NCB, BOI, to industry associations. Although, there has been the adoption of standard indicators for ICT and modified definitions, there still seems to be a lack of complete representation of the sector or a 'one-stop' data location.

Nevertheless using the available ICT statistics, the sector can be described as one the youngest with a potential for growth: characterized by several new entrants yearly and a considerable contribution to GDP⁷⁹. In the words of the Minister of Finance, it is "... one of the emerging sectors..." and "...its growth is one of the highest" (Budget Speech, 2013, p.10). For the period of 2012, ICT contributed 6.5 per cent of value-added to GDP with value added at 19,625 million MURs (CSO, 2012). It was initially projected that the sector would contribute at least 7 per cent value added to GDP⁸⁰ in 2012, however, adjusted figures for both 2011 and 2012 show that the "weight" in GDP has stagnated at 6.5 per cent since

⁷⁹ CSO's GDP contribution includes ITES/ITS

⁸⁰ Speech of Minister of ICT at IST Africa Workshop on 15 November 2012, accessed February 2013,<<u>http://mict.gov.mu/English/Documents/Speechees/Speeches 2012/ist africa.pdf</u>>

 2010^{81} . For the period of 2004 to 2012, the growth rate of the sector has been on average 14 per cent, with the lowest growth of 9.5 per cent reported in the period 2010 to 2011(see

Figure 25 and Table 10). This slowed growth is most likely as a result of the worsening global economic conditions. Although, the current growth is lower than previous years, it still represents one of the highest growth figures for any of the sectors in Mauritius.

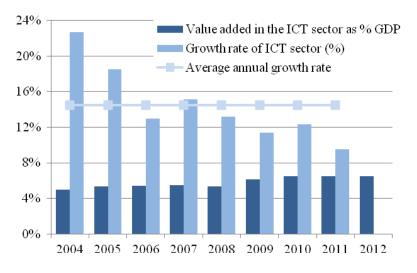


Figure 25: Value added in ICT Sector as % GDP⁸² and growth rate of ICT sector

Source: CSO data

Table 10: Value added of the ICT Sector (in Million MURs)

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Value added of the ICT Sector (Million MURs)	7,565	8,600	9,960	11,714	12,994	15,412	17,240	18,450	19,625
Source: CSO data									

Source: CSO data

The number of firms in ICT has increased and by extension employment figures have increased significantly from their 2004 values. According to the CSO the number of large firms (with more than 10 employees) operating in the sector in 2011 were 137. On the other hand, the BOI estimates that there were approximately 500 firms in the ITES/ITS subsector in 2011 and 575 in 2012. As a result of this disparity in the data the employment figures for the complete sector are difficult to determine. The CSO disregards small firms with less than 10 employees and as previously mentioned the CSO definition of ICT omits several firms (those involved in training and education in IT) which function in the ITES/ITS subsector.

⁸¹ Previous statistics recorded contribution to GDP at 6.7% for 2011(CSO, 2012; BOI, 2012).

⁸² CSO's calculation of GDP contribution comes from 'manufacturing activities, telecommunications services, wholesale and retail trade, and other activities such as call centers, software development, website development and hosting, multimedia, IT consulting and disaster recovery'.

For the period of 2011 CSO employment figures were 13,116 and the BOI estimates for the same period were 16,800 in the ITES and ITS sub-sector (see Table 11). According to the NICTSP 2011-2014 (p.31) employment should be much higher than what is currently referenced. Calculations combining the ITES and ITS sector with large organizations operating in ICT - such as retailers and telecommunications - produce a figure above 20,000⁸³. Already, in 2010 OTAM and MITIA had approximated overall sector employment between 15,000 and 20,000 (NICTSP 2011-2014, p.32).

Table 11: Employment in ICT sector

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Employment in ICT sector* (estimates large establishments only)	6,150	7,410	7,970	10,170	11,250	12,360	12,826	13,116	
Employment in sub-sector ITES/ITS only	2,392	3,801	5,513	6,960	10,440	11,437	15,000	16,800	17,700

Source: CSO data; BOI, 2012

* estimates of the CSO exclude several firms that operate in the ITES/ITS subsector; large establishments are those with 10 or more employees

Turning to external trade, the volume of ICT exports reflect the level of international competitiveness of the industry. For Mauritius total ICT exports have never exceeded 9 per cent of total exports (CSO data), in 2011 these exports (ICT) accounted for only 2.9 per cent of total exports. As illustrated in Figure 26, the sector's exports in the initial phases were dominated by the export of goods, nonetheless, since 2008 services have become the main contributor to ICT exports. ICT service exports now contribute, 93 per cent of total ICT exports. Although, ICT service exports contribute the largest portion to ICT exports, they are yet to attain 5 per cent of the total Mauritian service exports. This figure may be higher if the complete ITES/ITS sector is included. Even with this low contribution to overall service exports Mauritius is still a net exporter of ICT service exports contribute almost half (47 per cent in 2010) of the country's total service exports (WDI data), similarly in 2010 countries like Philippines, El Salvador, Romania and Costa Rica all recorded a more than 15% contribution of ICT service exports to total service exports (WDI data)⁸⁴.

⁸³ Calculations based on data provided from the NCB 2012 ICT directory

⁸⁴ Doniger and Sudan 2009 identified these countries as key ICT exporters. It is important to note here that WDI figures do not necessarily include ITES/ITS statistics.

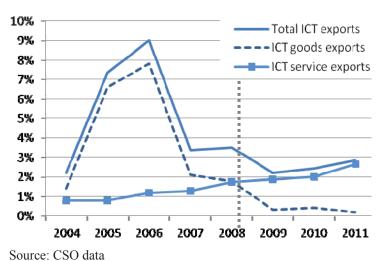


Figure 26: ICT exports as a % of total exports

Sector Composition

Subsequent to the overview of the key macroeconomic data related to the sector, it is important to identify and highlight the contributors to the ICT sector. The sector as per its definition comprises of both goods and services. This is then further subdivided into manufacturing, wholesale and retail of ICT goods, telecommunications and ITES and ITS. The segment which is critical to this analysis is that of services related to ITES/ITS, as it is considered the dynamic growing ICT subsector. However, to understand the contribution of these services to the sector it is important to have an overview of all contributing factors. Additionally, due to a lack of disaggregated data, general sectoral trends will be included in some parts of the discussion. To illustrate the major components of the complete ICT sector, a basic cluster map is elaborated (see Figure 27). This basic cluster map includes the main elements of the sector and the relationships which exist. The elements which spill-in to the sector as well as the spill-over into other sectors are noted. Members of each sub-sector listed are denoted in the same color to indicate their level. Besides this, contributions in each level based on value-added or number of firms (relevant for listed subsectors of ITES/ITS) correspond to the size of the relevant sub-sector shape.

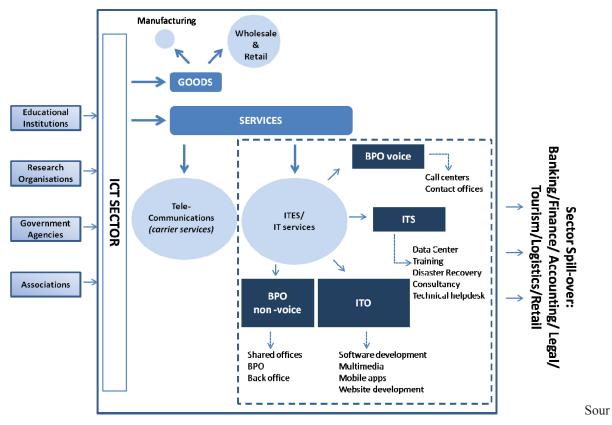


Figure 27: The Mauritian ICT sector

ce: Authors' concept

- Goods vs. Services

As illustrated in Figure 27, the sector is initially subdivided into those segments which provide either goods or services. The element of goods includes manufacturing and the wholesale and retail of IT hardware and software. Since 2004, there have been several changes to the dynamics at play. Particularly, the sector has seen a shift with respect to the importance of its goods component. The previously indicated division of exports alluded to the fact that the industry has become service dominated. The comparison of the contribution of goods in ICT exports from 2004 to 2011 illustrate the diminishing role it plays. The share of ICT service exports increased from less than half of the value of total ICT exports in 2004, to now being over 90 per cent of said exports (see Figure 28). A closer examination of the ICT export statistics demonstrate that from the period 2010 to 2011 there was a generous 48 per cent increase in export of services moving from a value of 3,128 million MURs to 4,630 million MURs, by contrast goods have not experienced this upward trajectory.

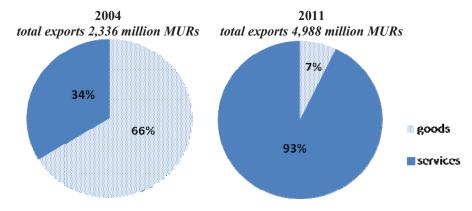


Figure 28: Export of ICT Goods and Services 2004 vs. 2011

Source: CSO data; BOM, 2012

Moreover, total industry turnover shows the declining trend of goods which in 2004 contributed 42 per cent to industry turnover and in 2011 this was just over 30 per cent⁸⁵. This combined with the lowest sectoral turnover growth rate of 2.2 for the period 2010 to 2011, emphasizes the reduced goods oriented nature of the sector (NCB, 2012).

- Telecommunications

Telecommunications was the former main contributor to value added in ICT, in 2004 it accounted for 66 per cent of value added in the sector (CSO data). By 2011 this figure was down to 43 per cent. The average annual growth rate for the period 2004 to 2011 was 5.7 percent (NCB, 2012). Although fully liberalized since 2003, the telecommunications market is still dominated by the formerly state operated Mauritius Telecom. Mauritius Telecom is now majority owned by France Telecom (40 per cent since 2000) with the government of Mauritius owning a sizeable 33.4 per cent of the company⁸⁶. The market is characterized by a few market participants with a slowly growing number of internet service providers. The number of service providers are listed in Table 12. In 2010, Mauritius Telecom controlled approximately 95 per cent of the market and had an estimated 360,000 of the 387,700 fixed telephone lines (NICTSP 2011-2014, p.38). Of the total 10,600 million MURs revenue for telecommunications in 2011, Mauritius Telecom was earning revenues of approximately 7,900 million MURs⁸⁷.

⁸⁶ Mauritius Telecom homepage, accessed February 2013,

<http://www.mauritiustelecom.com/about_us/index.htm>

⁸⁷ Mauritius Telecom homepage accessed February 2013,

<<u>http://www.mauritiustelecom.com/about_us/index.htm</u>> and NCB indicators portal accessed February 2013,

<<u>http://www.gov.mu/portal/sites/indicators/ICTeconomicList.html</u>>

	Operators	No. of
Type of service provider		operators
	Emtel Ltd.;	
Fixed-line telephone service	Mauritius Telecom Ltd.;	2
	Cellplus Mobile Communications Ltd.	
	(subsidiary Mauritius Telecom);	
	Emtel Ltd.;	
Mobile cellular service	Mahangar Telephone Mauritius	3
Internet service		17
of which providing service to the public		12

Table 12: Telecommunications service providers

Source: ICTA, 2012⁸⁸

- ITES/ITS

A closer inspection of the data sheds light on the growing ITES/ITS segment or as it is referred to in Mauritius the ICT-BPO segment. The ITES/ITS segment experienced a tripling of its turnover from 2005 (from 2,580 million MURs to 12,095 million MURs), and in 2011 the turnover exceeded that of telecommunications. In light of these changes, ITES/ITS has been consistently marked with increases in its overall contribution to sector turnover and by 2011 it was contributing 36 per cent to sector turnover, 4 percentage points more than the previous sector leader – telecommunications (NCB, 2012)⁸⁹.

Following the above discussion, ITES/ITS has a significant weight in the overall ICT sector, contributing roughly 45 per cent to the sector's total value added⁹⁰. Outsourcing which is the momentum pushing this segment, has increased significantly since 2005 and this has been translated into an annual growth of the island's industry (NICTSP 2011-2014). There are at present 575 firms operating which participate in the different sub-divisions of ITES/ITS. This value represents a more than five times increase in just 8 years from the figure of 72 firms in 2004, an estimated average annual growth of over 30 per cent as illustrated in Figure 29. Out of these 575 now operational firms there is almost equal participation of both local and foreign investors, with participation being 49 per cent and 51 per cent respectively. The most dominant foreign investors are those from Europe (36 per cent), of which the majority are French and British. Furthermore, this investment trend correlates with the main markets served. Nonetheless, with the worsening economic conditions in Europe the focus is now switching to non-traditional markets such as North America, Australia and Africa (BOI,

⁸⁸ICTA webpage, accessed February 2013,< <u>http://www.icta.mu/telecommunications/licences.htm</u>>

⁸⁹ NCB Indicators Portal, accessed February 2013,<<u>http://www.gov.mu/portal/sites/indicators/ICTSector.html</u>>

⁹⁰ NCB Indicators Portal, accessed February 2013, <<u>http://www.gov.mu/portal/sites/indicators/ICTSector.htm</u>>

2012, p.14). In addition to this, there is a considerable share of firms servicing the local market with 23 per cent of all firms dedicating services to local industries⁹¹.

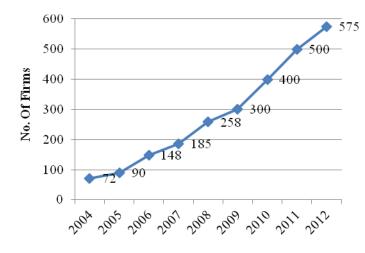


Figure 29: Number of Firms in ITES/ITS segment

Source: BOI, 2012

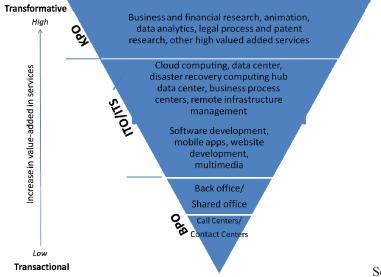
The 575 firms are characterized by four broad categories, namely BPO voice (75), BPO nonvoice (150), Information Technology Outsourcing (ITO) (276) and ITS (75) as presented in Figure 30. BPO as it signifies here are either companies offering voice services in the form of call and contact centers or non-voice services in the form of back office processes (internal business functions), shared office⁹² and other BPO activities. These services are usually the lower to medium value added activities which require large volumes of employees. Albeit the basic nature of some BPO non-voice services there are certain industry specific applications which entail going beyond low end "rule- based" activities to higher end "judgment-based" and "strategy-based" processes associated with Knowledge Process Outsourcing (KPO) (Everest, 2009, p.35). These higher end services range from business analytics, business consulting to legal services, usually requiring good judgment and higher employee education levels. In 2009 Everest (p.33) reported that 11 per cent of BPO service employees in Mauritius were performing tasks related to KPO such as data management, business research and information services. ITO is yet another level of services. These are usually of a transformative nature and include software development, web design and development, animation, game development and remote infrastructure management. Finally, ITS as considered by the BOI refers to disaster recovery centers, business continuity centers, data

⁹¹ It is important to note here that most firms service more than one market.

⁹² Shared services refers to the provision of a service by one part of an organization or group where that service had previously been found in more than one part of the organization or group.

centers, training, consultancy and technical helpdesks⁹³. The hierarchy of ITES/ITS is illustrated below in Figure 30. For small countries like Mauritius with limited population size, it is essential to provide a combination of services which provide to niche markets of higher value-added and simultaneously provide the necessary low to medium value added activities to absorb the workforce in simple semi-skilled jobs, so that greater gains can be made from ITES/ITS industry.



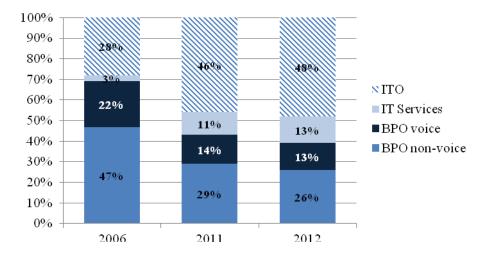




The number of firms in each segment has varied considerably throughout the years. With the evolving emphasis of the sector, the addition of several ITO companies proves in good stead that the sector is developing and providing higher value added services. In the initial phases of the sector the concentration was heavily on low value added services of the BPO nature (this is still a major player, however positive increases in other forms of services provide evidence that a switch is slowly taking place), today there are increasing numbers of new entrants who are providing services which are more of a transformative nature. At present, many new entrants are joining the software, multimedia and website development segment pushing the value of ITO firms to 48 per cent of the market, a change from having just 28 per cent of market participants in 2006. The evaluation here is purely based on the dynamic of the number of firms operating in the sector. The segmentation of the market as it were in the years for 2006, 2011 and 2012 is represented graphically below in Figure 31.

Figure 31: Segmentation of the ICT-BPO sector based on number of firms for selected years 2006, 2011, 2012

⁹³ BOI BPO Brochure and BOI Newsletter 2012



Source: BOI⁹⁴

Due to data limitations, the switch to a higher volume of ITO firms has not be evaluated based on turnover or value-added contributions of these new participants in comparison to the BPO firms. The change in the number of firms may not then truly represent the contribution to the sector. For example, the segment for BPO voice and non-voice combined, now represents 39 per cent (compared to 69 per cent in 2006) of firms in the sector but it is home to some of the largest players in the sector such as Accenture, Ceridian and TnT Business Solutions UK. This is supported by the employment data which shows that these firms are some of the main employers; employment data for the three firms combined generate 2,344 employment places which accounts for roughly 13 per cent of the total ITES/ITS employment. Turning to the ITO and ITS subsectors there have been increases in the employment levels related to the entrance of new firms with a 12.8 per cent increase in employment from the period of 2011 to 2012 (BOI, 2012, p. 13). However, the scale of employment and operators in this segment are still not at a level comparable to that of its BPO counterparts.

While Mauritius by most accounts is still providing many low value added services, the trend is moving towards a shift from continued investments in call centers to new entrants focusing on the ITO segment. Everest in 2009 (p.35), drew attention to the fact that there were already signs of niche high-value added services being offered as there was evidence of a growing number of operators offering legal process outsourcing, market research and finance and

⁹⁴ BOI data sourced from BPO Secretariat Brochure 2006, BOI Newsletters for 2011& 2012 and BOI ICT-BPO directory

⁹⁵ Based on data provided from both the NCB ICT directory and BOI listing of ICT-BPO firms

account reporting. Also, within the ITO segment some firms such as the Mundo publicis group have extended their services from basic desktop publishing to high end digital solutions focusing on quality and value added rather than mass production (Publicis Groupe, 2011).

There is much discussion concerning the general growth and potential of employment in the ITS/ITES segment. As previously mentioned, overall employment in this segment was recorded at 17,700 for 2012 (BOI, 2012, p.13). Different estimates exist for the future prospects of ITES/IT with respect to employment. Some officials have suggested that the sector would be able to create 15,000 new jobs by the year 2015. This signifies that employment levels would exceed 30,000 by 2015. Officials at the NCB however, believe that there would be 50,000 employees in ITES/ITS over the next 5-10 years; this is a more moderate consideration, although this may still be excessive (Sector Interviews, 2012). Indeed, if this level were to be achieved employment figures would be well above those figures recorded for the second largest employment sector - the textile industry - in 2012 (41,898⁹⁶), but with a workforce of relatively higher skills level. However, on inspection of the employment trend since 2005, though a positive upward trend if the current momentum is maintained employment figures reach only 25,000 in 2015 and below 40,000 by 2022, falling short of both estimates (see Table 13).

Table 13: Employment in ICT-BPO Sector 2004 to 2022

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2015*	2022*
ICT BPO sub-sector	2,392	3,801	5,513	6,960	10,440	11,437	15,000	16,800	17,700	25,000	39,000
Growth rate of		59%	45%	26%	50%	10%	31%	12%	5%		
Employment											

Source: BOI, 2012

* estimation based on extended trend-line from data for 2004 to2012

Not surprising, the majority of the employment stemmed from the few large service providers⁹⁷. By contrast, the numerous small firms (with 50 or less employees) accounted for less than 20 per cent of all ITES/ITS employment⁹⁸. Nevertheless, much of this sub-sector is characterized by small, even home run enterprises with less than 10 employees (Sector Interviews, 2012). Although, this is the employment pattern, Mauritian government officials deem ITES/ITS as an opportunity for young people to achieve employment and as an avenue

⁹⁶ CSO 2012 – however, please note for this figure it refers to establishments with more than 10 workers.

⁹⁷ Less than 20 per cent of the firms, extrapolated from data from the NCB ICT directory 2012 data for 287 firms

⁹⁸ Extrapolated from data from the NCB ICT directory 2012 data for 287 firms \approx 57 per cent of the 2011 market

that will help cure the scourge of high youth unemployment which currently stands at 20.5 per cent⁹⁹. According to the World Bank (2012), ITES/ITS are directly linked to increases in youth and female employment which are the sub-groups faced with the highest unemployment levels in Mauritius. If Mauritius were to have the experience of the Philippines or India, this segment would play a key role in the employment of women and young people. These two leaders in ITES/ITS both employ large numbers of young and female workers with over 50 per cent of the industry's workers representing the respective groups in both India and The Philippines (World Bank, 2012 p.16)¹⁰⁰. The Mauritian ITES/ITS has been following a trend similar to these well established locations with the median age of the workforce in the sector being 26 as of the ICT-BPO Salary Survey of 2010 and 54 per cent of the workforce was recorded as being female as of the previous Salary Survey of 2008. Although these trends seem to address the issue of youth and female employment, the alarming evidence is that the unemployed youth and females may be unable to meet the skills demands of these firms as a large proportion (47 per cent¹⁰¹), of the unemployed are persons who have not attained secondary level education, thus very unlikely to be absorbed into the ITES/ITS industry.

⁹⁹ This is the value for the 3rd quarter of 2012 as per Statistics Mauritius
¹⁰⁰ In Philippine ITES/ITS 60 per cent are females in India 70 per cent are between the ages of 26 and 35.

¹⁰¹ This is the value for the 3^{rd} quarter of 2012 as per Statistics Mauritius

iii. SWOT Analysis

For the ICT sector to truly flourish there is need for well adjusted strategies which are coherent with the internal and external environment in which the sector operates. In order to assess the true potential of the sector, an awareness of the strengths, weaknesses, opportunities and threats is critical. To this end the SWOT analysis presented below in

Table 14 will be discussed.

Table 14: SWOT diagram ICT sector

Strengths	Weaknesses					
 Amenable government approach to the sector's growth Adequate ICT ecosystem Availability of appropriate infrastructure Availability of skilled employees for certain segments Favorable Time Zone 	 Talent pool limited in size and skills Little appreciation for global ITES/ITS "work-culture" Low level intra-sectoral linkages & collaboration Relative low emphasis on high-value added services 					
Opportunities	Threats					
 Large untapped global outsourcing market Opportunities of niche markets Possibilities of strategic alliances Potential of ICT hub New potential markets Sourcing Professionals from abroad 	 Increasing and new international competitors Continued development of well established locations Brain-drain of qualified trained workers Global slowdown Reduced government financial contribution to sectoral programs 					

The Mauritian ICT sector has developed thanks to the continued commitment of the government and its use of amenable policies to enhance the sector. This can be considered to

be one of the major strengths of ICT. Through its many regulations and policies the government continues to build an adequate framework to attract investors to the island. Moreover, the general business environment fostered lends to ease of business and generally favorable conditions¹⁰² for foreign investors. As the government continues to address the deficiencies in the sector, it is possible that some of the current weaknesses may be assuaged. Further to this, the environment for ICT has now become equipped with appropriate infrastructure and connectivity opportunities. Although, this can be expanded, investors are offered considerably well functioning business parks with reliable electricity and connectivity to international bandwidth gateways. The recent additional connection to the LION2, gives Mauritius the redundancy gateway¹⁰³ that many other analyst highlighted as an industry drawback. The government must be given credit for its efforts which have resulted in Mauritius becoming a globally acclaimed IT outsourcing location.

The talent pool in Mauritius is of a curious nature due its limited size and capabilities. Although direct skills with respect IT services may be lacking, there are segments were there is a labor pool advantage. The small labor pool is able to offer services in both French and English and these capabilities differentiate the Mauritian service sector from other markets (AT Kearny, 2011). Additionally, there is a general ease of employability of secondary level certificate holders. Based on estimations by Everest 2009, employability of secondary level graduates for entry level positions is much easier in Mauritius than in other well established locations. Further to this in specialized areas that would allow for higher value-added tasks Mauritius has in some segments a certified professional base that is internationally recognized (Mistry and Treebhoohun, 2009, p.96), particularly, in the fields of law, finance and accounting.

In contrast to these positive aspects, there are key constraints affecting the ICT sector in Mauritius. One constraint which has been aired by industry participants and observers since 2001 and still persists in 2012 is that of the limited workforce, in terms of size and skills. In 2010, The BOI estimated that there would have been 3000 additional posts in the sector but the existing labor pool would have been unable to meet these requirements (NICTSP 2011-2014, p.10). The quality of human capital is critical to the success of the ICT sector (WBG, 2012, p.17) and as previously explained Mauritius suffers from an overall low level of

¹⁰² Range of tools used to attract investors for example: speedy delivery of occupation (work & live) permits, free repatriation of profits, 100 per cent foreign capital allowed, no minimum capital requirement, refunds on training programs, etc.

¹⁰³ UNCTAD (2007); Mistry and Treebhoohun (2009); NICTSP 2011-2014;

tertiary graduates. This is especially worrying as Mauritius wishes to attract investors who are looking for high quality, specialized niche services. Moreover, this lack of apparent critical high level skills in the sector has negatively affected Mauritian firms, as they have been unable to secure both international and some large scale national contracts due to this limitation ((NICTSP, 2011, p.19; Sector Interviews, 2012). The modification required here is thus a major upgrade in the current education on both the tertiary and certificate level so that individuals will have the appropriate skills required by the market (Vashista, 2011). Such changes although already in discussion at ministry levels, entail considerable lag times (Sector Interviews, 2012).

The ICT industry especially the ITES/ITS segment is known for its global nature. With this in mind, firms and employees operating in this sector must have a global mindset and be able to work within this timeframe. In Mauritius there is general lack of the "work-culture" of ITES/ITS companies (Sector Interviews, 2012). Mauritius is called on by Mistry and Treebhoohun (2009, p.118) to have a more 'hard-work' than a 'work-to-hours' ethic. The sector is plagued with the lack of readiness of the workforce and the general environment to adopt this attitude of conducting business outside of the core working hours.

Strong linkages in industry allow for knowledge sharing, pooling of talent and strong representative sector associations (WBG, 2012). Alliances and partnerships are crucial characteristics of the ICT industry. Probably, the most grueling task for the ICT sector would be to provide better linkages between the many small companies in operation and the large companies, to ensure that there is some platform for downstream and upstream linkages within the sector itself. Furthermore, for the industry to meet growing demand and to adequately address human resource concerns, and to show significant size and scope to win international contracts there needs to be cooperation between SMEs, which make up a large part of the sector. The lack of collaboration amongst sector participants can be linked to the poor representation of the industry by its trade association for ITES/ITS. OTAM one of the main industry associations is estimated by sector officials to represent about 20 per cent of the firms in the sector (Sector Interviews, 2012) and Mistry and Treebhoohun (2009, p.86) put this figure even lower at 15 per cent. Sector representatives are optimistic that the sector would move towards consolidation and small independent operators will regroup into larger organizations to bring their expertise and knowledge together and to benefit from economies of scale (Sector Interviews, 2012). However, this is not envisioned to happen within the near future.

Closely linked to the human capital transformation is that of the type of services provided. Mauritius needs to transform its scope to a concentration on high-value added services. Due to scalability restrictions and lack of competitiveness on markets with scale advantages, the island needs to promote itself as a 'high-value' location. The focus should thus switch to these segments and reduce investment in further call center activities. The NICSTP 2011-2014 acknowledges this and sees the greater contribution that this focus can make to the economy. The focus should be directed on services such as legal, financial, accounting and research and development (NICTSP 2011-2014, p.47). Mauritius has a pool of skilled workers that it can tap into for the higher value added processes in the fields of finance, law, medicine and tourism (Mistry and Treebhoohun, 2009). Additionally, services such as cloud computing and data centre services rely much less on labor force quantities. The government's focus on Mauritius to become a centre for application developers and cloud computing (Data island) demonstrates the realization that these areas will bring about more value to the sector (Budget Speech, 2013, p.11). Addressable would be the need to improve privacy and cyber security issues to give investors the necessary insurance of protected activities (NICTSP 2011-2014, p.11).

The weaknesses of the sector can be exacerbated by the threats to the sector's success. With ITES/ITS being a largely untapped market, many developing countries are attempting to position themselves as key market participants whether on a regional or global scale. This in essence poses a threat to the existing, burgeoning participants such as Mauritius. If there are advances in locations such as Kenya, South Africa and Morocco which allow them to gain advantages in skills level and prices, there will be a valid threat of low-end providers relocating to these destinations. Additionally, with worsening global economic conditions cost may become a key determining factor with respect to choice of destination. The unfortunate result of a relocation of large call centers or BPO operators would be a considerable number of persons being left unemployed in Mauritius.

The two major opportunities which present themselves to Mauritius are the possibility of forming strategic alliances with other countries and the exploration of new potential markets.

Through historical and cultural links Mauritius should be able to leverage better cooperation and investment opportunities with particular countries in Asia, Africa and Europe. Cooperation with strategic partners from these regions could provide for greater training opportunities, innovative solutions, higher investment, further visibility and credibility to attract other global players. UNCTAD (2007) suggests creating solid ties with India to help define the Mauritian ICT landscape. There are already instances where India is used as a source of training. Infosys is one such example as it uses its Indian headquarters to train its Mauritian staff (UNCTAD, 2007, p.24). This gives support to the idea that the seemingly easiest (to facilitate) and most beneficial partner with respect to expertise and knowledge would be India. Through the selection of Indian ICT companies as potential partners Mauritius may be able to experience the skills transfer that it usually lacks when collaboration takes place on contracts which are usually for the sole purpose of ensuring that local firms are seen as credible by the contracting agent (NICTSP 2011-2014, p.19). Further to this, the current emphasis on software development and the goal to act as an incubator for application developers gives greater incentive for Mauritius to position itself as a key partner to India in order to gain from its software development expertise.

The potential of new markets especially that of Africa is a somewhat contentious issue. Some view the possibility of Africa being a new market, as an idea yet to develop with no immediate fruition, whilst other observers view it as an opportunity for Mauritius to take charge of first mover advantages¹⁰⁴. The Minister at the ICT-BPO conference 2012 which was entitled "The Next Stage of Growth for ICT Development - Harnessing the Potential of Africa" proclaimed that "It was time for Africa". This declaration came as an illustration of the vast untapped potential that the continent has for the ICT-BPO industry and its positive growth trends with real GDP growth rates for SSA estimated to remain above 5 per cent in 2013¹⁰⁵. Considering, the deteriorating conditions in Europe, Mauritius has to explore new possible markets for its services and for those who view Africa as this opportunity, there exist many advantages. The proponents of this believe that Mauritius already holds a strategic position as it is a member of several trading agreements¹⁰⁶, has signed several DTATs with African countries, enjoys close cultural and historical links. Present are few but still Mauritian companies on the market such as State Informatics Limited that has subsidiaries in both Namibia and Zambia, and 8 per cent of the ICT-BPO operators are already servicing African markets. On the other hand, the more cautious and detractors of this idea, believe a strategy of "taking advantage of Africa" leaves out consideration of the complications of the individual markets. Even though Mauritius is regionally accepted as an African country it is

¹⁰⁴ Mistry and Treebhoohun (2009), State Informatics (2010), Minister of ICT (2012), Sector Interviews (2012) ¹⁰⁵ IMF Regional Economic Outlook accessed February 2013,

http://www.imf.org/external/pubs/ft/survey/so/2012/car101212b.htm>
¹⁰⁶ Participation in regional trade agreements – SADC/AGOA/COMESA/IORA/ACP

not well integrated because of its geographical location and ethnic composition. By extension for many African countries large contracts such as those of government agencies are offered heavily on the basis of close relationships and solid market presence which Mauritian firms do not possess (Mistry and Treebhoohun, 2009, pp.115-117). However, the more prudent approach for Mauritius would be to host multi-national co-operations wishing to do business in Africa but wanting to maintain their headquarters and specific services in a stable environment with a good legal framework and recognized rule of law. Thus, Mauritius could be a hub for services ranging from outbound marketing, collection centers to KPO, data analytics and research in both French and English markets for those servicing the African markets.

iv. Conclusion

Since the establishment of the MICT in 1995, the ICT industry has solidified its place in the Mauritian economy. The current emphasis and expansion of the ITES/ITS subsector show an interesting trend in the new outsourcing service orientation of the sector and the potential of Mauritius to tap into a continually expanding global market. The government's focus on building the appropriate enabling environment has caused the sector especially the ITES/ITS segment to attract major global players and by so doing has contributed to overall employment, GDP and to a small extent exports. The industry has developed thus far that it now requires a shift in emphasis and improvement in capabilities both with regard to the type of services provided and the skills of its talent pool. These changes coupled with continued developments in the ICT environment would bring about greater opportunities to have the proper mix of high-valued services reliant on the talent pool and less labor intensive services reliant on robust infrastructure. Prospects for further employment in the industry need to have consistent public and private sector support for the training and re-shaping of the Mauritian labor force. There is much room for Mauritius to continue to benefit from the ICT sector, however smart adjustments and a focus on those segments that would produce the most favorable outcomes for the country are critical to this success.

V. Conclusion

In this paper we have identified the financial and the ICT sector as current growth drivers of the Mauritian economy and attempted to analyze their potential impact on the economic growth prospects of the island. The findings are based on the historical development path and the determinants that enabled Mauritius to its unique growth story. One of the underlying reasons for the development is certainly the high quality of political and economic institutions that ensured political and social stability and enable the interaction of factors for the economic success. Interestingly, this stable basis might also be reason to avoid a potential 'middle-income trap'. As some of these initial growth factors like the sugar wealth or trade preferences have vanished, this deeper determinant is even more important to realize its well-known vision to be the hub for trade and financial flows between Asia and Africa and vice versa.

One key sector for this vision is the Mauritian financial industry that experienced a transformation from a domestic banking business towards an international financial center due to the introduction of offshore sector in the early 1990s. Currently, the financial industry is mainly characterized by the dominance of its banking sector and the massive investment flows that are rooted via Mauritius. Hence, the growth potential can be found in the expansion of local banks towards African and Asian markets and the up-grade of services associated with international financial flows. So far, these global business activities are mostly limited to low-value-added services like accounting or administration and thus have only minor contribution to GDP. Mauritius might therefore engage in higher-value adding activities like wealth and asset management or like treasury and risk management in order to benefit more from these international financial flows. However, the lack of skilled labor and the fact that these financial flows are mainly based on Double Taxation Avoidance Treaties might limit the growth prospects significantly.

The other potential growth sector is the ICT industry, one the youngest sectors in Mauritius; its growth is fuelled largely by the dynamism in the ITES/ITS sub-sector. ITES/ITS has attracted global players and has contributed significantly to the country's GDP and employment. To further promote the growth trajectory it is essential that there is a switch of emphasis to high value added services combined with a focus on new non-traditional markets. Markets such as Africa and North America may present new opportunities for this sector. Although, the sector has been performing well, its overall contribution to exports is

still low, with a switch to offering both traditional and new markets higher value added services such as business analytics, financial and legal services the ITES/ITS segment could have a greater impact on exports. Unfortunately, similar to the constraint of the financial industry the lack of a skilled workforce is damaging to the expansion of the sector. Current focus on re-training and educating the potential workforce for this sector is well placed but its benefits might only be realized in the long-run.

Although both sectors, financial intermediation and ICT, have clear growth prospects that are also supported by large governmental commitments, both industries have only a marginal impact on the current account deficit of close to 10 per cent of GDP in 2012 that emerged with the downturn of the traditional export sectors textiles and sugar in the 2000s. Even though the IMF (2012) ensures that reserve assets remain at a comfortable level, due to strong FDI inflows, the estimated current account deficit of -4 per cent in 2017 is still below the historical level of minus 0.7 percent during the growth period between 1984 and 2004 (WDI data). Hence, the focus for the further development of the financial and the ICT industry has to be also on the creation of higher exports.

However, the current macroeconomic problems also make clear that the major risk for the continuation of Mauritius' extraordinary growth story might not even be the specific risk within the strategic growth sectors, as analyzed in this paper, but the balance of payment constraints associated with the current account deficit. Especially, as the negative effects of the structural changes in the 2000s on unemployment, trends in inequality and educational system are still unsolved, the answers to these structural problems might be the major key to sustainable growth for Mauritius.

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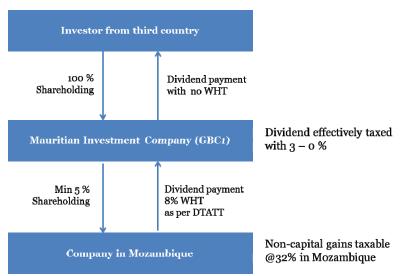
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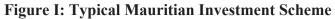
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Appendix I

Many investors use the possibilities of tax structures in Mauritius for their investments into India or other Asian and African countries. Based on the regulatory framework, investment holdings, collective investment schemes and close end funds have to use GBC1 companies. For instance, a FDI investment from a third country into a country holding a DTAT with Mauritius can benefit from tax reductions and exemptions and repatriate profits mostly tax free to the third country. It is important to note that all DTATs are bilateral agreements with different characteristics. An example for an investment into a company in Mozambique is illustrated in the following figure:





Although some DTATs eliminate taxes on dividends, interest rates and royalties, most of the agreements have only a reduced tax rates. With Mozambique a with-holding tax (WHT) of 8 per cent on dividends instead of 20 per cent is valid. In general, there is potential tax savings of 5 to 20 cent in most cases. Officially the world income of GCB1 companies in Mauritius is 15 per cent.¹⁰⁷ However, if GCB1 holdings elect to provide written evidence to the Commissioner of Income Tax showing the amount of foreign tax paid in the country of investment, this foreign tax can be deducted from the tax amount in Mauritius. In the case of a Mozambique investment, the 32 per cent corporate tax and the 8 per cent WHT tax can be

Source: Authors and Impara, 2012

¹⁰⁷ Since 2010, GCB1 companies can also conduct business with Mauritian residents. Profits from these activities are also subject to 15 per cent tax. However, foreign tax credits are not applicable which make these activities less attractive.

used to reduce the tax on dividends in Mauritius to nil. In other cases without the foreign tax evidence, 80 per cent of the foreign tax credit can be used and the tax burden can be reduced from 15 per cent to 3 per cent. The same scheme is valid for investments with debt instruments as the tax incentives are also valid for interest payment. Additionally, and most attractive for equity and other funds, capital gains are not subject to tax if the DTAT is valid. Hence, many equity funds investing in India and Africa use Mauritius as platform as there are substantial tax savings from 30-35 per cent compared to the usual capital gain tax in these countries. The repatriation of such gains is not subject to any WHT in Mauritius.

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