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MAURITIUS

FROM PREFERENCES TO GLOBAL COMPETITIVENESS

REPORT OF THE AID FOR TRADE MISSION

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APRIL 26, 2006

Preface

In February 2006, the Government of Mauritius requested the World Bank's technical assistance in the analysis of its reform program, a program designed to respond to a particularly adverse combination of external shocks. The Government sought the World Bank's assistance in analyzing some of the implementation options of its program and in informing these options with experience from other countries.

This report, the first step in a process, outlines the trade competitiveness challenges facing Mauritius that, if confronted and managed, will pave the way to a return to a higher growth path. After the Government develops the specific actions in its program, the Bank will work with the government in costing the specific investments necessary to implement its program of trade competitiveness, and will help in mobilizing external support as part of the international community's effort put together a global program of Aid for Trade.

The Aid for Trade mission of the World Bank that produced this report was comprised of Richard Newfarmer (leader, macro and tax regime), Paul Brenton (trade and incentive regime), Donald Mitchell (agriculture), and Julia Nielson (services and training), with statistical analysis from Mombert Hoppe and Martha Denisse Pierola. Several experts provided written contributions that form part of the report: Robert Keyfitz (macro and labor markets), Kalanidhi Subbarao (social safety nets), Richard Stern and Ken McKinsey (marginal effect tax rates), Isabel Neto and Laurent Besancon (telecommunications), Marc Juhel (ports), Noroarisoa Rabefaniraka and Charles Schlumberger (air transport), and Ann Rennie (financial sector). The team also benefited from comments from the World Bank's country team for Mauritius, from Leora Klapper (finance) and from Victor Thuronyi (IMF). The mission is grateful for the collaboration of the Ministry of Finance and other agencies of government that provided information, support, and substantive collaboration.

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Acronyms

ACP	African, Caribbean, and Pacific
AETR	Average Effective Tax Rate
AHRIM	Association des Hôteliers et Restaurateurs de l'Ile Maurice
APMT	Asia Pacific Mobile Télécommunications
Art	Autorité de Régulation des Télécommunications (French Telecommunications Regulator)
ATC	Agreement on Textile and Clothing
BOI	Board of Investment
BPO	Business Processing Outsourcing
CCT	Conditional Cash Transfer
CEO	Chief Executive Officer
CHCL	Cargo Handling Corporation Limited
CIT	Commercial and Industrial Tax
CSO	Central Statistics Office
EASSy	East African Submarine Cable System
EC	European Community
EIB	European Investment Bank
EPA	Economic Partnerships Agreements
EPZ	Export Processing Zone
ESC	Efficient Subsidy Coefficient
EU	European Union
f.o.b.	Freight on Board
FDI	Foreign Direct Investment
FIFO	First In, First Out
FY	Fiscal Year
GDP	Growth Domestic Product
HACCP	Hazard Analysis and Critical Control Points
HDN	Human Development Network
HIC	heavy and Chemical Industry
HRD	Human Resources Development
HRDC	Human Resource Development Council
HSC	High School Certificate
HSM	Hotel School of Mauritius
ICT	Information and Communications Technology
IMF	International Monetary Fund
IT	Information Technology
LRIC	Long Run Incremental Cost
Mbit	Megabyte
MCB	Mauritius Commercial Bank
MCT	Mauritius Container Terminal
MEEC	Modernization and Expansion Enterprise Certificate
METR	Marginal Effective Tax Rate
MFA	Multifibre Agreement
MFN	Most Favored Nation

MIC	Middle-Income Country
MICE	Meetings, Incentives, Conferences, and Exhibitions
MPA	Marine Protected Area
MPA	Mauritian Ports Authority
MPT	Multi-Purpose Terminal
MSC	Mediterranean Shipping Company
MTPA	Mauritius Tourism Promotion Authority
NAV	Net Asset Value
OECD	Organization for Economic Cooperation and Development
PSA	Private Sector Assessment
PSC	Pioneer Status Certificate
Rs	Rupees
SAFE	South Africa Far East
SAT-3	South Atlantic Telecommunications Cable No.3
SDB	State Development Bank
SME	Small and Medium Enterprise
TEUs	Twenty-foot Equivalent Units
TFP	Total Factor Productivity
UAE	United Arab Emirates
UK	United Kingdom
UNDP	United Nations Development Program
UNWTO	United Nations World Trade Organization
US	United States
VAT	Valve Added Tax

1. Overview: From Preferences to Competition with the World

Transition amid Triple Shocks and Slow Growth

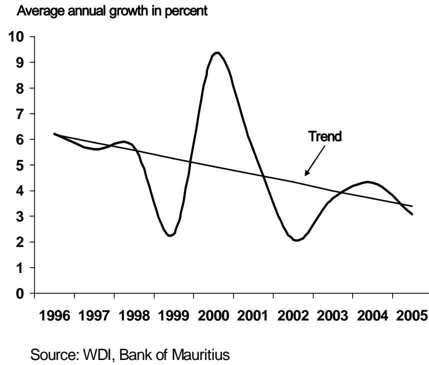
Mauritius is facing a sharp transition from dependence on trade preferences to open competition in the global economy. And it must do so in an unusually difficult environment. After 20 years of remarkable performance, the economy has fallen off a high growth plateau of about 6 percent toward the 2-3 percent range. The creation of new jobs is now too slow to prevent an increase in unemployment. Domestic investment has fallen, the external accounts have shifted from surplus into deficit by $300 million, and the country has sporadically lost reserves.

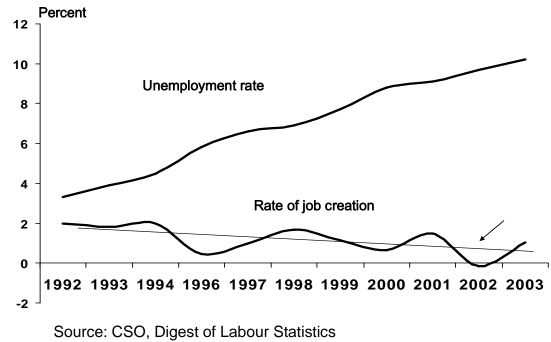
Major industries that supported growth in the past are no longer competitive in a world without preferences. Sugar production, the main pillar the economy for three centuries and surviving in recent decades on preferential access to the EU, cannot compete with the world's powerhouse producers without substantial downsizing. And even then it will no longer be an engine of growth. Clothing and textiles, already suffering from the relatively high wage costs that rising incomes bring, also no longer benefits from the protective cover of the global quota regime, and has already shrunk by 30 percent. And, to make matters worse, the surge in global oil prices has rocked the economy with a further terms of trade shock.

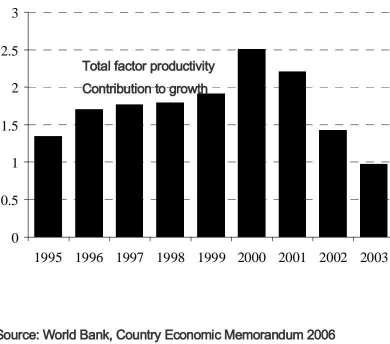
Nor does the immediate outlook for the global economy offer cause for believing relief is just over the horizon. The wave of reductions in sugar earnings and probable declines in textiles have yet to hit Mauritian shores. The sugar industry will soon suffer a 36 percent reduction in earnings, with the probability of even more to come in the next decade. Moreover, it seems likely that the world economy – and therefore the market for other Mauritian exports – will eventually begin to slow from its exceptionally strong performance in the last three years. Nearly all regions are forecasting slower, if still robust, growth in 2007-08. At the same time, the long cycle of low interest rates and cheap investment capital is now ending. US policy interest rates, one harbinger of the future, have risen about 350 basis points in the last 24 months; EC policy rates are also rising as well; and, after considerable lag, long-term bond yields too are beginning to climb.

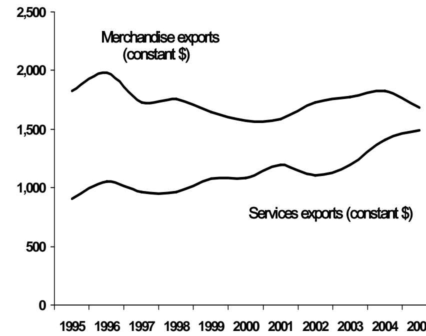
While the Mauritian economy can manage these short-term adjustments because of its comfortable reserve position and low external liabilities, the task of regaining rapid growth momentum is difficult because the triple shocks come on top of sustained long term adverse trends in competitiveness. Productivity – of capital and labor – has been falling steadily since 2000 (Figure 1.1). Exports of goods and services, adjusted for inflation, have stagnated for the last decade. The emerging the tourism industry, an economic bright spot with 6 percent real growth over the last decade, has offset a modest

Figure 1.1 Slowing growth and declining competitiveness

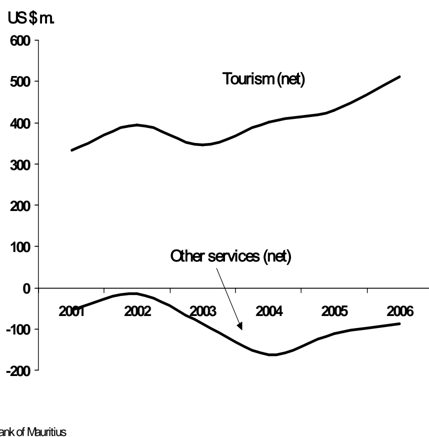




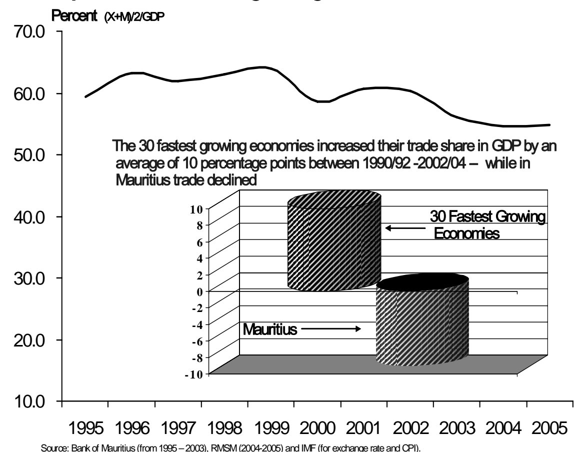




Source: Bank of Mauritius (from 1995 – 2003), RMSM (2004-2005) and IMF (for exchange rate and CPI).



Source: Bank of Mauritius

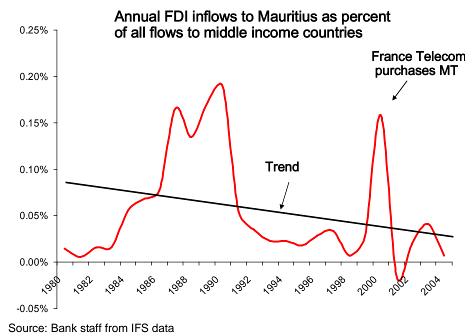


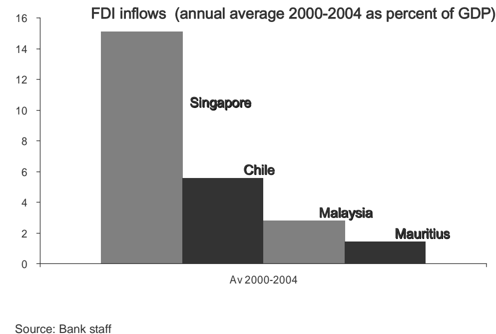
Source: Bank of Mauritius (from 1995 – 2003), RMSM (2004-2005) and IMF (for exchange rate and CPI).

real decline in goods exports and other services. Moreover, at a time when the world's fastest growing economies were increasing the role of trade in their economies, trade in the Mauritian economy has seen its share decline.

Nor has Mauritius taken full advantage of new foreign direct investment flows as a source of information, technology, and – indeed –competitive spurs to productivity growth. Mauritius' share of global FDI has actually fallen progressively over the last decade even as investors have gone to other markets at a 8 percent annual clip (Figure 1.2). Economies that Mauritius seeks to emulate in growth have several multiples of Mauritius in FDI as a share of their GDP. While Mauritius receives about 1.4 percent of GDP, Singapore receives 10 times more FDI as a share of GDP, and Chile gets four times more.

Figure 1.2 Mauritius share of global FDI is low and decreasing





The challenge facing the government is to manage the short-term shocks while moving aggressively on the underlying causes of the deterioration in Mauritian competitiveness. The government has already indicated its plans to:

- reduce government deficits
- improve the investment climate
- attract FDI
- restructure its domestic industry

Key elements in this program are to move the economy to a duty free island and to democratize the economy by making jobs and opportunities available to everyone.

These objectives provide an important foundation upon which to build a sustained action program to improve competitiveness. The task of this report is to help the government refine its program to promote trade competitiveness, bring to bear international experience to illuminate key policy choices associated with implementation, and provide some analytical underpinnings for policies in selected areas.

Towards an Action Plan to Regain Competitiveness

Despite the formidable nature of the challenges ahead, the government is enacting its program with considerable and well known assets – a substantial natural resource base, a multi-lingual and moderately well educated work force, and a strong system of governance with a culture of democracy. No less important is the credibility of its policy framework, a credibility carefully constructed over several political administrations and recognized around the world. Putting these assets to work in ways that will propel the country back to a higher growth plateau requires tackling lingering policy problems with decisive and coherent national strategy that enjoys broad support among senior policy makers and the society at large.

Central to a program to establish a competitive position in the global market not based on preferences are three elements:

- Encouraging private investment flows into dynamic activities
- Unshackling new sources of growth, now burdened by high costs of services
- Ensuring that low-income workers and the unemployed can participate fully in the new growth – that is, to use the government's phrase, "democratizing growth."

Encouraging private investment flows into dynamic activities

The first task is moving resources – labor, land, investment capital -- out of inefficient activities and into internationally efficient ones, with the competitive spur to adopt new, efficient technology. This means moving resources from slow growing sectors where productivity is low into dynamic activities where productivity growth is prospectively rapid. It also means better integrating the large and growing informal sector back into the main economic engine of the country, a task that will contribute to the democratization of the economy at the same time it propels growth.

At present, investors face a collection of incentives shaping market signals – through the trade regime, the tax system, and labor market rules – that are heavily *biased toward stasis* rather than flexible responses to new market opportunities, are *biased against export activities* in favor of producing behind protection, are *biased against labor* in favor of capital-intensive technologies, and *biased against small formal enterprises* in favor of large firms and the informal sector. Revising these incentives cannot be done with simple tweaks that add yet another tax break to the existing system of tax and customs duties incentives. Rather, reform calls for a new framework that encourages private firms to invest in unlocking new opportunities – incentives that offer profits and provide competitive pressures to adopt the most efficient technologies.

It also means releasing the flow of resources now bottled up with regulations, policy proscriptions, and onerous exit costs. Land cannot easily exit sugar. Companies cannot readily shed labor, and therefore shy away from hiring labor. An increasing share of credit potentially available for investment is being taken up by financing government deficits. Moreover, complex and discretionary regulations prevent these potentially

available resources from combining in new ways with new technologies. For example, foreign companies can enter tourism only with high costs if they wish to gain access to land.

Perhaps the most important price in the incentive framework is the exchange rate. External shocks have driven down the real effective value of the rupee, and while this has encouraged exports, the adjustment has not been sufficient to move the current account back into equilibrium. With the prospect of further erosion in export earnings in the next one or two years, it is imperative from a competitiveness perspective that the government allow the pace of nominal depreciation to continue to reduce the purchasing power of the rupee. A secret to the success of East Asia, Chile and other countries in increasing their market share in the global economy has been the maintenance of a competitive real exchange rate. Although it will take several quarters to be visible, depreciations in advance of coming shocks can establish a new competitive equilibrium, avoid losses of additional reserves, and eventually pave the wave for a new growth spurt. Not only would exports fuel that growth, but also more efficient production for the domestic markets would grow.

Unshackling new sources of growth

A second element necessary to reignite growth is up-grading services that are crucial inputs into internationally competitive sectors. Mauritius has several new sources of future growth. Among services, tourism, out-sourcing, ICT and cargo transshipment have recognized potential, and in the real sectors, fish processing, and non-sugar agricultural production that would substitute efficiently for products presently imported also have potential. One other source of growth lies in SMEs that are now largely relegated to the informal economy, and by virtue of their isolation from the system of laws, are unable to take advantage of financial services and export opportunities.

For the tourism sector, air fares that are high-cost, even controlling for distance, raise the price of tourist packages and discourage tourist arrivals. High telecommunications charges, often 2-4 times higher than comparator countries, hobble the off-shoring and ICT industries, and discourage essential internet access for businesses trying sell Mauritian products in export markets. They limit access to the global information so essential to businesses wishing to adopt the latest technologies, to say nothing of their crippling effect on education of the citizenry. Electricity also costs more than in comparator countries, is unreliable and imposes additional costs of maintaining back-up systems on subscribers. Even if not a major cost for most industries, poor quality services simply drive down average productivity.

One service activity of far-reaching importance is the education and training of new professionals and workers. Although analyzed in more detail elsewhere[1], Mauritius is turning out too few workers and professionals with the world-class skills needed to staff new opportunities in tourism and hotel management, off-shoring and ICT industries,

[1] See World Bank, 2006, Mauritius Country Economic Memorandum chapter 4.

and other dynamic businesses competing effectively in the global market. While Mauritius does well at the primary school level, its secondary schools are performing at a rate comparable to countries with only 60 percent of its living standard and its colleges and universities have enrollment rates equal to countries with half its per capita income. Left unattended this constraint will increasingly undermine the adjustment towards global competitiveness.

Other selected public services also require attention to promote competitiveness (though we have not dealt with them here). Particularly notable are customs, investment and tourism promotion agencies, and agricultural extension. Active reforms merit support in all four. Agricultural extension is vital. As lands are converted from sugar to supplying the domestic food market, agricultural extension, particularly to reach small holders, is important to disseminate new information about market opportunities the most recent technologies. The government will have a role in disseminating knowledge of food and hygiene standards among farmers and small enterprises to facilitate linkages between the expanding tourism sector and local horticulture and food processing. Ensuring compliance with those standards will be critical in protecting the reputation of the Mauritian tourism sector.

Ensuring the participation of all workers in new growth

Improving competitiveness means creating opportunities for everyone to participate in the new growth – democratizing the economy. This report considers three elements.

The *first* is the impact of the package of reforms on low-income groups. Here the conclusions are sanguine. Reforming the tariff system and tax system is designed precisely to create jobs. It will do so by reversing recent trends toward slower growth. Moreover, adopting policies that shift the incentives framework away from capital-intensive technologies and large firms and toward greater neutrality, while encouraging SMEs, will augment the job-creating effects of growth. Although the trade reform will induce some dislocation, adverse impacts are confined to a rather narrow set of inefficient import substitution industries and relatively few workers, less than one-third of the number already dislocated by changes in sugar and textiles. These costs are mitigated not only by the promise of higher growth in the future but by lowering the relative prices of food, clothing, and footwear – big ticket items for the budgets of low-income workers but relatively small for the wealthy. Said differently, the trade reform itself would provide lower prices that would disproportionately benefit low-income workers. Even though the new growth is likely to have the strongest effects in raising incomes of low income workers, the estimates in chapter 2 suggest that *relative price effects alone could lift as many as 5 percent of the currently poor above the poverty line.*

This brings us to the *second* element, weaving a social safety net to support the currently unemployed. It is important to recognize that most of today's unemployed are not associated with trade-related dislocation, but are new entrants that have not yet found jobs. Less than 15 percent of the unemployed live in households where they are the only

source of income. That said, one third of the unemployed are in the poorest quintile. All this means that any social safety net must deal not only with those dislocated by trade (e.g., textile or sugar downsizing) or new trade reforms (i.e., from the import substitution manufacturing sector), but all those unemployed as part of the normal growth and structural change in the economy – that is, all workers suffering unemployment in the future irrespective of the reason.

The social safety net today is a patchwork quilt of unfocused programs that provides generous benefits for many that do not need them, but fails to support many that do. The basic pension program costs about 2.7 percent of GDP, and the social assistance programs cost another 1 percent. Neither is directed at the lowest income groups. Consolidating the myriad of social funds and subsidies into a single pool, and redirecting them to the lowest quarter or quintile of the population would liberate resources to help with the next step.[2]

Sequencing, however, is critical. It is important to begin providing benefits to those now unprotected but who would qualify in the new system *prior to* reducing the social protection budget. Studies have shown that Mauritius needs no more than 1 percent of GDP as a direct cash transfer benefit to completely alleviate poverty. To be effective these programs have to be targeted, and so chapter 5 discusses lessons from other countries, and concludes that "proxy means" targeting is particularly feasible and suitable for Mauritius. Eventually, to make resources available, it will probably be necessary to reform the high cost and inequitably structured basic pension program. In addition, the government may wish to establish special programs for the unemployed. Programs that have worked in other countries, include public workfare programs, unemployment assistance programs, improving severance payments regulation, and eventually an unemployment insurance scheme (all issues discussed in chapter 5 of this report).

Facilitating integration of today's unemployed and those possibly laid off in the course of restructuring requires a menu of options. Roughly half of the unemployed are under the age of 25. Since these represent the future productivity of the labor force, programs also need to target these individuals and not only those already employed – a drawback of the many training programs funded by the industry training levy. The existing program of temporary wage subsidies for job-seekers might be made more effective, and subject to closer monitoring and assessment. Experience with pilot wage subsidy programs to encourage on-the-job training of laid-off workers have had mixed results, and a proposed new approach focuses on providing workers with generic skills to increase employability. Integration of the unemployed into the workforce would also be assisted by greater investments in particular schools (such as the Hotel School of Mauritius), along with improvements in university courses leading to employment in high growth sectors (such as tourism and ICT). More fundamentally, Mauritius has to redress

[2] See IMF, February 2006. Mauritius: Aide-Memoire for a comprehensive review of Mauritius fiscal accounts, including suggestions for reforming social spending.

its past underinvestment in secondary and tertiary education, since it is rapidly becoming a major bottleneck for the economy.[3]

[3] See World Bank, 2006 Mauritius Country Economic Memorandum chapter 4 for specific recommendations.

2. Creating Incentives for Private Investment to Move into Competitive Activities

Several policy domains shape the incentive regime in Mauritius. Most important are tariffs, macroeconomic policies that affect the relative price of tradables, tax policy affecting business investment (including small enterprises), and labor market policies. These are the subject of this chapter, except for labor market policies, which are discussed in the forthcoming Country Economic Memorandum (World Bank, 2006).

In reviewing the framework, several conclusions emerge about the way the collection of incentives affects private investment:

- The incentive regime encourages investments in the domestic market more than for exports;
- It encourages investments in capital equipment rather than investments in people;
- It discourages foreign investments relative to domestic investments;
- It favors large firms over small firms.

Eliminating these biases would have a markedly positive impact on the poorest one-third of Mauritian society. Reducing tariffs across the board would also benefit low-income groups. Those with the lowest incomes spend a higher proportion of their earnings on a range of basic consumer goods (footwear, clothing, beverages and food products) that are taxed at a relatively high tariff rate. More important, to the extent that this reform were combined with removal of other disincentives -- to small businesses and to employ labor – the effects through the labor market would constitute a strong impulse to reduce poverty. Finally, as the reform package took hold and began to realize its promise of higher growth, rising incomes would be shared more with low-income workers, the unemployed, and other disadvantaged groups.

Tariff Protection: The Anti-Export Bias

Tariff protection continues to distort the allocation of resources to favor serving the domestic market over competing in the global market. This creates an anti-export bias that is not offset by the other measures.[4] It also keeps resources – capital, labor, and entrepreneurial activity – deployed in low productivity sectors. One indicator of this can be found in comparing the productivity growth in non-EPZ manufacturing with that of the whole economy. In the most recent years for which data are available, average TFP growth was actually negative compared to more than one percent growth in the economy as a whole (Figure 2.1).

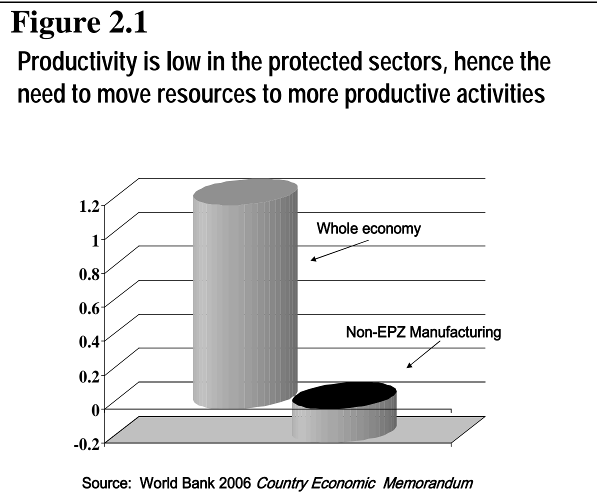
[4] Over the years a range of incentive packages have been introduced in an attempt to mitigate the distortion caused by tariff protection. For example, firms designated under the EPZ can import listed materials free of duty and VAT. The increasingly complex and opaque system wastes considerable resources for administration and enforcement.

The government has indicated it plans to move to a duty free island. This is a vital element of the package of measures that are required to bring greater clarity, transparency, predictability and fairness to the system of incentives in Mauritius. Implementing a duty free island would:

- Remove distortions that contribute to limiting resources moving from less productive activities into the more productive expanding sectors in the economy
- Remove the inherent bias that high import protection of certain sectors entails against export activities
- Reduce the cost of inputs for firms and allow *all* firms (and especially small firms) to effectively source their inputs.
- Release administrative resources in both the government and firms that are wasted in applying and monitoring the current complex system of exemptions.
- Raise incomes of low-income workers and the unemployed by removing tariffs on clothing, footwear, and processed foods, products that consume a disproportionately higher portion of their budget.

Figure 2.1

Productivity is low in the protected sectors, hence the need to move resources to more productive activities



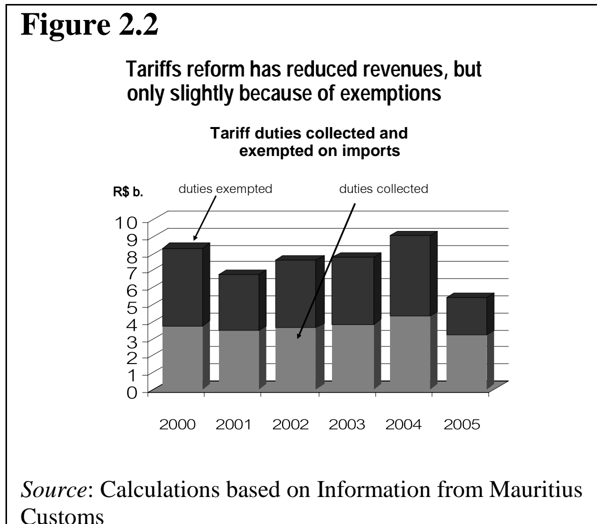
Source: World Bank 2006 *Country Economic Memorandum*

Current system of protection

Mauritius has already implemented substantial reform of statutory tariff rates over the past 6 years. The unweighted average tariff has fallen from more than 19 percent in 2000 to around 7 percent in 2005 (the weighted average tariff has fallen from almost 13 to just over 6 perent). However, these statutory rates mask the true level of protection due to the extensive granting of exemptions (Figure 2.2). Actual customs duties collected as a proportion of the value of imports amounted to 6 percent in 2000 and has fallen to 3.6 percent in 2006. In 2000 and each year through 2004 the value of customs duty exempted exceeded the amount collected. In 2000 the value of duty exemptions was 7.4 percent of the value of imports. The impact of the reform of tariffs has been primarily to diminish the value of these exemptions. Nevertheless, in 2005 exempted customs duties still amounted to 2.5 percent of the value of imports.

Figure 2.2

Tariffs reform has reduced revenues, but only slightly because of exemptions

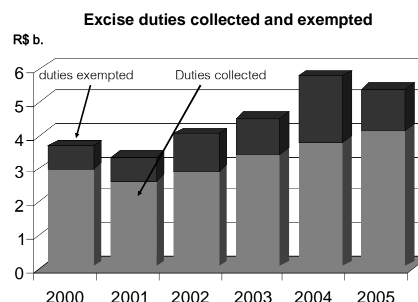


Source: Calculations based on Information from Mauritius Customs

Excise duties now contribute more revenue than tariffs (Figure 2.3). The key excises are those on alcoholic products and tobacco, fuel and motor vehicles. The value of exemptions of excise duty is small relative to tariff exemptions, being about half in 2005. Nevertheless, the excise duties exemptions are highly concentrated with 72 percent relating to vehicles (duty exemptions for civil servants account for almost half of the vehicle duty exemptions).

Figure 2.3

...and excise duties have risen...



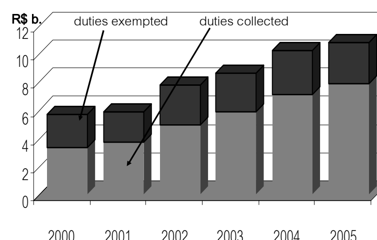
Source: Calculations based on Information from Mauritius Customs

The main source of revenue from imports is now the VAT, which accounts for over a half of revenues from trade compared, with around one third in 2000 (Figure 2.4).

Figure 2.4

...and VAT on trade has risen sharply

VAT collected and exempted on imports



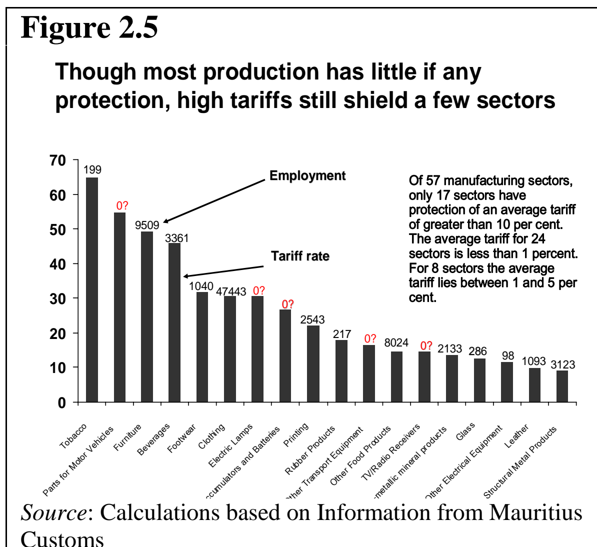
Source: Calculations based on Information from Mauritius Customs

This reflects both the increasing value of imports and increases in the rate of VAT from 10 to 15 percent (in two steps). Exemptions from VAT are also substantial, being around one third of the VAT actually collected on imports. There are also a number of products that are zero-rated for VAT (see IMF (2006)).

Overall, while the value of customs duties collected is slightly lower than in 2000, the revenues from imports, driven by higher imports and increased VAT collections has increased significantly by almost 50 percent since 2000 and has increased slightly as a share of GDP. This highlights that from a revenue perspective it is important when simulating the impact of lowering or removing customs duties to take account of the additional revenue from VAT and of relevant excises from the increased volume of imports.

Although there has been substantial reform of the tariff, for a number of sectors tariff protection remains very high (Figure 2.5). Of 57 manufacturing sectors, the average tariff for 24 sectors is less than 1 percent. For 8 sectors the average tariff lies between 1 and 5 per cent, while there are 17 sectors protected by an average tariff of greater than 10 per cent. A number of these sectors produce goods that comprise a substantial part of expenditure of low-income groups, such as clothing, footwear and other food products. Reducing these tariffs would therefore contribute to lowering the cost of their consumption basket and raising their welfare.

Figure 2.5



Source: Calculations based on Information from Mauritius Customs

The structure of remaining tariff protection leads to a mixed and confusing set of incentives for producers in Mauritius. For example, the clothing sector is seeking to adjust so as to maintain exports in the now highly competitive global market, yet can sell to the local market behind a 30 percent customs duty. While many of the highly protected sectors produce final products, there are a number of sectors that provide intermediate inputs to other industrial and services sectors; for example, other food products, other electrical equipment, structural metal products. It is upon these sectors that exemptions are focused. For example, the average statutory duty facing producers of structural metal products is over 15 per cent while the applied duty after exemptions are accounted for is around 8 percent. Similarly, for other electrical equipment the average statutory rate is 30 percent but exemptions bring the applied rate down to around 11 percent. Domestic producers of these sectors face an unclear and uncertain policy environment in which sales in the domestic market are highly protected but key purchasers in the local market are eligible to import competing products duty free. Thus, these producers can only target with confidence producers that are not eligible for any incentives, a difficult task when the incentive regime is opaque, uncertain and subject to significant discretion.

Implementing a duty free island

Removing all tariffs would lead to a substantial simplification and much greater clarity in the incentive structure in Mauritius that would remove the bias against exporting, provide for a level set of incentives across sectors and release substantial administrative resources required to administer the current complex system. Having received an investment certificate from the BOI, firms that are eligible for exemptions from import duties require authorization *for each shipment* to be presented to customs. A duty free island would remove the need for the EPZ and would allow Mauritius to implement a standard system of VAT.

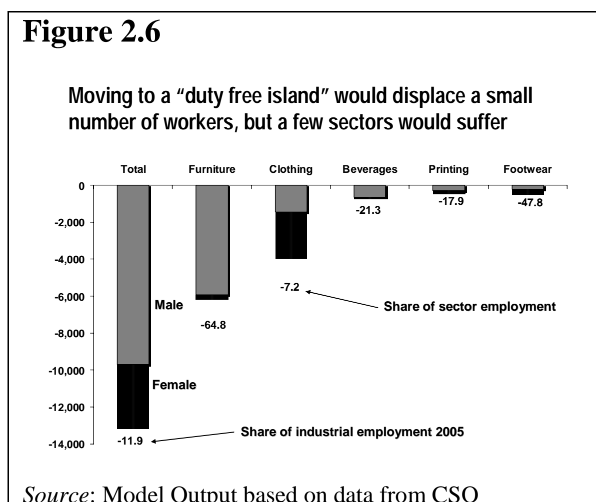
Employment effects: sectoral dislocation

Moving to a duty free island would also have implications for employment in the previously protected sectors and for government revenues. In the long-run, the employment and income effects are expected to be strongly positive because the reform program will help the country exploit better its comparative advantage in global markets by eliminating the implicit tax on exports that the tariff system entails.

However, in the short term, employment in the formerly protected sectors will contract. Carefully identifying potential orders of magnitude of these effects is important in allowing the government to understand the impact across the economy and to design measures to assist resources in leaving the declining sectors and moving into the dynamic competitive sectors of the economy.

Calculations[5] from a simple model of sectoral output (Figure 2.6), employment and trade suggest that the complete removal of tariffs in Mauritius could lead to the loss of around 13,000 industrial jobs, equivalent to around 12 percent of the current industrial workforce and about 2.5 percent of total employment. Around 9,700 of the job losses are expected to be male workers and 3,500 female.

Figure 2.6



Source: Model Output based on data from CSO

These numbers are relatively small. If average annual turnover in the labor market is 10 percent then on average 50,000 workers change jobs each year. If the move to a duty free island is implemented over a period of four years a number of workers amounting to at most 13 percent of normal annual labor turnover will need to be absorbed (see scenario below). This reflects that a large part of industrial employment is producing for the overseas market or sells in the local market without trade protection and that industrial employment is one fifth of total employment in the economy. It is also small when compared to the fact that the economy has shed more than twice that number in the last five years in the EPZ sector alone – and still managed to create *net new jobs* of about 5,000 annually. Mover, job losses associated with a tariff reform are likely to be offset by the positive impacts on employment in export activities. Further, these predicted impacts on employment will be virtually unnoticeable if the reform is phased in over 4 years. Finally, the number of new jobs created will accelerate if the policy reform

[5] Unfortunately, up to date information on output by sector is not available in Mauritius. We have had to extrapolate forward the latest data from 2002 using an average based upon changes in employment and VAT returns. The sensitivity of output of each sector to changes in import prices, a key parameter in the model, is based upon the analysis of local experts from Enterprise Mauritius and the government. The exercise here will overstate the impact of the final step to a duty free island since the effect of the substantial tariff reform undertaken in 2005 will not be fully reflected in the employment data and extrapolated output data.

package is successful in delivering sustained higher growth. Every 2 percentage points of additional growth will add fully 5,000 new net jobs over and above the usual rate of job creation.

Nonetheless, the adjustment to the removal of tariffs is concentrated upon a small number of sectors (those in which a significant amount of employment is devoted to sales for the domestic market and tariff protection remains high), with just 5 industries accounting for almost 90 per cent of the simulated loss of employment. The employment loss is concentrated on the furniture sector.

The workers released from the sectors facing greater import competition will posses a set of skills that may not necessarily match the profile required by the expanding sectors, such as tourism, ICT and financial services. Measures to assist these workers in acquiring the necessary skills through training will ease the flow of labor from less productive declining sectors into more productive expanding sectors (see chapter 5).

Because the impact of moving to a duty free island is heavily focused on this small number of sectors, the outcome is quite sensitive to the data for those sectors and how the assumptions of the model pertain to those sectors. The exercise reported here is a mechanical one that takes little account of how firms have reacted in the past to increases in imports. For example, imports of furniture increased by more than 20 percent between 2002 and 2005 yet employment contracted by only 3 percent. Imports of footwear increased by almost 70 percent since 2002 but employment in Mauritius increased.[6] Hence, for these reasons the impacts discussed here are likely to overstate the impact of moving to a duty free island and should be seen as upper bounds to the likely outcome.[7]

Two policy scenarios

The way in which the move to a duty free island is implemented will have implications for the nature of the adjustment. Here we simulate the impact of two different approaches to the removal of tariffs over a four year period (Figure 2.7). First is a strategy that acts initially to reduce the value of exemptions (by cutting the statutory rather than the applied tariffs) and then aggressively reduces the protective part of the tariff.[8] Under this scenario the initial loss of employment will be around 2,400 jobs in the first year of reform rising to a maximum of around 4,400 in year 3. The maximum

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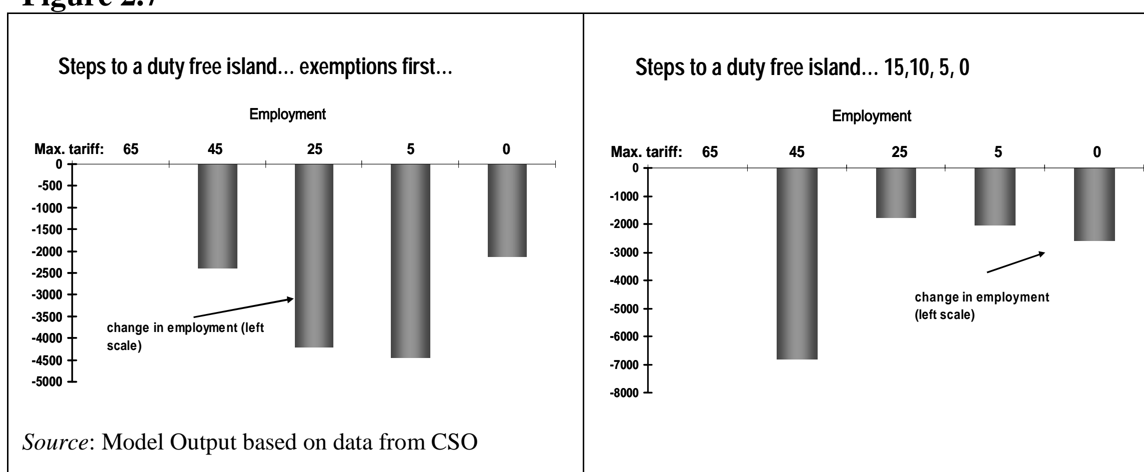
[6] Despite the data limitations, a more detailed empirical investigation of the sensitivity of domestic output and employment to changes in import prices would be useful in refining this analysis and taking it forward.
[7] Previous analysis of the impact of trade liberalization in Mauritius in the 1980s found that while employment in export activities increased, as expected, there was no contraction in employment in import competing activities. This was explained by an increase in the supply of female labor that eased labor market constraints and strong growth in the economy. (see Milner, C and P Wright (1998) 'Modeling labor market adjustment to trade liberalization in an industrializing economy', *Economic Journal*, 108, 509-28.
[8] We do this by applying a Swiss formula cut to the statutory tariff rates. The Swiss formula acts to cut higher tariffs more than proportionately than lower tariffs around a maximum value defined by a parameter that has to be chosen. We simulate a cut with a parameter of 5 implemented over 3 years with a final step in year 4 to remove all remaining duties. The Swiss formula is defined as new tariff = (old tariff *parameter)/(old tariff + parameter)

applied tariff (sector average) under this scenario (starting from 65) would be 45 in year 1, 25 in year 2, 5 in year 3 before being fully removed in year 4.

Another approach would be to implement simple steps, rather than use a more complicated formula, and reduce maximum tariffs to 15 in year 1, 10 in year 2, 5 in year 3 before being removed in year 4 (Figure 2.7, panel b). In this case, the employment loss in concentrated in the first year in which more than 50 percent (6,800) of the job loss occurs, with much smaller contractions in employment in the industrial sector in the subsequent years.

Figure 2.7



Source: Model Output based on data from CSO

Impacts on low-income workers and the poor

A tariff reform affects low-income workers through two channels: through the effects on the demand for labor, as just discussed above, and through changes in prices that low-income workers pay for their consumption. As noted above, the long-term effects of tariff elimination for low-income workers through changes in labor demand are likely to be strongly positive. What then are the likely consumption effects of moving to a duty-free island?

Of particular importance are duties on food, beverages, clothing and footwear products with inelastic demand, as these necessities represent a large share of the spending of poor households. In Mauritius, the share of disposable income spent on food and non-alcoholic beverages averages 42 percent for the lowest income quintile but only 15 percent for the richest households.[9] Translating the removal of tariffs into changes in domestic prices suggests that the price of basic food items may fall by 12.8 percent, meat prices by 4 percent, fish by 1.3 percent, fruits by 2.5 percent, vegetables by 10 percent and clothing and footwear by 10 percent.[10]

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[9] This analysis is based upon information on spending and income by household from the 2001/02 household budget survey.

[10] Our analysis will probably understate the impact on the poor of reducing tariffs on clothing. Our tariff for clothing is an average across a wide range of products. In September 2005 tariffs were reintroduced on a number of clothing products. However, these were formulated as specific duties, the incidence of which

The effects of these price changes on real disposable income are summarized in Table 2.1. The table shows that the poorest households gain proportionately much more than rich households. Moving to a duty free island would allow the poorest households to consume their current bundle of goods and services and be 3 percent better off. The reduction in prices would reduce the number of the poor by 5.2 percent. This reflects that a large number of the poor have a per capita income of just below our definition of the poverty line.

Table 2.1: Effects of Lower Prices on Poverty

Monthly Household Disposable Income per Capita	Income Effect	Number of Poor Households	Number of Poor	Households	Household Members	Total HH Member in Quintile
< Rs 1861	2.8%	59642	261507	0	0	261,507
Rs 1862 – Rs 2562	2.4%	7790	31924	-5066	-20597	250,133
Rs 2563 – Rs 3500	2.1%	0	0	0	0	232,737
Rs 3501 – Rs 5170	1.8%	0	0	0	0	215,485
> Rs 5171	1.1%	0	0	0	0	195,222
						1,155,084

Note: The poverty line is defined as 50 percent of the median disposable per capita income, i.e. Rs 2026 per month. Data exclude Rodrigues, numbers are grossed up from the survey data
Source: World Bank staff calculated from CSO data

Impacts on government revenues

Removing tariffs will also have an impact on government revenues. On the one hand, tariff revenues will be lost. On the other hand, this will be offset, to an extent, as lower prices will entail an increase in demand and additional revenues from excises and VAT. As noted above tariffs are already a relatively minor source of revenue from trade, contributing less than either excises or VAT on imports. This is because a large number of tariffs have already been set to zero and exemptions reduce the revenues from those tariffs that remain.

Our calculations suggest that revenues from trade will fall by around 1.8 billion rupees,[11] equal to about 12 percent of current trade revenues and about 5 percent of total government revenues. If excise duty exemptions were to be phased out as tariffs were removed then the loss of revenue would be halved to around 0.7 billion rupees. Further, growth in the economy will act to minimize the impact of the loss of revenues from tariff duties. For example, if the economy and imports were to grow at 5 percent per annum

falls particularly heavily on low value items, those consumed predominantly by the poor. The ad valorem equivalents of these specific duties on low value products from China are typically around 100 percent and sometimes exceed 200 percent. On the other hand, the ad valorem equivalent when product comes from France is very low, often less than 10 percent.

[11] This includes the loss of VAT and excises from domestic output that is substituted by imports. It does not include any loss of corporate taxation from domestic firms that decline or exit or any increase in corporate taxation from retailers that sell imports or from the expansion of domestic companies that use previously taxed imported inputs.

over a four year implementation period then revenues from trade (even if excise exemptions were maintained) would exceed those currently collected by around 1 billion rupees.

Table 2.2 looks at how the loss of revenues may be distributed across a 4 year implementation period according to the approach adopted to phasing out tariffs; the Swiss formula that targets exemptions first or the more simple approach of moving first to a maximum tariff of 15 percent, then 10 percent, 5 percent and zero. In fact there is not a great deal of difference in the pattern of revenue loss between the two approaches. Most revenues are lost in the final year showing that the majority of tariff revenue comes from products that are subject to relatively low tariff rates.[12] In both cases there could actually be an increase in revenues in the first year (driven mainly by an increase from excises on tobacco and beverages).[13] The table also shows how phasing out excise duty exemptions (in equal installments over the four years) would reduce the overall loss of revenues, but would also alter the distribution of losses over the implementation period. Finally, the table shows that with moderate increases in imports as the economy grows over the period, revenues from trade increase.

Table 2.2 Revenue Impacts of Moving to a Duty Free Island

Policy Scenario	Change in Trade Revenue (% of initial trade revenue)				
	Year 1	Year 2	Year 3	Year 4	Total
Tariff exemptions first	2.29	-0.97	-5.09	-8.04	-11.80
with phase out of excise exemptions	7.50	-2.69	-6.82	-2.68	-4.69
with 5% annual growth and phase out of excise exemptions	12.61	2.58	-2.04	1.16	14.31
15, 10, 5, 0 Collapsing Maximum	4.20	-1.77	-3.66	-10.60	-11.80
with phase out of excise exemptions	9.43	-3.51	-5.39	-5.22	-4.69
with 5% annual growth and phase out of excise exemptions	14.64	1.78	-0.32	-1.78	14.31

Source: World Bank staff

Macroeconomic Policies to Support Trade Competitiveness

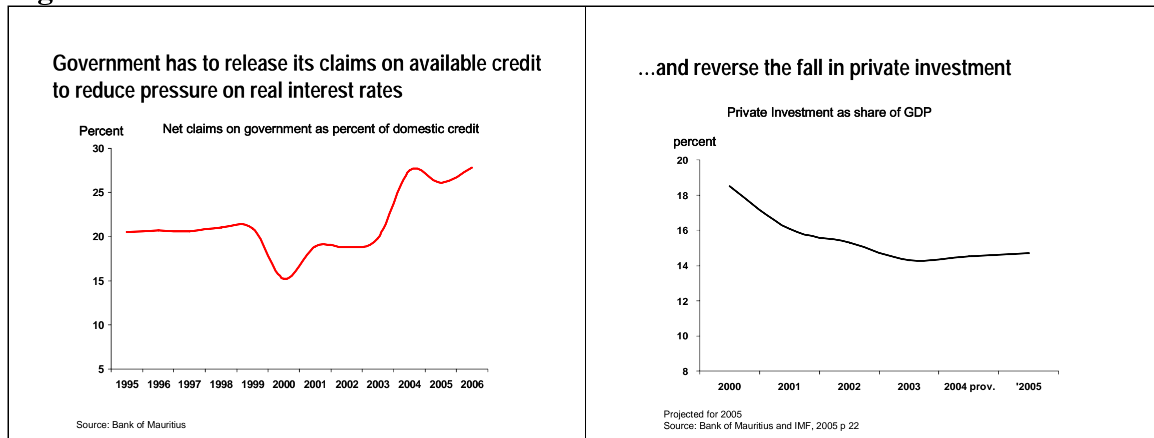
Two policies inherent in the Government's macroeconomic framework are pivotal to the incentive framework for competitiveness: those affecting interest rates and the value of the rupee. In the run up to the decision to begin to consolidate the fiscal position, the government has borrowed heavily in domestic markets. As a result non-financial public sector debt has risen to nearly 70 percent of GDP. One consequence is that the government share of available credit has risen from a low of 15 percent in 2000 to nearly 28 percent last year (Figure 2.8). The impact on interest rates has not been dramatic so far because, as the economy has slowed, private investment and the demand for resources

[12] Of current tariff revenue, 69 percent comes from products subject to a tariff of 10 percent or less, 25 percent comes from products subject to a tariff of between 10 percent and 50 percent and only 6 percent of revenue comes from products subject to a tariff of more than 50 percent.

[13] The model has unitary elasticities of demand and excise rates are multiples of the tariff for these products.

has fallen (Figure 2.8). Nonetheless, real interest rates have remained high, and as interest rates in global credit markets rise in response to policy tightening in the US and recently in Europe, rates in Mauritius will also have to rise. The government's proposed fiscal tightening can relieve at least some of these pressures.

Figure 2.8



The price of capital is not the only price that matters to exporters. Perhaps the most important price in the incentive framework is the value of the rupee against the currencies of trading partners. The external shocks have driven down the real effective value of the rupee, and while this has encouraged exports, the adjustment has not been sufficient to move the current account back into equilibrium. With the prospect of further erosion in export earnings in the next one or two years, it is imperative from a competitiveness perspective that the government allow the pace of nominal depreciation to continue to reduce the purchasing power of the rupee, to raise the relative price of tradeables to nontradeables and stimulate exports.

The policy of selective intervention in exchange markets to support the rupee has been effected at the heavy cost of lost reserves. However, a weaker rupee in the short-term would favor exports. Several countries embarked in export pushes have maintained low values for their currencies to encourage exports and domestic production to substitute for imports. Thailand, Malaysia, and Indonesia all maintained low currencies to stimulate exports. Chile did so for more than a decade after its financial crisis in 1981-82, and this fueled an unprecedented expansion of its export industries. China's low currency value has propelled its recent export expansion – to the point of eliciting complaints from its major trading partners. Though it will take several quarters to be visible, depreciations in advance of anticipated export slowdown can mitigate them, and accelerate the move of external accounts into balance.

Maintaining a low rupee for several quarters would also likely widen the spread between returns to skilled and unskilled labor. This may be necessary to reset the balance in labor markets which today puts insufficient premium on education and contributes to early school-leaving. Wage compression in Mauritius has distorted the incentives to reallocate resources into new sectors and has increasingly undermined the prospects of

low-skill workers in the adjustment away from the sugar and textiles sectors.[14] Allowing depreciation-induced inflation to rebalance the real wage structure through market based adjustments to skilled and unskilled labor would create an incentive for youth to aspire to higher levels of education and training. For this to work, wage policy has to avoid using remuneration orders or other policies that bump up real wages faster than productivity (see World Bank, 2006), so that relative prices in real terms can provide differential remuneration.

Tax Policy toward Business

Incentives through the Board of Investment

Much like other countries, Mauritius has offered companies a wide range of investment incentives. These comprise exemptions from customs duties, varying reductions in income tax rates, exemptions from land taxes, and several other benefits. In total, the investment incentive framework comprises more than 20 different types of incentives (see summary Table 2.3).

Several features characterize the system. First, many sectors over the years have benefited from tax incentives, and legal revisions, often intended to streamline the system, have instead added to its complexity. This was the case for the Incentives Law of 2001. Second, the system is oriented toward administrative approval of investments, and has a high degree of discretion associated with it. Some programs, such as the Integrated Resort Scheme, require ministerial level approval. Third, the system is cumbersome to administer, because in some cases, benefits require monthly reporting to the Board of Investment; as noted earlier EPZ beneficiaries are required to provide import certificates for verification *for every shipment*. Companies can lobby to have duty free access to additional materials so that the list of approved products is subject to change. Fourth, some programs are not time bound so privileges endure without limit; some "pioneer firms" have benefited for more than [two] decades. Fifth, the value of tax expenditures via exemptions is neither quantified for purposes of reporting to the budget nor monitored as to whether the initial objectives were achieved. The result has been an administratively cumbersome, highly discretionary system, providing tax incentives whose economic benefits are impossible to evaluate.

Except in one respect. The system generally discriminates against small and even medium size firms. This is because firms applying to the BOI for benefits have to have a minimal level of capital [(R$10 million)], and because hefty administrative costs and legal fees are fixed costs that require a large volume of business to support.

[14] See Porter, N., 2004, Wage Compression, Employment Restrictions, and Unemployment: The Case of Mauritius.

Table 2.3: Incentives for the different type of Investment Certificates

	EPZ	ESC	Freeport	ICT	MEEC	PSC
Corporate tax 15% (instead of 25%)	X	X	X	Only after 2012, before that tax holiday, BPO and call centres can opt for a uniform corporate rate of 5%	X (provided that company is not engaged in the manufacture of excisable goods under Excise Act 1994)	X
Custom duty exemption	X (on raw materials and equipment)	X (office equipment)	X (on all goods imported on the Freeport Zone)	X (for equipment)	X (for equipment)	X (for equipment and raw materials)
Excise duty exemption	X (on raw materials and equipment)				X (for equipment)	X (for equipment and raw materials)
VAT exemption	X (on raw materials and equipment)					X (for equipment and raw materials)
Free repatriation of profits, dividends and capital	X		X (only for profits)			X
Income tax	a) exemption for dividends b) 50% relief for 2 expatriate staff	a) exemption for dividends		a) 50% relief for IT specialists		a) exemption for dividends b) 50% relief for 2 expatriate staff
Other incentives	a) New industrial enterprises are liable to only 5% of the registration duty on purchase of lands and buildings		a) reduced port handling charges b) 100% foregin ownership c) no exchange control d) access to offshore banking e) access to local market	a) investment allowance of 50% plus annual allowance of the total investment over 3 years b) fast track processing of visa, work and residence permits for expatriates		

Note: EPZ: Export Enterprise Scheme. Firms granted with the Export Enterprise Certificate
ESC: Also part of the Export Enterprise Scheme but for firms undertaking exports of services. It aims at developing marketing and services in support of the manufacturing sector.
Freeport License: For all the companies operating in the Mauritius Freeport (a duty-free logistics, distribution and marketing hub).
ICT: Special scheme of incentives for the Information and Communication Technology sector.
MEEC: Modernisation and Expansion Enterprise Certificate. This scheme aims at accelerating the modernisation, expansion and diversification of existing manufacturing enterprises by encouraging them to invest in modern equipment, computerisation and pollution control technology.
PSC: Pioneer Status Certificate. This scheme aims at encouraging the transfer of technology for the creation of new support industries for the high value-added sector, for the development of priority sectors and for pioneer services.
Source: BOI

Recognizing these shortcomings, the government wishes to reorient the incentives and the Board of Investment. It wishes to *move from a discretionary and approval based system to a pro-active investment promotion system focused on attracting investment* to a superior Mauritian investment climate. Two reforms will go far toward moving the system to neutrality: adopting a duty free island (that will eliminate the distortions and administrative complexity in customs duty exemptions) and reforming the corporate income tax (see below). These reforms will allow the Board of Investment to succeed in moving from a discretionary approval system to a pro-active investment promotion system.

If the government does decide to provide new incentives – and the weight of the literature argues against incentives (see Morisset and Pigato, 2002) – they would be most cost effective if they were:

- Time-bound (that is, limited in duration)
- Intended for a specific purpose and evaluated against that objective
- Simple to understand (e.g., limited to one or two tax instruments)
- Automatic in approval for all firms meeting the criteria rather than discretionary
- Reported annually as "tax expenditures" to Parliament as part of the budget envelope so as to be subject to fiscal discipline and judged against competing priorities
- Inclusive and available to small firms at the same cost as large firms
- Monitored closely as to whether they were achieving their intended result.

Economic effects of business taxation: marginal effective tax rates

Business taxes on investment have a direct impact on investment decisions. Analysis goes beyond statutory tax rates to incorporate tax depreciation (write-off) rates; special investment credits and allowances; other taxes on business capital – property taxes, capital taxes, turnover taxes, capital transfer taxes, etc.; tax holidays, etc. Economists summarize the key elements of the business tax system with respect to investment in a measure called the marginal effective tax rate (METR) on capital. The METR is a summary measure of the effective rate of tax imposed on the rate of return generated by the last, or marginal, unit of capital in which a firm invests, it is a summary measure of the total distortion in the rate of return to capital imposed by the business tax system (see Box).

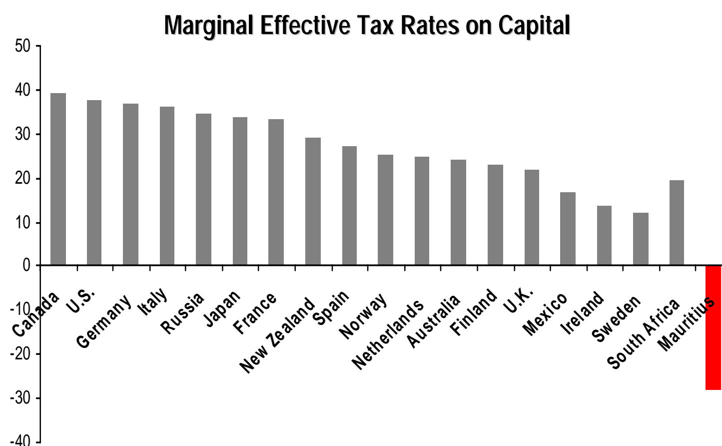
The business tax regime in Mauritius *subsidizes* (rather than taxes) investment at the margin, primarily because of the availability of the investment allowance which does not reduce the depreciable base for tax purposes as well as high straight-line write-off rates for depreciable assets. Investment incentives are often redundant. There are two immediate consequences of importance: the framework is biased toward the deployment of capital rather than labor, and the incentives in place are overly generous and of reduced effectiveness.

The result is one of the most lavish investment regimes among comparator countries (Figure 2.9). Compared to other countries, Mauritius' subsidies to capital formation in both manufacturing and services are substantial. The tax/incentive system in

Mauritius is more generous than in both neighboring countries and in comparator countries.

Figure 2.9

Tax policy makes capital cheaper than labor and renders incentives powerless



Source: World Bank staff

Table 2.4 presents provisional calculations for the standard tax regime, which assumes a number of features of the tax system apply to a hypothetical marginal investment.[15] The most striking outcome from the calculations presented in Table 2.4 is that the METRs are negative for depreciable assets (machinery and equipment, and buildings), and in aggregate, for all four broad sectors. Said differently, the before-tax rate of return on a marginal investment is actually lower than the required after-tax rate of return. Thus, the -95 percent METR in manufacturing means that in order to generate a real, net of depreciation, *after-tax* rate of return of 4 percent an investment in machinery and equipment need only generate a real *before-tax* rate of return of little over 2 percent.

[15] This assumes: 25 percent statutory CIT rate; industrial and commercial buildings, excluding hotels, are written off for tax purposes at 5 percent on a straightline basis; hotels written are off at 20 percent straightline; machinery and equipment is written off at either 20 percent or 25 percent straightline, depending upon the sector; 25 percent investment allowance is available for all capital expenditures (buildings and machinery); the investment allowance does not decrease depreciable base; inventory is accounted for on a FIFO basis for tax purposes; and a land transfer tax of 5 percent is applied to the market value of fixed property.

Box 2.1 The METR: A Summary Measure of the Impact of Business Taxes on the Return to Capital

Conceptually the idea behind the METR is straightforward. Consider that there are two main "stakeholders" that hold an interest in firms: debt holders and equity holders (owners or "shareholders"). In order to satisfy these stakeholders, an investment must earn a rate of return after the payment of all business taxes that is greater than or equal to the (weighted average) "hurdle" rate of return required by these stakeholders. The hurdle rate is the minimum rate of return acceptable to the stakeholders. For example, say the hurdle rate of return is 10 percent. This means that all capital projects that earn a rate of return greater than 10 percent, after the payment of all business taxes, will be undertaken. Say the tax system is such that in order to earn a rate of return of 10 percent after business taxes, an investment must earn a rate of return of 15 percent before business taxes. The METR is then 33.33 percent (determined as (.15-.10)/.15). The METR therefore measures the share of the investment's pre-tax required rate of return needed to cover the tax costs associated with the investment. Note that the METR could differ substantially from the statutory CIT rate because of the existence of other taxes, deductions, credits, allowances, etc. The methodology thus captures the "big picture" aspects of the tax code and should be interpreted in this light.

Several things should be kept in mind when interpreting METRs. First, the METR should not be confused with the average effective tax rate (AETR). The AETR measures total taxes as a share of total income while the METR measures taxes paid by a marginal investment as a share of the required before-tax rate of return on that investment. The METR is thus a forward looking measure which measures the impact of taxes on the incentive to invest *at the margin*. The AETR is a backward looking measure which reflects previous investment decisions and taxes levied on the income generated by those past investments. It is possible for the AETR to be quite high and the METR quite low, and vice-versa. Both are useful for tax policy analysis, but serve quite different purposes. The METR provides a measure of the incentive effects of the tax system on investment. The AETR provides a measure of the burden of the business tax system and a useful indicator of the distribution of the business tax burden across companies or sectors.
Second, the METR measures the impact of taxation on the incentive to invest in capital inputs. Taxes that corporations pay on other inputs that do not impinge on the rate of return to capital (e.g., taxes on labor, such as payroll taxes), are not reflected in the METR on capital. Third, METR analysis is only one of several tools that should be employed in analysis of the tax system. The calculations are based upon a hypothetical marginal capital investment subject to a rough caricature of the tax system. While several important aspects of the tax system can be incorporated – such as the corporate income tax rate, tax depreciation allowances, investment allowances, tax credits, property and capital taxes, tax holidays, implicit sales taxes on inputs, the treatment of inventories, etc. – several simplifying assumptions must be made, and important nuances of the tax code cannot be captured. Finally, METR calculations reflect the statutory provisions of the tax system; they do not reflect various administrative and compliance issues that are extremely important in determining how a tax system works on the ground.

Table 2.4 Marginal Effective Tax Rates on Capital, Mauritius, Standard System, 2006

	Manufacturing	Agriculture	Tourism	Services
Equipment	-95.4%	-92.5%	-77.4%	-104.4%
Buildings	-0.8%	-41.6%	-47.6%	-6.9%
Land	4.9%	4.9%	4.9%	4.9%
Inventories	29.9%	29.9%	29.9%	29.9%
Total	-22.0%	-3.2%	-42.3%	-34.0%

Source: World Bank Staff

The reason for this is two-fold. The first is the 25 percent investment allowance that may be claimed in the first year of any investment.[16] This investment allowance is very generous because it does not decrease subsequent tax depreciation allowances. As such, over the (tax) life of an investment in depreciable capital, 125 percent of the purchase price is written-off for tax purposes. The second factor is that the tax depreciation rates themselves are very high. Machinery and equipment is written-off over four or five years (depending upon the sector). Buildings are written-off over a more reasonable twenty year period, except in the tourism sector where hotels are written-off over five years. The investment allowance and fast write-off rates combine to generate negative METRs for depreciable assets. Marginal investments in land and inventories, on the other hand, bear positive METRs. The METR for land reflects the application of a 5 percent land transfer tax, and the METR for inventories reflects the taxation of inflationary gains due to the use of FIFO accounting.

Also evident from the table is the large variation in METRs across the four broad sectors. At the asset level this largely reflects differences in economic depreciation rates across assets. For example, economic depreciation for equipment is somewhat higher in agriculture than manufacturing, while for buildings and structures the opposite is true. At the aggregate level, the variation in the weighted average total METRs across sectors also reflects differences in the capital weights across the sectors. For example, the manufacturing sector is quite machinery intensive relative to the other sectors; agriculture is more land intensive; tourism (hotels) is more building intensive; etc.

Table 2.5 presents METR calculations for investments eligible for incentive treatment. Mauritius has several investment incentive schemes in place. The features of those schemes that are relevant for the calculation of METRs involve the corporate tax rate, write-off rates, and investment allowances. Companies receiving investment incentive treatment are subject to a lower 15 percent corporate tax rate. Moreover, there are additional investment allowances available in some sectors. Table 2.5 only incorporates one such allowance – the additional 25 percent investment allowance for manufacturing investments in "modernizing" plant and equipment.

[16] The calculations presume full taxability – i.e., it is presumed that firms can write-off deductions associated with marginal investments against the income generated from infra-marginal investments.

Table 2.5 Marginal Effective Tax Rates on Capital, Mauritius, Incentive System, 2006

	Manufacturing	Agriculture	Tourism	Services
Equipment	-139.1%	-35.4%	-31.7%	-39.1%
Buildings	-20.2%	-20.8%	-22.8%	-4.3%
Land	4.8%	4.8%	4.8%	4.8%
Inventories	18.4%	18.4%	18.4%	18.4%
Total	-45.3%	-2.1%	-20.1%	-16.1%

Source: World Bank Staff.

For the manufacturing sector, the investment incentive schemes make an already generous tax regime even more so, driving the METR on equipment to almost -140 percent, and the overall METR in manufacturing to -45 percent. This is due exclusively to the additional 25 percent investment allowance. Interestingly, in the other sectors the reduction in the corporate income tax (CIT) rate from 25 percent to 15 percent actually lowers the METRs (making them less negative) for depreciable assets and overall. The reason for this is that prior to this reduction in the CIT rate investments in these assets were subsidized (as pointed out above). In this case the reduction in the CIT rate lowers the value of the generous resource allowance and tax depreciation deductions to the firm, reducing the value of the subsidy. Investments in inventories and land benefit from the reduction in the tax rate at the margin.

Reforming the corporate income tax

Two relatively simple reforms would reduce perverse incentives in the tax system. First, replacing the system current system of different tax rates with a flat 15 percent across the board would eliminate the biases against retail trade, finance, and other commercial sectors, as well as the few firms that actually pay the 25 percent rate. Second, and arguably more important, revamping the overly generous depreciation allowances by moving them toward international averages. As part of this process it may be necessary for legal purposes to grandfather existing beneficiaries and provide for some adjustment period or off-setting compensation (e.g., bonds to indemnify holders, such as occurred in Argentina when it eliminated overly generous tax breaks).

Small businesses: democratizing the tax regime

The informal sector is unusually large in Maritius. Some estimates prepared on the basis of electicity consumption conclude that the informal sector may comprise as much as 40 percent of employment. Moreover, the share of the informal sector appears to be rising. For its part, the Ministry of Industry estimates that of 95,000 small establishments all but 2,500 are unregistered. While exact numbers are impossible to calculate, the general conclusions that the share is larger – and larger than estimates in other countries – and growing seems robust. In this regard the situation in Mauritius differs from the experience of other countries where informality has declined as income has increased.

The country would benefit if the size of the informal sector could be reduced, both because it would contribute to the greater productivity of the sector itself, because small firms would face no disincentives to growing bigger, and because they eventually could make a contribution to growth, to tax revenues and even exports. However, at present, the benefits of registration and significantly lower than the cost.

Changing the incentives for small firms to register requires increasing the benefits and reducing the costs. The most significant constraint small firms face is finance (see Klapper, 2005), so if registration could become a basis for access to micro-finance and other programs, it would be a significant incentive. At present the government has a myriad of programs of micro-finance run through the SDB and other sources; these are small, administratively costly, and inadequately promoted. Achieving some economies of scale through consolidation might increase efficiency and allow for greater resources. Similarly, reducing costs by making registration procedures easier, formally exempting small firms from labor legislation that imposes high costs on firings, and exempting them from income tax payments and VAT collection responsibilities would go far to reduce costs. While variations of these incentives are already in place, making policies explicit, centrally administered, and more welcoming – and with greater links to access to finance – may increase their effectiveness.

Reforms to the Incentive System: Rekindling Rapid Growth

The reforms, discussed above and summarized in Box 2.2, are mutually reinforcing. Moving to the duty free island would substantially remove the bias in favor of domestic production. Lowering the corporate tax rate to a flat 15 percent and eliminating exemptions would level the playing field among various sectors and firms. Revamping the depreciation allowances would also remove the incentives at the margin for firms to invest in machines rather than labor. Reforms of the corporate income tax would eliminate one of the advantages that large firms have relative to small firms. This, together with the reform of the tax incentive system, would allow the Board of Investment to reorient is activities from approvals to promoting Mauritius as an investment destination. If this were combined with reforms to the labor market (see World Bank, 2006), the net result would be to give a boost to job-creating growth by inducing shifts over time into higher productivity sectors.

Box 2.2 Elements of reform to the incentive system Summary:

- Move to duty free island
    - Implies end of EPZ status
    - Normal system of VAT
- Reform corporate income tax
    - Reduce corporate income taxes to flat 15 percent
    - Revamp depreciation allowances to end bias toward capital
    - Phase-out existing incentives over fixed period
- Reorient Board of Investments
    - From discretionary approval to automatic approvals
    - From approval to promotion
    - Principles of new incentives (if any): time-bound, non-discretionary, specified objectives, no minimum size, reported annually in budget as tax expenditures, and subsequent monitoring for fulfillment of objectives
- Small enterprises (below 10 employees or specified value of sales):
    - Facilitate business registration to obtain certificate for purposes of credit, requiring only annual statement of income and assets
    - Consolidate existing micro-finance entities (see UNDP, 2006)
    - Require safe working conditions and compliance with environmental laws
    - Exempt from labor regulations and tax obligations

3. Moving Resources to More Productive Uses: Sugar and Textiles

Over the past two decades the Mauritian economy has exploited -- and then come to depend upon -- preferences granted in industrial countries, especially the EU. These preferences have been concentrated upon two sectors: sugar and textiles and clothing. This has led to substantial transfers to Mauritius and has sheltered Mauritian exporters from global competition. These preferences are now declining. The removal of quotas on textiles and clothing products has intensified competition from previously constrained Asian countries in the key markets for Mauritian exports, the EU and the US. The reform of EU sugar policy will see a substantial reduction in the guaranteed price for Mauritian sugar, with possible further revisions in the next decade.

Adjusting to these realities will be difficult since preferences tolerated inefficiency and low productivity, but these can no longer be sustained in the new, more competitive world. The challenge facing both sectors is to encourage private investment into high productivity activities within the sector that can be globally competitive while allowing resources to leave the industry and to find employment in the dynamic expanding sectors of the economy that will be the engine of sustained future growth.

The Case of Sugar

Sugar earnings have long supported Mauritian development. However, the industry has survived through preferences, and with the phase-down of EU sugar prices, it can be marginally competitive only if it reduces costs, adds value to its product (including by supplying energy), and releases resources from the sector. Particularly important are the release of some 8,000 of the 14,000 sugar workers now in the industry. Because labor laws require severance payments for sugar workers that are particularly generous – an average of $10,000 per worker for severance payments plus an equivalent amount in improved land – downsizing industry to free up labor and land for more productive uses could cost upwards of US$80 million in payments to excess labor alone. It seems unlikely that the industry can finance these payments and make the requisite investments to reducing costs and increase returns from sugar production at the same time. Because this is a contracting industry, public investments in the industry have to be subject to stringent tests against alternative uses, and undoubtedly the workers themselves will have to be asked to contribute for the restructuring to succeed.

At the same time, the sugar industry has some important benefits that need to be factored into future strategy. Sugar cane provides attractive vistas for tourists (another important source of foreign exchange earnings) and prevents soil erosion that could scar the landscape and pollute the lagoons. Few if any other crops can provide both incomes to farmers and protect the environment from cyclones and heavy rains. Sugar also provides environmentally friendly biofuels for power generation and is an important part of the history and culture of the island. These benefits accrue to the entire island and could justifiably be supported from general budget revenues as are other public goods.

Costs are high in Mauritius

Mauritius is a relatively high cost producer of cane sugar compared to Brazil, Australia and Thailand who comprise about 50 percent of global exports and are the world's lowest cost producers. Those countries have an average cost of production of about $.10/lb compared to approximately $.18/lb in Mauritius. In the past, this has not been a problem for Mauritius since most of its exports went to the European Union at nearly triple the world market price (about $.32/lb in recent years). However, the EU agreed to reform its sugar regime in November 2005 and that reform will reduce Mauritius' price on exports to the European Union by about 36 percent over four years beginning in mid-2006. This has forced Mauritius to begin reforms and to develop a comprehensive reform program called 'A Roadmap for the Mauritius Sugarcane Industry for the 21st Century'. The Roadmap calls for Rs23.5 billion of expenditures ($780 million) to make the industry globally competitive. The expenditures are not expected to reduce production costs to the level of the most efficient producers, but are expected to make Mauritius competitive with other major producers in Africa and Asia. Mauritius will never achieve the low costs of Brazil, Australia and Thailand because of the small size of its industry which limit economies of scale, and the hilly and rocky terrain that impede mechanical planting and harvesting, and high wage rates.

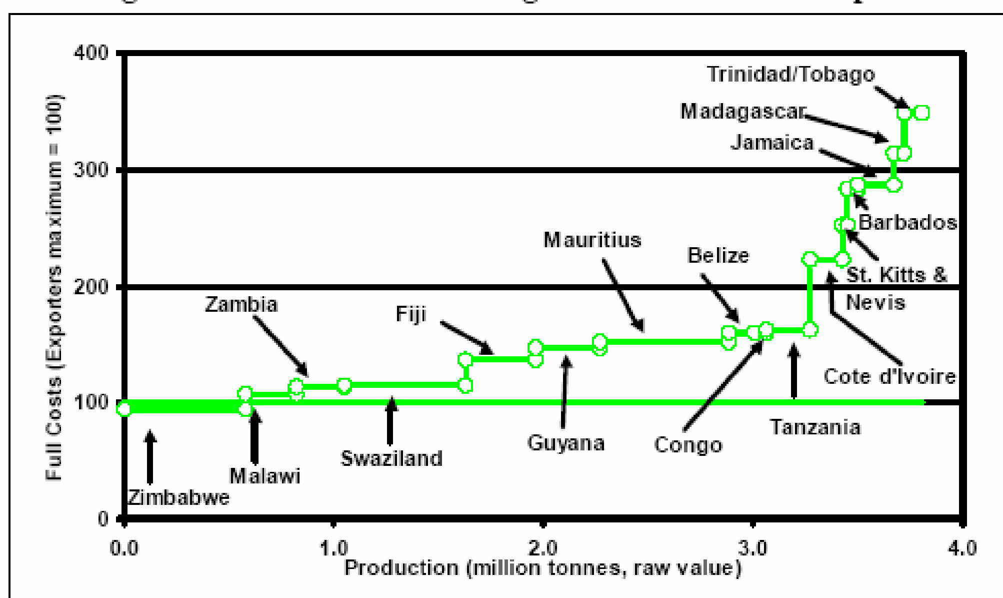
The EU reforms will force the Mauritian industry to release land and labor now devoted to sugar to alternative uses. Sugar currently grows on 44 percent of total lands, and 90 percent of total cropland, in Mauritius. High sugar prices have slowed the diversification into non-sugar agriculture, such as fruits, vegetables, and meats, which could supply the growing tourist industry and the domestic market. Restrictive land use policies and administered wages and benefits have kept resources in the sector to the detriment of overall economic growth. Whilst it is important that Mauritius remains in sugar production to some extent because of the environmental issue, some of the resources devoted to sugar should transition into high-valued agriculture and non-agricultural uses.

The price cuts in the European Union will apply to all African, Caribbean, and Pacific (ACP) producers and some will find it difficult to continue supplying the EU market. The quota allocated to ACP producers is fixed by the Lomé Convention and subsequent Contonou Agreements at 1.3 million tons. When countries with ACP quota are no longer able to supply sugar to the EU, the quota is allocated to other ACP producers. Figure 3.1 shows the estimated raw sugar f.o.b. production costs of Mauritius in relation to other African, Caribbean, and Pacific (ACP) producers. Mauritius is seen to have production costs that are above low-cost African producers such as Zimbabwe, Malawi, Zambia and Swaziland. However, Mauritius is competitive with Fiji, Guyana and Belize and well below most of the Caribbean producers. Many of the higher cost ACP countries will find it difficult to produce at lower EU prices and will begin to close their sugar industries. St. Kitts and Nevis, for example, has already announced plans to close their industry. Mauritius is one of the countries likely to be allocated additional quota if it can supply more to the European Union.

Mauritius has a large share of the EU's ACP quota and about 90 percent of its total sugar sales go to the EU. It also faces the largest cut in its export earnings for the same reasons. Total Mauritian sugar production is about 550,000 tons per year and its EU quota is 507,000 tons. The U.S. quota, which also pays higher than world market prices, is about 12,600 tons and domestic sales in Mauritius comprise an additional 35,000 tons. Depending on production levels and international market conditions, domestic sales are either met by imports or domestic production and exports to the world market are minimal. The EU sugar regime reform will not change the total ACP quota, but will reduce the internal price for producers and ACP exporters. The EU's new sugar policy is scheduled to remain unchanged until 2013 without a scheduled mid-term review. After 2013, further reforms are possible. The EU price reductions will be phased in over four years and internal prices will decline by 36 percent from 2005 levels. Mauritius would still have the most favorable market situation of any ACP country, because it would sell most of its sugar at well above expected world market prices. However, over the longer term, it is likely that EU prices will decline and Mauritius will need to prepare for exports at world market levels. This poses challenges as the high preferential prices received on sugar sales to the European Union have encouraged the development of a restrictive and costly regime in the industry that is difficult to remove.

Figure 3.1.

ACP Sugar Production Costs Are High Relative to Other Exporters



Source: LMC International & Oxford Policy Management, 2004. Note: Data is the average raw sugar production costs for 2000-2002 f.o.b. basis.

Consolidation and cost reduction pose challenges

There are about 35,000 sugar cane growers in Mauritius and about 25,000 of these producers are classified as small with 2 hectares or less of land. The average land holding

of these small producers is only 0.3 hectares, and they generally have the less desirable lands. They use less mechanical planting and harvesting and more family labor than the larger growers and estates. These small producers could diversify into other crops, such as fruits and vegetables, but many find it more profitable to grow sugar cane because it does not require a large amount of time to tend the crop and they can pursue off-farm employment opportunities in the sugar or other industries. Restrictions on land use and conversion to non-agricultural uses have prevented these small growers from selling their land, converting the land to other uses, or erecting buildings on the land.

The Government amended the restrictions on land conversion for farmers owning less than one hectare of total lands in September 2005 to help small growers exit the industry. Under the amendment, qualified farmers did not need to obtain a land conversion permit or pay the land conversion tax. However, they were still required to obtain approval from the local land use planning authority and this proved difficult. The amendment excludes land that is located within an Irrigation Zone, but it is difficult to identify lands in such zones due to lack of detailed land maps for local authority use. In addition, the amendment did not apply to persons with more than one hectare of total land in Mauritius and land records are not easily accessed to establish total land holdings. Consequently, the local land use planning authorities are reluctant to approve land conversion requests.

There are currently 11 operating factories in Mauritius and a consolidation plan would reduce the number to 4. This would provide substantial cost saving to the industry through greater economies of scale. The entire production of Mauritius is about 550,000 tons of sugar and the average sugar produced per factory is 50,000 tons. In contrast, the largest factory in Kenya produces five times this amount and the average factory in Brazil produces 3-4 times as much. In addition to efficiency gains from economies of scale, factories would achieve large enough size to justify locating an adjacent power plant, fueled with bagasse from the sugar factory during the harvesting season and coal during the off-season. Using bagasse during part of the year reduces the operating cost of the power plant substantially and in exchange the factory is supplied with necessary power as well as a payment of Rs70/ton for the bagasse. The main advantage to the factory is reduced construction and operating costs because it would no longer produce its own power or maintain the boilers and steam turbines. One power plant is currently operating in this manner and is producing power for both the factory and sale to the national power utility and plans are under way to locate independent power plants next to each of the other consolidated factories. The operating power plant was financed with commercial bank funding and additional funding appears to be available for the future power plants. The long-term contract for sale of power to the national power utility currently pays Rs2.5 ($0.07) per kwh, but rates will vary with the cost of producing fuel from alternative sources.

The largest cost for sugar production in Mauritius is labor, with wages comprising 50 percent of sugar cane production costs and about one-third of factory operating costs. Wages have increased at more than double the rate of the consumer price index (Table 3.1) and generous fringe benefits add an additional 65 percent to wage costs. The

National Remuneration Board sets wages and minimum conditions of employment for the sugar industry and 28 other sectors, and the sugar industry has more favorable conditions for workers than any sector. For example, workers in the sector must be paid for annual employment, while working only 5 months of the year during the harvest season. One sugar company operating in both Mauritius and Tanzania reported that wage costs in Mauritius are four times those in Tanzania, and another reported that more flexible labor laws would allow them to reduce labor to 15 percent of total costs from the current 50 percent.

Table 3.1. Wages of daily paid male workers in the sugar industry vs. the CPI.

Year	Rs per day	Index	CPI
1962	4.10	100	100
1972	7.00	171	125
1982	36.48	890	591
1992	94.07	2294	1143
2002	242.00	5902	2186

Source: Mauritius Chamber of Agriculture

Conditions for retrenchment are even more generous and sugar companies often retain surplus labor or workers who are poor performers rather than pay severance benefits. Mechanization in both field and factory operations have reduced the need for labor, but restrictive labor regulations prevent reductions in the labor force. A voluntary retirement program was used to shed surplus labor in 2000-2001 and another such program is being proposed.

The earlier program was financed by the sugar companies using concessionary loans arranged by the government with the Bank of Mauritius. The loans were to be repaid with sugar company land sales, but the necessary approvals to convert the land from sugar production to other uses have not been granted and the industry remains heavily indebted. The program allowed early retirement of male workers over the age of 55 and female workers over the age of 50 with two months of salary for each year of employment and a plot of land for every employee. The land was provided by the sugar companies along with basic utilities such as roads and the cost of the land was about equal to the cost of the severance package. By contrast, other industries are only required to pay severance of one or two weeks of salary per year of service.

Moreover, the industry provides a $16 million annual subsidy to domestic sugar consumers (who pay Rs1.8/half kg. of sugar compared to a cost of Rs8/half kg), and pays a 10 percent levy to support organizations providing services to the sugar industry. Many services are delivered to smallholder cane growers at less than full cost, while adding to the costs of all producers.

But a downsized and diversified industry could survive

The industry cannot absorb the EU price cuts in its current form and remain profitable. The European Union has offered assistance to ACP sugar exporters to aid their adjustment, but the funds earmarked for Mauritius are only about 5 million and not

sufficient to make the necessary adjustments. The sugar industry 'Roadmap' outlines Rs23.5 billion of expenditures through 2015 to modernize the industry and reduce production costs. Some of these funds can be provided by private investors, but some will need to come from concessional financing or foreign aid. However, the amount of investment actually required may be much less than the initial proposal and thus a more realistic estimate is needed.

Priorities for investment are reducing labor costs and making strategic investments that facilitate factory consolidation. However, such investments should be structured so as to not slow the exit of resources from the sector or discourage necessary cost cutting adjustments. If these priority investments are undertaken, then the industry and new investors can likely make the other investments to modernize factories and construct power plants. Field improvements, such as derocking and expanding irrigation, can also be undertaken on a gradual basis, as has been the case in the past.

The government probably has no choice but to assist with reducing wage costs and shedding surplus labor, since labor laws and decisions by the National Remuneration Board are largely responsible for current high wage and surplus labor. The European Union and other donors may also be willing to share the costs of retrenchment, but the amount of additional funding beyond the 5 million already pledged is highly uncertain. Sugar workers themselves may in the end have to make some contribution – through reductions in lucrative severance schemes – to finance the transition. If this could be accomplished and strategic investments can be made, such as the road linking the Medine factory with the nearby cane producing area that is scheduled to see its factory close, then the industry could survive the EU price cut and continue to provide, foreign exchange earnings, employment, and environmental benefits to Mauritius.

Special assistance for small growers to leave the industry may also be needed, and should be directed to the poorest to ensure an income safety net while they transition into wage employment or diversified agriculture. Expanding research and extension programs that target high-value agriculture for domestic or export markets should also be considered. While some subsidized services to small growers may need to continue, the consumer subsidy should be stopped as part of the sugar industry reform – or, if it is to continue, should be funded from general budget revenues not sugar industry sales. It should also be targeted to the poorest consumers (the current subsidy goes to all consumers and costs about $16 million per year).

The sugar industry also needs to generate additional earnings by increasing sales of branded and specialty sugar (which accounts for 15 percent of sugar sales, versus 85 percent for bulk sugar), producing ethanol from molasses, and selling bagasse to power companies. Production of ethanol from sugar cane juice is being considered, but is not economically viable at crude oil prices below $80/bbl according the Mauritius Sugar Authority.

Strategies for reform in sugar

The government has no choice but to actively promote the restructuring of the industry so that it can remain competitive with other suppliers to the EU. Moreover, because other countries in the ACP are also adjusting, it has a generous but time-bound period in which to make the adjustments. Nonetheless, half-measures, or only doing one or two of the following measures, is unlikely to reduce costs sufficiently to remain competitive. Necessary measures include:

- Reduce surplus labor in the sugar industry through an agreed retrenchment program. Because the required payments are so large, it seems likely that all participants will have to make a contribution -- the industry, sugar workers, Governments and donors and rationalize future wage, benefits and severance regulations with other industries in Mauritius.

- Liberalize land use and sale regulations to allow the sugar industry to diversify and dispose of land as part of their restructuring plans, and use proceeds for investments that reduce their costs.

- The Government should undertake strategic investment in partnership with the sugar industry to facilitate industry restructuring in order to achieve better economies of scale and greater efficiency in production.

- Marketing of sugar should be liberalized so that individual companies can pursue their own marketing strategies and implement hedging strategies as they deem appropriate.

- Consumer price subsides on sugar should not be paid by the industry, and if they are continued, they should be targeted to the poor and paid from Government budget.

Textiles and Clothing: Adjusting to New Global Realities

The textiles and clothing sector was a strong driver of growth in Mauritius during the 1980s and 1990s and around the turn of the century employed over 80,000 workers, equivalent to 17 percent of total employment, accounted for 69 percent of total merchandise exports and almost 10 percent of GDP. More than two-thirds of the workers are women and so the sector has been a powerful force for poverty reduction in Mauritius. Most activity in the sector is geared towards the manufacture of clothing. Growth of the industry was favored by preferential access to the EU market under the Lome and then Cotonou Agreements and the global system of quotas under the Multifibre Agreement (MFA) that limited the access of Asian suppliers, especially China, to the markets of industrialized countries.

Since 2000 the sector has undergone a major contraction. Employment has fallen by a quarter to around 60000 (less than 12 percent of the total), textile and clothing exports now comprise only 41 percent of total merchandise exports and the contribution to GDP has fallen below 7 percent. This decline reflects in part the progressive removal of quotas on China and other Asian countries and increasing competition in the key markets for Mauritius' exports but also that Mauritius is no longer a low cost location for the production of clothing. Labor costs in Mauritius are around 5 to 6 times higher than in neighboring countries in Africa. Most of the decline has resulted from the relocation of Hong Kong owned firms, that initially drove the sector forward, to other countries.

Unemployed textile and clothing workers comprise a large share (more than 20 percent) of total unemployment. Reintegrating previous textile and clothing workers into the labor market is a major challenge that is likely to intensify in the face of further labor shedding from the sector. It is worth noting that the loss of labor from the textiles and clothing sector over the past 5 years substantially exceeds that predicted from the move to a duty free island. It is likely that further reductions in employment as the industry adjusts to increasing competition in overseas markets will be as important if not more important than adjustment to more intense competition in the local market when tariffs are removed. In other words policy support to displaced textile and clothing workers needs to encompass all those losing their jobs not just those displaced by imports.

Whilst some further downsizing of the sector is inevitable a number of studies have suggested that significant activity can remain in Mauritius. The reality of the global market in textiles and clothing is that buyers are increasingly looking beyond price and quality considerations in their retail strategies. These factors which include "inventory risk, product diversity, replenishment and service, will remain influential for the private retail decision –makers even after quotas are lifted. By responding to these additional considerations, apparel and textile producers have some control over their fate."[17] The challenge is to both allow resources to leave the industry to move to more productive activities elsewhere in the economy and to facilitate adjustment within the sector such that internationally efficient producers can thrive.

To be able to compete in the global market without the protection afforded by the Agreement on Textile and Clothing (ATC) and in a context of relatively high local labor costs it is crucial that Mauritian producers move into higher value niche products and away from direct competition with low cost producers in Asia and provide a greater range of the services that are increasingly demanded by global buyers. The continued success of a number of relatively high labor cost producers in the global market suggests that a successful strategy for competitiveness can be based around other elements of the textile and clothing chain. For example, Turkey has been able to expand its exports to the EU over the past few years despite having much higher labor costs than other countries on the periphery of the EU by efficiently providing for higher quality a wider range of services for EU buyers.

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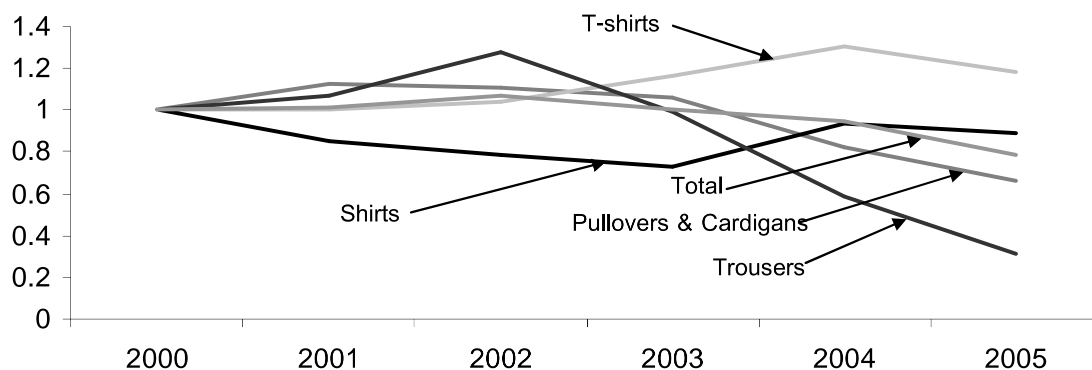
[17] Abernathy, F., A. Volpe and D. Weil, 2004, The Apparel and Textile Industries after 2005: Prospects and Choices

A feature of the textile and clothing sector in Mauritius is the high concentration of exports of a relatively narrow range of products. Four items account for over 80 percent of total exports: pullovers/cardigans, t-shirts, shirts and trousers. Nevertheless, performance over the past five years has differed significantly across these products, suggesting the importance of firm strategies in responding to greater global competition (Figure 3.2). Exports of trousers have fallen by almost 70 percent since 2000 while exports of pullovers and cardigans are 30 percent lower. Exports of shirts have declined by a more moderate 11 percent since 2000 but exports of t-shirts have increased by 18 percent (although there was a small decline in 2005 relative to 2004). These developments are reflected in changes in unit values which show a decline since 2000 for trousers suggesting a lack of movement into higher quality products and difficulty in competing in low value segments of the market. For the other products there appears to have been some shift towards higher value and higher quality products which has supported the sector in adjusting to new competition.

Figure 3.2

Export Performance has Varied across Main Clothing Products
(Index of Rupee Value of Exports: 2000=1)



Analysis of the textile and clothing sector in Mauritius has highlighted a number of weaknesses within the sector that need to be addressed as part of a strategy for survival in the global market. The key elements that need to be addressed are the poor productivity performance and weak management of firms in the sector. This entails the need for both production process and financial restructuring. At the same time firms need to exploit the advantages of Mauritius as a reliable platform for clothing production that provides the broad range of services that buyers require. This process of restructuring and repositioning will entail moving into higher value added activities requiring more skilled labor. The key constraints to this process are access to finance and a lack of suitable skilled technicians. The industry faces an uncomfortable paradox of relatively high unemployment together with dependence on foreign workers. Less than 30 percent of firms in the sector have been making use of the levy grant scheme for retraining and the number of workers being trained declined between 1999 and 2003.

In addition to this internal restructuring there are several key external factors that are crucial to long-term competitiveness of the sector. Proximity to market and the quality and speed of trade facilitation services (ports and customs) is an important element in competition in the clothing market due to costs of transportation, the increasing demand for short turnaround times and the need to reduce and effectively manage inventories. Mauritius clearly starts at a disadvantage relative to a number of other suppliers of the EU and US markets. As such transport and trade facilitation services in Mauritius have to be at or close to global best practice to bring Mauritius closer to these markets. This entails that the cost and frequency of air freight services is crucial in delivering high value products to the market and allowing for effective inventory management. Similarly, the speed and cost of port services and customs clearance affect the cost of and management of material flows.

Telecommunications services and connectivity are vital to the sector as it seeks to minimize the negative impacts of lack of proximity. The services increasingly required by global buyers are placing a premium on obtaining and managing information so as to effectively implement strategies for design, sourcing and inventory control. The cost, quality and reliability of telecommunications services are essential in this regard. Higher costs and poorer services relative to the main competing countries will impede the competitiveness textile and clothing producers in Mauritius.

Strategies for reform in textiles and clothing

As with sugar, the textile industry will have to restructure itself. The role for the public sector is to lower costs of its now uncompetitive services inputs. Key elements of the restructuring program would include:

- Successful adjustment requires a substantial shift in the skill mix towards relative more skilled workers. The educational system and vocational training are not providing the number and nature of skilled workers required and need to be better tailored to the requirements of the industry.

- Adjustment in Mauritius to more intense global competition in export markets and to greater import competition in the domestic market will see the release of substantial numbers of clothing workers, primarily low-skilled and predominantly women. This will pose a substantial challenge to retrain those workers who seek employment in the new dynamic sectors of the economy. It also enhances the need for an effectively targeted social safety net to prevent adverse social impacts through greater poverty.

- Policy discussions concerning air transport and the port and customs should reflect on the importance of low cost, frequent and reliable freight services for the competitiveness of the textile and clothing industry.

- Policy measures that reduce the cost and increase the quality and reliability of telecommunications services will be important is enhancing the competitiveness of

the textile and clothing sector as it moves towards the production of high value products.

4. Unleashing New Sources of Growth: Services Exports

If sugar and textiles lack the dynamism of previous eras, it is services exports that can provide a new impetus to growth. Ports, tourism, financial services and business processing outsourcing (BPO) are all sectors with high growth potential that could propel growth back toward the high rates of the past. However, all have inherited outmoded business organizations, structures that served Mauritius well in the past but are ill-suited to the new global marketplace. Three main actions are required to build competitiveness:

- ***Introduction of competition into key input services.*** Without addressing bottlenecks and high prices from monopoly suppliers, Mauritius will be unable to grow the sectors it expects to power the economy in the coming decades. Tackling monopolistic pricing on international connectivity is essential if Mauritius is to become a cyber island. Relieving the capacity constraint on air transport is needed if the target of 2 million tourists per year by 2015 is to be met. And on a longer time frame, introducing competition in cargo handling could raise efficiency and help to cement Mauritius as a regional hub.

- ***Ensuring quality regulation to underpin liberalized services***. Opening services markets may not automatically generate competition without strong pro-competitive regulation and a strong, independent umpire. More needs to be done to strengthen the hand of the Mauritian telecoms regulator to ensure a competitive market, while the policy of gradual liberalization in air transport requires expert monitoring and assessment to ensure that objectives of increased capacity and lower prices are being achieved. Continuing government ownership of services operators underlines the importance of regulators independent of government to reassure investors that the playing field is level. In financial services, strong regulation should focus on maintaining high prudential standards and simplifying and eliminating ineffective or even counter-productive tax and incentive schemes.

- ***Targeted investments to create future capacity.*** The private sector can provide much of the needed investment in tourism, ports, BPO and financial services, but government investment will also be required. Investing in education and training to upgrade the skills of the workforce will not only assist the current growth sectors of tourism and BPO but will create the conditions for the discovery of new growth sectors in the future. Hardware may also be required, in partnership with the private sector; e.g., for future capacity in the EASSy cable and ports upgrading.

The opportunities are great but the window to seize them is narrow. Tourism is both more competitive than ever before and, as the Chikungunya virus demonstrates, more fragile. In the ICT-BPO sector, Mauritius is one of many new entrants, competition for market niches is intense and established providers such as India continue to expand. Mauritius has great potential as a regional hub but others in the region – Durban,

Mombasa and Dar-es-Salaam - are backed by larger markets and investing in upgrading their facilities. Without action to diversify sources of business, and develop higher-value-added services, offshore financial services remain vulnerable to regulatory and legal changes in other jurisdictions.

Outsourcing: Capitalizing on Opportunity

The ICT/Business process outsourcing sector in Mauritius accounts for 3800 jobs, with 90 firms and annual sales of $85 million. Activities span software development, multimedia development, BPO, call centers, disaster recovery and on-line education, with call centers and BPO accounting for 90 percent of employment (Table 4.1).

Table 4.1: Breakdown by major BPO services

BPO services	Number of companies	Percentage of companies	Number of people employed	Number of people employed	Percentage of employment*
Software Development	14	16	252	252	6.6
Multimedia Development	19	10	38	38	0.1
BPO	43	48	1,342	1,342	35.3
Call centers	21	23	2,071	2,071	54.5
Disaster Recovery	2	2	86	86	2.3
Online Education	1	1	12	12	0.4
Total	90	100	3,801	3,801	100

*total does not equal to 100 due to rounding.
Source: BOI *Facts and Figures on the ITES-BPO Sector* September 2005

The sector has grown rapidly at around 25 percent per year over the last 5 years, reflecting both the newness of the sector, and its dynamism at the global level. The global ICT-BPO sector is expected to grow at 30 percent per year over 2003-2008, and applications lodged with the BOI suggest that the Mauritian sector could match this rate.

Mauritius enjoys some advantages in the ICT-BPO sector, in particular over possible competitors in Africa, having a high basic literacy rate, good infrastructure, a bilingual population and political stability (for disaster recovery, its relative remoteness is also an advantage). However, competition in the sector is global and Mauritius lags behind global pace-setters such as India in two key respects: price and quality of telecommunications, and availability of skilled labor. Both are ranked highly as factors in choice of offshore location and the combination could threaten future growth in the sector.[18]

The BPO industry argues - and the evidence suggests - that costs of internet and broadband connectivity remain high compared to competitors. Communications costs for

[18] The AT Kearney Offshore Location Attractiveness Index, for example, takes into account: (i) financial structure (40 percent), including costs of wages, infrastructure (including telecoms), tax and regulation; (ii) people skills and availability (30 percent); and (iii) overall business environment (30 percent), which also includes a metric of the quality of telecommunications and IT services.

companies in the sector are 33-38 percent of their total cost structure as against around 25 percent for international competitiveness. Likewise, lack of skilled labor – compared to repositories of skills in India, China, Romania and Eastern Europe – deters investment and inhibits moves into higher value-added activities, a necessity over the longer term given relatively high wage and telecom costs.

Tackling these constraints will not be easy, but the payoff from reform is large - if effective competition is introduced in telecommunications to lower costs and significant investments are made in training, industry sources estimate that the sector has the potential to generate up to 25,000 jobs in the next 5-8 years. This is an ambitious figure, although the ICT-BPO sector has grown rapidly in many countries. For example, India's offshoring exports grew at 25-30 percent between 1992 and 2002, with BPO exports growing by over 40 percent during 2004-2005 alone. In the Philippines, call center seats increased from 40,000 to 70,000 over 2004-2005. This ambitious projection must be seen in this light, and against the backdrop of expected global growth in the ICT-BPO sector of 30 percent.

Two issues are crucial to the success of the industry in Mauritius: First, telecommunications, as a key to competitiveness across the economy, is addressed in a subsequent section below. Second, no less important are labor shortages in the BPO sector. In 2001, the E-Education Task Force estimated that about 10 000 tertiary educated ICT professionals would be required by 2006, along with 3,000 ICT postgraduates. However, the projected output of graduates for the period up to 2005 is a total of 305 ICT postgraduates and 3,611 IT Professionals (Diploma/ Graduates) - only 10 percent and 36 percent of these requirements. The forthcoming National Human Resources Development Plan, drawing on applications lodged with the Board of Investment, estimates the required workforce over the next 3-4 years at 12,000, with most of the growth in call centers and BPO.

These numbers indicate that trained workers are needed at all skill levels in the sector. But supply may not keep pace. Over 1998-2004 only 17 percent of students taking School Certificate exams sat for computer studies; at HSC level, only 5 percent of students were in computing. At the tertiary level, only 17 and 18 percent of students joined IT in 2003 and 2004 respectively.

While steps are being taken, there is a clear need to significantly increase both the quantity and quality of education and training in the ICT sector.[19] The number of graduates in ICT-related fields needs to double in the coming years to keep pace with projected demand, and training for call center and BPO jobs will need to increase above its current relatively modest levels. The ICT sector trained 821 persons in FY2004-2005 under the training levy (section 6) to which it contributed Rs3 million and received Rs2.4

[19] A program was launched in December 2005 to train 1 500 call center workers to meet projected needs over 2006-2007. The pilot program (90 hours of formal training and 90 hours of work at a call center) for 81 workers had mixed outcomes. Around half the workers already had jobs in call centers, and others left call centers within a few weeks (mostly because of the irregular hours), while some employers recruited fewer employees than expected. A pilot program is also planned for BPO.

million in disbursements (a small amount out of a total fund of Rs193.1 million). Moreover, of the 163 companies in the sector that contributed to the levy, only 27 claimed disbursements. There is clearly scope to make greater use of the training levy. That said, the levy scheme itself also has some limitations, as it targets workers that are currently employed, rather than the unemployed or school leavers. Additional training for these groups will require increased government investment, coupled with contributions from the private sector.

Both quality and quantity may be addressed by further developing the presence of foreign education providers, including through establishment of branch campuses in Mauritius (around 30 foreign institutions currently offer various programs). Introduction of recognized certification schemes, including industry-based schemes (e.g., by Microsoft) would help to raise standards and enable employers assess skills. However, efforts to expand these and other e-learning programs for industry-specific skills will be limited in potential without action to address the continuing high cost of Internet access (see section on telecoms below). Improvements in education should focus not only on technical skills, but include but communication and language skills (to capitalize on the translation market potential) and strategic thinking.

Shortages are acute at the middle manager level, which has led to poaching, exacerbated by the short (15 days) notice period for resignation. Workers could also be encouraged to stay with their current employer – for example, by increasing the level of tax deductability of training for every year that an employee stays with the company. But this will do little to address the overall shortage and shortfalls will need to be met by increasing the numbers of foreign workers.

Easing entry for foreign workers should be viewed as an integral part of, not a threat to, national competitiveness. In the emerging global market for skills, rapid, welcoming and efficient visa procedures are essential. While the ICT sector benefits from fast track processing, other improvements could include: extension of the duration of permits (currently often only 1 year, even for senior managers); automatic renewals in shortage sectors; spouse working rights; and expanding pre-certification of companies for a specified number of permits that can be issued automatically. Companies should also be encouraged to bring in junior ore trainee skilled personnel, to increase cross-fertilization with, and create additional opportunities for overseas assignments for, Mauritian staff.

There may be limited scope for the ICT-BPO sector to absorb workers laid off from the textile sector, as call centers also generally require minimum School Certificate qualifications, literacy and communication skills. Industry sources estimate that only about 30 percent of textile workers could potentially be re-trained for call centers and, of the general unemployed, around 25 percent may be absorbed into the sector with appropriate training (especially school leavers who constitute around 50 percent of the unemployed). Absorption could be increased by introduction of greater flexibility on

working hours (new labor legislation for the sector is under consultation) and addressing the lack of transport facilities.[20]

Finally, additional government investment in construction of infrastructure must be matched with efforts to increase labor supply (unless such infrastructure is created to specialize in disaster recovery, where labor demand is minimal).Investment ahead of demand may be needed, but over-investment in infrastructure and under-investment in people may be taking place. Cyber Tower One is fully occupied, but its rents have increased 25 percent since it opened, and the second Cyber Tower is only 25 percent subscribed to date, mostly with foreign companies. Investment in a possible third Cyber Tower should come largely from the private sector, with limited government resources directed more towards training.

A National ICT Strategic Plan, involving all major stakeholders, is being prepared and will include a focus on human resources (and telecommunications – see below). The Plan is an important opportunity to increase policy coordination in the sector; while improvements have been made, the sector remains characterized by multiple bodies with overlapping mandates (and inconsistent data). Clear leadership is required to take the sector forward.

Strategies for BPO reform and new initiatives

If the government is to realize the promise of the industry, it will have to undertake several actions:

- Significantly increase investment in education and training in the ICT sector, including by further pursuing partnerships with foreign education providers and international certification.
- Ease visa conditions for skilled foreign workers, via longer durations of stay, pre-certification, automatic renewals and spouse working rights.
- Increase awareness of the sector in schools to promote greater entry into the field.
- Prioritize government investment in training over infrastructure; new facilities should be majority funded by the private sector.
- Further streamline coordination among various government bodies and establish clear lines of responsibility for policies in the sector.
- Finally, it will have to undertake reforms of the telecommunications sector, the subject of the next section.

Telecommunications: Overcoming High Costs and Low Quality

Beyond BPO, costly and poor quality telecommunications affect the competitiveness of the whole economy. From increased costs and lost opportunities in business, to lost efficiency in government, and foregone e-learning opportunities, the cost

[20] Lack of after-hours transport facilities is a problem for call center workers. Even for more highly skilled work, some employers complain of having to fund taxis for employees working outside of standard hours.

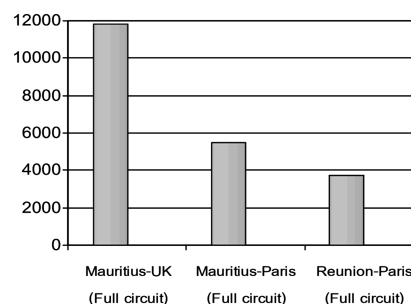
of sub-standard telecoms has a multiplier effect. If Mauritius is to achieve its goals of becoming a cyber island, current limitations on telecoms must be addressed. Mauritius faces two key challenges: (i) effective regulation of the telecoms sector to lower costs and increase investor confidence both in the ICT sector and beyond; (ii) ensuring adequate and cost effective international bandwidth in future.

There are a range of competition problems in the ICT sector. Other operators claim that fixed-line interconnection fees paid to Mauritius Telecom are higher than the incumbent's tariffs to end users, and that it offers its own Internet Service Provider discount access to bandwidth. Outside of the Cyber Tower and BPO centers, quality of ICT services remains low.

From the perspective of the ICT-BPO sector, the greatest problem lies in the cost of international connectivity via broadband, where costs remain high, notwithstanding the January 2006 voluntary reduction of international bandwidth prices by 17-31 percent following increased regulatory pressure on Mauritius Telecom.[21]

Figure 4.1

Comparison of Leased 2Mb Bandwidth Price ($US)



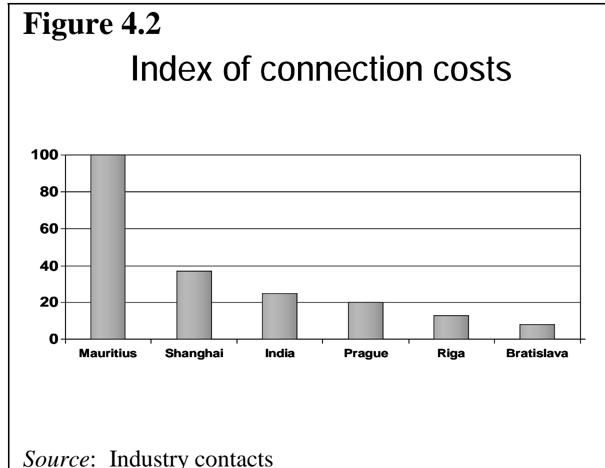
Source: Mauritius Telecom, Art

Mauritius Telecom, owned by the government and France Telecom,[22] has a monopoly on international connectivity via the SAFE cable. The SAT-3/SAFE international consortium is organized under a monopolistic club deal structure, under which access to capacity is limited to consortium members (which then on-sell within their countries). This restricted access to capacity results in higher prices in connected countries. The cost of international bandwidth in Mauritius is $11,800 and $8,800 per month for 2Mbps connection to the UK and Paris respectively. Action by the French Telecommunications Regulatory Authority (Art) in early 2004 has lowered charges in Réunion to 1 550 (approximately $1860) for 1Mbit per month to Paris (i.e., 3 100 or $3720 for 2Mbit per month) (Figure 4.1). This suggests that considerable cost reductions should also be possible for Mauritius.

[21] Some companies already had reduced rates and reported limited impact from the reductions.

[22] More precisely, the shareholders are: France Telecom (40 percent), Government of Mauritius (34.5 percent); State Bank of Mauritius (19 percent) and the National Pension Fund (6.5 percent).

Figure 4.2

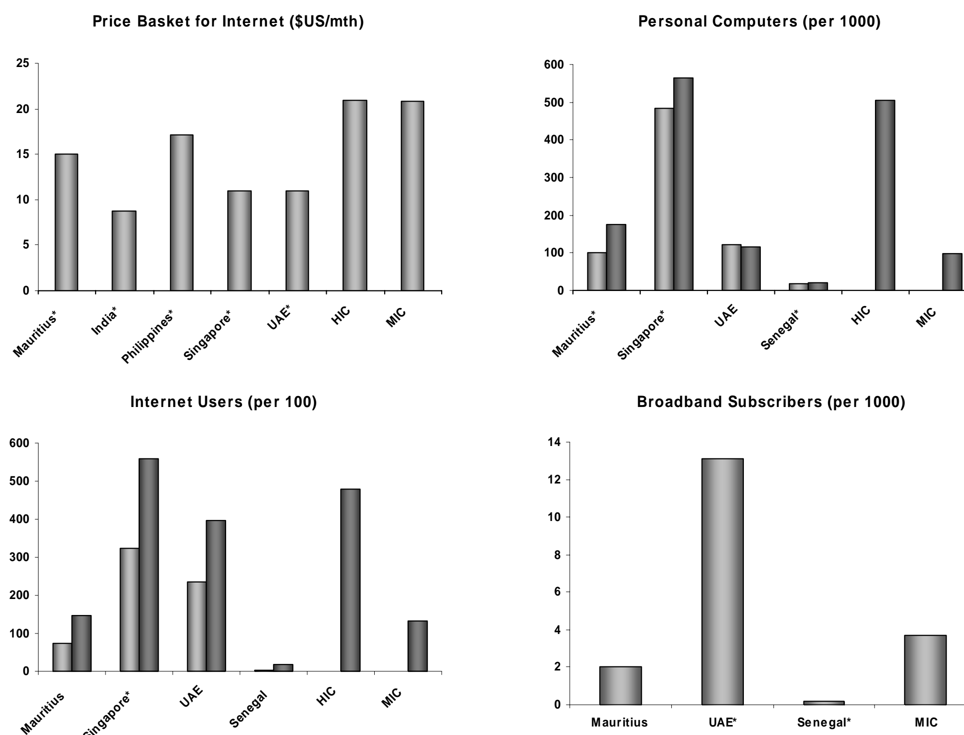


Source: Industry contacts

While prices vary and up-to-date comparative data is scarce, one ICT-BPO industry source indicated that costs paid in Mauritius were significantly higher than those in competing locations (Figure 4.2). High costs deter new investment and discourage existing investors from expansion. Telecoms costs are a particular strain for lower value BPO activities, such as call centers (one reported that telecoms costs had led them to reduce their call center staffing by three quarters; another reported a 3:1 ratio of telecoms to labor costs). However, ICT performance and costs also matter for some types of higher-value added activities which require heavy data files. Impacts are also felt in other sectors – in tourism, for example, where hotels target the business market for low season revenues and leisure tourists' increasingly demand cheap and reliable email access.

High access costs also discourage uptake of the Internet amongst the general population, with broader growth and competitiveness effects. Mauritius, while generally on par with other middle income countries, lags behind others that have successfully established as cyber-destinations, such as Singapore and UAE, in terms of the price basket for Internet, uptake of internet, number of personal computers and broadband subscribers (Figure 4.3)

Figure 4.3 Mauritius lags behind other countries in the uptake of the internet



Note: * Data refers to 2004 except where marked.
Source: World Bank ICT at a Glance.

Mauritius Telecom argues that its prices are within the normal for comparable services, and that many technical factors contribute to assessing comparability. However, the margins for error are very large, given the aforementioned gaps between Mauritius and competing locations. Even if these figures are not exact, they indicate orders of magnitude; and the overall message is that Mauritius is some way off the global pace. Industry's perception of Mauritius as a high-cost destination also influences its outsourcing decisions, and many Mauritian BPO firms are branches of foreign companies that must compete internally for contracts with other BPO branches in Dubai, Mexico, Beirut, China, India and Romania.

To date, regulatory discipline has been limited, with requests for information relevant to cost modeling unmet and relevant operators and markets for the purposes of prevention of abuse of dominant position and anticompetitive tariffs yet to be defined. The regulator's preference for dialogue and mediation appears to be motivated by (i) the high risk and resource-intensiveness of litigation; (ii) concerns about limits on the regulator's power imposed by the Act and the terms of Mauritius Telecom's license[23]; and (iii) the impact of more forceful action on Mauritius' reputation as an investor-

[23] For example, while the law provides that decisions of the regulator are not suspended in the case of appeal, there are some doubts about the constitutionality of this provision. Conversely, there are also concerns about the cost to the regulator of having to undo actions in case of defeat on appeal.

friendly location (given France Telecom's 40 percent share). Initial analysis suggests that the legal framework for the regulator should be strengthened and accompanied by clear signals from the government about its commitment to address bottlenecks, including indications that a strong regulatory stance would be supported. Concerns about Mauritius' reputation for investors should not be overstated; pro-competitive regulation is an essential complement to market opening worldwide, and failure to ensure a level playing field in a key sector arguably carries a greater reputational risk.

In terms of capacity, Mauritius faces a choice. A new international cable (EASSy) is planned along the East and Southern coast of Africa. Mauritius Telecom is planning to buy capacity on the cable. The Government of Mauritius is also considering participation from Mauritius, either through an actual landing point or simple purchase of capacity on the cable (which would provide additional capacity from South Africa to Europe and beyond).[24] Initial estimates of the cost of a landed connection via Madagascar are of the order of $24-29 million; a direct connection via the Southern route, $49-56 million and connection via the northern route (Seychelles), $62-70 million.

Notwithstanding the cost of the initial investment, non-participation in EASSy may also put Mauritius at a competitive disadvantage, particularly in view of the government's intention to develop Mauritius as a cyber island into the future. Access to EASSy could bring benefits to Mauritius in terms of (i) affordability of capacity, as an alternative to the monopoly controlled and high priced SAFE cable; (ii) additional capacity to SAFE, in case traffic volumes over the next decade or so cannot be absorbed by the SAFE cable; and (iii) a redundancy route, in case of a major failure on the SAFE cable.

While further capacity is due to be made available on the SAFE cable, it is not clear whether this will be sufficient over the long term, and at what price. Considering that prices can in principle be lowered on the SAFE cable through appropriate regulation, investment in EASSy would need to take into account the potential total capacity demand over the next 10-15 years. Even if demand could largely be covered via additional capacity on SAFE, there may still be an interest in buying capacity on EASSy for onward connectivity and easier access to Europe.

But investment in EASSy only makes sense if (i) access is structured in an open and competitive manner[25] *and (ii) action is taken to address other constraints to the growth of ICT-BPO sector, such as labor shortages.* Capacity on EASSY should be acquired under a structure that would guarantee access for all players, so as to avoid the current monopolistic access to SAFE. One option may be a special purpose vehicle with the government and other operators and perhaps Mauritius Telecom as shareholders, through which capacity would be sold to all at a cost based price.

[24] The structure of access to EASSy is currently under negotiation, and it is not clear at this point what the conditions (i.e. price) of access will be for operators who are not initial investors.

[25] Mauritius Telecom has signed the EASSy Memorandum of Understanding and pledged $2.5 million to the cable. While it claims to have informed other operators about the possibility of pledging, it is not clear whether they were given sufficient time to consider the investment.

Regardless of the decision on EASSy, action must be taken to address the competition problems with the SAFE cable, in order to bring down prices of current and possible future capacity on that cable. This is particularly important if Mauritius decides against a landed connection for EASSy, as accessing capacity on the EASSy cable would then still require use of the SAFE cable.

Strategies for telecommunications reform

Many of the needed reforms – on interconnection costs, and strengthening the power of the regulator to address anti-competitive practices - are planned, and needed reforms will also be considered in the context of the National ICT Strategic Plan. It is critical that planned reforms are implemented in full and with a sense of urgency, and that the ICT Strategic Plan address as a priority the issue of telecommunications, and especially bandwidth, costs. Failure to follow through and set clear targets for reforms will see Mauritius falling further behind competitors and will send a negative signal to future investors. A strong commitment to, and clear strategy for, reform is needed. While fuller analysis may be needed on specific points, priority steps include:

- Clarify mandate and separate operational and ownership from policy-making and regulatory responsibilities for Mauritius Telecom. Benefits and obligations on Mauritius Telecom should be administered in a transparent and non-discriminatory manner.
- Revise law to strengthen the regulator's ability to discipline anti-competitive practices, including by equipping it with appropriate cost models and capacity.[26] Improve accountability to the regulator and provide a fast track for appeal and conflict resolution in litigation.
- Intensify cooperation at all levels with other regulators (e.g., France and India) to provide support in disciplining anti-competitive behavior.
- Rapid movement towards cost-based interconnection.[27]
- Conduct a future demand study with respect to EASSy, including better estimates of how much additional capacity can be acquired on SAFE.
- Take strong regulatory action to curb monopoly pricing on SAFE and put arrangements in place to ensure that access to current and future capacity on the SAFE cable, as well as any new capacity on the EASSy cable, is on a pro-competitive basis.
- Actively engage in the EASSy negotiations with a view to Mauritian participation in the cable and ensuring competitive access.

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[26] Amendments to the ICT law could add significant precision to the definitions of: markets and the process through which market segments are defined, significant market power and provide additional powers to deal with anticompetitive behavior (e.g., penalties for late or non-provision of information to the regulator). Such an amendment could require all operators, including Mauritius Telecom to hand in their license for re-issuance under new terms and conditions.

[27] Mauritius Telecom is due to move to a fully Allocated Current Cost regime by May 2006, and at the same time the regulator will launch a consultation *paper* on the introduction of the LRIC (Forward Looking Long Run Incremental Cost) methodology. If accepted, LRIC would be introduced in April 2007.

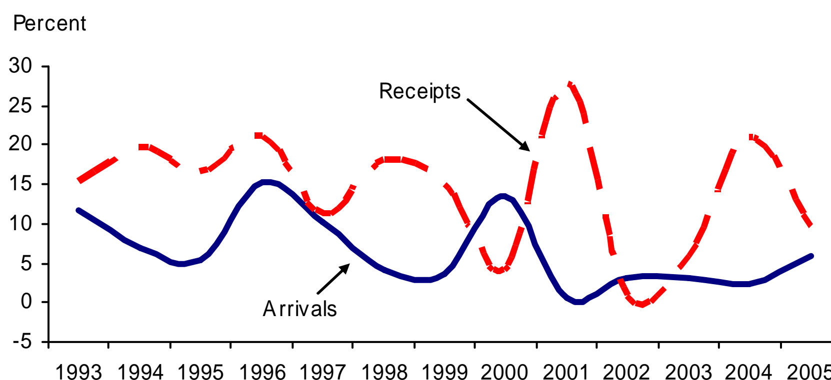
- Support the above by using the development of the ICT Strategic Plan to forcefully make the case, and to set a timetable for, telecommunications reform.

Tourism: Consolidating a Dynamic Industry

Mauritius has a strong and successful tourism industry, but one which is facing a challenging outlook, as global trends towards liberalizing air transport markets open up more destinations. Long haul beach tourists from Europe (who account for Mauritius' major market) now have cheaper and more accessible routes to South East Asia and the Caribbean. The sector is also vulnerable to the forecast slowdown in global growth and to a range of other external shocks – the recent Chikungunya virus has seen current occupancy rates in some hotels drop to around 40 percent, and a reduction in new bookings. Effects may well be felt throughout the year, as MICE market[28] events (which have long lead times) scheduled for the low season are canceled.

While tourism is a volatile industry, Mauritius has performed well over the longer term in terms of both numbers of arrivals and tourism receipts (Figure 4.4). Tourism is Mauritius' largest export, generating $430.9 million in 2005, projected to increase to $512.2 million in 2006. If the Tourism Satellite account approach is used, which takes a broader measure of the tourism and travel economy, the direct impact of the tourism industry in the Mauritian economy was around $921million in 2005, with the broader tourism and travel economy (which includes, for example, indirect suppliers to the industry) contributing around $2 billion to total GDP.[29]

Figure 4.4: Tourism, a steady driver of growth, is nonetheless vulnerable to shocks



Source: UNWTO from World Bank, 2006

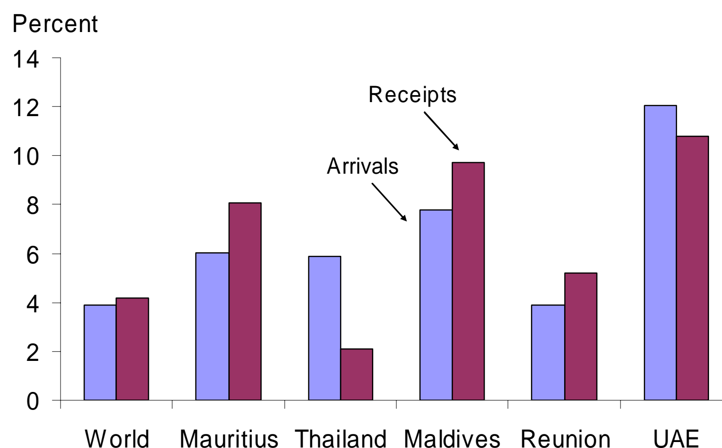
Over 1995-2005, Mauritius' tourism arrivals grew at an annualized rate of 6 percent, compared to the world rate of 3.9 percent. On tourism receipts, Mauritius

[28] The meetings, incentives, conferences and events market.

[29] See World Travel and Tourism Council 2005 Economic Research. The Tourism Satellite Account quantifies all aspects of tourism demand from personal consumption to business purchases, capital investment, government spending and exports. Estimates of the travel and tourism economy include, *inter alia*, suppliers to the industry and the contribution of the sector to the resident economy in constriction, manufacturing and government, and the value of goods imported by direct and indirect suppliers.

performed even more strongly, reflecting its position at the high-end of the market, at 7.9 percent per year compared to a world average of 4.3 percent. That said, over the same period, some competitors have also performed as, or more, strongly (Figure 4.5).[30]

Figure 4.5: Mauritius' tourism arrivals and receipts grew more compared to the world



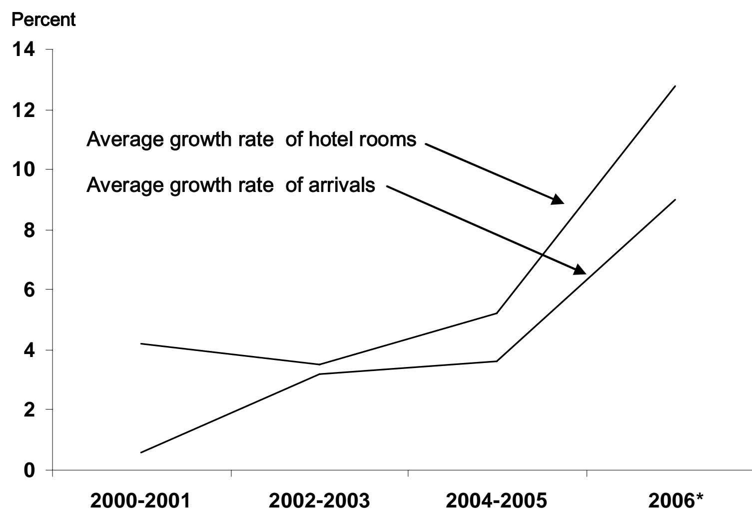
Source:UNWTO

Mauritius' growth rate (in arrivals) also slowed over 2002-2005 to 3 percent, slightly under-performing against the world growth rate of 3.5 percent. However, arrival figures for the first part of 2006 are up 13-18 percent over 2005 and suggest a recovery (subject to the impact of the Chikungunya virus). To meet its target of 2 million tourist arrivals per year by 2015, Mauritius will need to achieve growth rates of 10 percent per annum.

Reflecting the strong interest in the sector from investors, the number of hotel rooms have also expanded rapidly in recent times, outpacing the growth of arrivals (Figure 4.6). The average annual growth rate of hotel rooms over 2000-2006 was 5.7 percent, ahead of that for arrivals (4 percent). In 2005, there were around 10,500 hotel rooms in Mauritius,[31] rising to 12,600 by the end of this year.

[30] Underscoring the fragility of the tourism sector, the Maldives suffered a 44 percent contraction in 2005 following the Tsunami, which is not reflected in these figures.
[31] The Ministry of Tourism figure is 10,497, but AHRIM numbers indicate 10,640 in 2005.

Figure 4.6: Supply of hotel rooms exceeds the demand



Source: AHRIM, UNWTO

Additionally, around 3,000 more hotel rooms are in the wings – some 800 with investment approval, and a further 2,000-odd in the Board of Investment pipeline.[32] Depending on the time scale and approval rate of projects, this could mean a 25 percent increase in capacity over the next 3-5 years.

With hotel occupancy rates averaging around 69.4 percent over 2000-2004, ensuring that arrivals keep pace with investment and with the overall target of 2 million tourists by 2015 will require action to address current constraints in the sector, notably with regard to air access and skills shortages. There are also important actions that can be taken to increase the benefits of tourism and safeguard the industry into the future.

Air transport: promoting competition to lower prices and increase access

Protection of the air transport market has been justified on the basis that Air Mauritius provides an essential service to the island nation, as carriers making decisions on purely commercial basis could decide no longer to serve the Mauritian market, cutting critical trade and transport links. Moreover, as a high end tourist destination, there was argued to be less need for Mauritius to provide low-cost mass transport. Yet as the global tourism market becomes more competitive, including because of moves towards open skies in other destinations, there is increasing recognition that, in order to grow, the

[32] According to BOI data, 40 projects have been approved, including 3,064 hotel rooms and 145 villas, of which with 864 still to be implemented. A further 37 projects are in the pipeline, with a minimum of 2,211 hotel rooms, 352 villas and 50 bungalows. This figure could be an underestimate as, for a number of hotel projects, the number of rooms was not specified.

tourism industry requires expanded capacity (especially to combat congestion on peak periods),[33] new routes and lower costs.

In balancing these factors, Mauritius has moved towards a policy of gradual liberalization, which involves selective opening of particular routes, including by third carriers (e.g., Corsair from France to Mauritius, ComAir to South Africa); adoption of a more flexible approach to capacity increases of existing carriers; additional flights by existing carriers in peak seasons; and opening new markets including direct flights from Spain and China, and special flights targeting markets in Central and Eastern Europe.

There is some evidence that the relatively modest increases in capacity to date have released pent-up demand. Year-on-year December growth in passenger arrivals was relatively steady at between 2000-4 000 per year between 2000 and 2004. Introduction of further capacity in 2005 (via additional flights from Air Europe) saw arrivals in December 2005 increase by 13,000, or 16.3 percent, over the previous year and increases in arrivals for 2006 to date of 15-18 percent over 2005.

Price competition remains an issue on major routes served by two carriers. With around 80 percent of Mauritius' tourism taking the form of packages, the air component is considered to be higher than for competing routes (some tour operators claim that the UK-Mauritius route is around £200 too high in comparison to the UK-Thailand route. Price competition is also not assisted by the presence on the Air Mauritius Board of airlines that ostensibly compete with Air Mauritius on its major routes - Air France, British Airways and Air India. Introduction of third carriers (such as Corsair on the French route) is expected to assist in reducing prices.

While there appears to be a degree of consensus on gradual liberalization – disagreements persist over whether the emphasis should be on "gradual" or on "liberalization". In either case, some additional complementary measures are critical to its success.

First, gradual liberalization requires ongoing monitoring and assessment of the sector to ensure that goals of increased capacity, lower prices, and greater connectivity are being met and to provide a clear direction to market participants of the direction of policy in the sector. A well-resourced and expert – and independent - regulator is required. While the present policy consensus and the desire to group air transport and tourism under one roof, has led to consideration of an Air Access Policy Unit under the Ministry of Tourism and External Communications, an independent regulator provides a greater degree of confidence to potential market entrants of a level playing field, particularly in view of the government's continuing share in Air Mauritius. An independent regulator is also a better guarantee of the sustainability of reforms over the longer term. Building of regulatory capacity, via provision of international expertise and training of local officials, could be an element of an overall aid for trade package.

[33] Coordination problems arise in July when high demand for airline seats by returning ethnic Mauritians raises airline prices at a time when hotels are seeking lower rates to attract off-season business.

Second, the requirement for Air Mauritius to operate in a more competitive environment necessitates changes to its present governance structure to remove its competitors from the Board. One solution would be to create a holding company, under which competing airlines with a presence on the Board would be able to receive shareholder value but would be separated from strategic and operational aspects. While the presence of these airlines has in the past been argued to provide international credibility and reduce potential government interference, these goals may be better met by an independent regulator and quality management. Efforts by the new management of Air Mauritius to reduce costs and improve competitiveness should not be impeded by the governance structure and should be encouraged by a sufficient level of competition in the market.

Third, reforms to introduce a penalty for late (15 days or less) handing back of seats by tour operators would also strengthen the ability of Air Mauritius to compete, including in the fast-growing market of last minute on-line bookings made by individuals.[34] Online bookings currently account for around 60 percent of the global market.

Finally, beyond benefits to the tourism sector, increasing air access to Mauritius should also enable greater competition in the air cargo sector with benefits for Mauritian exporters in other sectors.[35] Cost effective air cargo is becoming increasingly important to the textiles sector, for example, where restructuring is requiring the industry to move into higher end products for which rapid delivery is critical.

Training needs to keep pace with growth in the tourism sector

Employment in hotels and restaurants is projected to increase from 31 400 in 2005 to 36,600 in 2008, an increase of 5 percent over 2006/07 and 4.2 percent over 2007/08. The HRDC estimates the projected employment needs in the sector will grow rapidly. The sector is already experiencing shortages, particularly in middle management and for specialist skills (chefs, bar staff).

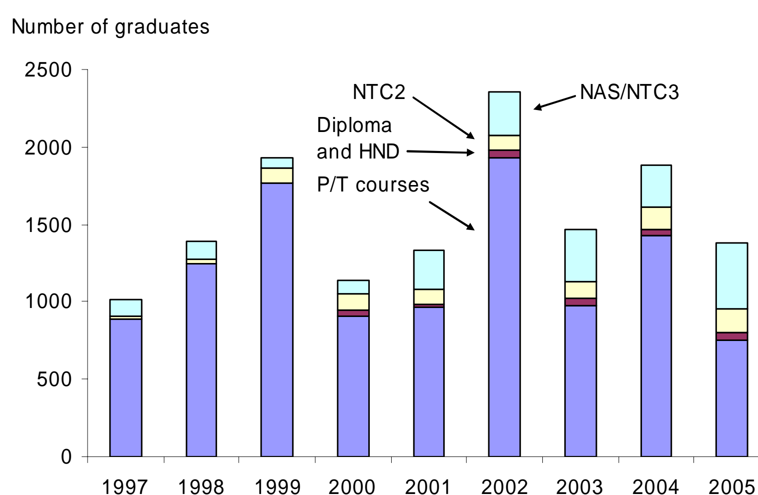
In total, 7,928 persons in the hotel industry received training in FY2004-2005, most of whom were already employed in hotels and received training funded by the industry training levy (see section 6). The sector contributed Rs21 million to the levy and received about Rs18.1 million in disbursement, but this was concentrated amongst relatively few recipients: out of 616 hotels contributing to the levy, only 57 claimed reimbursement. Training is also concentrated in the shortage areas (management and technical training) and is provided by the hotels in-house, by a number of private sector bodies (13-14) and by the Hotel School of Mauritius (HSM). Programs in tourism are also available at the University.

[34] Air Mauritius is planning a new service to enable individuals to book air tickets on line and arrange their own accommodation.

[35] This issue will be taken up further by a specialist air transport mission to Mauritius commencing on April 27 2006.

The Hotel School of Mauritius currently graduates around 623 full time students per year (Figure 4.7).[36] It estimates that to keep pace with current growth, that figure should be closer to 1,500, but it currently has no capacity to expand and a zero cost growth budget (the required additional budget in recurrent costs only is R15m). Most of its students are in part time courses funded by the training levy and are mostly already in the industry. Due to resource constraints, the HSM has not expanded into new areas of hotel demand such as specialist (Asian, Indian) cuisine, spa and golf course management. The school currently recovers about 30 percent of its costs from course fees (60 percent for international students). It has relationships with international schools in Singapore, but ended its relationship with the Ecole Hotelière in Lausanne for cost reasons.

Figure 4.7: Graduates from HSM, 1997 – 2005



Note: NAS/NTC3: National Apprenticeship Scheme /National Trade Certificate Level 3 (food production, front office, housekeeping, pastry, restaurant and bar); 1-2 years, SC or equivalent required work under supervision. NTC 2: the above + tourism studies, leisure and entertainment; 1 year; NTC+ experience OR SC + experience OR HSC required, work as a supervisor. Diploma Tourism management, 2 years, HSC required; Higher National Diploma 3 years, HSC required and tuition costs Rs21,000p.a.

One option that should be explored as part of Mauritius' knowledge hub program is partnering the HSM with an internationally recognized hotel school and creating a regional center of excellence capable of attracting fee paying international students (Mauritians could be charged a lesser rate) and exchange programs from the region and beyond. As is currently the case with some HSM programs, placements could be arranged with Mauritian hotels. This would capitalize on Mauritius' reputation for excellence in tourism, generate additional revenues to fund training and provide additional labor for the tourism industry. Some upfront investment by government would be required, a market analysis should be undertaken to ensure the viability of the project.

But training alone will not address shortages as new hotels come online in the next 2-3 years. Indeed, shortages are having a chill effect on training, particularly by SMEs, as trained staff are poached by other establishments. Temporary foreign workers

[36] Figures do not include students that enter 2-3 year and progress to degree from diploma or drop out.

could be used to ease supply in the short-term, particularly trainees from foreign hotel schools. (There is currently a lack of clarity over whether trainees can be brought to Mauritius, with some hotels doing so regularly and others being refused). As for ICT-BPO, flexibilities on visas should be introduced, including pre-certification of companies to bring in a specified number of workers. These companies could be encouraged to establish programs offering Mauritians opportunities for training within the company abroad.

Given that hotels pay for the training of their employees through the industry levy, government investment in training should be focused on those less well covered by the scheme - the unemployed and workers laid off from other sectors. Only approximately 1,000 former textile workers in the last 5 years have taken courses at the HSM. In FY2004-2005 there were around 400 workers; for FY2005-2006 there are only 32. One option is to provide a wage subsidy to encourage hotels to take low-skilled workers and provide on the job training in housekeeping. However, a pilot project along these lines was tried in 2005, with mixed results (see section 5). As for ICT-BPO, there is also a need to promote the sector more vigorously in schools to attract more and higher skilled workers to the sector.

Developing the tourism into the future

The informal sector presently comprises around 30 percent of arrivals, but has remained largely unregulated to date. Present government moves to regulate the sector to ensure safety and quality standards will be important for the safety of tourists and the reputation of the Mauritian industry as a whole. Coupled with broader reforms to reduce informality in the economy and encourage business registration (see chapter 2), these regulatory reforms could help to establish a viable and quality "second" market in Mauritius below the 4-5 star level. Regulation of the sector should also assuage concerns that encouraging the secondary market will harm the quality reputation of Mauritian tourism. Developing this market would provide greater choice to visitors and positions Mauritius to better capitalize on the fast growing segment of individuals who book holidays on-line at the last minute and organization their own accommodation, rather than buying a package. These small hotels would be major beneficiaries of further opening of the air access market, in particular for tourists from South Africa and India, where arrivals in 2005 grew by 11 and 20 percent over 2004 respectively (MPTA).

Regulation of the informal sector is also important to ensure sound environmental management in the tourism industry. In addition to ongoing attention to waste disposal, priority should be accorded to conservation of the coral reef. Damage from unregulated tour operators is one issue, as is the potential for spoilage from land erosion (a risk which may increase as land leaves sugar). Assistance with reef management, drawing upon international experience, is another potential area for assistance under aid for trade.

Finally, there is scope to increase the backwards linkages from the tourism industry to the local economy. In 2005, the value of goods imported by both direct and

indirect suppliers to the tourism and travel sector was Rs12.7bn.[37] This clearly represents a wide range of goods, of which one area of potential for local suppliers is food. The sector currently imports most of its food, except vegetables and some fruits which are sourced locally. Importation is costly and time consuming and the sector would be interested in sourcing more locally if quality products were available. This potential niche growth area for non-sugar agriculture is worthy of further examination, although some investments in agricultural outreach and in upgrading standards (including to HACCP[38]) may be required. Government investment in ensuring that food quality and safety standards are met should also be seen as an investment in maintaining Mauritius' reputation as a high-end tourism destination.

Strategies for reform in tourism

A successful strategy to lower cost would require:

- Open the air transport market to increase competition and establish effective regulatory oversight.
- Explore the feasibility of partnering with an international hotel school to create a regional center of excellence and attract fee paying international students.
- Target government investment in training at the unemployed and laid off workers from other sectors.
- Make visas more flexible for foreign workers, including trainees from foreign hotel schools. Encourage pre-certified companies to offer exchange programs for Mauritians.
- Continue regulation of the informal sector to develop the 3-4 star hotel market, including for regional and non-package tourists.
- Seek aid for trade assistance for a reef management and conservation program.
- Explore scope for increased backward linkages via non-sugar agriculture and food supply to hotels.

Ports: Creating a Regional Hub

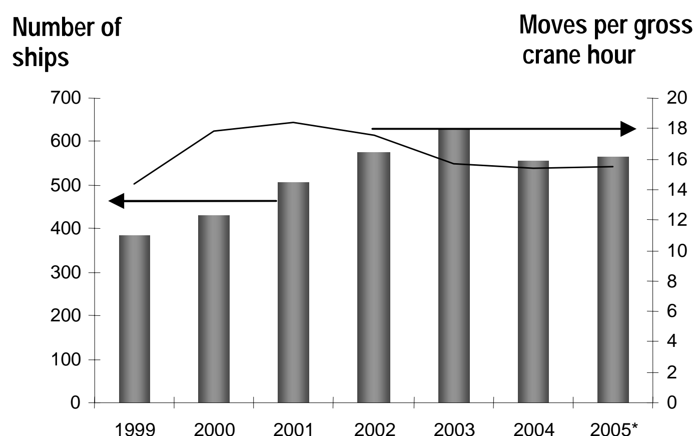
In the early 2000s, following a successful wave of reform and the introduction of the Mauritius Container Terminal, Port Louis was on the cusp of becoming a regional hub. Between 2002 and 2003, container traffic, particularly transshipment operations, increased by over 90 percent. However, this high demand placed a strain on existing facilities, leading to problems with congestion and delays (pre-berthing delays increased from less than one hour to 40 hours or more). Limited and over-used equipment also put

[37] Out of total Travel and Tourism GDP in 2005 of Rs54.8bn, direct suppliers to the travel and tourism sector (e.g., hotels, airlines, car rental) contributed Rs26.3bn, and indirect suppliers (fuel, catering, laundry services) Rs 15.7bn (WTTC).

[38] HACCP (Hazard Analysis and Critical Control Points) is a food safety certification system required by all food businesses in the EU. A number of hotels in Mauritius either require HACCP certification or are moving in that direction.

severe strains on productivity (Figure 4.8). These difficulties resulted in a decline in traffic in 2005, most particularly in the transshipment sector, which contracted by 18 percent (local traffic also dropped in view of the economic downturn, but only by 4.3 percent). Current rates of growth are estimated at around 5-6 percent for captive container traffic and a maximum of 10 percent for transshipment traffic.

Figure 4.8: Ports can provide new services exports, but recent congestion has led to declines in productivity



Source: MPA

Responding to the evident demand for Port Louis to play a regional logistics role would bring a number of benefits to economy: (i) additional turnover in container handling and thus additional jobs; (ii) better external connectivity thanks to additional shipping services; (iii) downward pressure on freight rates due to increased competition in the local market; and (iv) enhanced support to Freeport activities. However, the potential for Port Louis to serve as a regional hub cannot be exploited by the existing facilities. The current port infrastructure has the capacity to handle more traffic, but cargo handling facilities lack both the requisite equipment and organization (discussed below).

There is a narrow window for Mauritius to become a regional hub. By standing still, Mauritius is vulnerable to moves by regional competitors to upgrade their facilities. The port of Mombassa has registered high growth rates (although less so in transshipment trade,) and is aiming to reach 1 million TEUs[39] by 2015, including by construction of a second container terminal (Kenyan Ports Authority). Tanzania's Dar-es-Salaam port has also seen strong growth of around 20-30 percent per year since its leasing to Hutchison-Whampoa in 2001 (Table 4.2). South Africa has budgeted for a US$2.5 billion capital investment to develop its ports; if reform succeeds, the size of the South African market makes Durban an attractive alternative regional hub. The French government is also making substantial investments in upgrading the port of Réunion.

[39] Twenty-foot Equivalent Units, which refers to container size.

Table 4.2: Port Throughputs of TEUs and Growth Rates

Location	Throughput of TEUs					
	2002	**% change**	**2003**	**% change**	**2004**	**% change**
Mombassa	201,684	22	388,380	92.5	393,456	1.5
- of which transshipment			102,282		100,316	
Mombassa	305,427	5.1	380,353	24.5	438,597	15.3
- of which transshipment	27,368		49,605		34,245	
Dar-es-Salaam	166,300	12	201,000	21	259,000	29

Note: * includes Freeport TEUs; 2003 and 2004 figures include transshipment TEUs. ** Figures cover period April 2001-March 2002.
Sources: Mauritius Ports Authority; Kenyan Ports Authority; Hutchison-Whampoa Annual Reports

Cargo handling at Port Louis is currently operated by the Cargo Handling Corporation Ltd, jointly owned by the Mauritian Ports Authority (MPA, 40 percent) and the State Investment Corporation (50 percent). The MPA serves as port landlord, providing the equipment and land and collecting fees from ships, as well as regulator overseeing the concession contract to CHCL.

The key problem in upgrading cargo handling capacity are: (i) undercapitalization of CHCL, which prevents it from adequately investing in and maintaining equipment;[40] (ii) CHCL's tight financial situation brought about by the fact that approximately 40 percent of revenue goes to paying pensions (its turnover rate is close to 55 percent); (iii) the requirement for CHCL to abide by public procurement rules; and (iv) CHCL's insufficient technical and operational expertise to move to the next level of productivity. These factors combine to constrain CHCL's ability to respond rapidly to new investment needs and surges in demand.

A strategic partnership with an international player would bring CHCL an injection of capital and best practice technical expertise.[41] It would also provide a good opportunity to divest MPA of its 40 percent share in CHCL, with equity passed to its strategic partner. At present, MPA is both regulator of, and partner in CHCL – an undesirable situation made worse by the relative strength of MPA's financial position and its need to bail out CHCL. A strategic partnership could also provide capital (as part of the concession contract) for a 150m extension to turn the MCT into a full 3-berths terminal (it is currently 560m and 2-berths) at the same depth (14.5m). This would relieve the government of the financial cost of upgrading the port, and should be feasible without any protection works.[42]

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[40] Two new cranes, financed by EIB, are due to be delivered in mid-2007. While these will enhance productivity, their purchase has placed a strain on CHCL's finances.
[41] Recapitalization by the government would not address the financing problem over the longer-term.
[42] Should a larger extension - e 400m extension with two new berths at a depth of -16m – be undertaken, an additional breakwater would need to be financed by the MPA at a likely cost of R4 billion.

To provide the necessary assurances to the labor unions, and to make CHCL attractive to investors as a viable commercial entity, the government may need to take on CHCL's pension liabilities. The argument for doing so is strong: the government is already in effect paying for these benefits, but via an inefficient means that undermines both the economic viability of CHCL and the future of Mauritius as a regional hub. The level of foreign equity in CHCL would thus need to take account of the need to cover the costs to the government of assuming the pension liability. While a majority share (51 percent) is more attractive to investors, local control could be preserved through a golden share for the government (49 percent equity)[43] or inclusion of local partners in the strategic partner's 51 percent share.

Maersk has expressed its interest in running Mauritius' port operations (via its subsidiary APMT); however, it is likely that an open competitive bidding would attract interest from other operators (e.g., PSA-Singapore, Hutchinson-Hong Kong and Dubai Ports). A transparent and open competition of preferable, even with the risk that Maersk may decide to take its business elsewhere should it not win the concession (given its current global strategy of managing its own facilities) and that it might seek to establish a regional hub in Durban. However, there are also concerns (if Maersk should win) about allowing a shipping company to run cargo handling, in view of the perceived risk of favorable treatment for its own vessels. The MPA reports that MSC, which accounts for 70 percent of the traffic in the terminal, has threatened to leave if Maersk takes over cargo handling operations for fear that charges would rise.

This risk underlines the need for the MPA to be formally separated from cargo handling operations in order to provide independent regulatory oversight to the sector. In the medium term, concerns about dominance of one ship operator could be addressed by entry of a second operator to introduce competition for port handling services – including via investment toward the development of a further site (either a new site or renovating the existing MPT).[44]

Consensus on the general direction of these reforms is not universal, and the MPA in particular has expressed the view that there is no urgency to find a strategic partner for CHCL. It is exploring solutions to CHCL's financial problems and believes that port upgrading need not be undertaken for 3-5 years given the past slowdown in traffic (Figure 1) and what it anticipates to be the further slowdown as sugar and textile exports decline. Yet delay risks the opportunity being missed; once a regional hub is established in another port, it will be difficult for Mauritius to reclaim this opportunity.

[43] It is not recommended that this include choice of CEO, as an anticipated benefit of the partnership is additional expertise.
[44] The MPT currently handles small ship traffic, but does not have crane capacity. In periods of high congestion, ships can be diverted from the MCT to the MPT, with consequent higher costs and loss (up to two or three times less) of productivity in handling. Even the risk of being diverted to MPT has had a chilling effect on trade.

A seafood hub would require investment

The MPA is planning a dedicated terminal able to handle very large fishing boats with a view to establishing a seafood port and processing hub. At present fishing traffic is distributed throughout the region; the plan is to consolidate this at one facility in Mauritius, with further processing facilities (e.g., canneries) on-site. In FY2004/2005, the MPA derived operating revenue of Rs34 million from the fishing business segment, both for vessels and quay dues. Total fish traffic at Port Louis during FY2004/2005 amounted to 74 881 tons and the number of fishing vessels calling at the port increased by 38.6 percent in FY2004/2005 over FY2003/2004. Total fish traffic increases by 11.9 percent over the same period.

The Mauritius Freeport already provides more than 80 000m3 of cold room facilities, representing a storage capacity in excess of 22 000 tons. Reefer container parks and processing facilities for the grading, sorting cutting, filleting and packaging of fish products prior to re-export are also provided. Logistics services are in accordance with EU standards.

The MPA would be responsible for providing access and protection at the port, involving some dredging and construction of a breakwater. Development of an 800m quay dedicated to foreign fishing vessels is estimated to require investment by MPA in the range of $25-30 million.

For development of the terminal itself, the MPA could test industry interest in constructing berths, as is commonplace in the container terminal business. If no interest from industry was forthcoming, MPA could construct the berths and recoup the investment via the concession fees (obviously, these fees would be significantly lower where operators had constructed their own berths). The financing strategy should also involve some element of loans to smooth the shock and ensure that adequate financing was left for other port projects. The World Bank, perhaps in conjunction with the EIB, would be in a position to provide a loan.

While involving some government investment, the seafood hub could create needed jobs, both at the hub itself, and via the extension of processing facilities (e.g., canneries), largely for lower-skilled workers. While the ACP preference on canned tuna (currently zero, as opposed to an MFN rate of 24 percent) will be lost, it is likely that similar arrangements will be negotiated under the Economic Partnerships Agreements (EPAs) and this should be one focus on Mauritius' attention in these negotiations.[45] However, MFN reductions will likely see the value of these preferences eroded over time, a factor that needs to be taken into account in assessing the long-term viability of the seafood hub and the extent of public investment.

[45] A condition of the EPA negotiations is that ACP countries will not be worse off under an EPA than they were under the ACP agreements.

A cruise jetty could further boost tourism

The MPA is also planning to invest $4 million in a cruise jetty, away from the industrial section of the port where tourists currently disembark, to cater to the 20 cruise ships per year that stop in Mauritius. The proposal would involve joint promotion of traffic by all islands under the Cruise Indian Ocean Association and it is envisaged that the number of ships would increase. MSC has already indicated that its cruise subsidiary would stop at Mauritius if the facilities were upgraded. To maximize the benefits, promotion should be coordinated with the MPTA.

Strategies for reform in ports

Lessons from past port reform are that a participatory process, bringing in labor unions at an early stage, coupled with clear government commitment, is essential. Experience with the benefits of past reform, and of the reversals caused by congestion, could facilitate dialogue with the labor unions. Well documented monitoring indicators could also facilitate this process. Above all, decisions need to be taken quickly before others seize the opportunity to become the regional hub. Priority actions are:

- Formally separate the MPA from CHCL to enable MPA to serve as an independent regulator of the port.
- Take an early decision to open up CHCL's equity to a Strategic Partner, operator and investor, to bring in both the financial capacity and the additional proficiency required to adequately respond to market demands. Government may need to take on the pension liabilities and this should be factored into the concession price.
- In the medium term, foster competition on the local container handling market by introducing a second operator.
- Explore ways to maximize private sector contributions to the financing of development of the seafood hub
- Coordinate marketing of the cruise jetty with the MPTA.

Financial Services: Building on existing strengths

Performance and prospects

The development of the financial services industry has been one of the success stories of the Mauritian economy over the past 15 years. It has grown at a compound rate of approximately 9 percent per annum since the early 1990's, and, while growth has slowed in the past few years, it continues to outpace growth in the economy as a whole, growing at 7.6 percent in 2005.

While employment in the sector is lower than that of tourism, sugar or the EPZ, it nonetheless employed 8401 people as of March 2005. Importantly, employment in the sector is growing, increasing by 12 percent between March 2004 and March 2005, and it

has the highest average wages of all sectors. Moreover, if one excludes the one-off sale of Mauritius telecom, it has also been the largest single source of foreign direct investment into Mauritius in recent years. FDI in banking alone (excluding non-bank financial services), has accounted for 25 percent of all FDI in Mauritius since 1995 and 41 percent if the Mauritius Telecom sale is excluded. Foreign banks in the market include some top international names, such as Barclays, HSBC, and Deutsche Bank, though the industry is dominated by large domestic players, notably Mauritius Commercial Bank and State Commercial Bank. Finally, the financial sector is a source of significant tax revenues for the government: the two banks cited above are the largest taxpayers in the country, and other financial institutions are also major contributors.

The financial sector comprises a relatively large and well-developed domestic financial system and a growing and profitable offshore sector. Mauritius belongs to an elite group of developing countries where domestic bank assets exceed GDP, and contractual savings represent over 40 percent of GDP. The growing offshore financial sector is also large relative to GDP, but has been weakly integrated with the domestic economy. The distinction between offshore and domestic banks was eliminated in the 2004 banking law, which should lead to greater synergies and integration of the offshore sector in the future.

The basic financial sector infrastructure, such as payment, securities trading and settlement systems, is modern and efficient. Access to financial services is very high, with more than one bank account per capita. While the ICA survey results cite access and cost of credit as a major constraint to business development for SMEs, both survey results and data obtained from the Registrar of Companies indicate that, unlike in many developing countries, both small and new firms have access to bank credit. The development of the sector has enabled Mauritius to finance its development largely with domestic resources, and it has a valuable role to play in supporting the transition of the economy.

The offshore financial sector draws principally on 29 favorable double taxation avoidance treaties, though also benefits from its location, relatively low wages, bi-lingual population, and modern, business-friendly legislation. It has 14 offshore banks (former category 2 banks), several hundred offshore funds managing roughly $12 billion in assets, 15 offshore/captive insurance companies, and some 25,000 global business companies.

Following a report issued by the Financial Stability Forum in 2000, which cited Mauritius as a poorly regulated jurisdiction, the government undertook a comprehensive program of legal and regulatory reform with a view to developing Mauritius as a competitive international financial center of high standing. Measures adopted include the creation of a new integrated regulatory body for the non-bank financial sector, the upgrading of banking supervision and regulation by the Bank of Mauritius, and new, modern legislation governing banking, securities, insurance, commercial law, trusts, anti-money laundering, accounting and auditing, and corporate governance has been passed.

This program has been recognized by the international community, and has brought the legal and regulatory framework broadly into line with international standards.

While there has been some backlash against the pace and scope of regulatory changes (and associated compliance costs), particularly from smaller, domestic market participants, in the current international environment, a reputation as a well-regulated jurisdiction is critical to attracting reputable international financial institutions and companies. It is therefore important that the regulatory authorities maintain high standards. Offshore jurisdictions are particularly vulnerable to reputational risks arising from potential money laundering. It is also important that regulators and financial institutions pursue efforts to strengthen governance, risk management, and internal controls, which have been weak in a number of key public and private sector financial institutions of systemic importance. The major protracted fraud at MCB exposed serious weaknesses in these areas at both MCB and the National Pension Fund, and there have been less spectacular but still serious incidents at other financial institutions. In addition to the potential systemic risks, the negative publicity of such scandals can damage Mauritius' reputation as a financial center.

Increasing value-added exports

Any strategy for exporting high value-added services should logically build on Mauritius' success in financial services**.** Most of the higher value-added work (asset management, investment analysis, international tax planning, etc.) of offshore firms incorporated in Mauritius is currently done elsewhere. This not only has high opportunity costs, but leaves the jurisdiction vulnerable to charges that Mauritian domicile is merely a tax-avoidance measure, devoid of substance. However, Mauritius currently does not have an adequate number of highly skilled finance professionals, with up-to-date knowledge in relevant areas required by sophisticated international investors. In order to capitalize on these missed opportunities, Mauritius needs to encourage the entry of highly qualified foreign firms and individuals, and to offer world class education and continuing training in international finance, law, tax and related fields. Current barriers to the entry of international law firms should be eliminated as a matter of priority.

In addition to developing higher skills and offering more sophisticated products in the offshore sector, Mauritius can build on its existing capabilities to offer BPO to financial service providers. Deutsche Bank, for example has recently outsourced some of its international back office operations to its Mauritian subsidiary. Given its existing strengths in financial services, and the presence of many international players in the market, financial services could prove to be a niche BPO market where Mauritius has a competitive advantage. Potential activities would include back office operations, credit card processing, calculations of NAV and other administrative tasks for investment funds, processing of insurance claims, credit analysis, etc.).

Mauritian banks have also been expanding in the region, and are well-placed to provide financial services to the African market (both through local subsidiaries or cross-border transactions). MCB attributes its 16 percent rise in profits in 2005 exclusively to regional business development. The Stock Exchange of Mauritius has provided advisory

services to nascent exchanges in Africa, and with excess capacity and modern technological platform, could provide trading, clearing and settlement services to smaller African exchanges.

Strategies for reform for finance

- To protect itself from vulnerabilities arising from legal and regulatory changes in other jurisdictions, Mauritius must continue to diversify its sources of offshore business, and develop higher-value-added financial services that do not rely solely on favorable double tax avoidance treaties.

- Significant increases in training and education are needed, notably in international finance, law, and taxation, perhaps in partnership with international providers. Given the nature of these skills, and the potential rewards that will accrue to those trained, the costs should be born largely or entirely by the private sector or participants.

- Entry of skilled finance professionals should be encouraged through easier and longer-term visa delivery and renewal, and spouse working rights.

- Improving access to credit information and the development of a credit information bureau is a way to increase bank competition and credit quality. A comprehensive credit information bureau could improve loan quality by allowing lenders to better assess the credit risk of firms. This would lead to greater competition among domestic and foreign banks, which could increase access to credit and lower borrowing rates.

- Regulatory authorities must maintain high standards and both regulators and financial institutions should pursue efforts to strengthen governance, risk management, and internal controls.

- The government should undertake a thorough review of taxation in the financial sector and incentive schemes with a view to simplifying and eliminating distortions. Various tax incentives, subsidies and government funds have been established over the years to promote markets or sectors considered high priority, but it is far from clear that these schemes have generally achieved their desired objectives, and in some cases they have created distortions which may be impeding financial market development. Inconsistent treatment of different types of interest income, for example, has impeded the development of a corporate bond market. Harmonizing the tax and regulatory framework could improve bank and non-bank competition.

5. Democratizing Growth in an Open Economy

Creating opportunity for everyone – democratizing the economy -- is a central objective of the government. From the perspective of a program to enhance trade competitiveness, three elements are important to this objective.

First and probably most important, as noted in chapter 2, the package of reforms the government is considering would have a positive impact on low-income workers and the unemployed. The most important consequence would be to reverse recent trends toward slower growth that will have positive income effects for low-income workers. In addition, lowering the relative prices of food, clothing, and footwear – products on which the low-income workers spend relatively more as a share of their income than the wealthy – will also serve low-income workers and the poor. *Beyond income effects, changes in the relative these prices will raise about 5 percent of low-income workers above the poverty line.* Trade reform will induce some dislocation, but these are small relative to the overall turnover in the labor market and are likely to go unnoticed, save for in a few specific sectors like furniture. These pale in comparison with the dislocation already weathered in sugar and textiles. Moreover, other aspects of the reform program will directly benefit low-income workers. Adopting policies that unwind incentives toward capital-intensive technologies and large firms and instead shift them toward greater neutrality, while encouraging SMEs, will augment the job-creating effects of growth.

Second, weaving a social safety net to support workers in transition between jobs and those suffering prolonged unemployment is essential during any period of economic transition. It is important to recognize that most of today's unemployed are not associated with trade-related dislocation, but are new entrants that have not yet found jobs. Roughly half are under the age of 25. Less than 15 percent live in households where they are the only source of income. Still, one third of the unemployed are in the poorest quintile. All this means that any social safety net must deal not only with those dislocated by trade (e.g., textile or sugar downsizing) or new trade reforms (i.e., from the import substitution manufacturing sector), but those unemployed as part of the normal growth and structural change in the economy – that is, all workers suffering unemployment in the future irrespective of the reason.

Third, a key element of supporting workers is ensuring that education and training systems are able to deliver relevant knowledge and skills. Jobs being created in growth sectors such as ICT and, to a somewhat lesser extent, tourism require higher skills, while existing industries undergoing adjustment and seeking to survive by moving up the value chain, such as textiles, are also increasing their demand for skilled labor. However, the labor market is characterized both by high unemployment and skills shortages in key sectors. Resolving the mismatch requires upgrading of education and training. Increased investment in education and training is essential to both to enable Mauritius' move towards a knowledge economy and to ensure that its benefits are spread widely amongst the population.

This chapter aims to provide some initial observations on social safety net and training issues in Mauritius, and to provide some insights from international experience. It is by no means comprehensive, but aims to highlight some of the key issues moving forward.

Protecting Workers, Not Jobs

Introducing flexibility into the process of hiring and firing allows the economy to shift capital and labor more rapidly into high productivity activities, increasing average wages. Economic change, whether driven by technological progress, structural shifts in the economy, or trade, is part of the growth process, and necessarily means job creation and job destruction. The ways to accommodate this process is to welcome change by protecting workers, rather than impeding change by protecting the jobs they currently have.

The social safety net today comprises unfocused programs that provide generous benefits for many that do not need them, but fails to support many that do. The basic pension program costs about 2.7 percent of GDP, and the social assistance programs cost another 1 percent. Neither is directed at the lowest income groups. Consolidating the myriad of social funds and subsidies into a single pool, and redirecting them to the lowest quarter or quintile of the population would liberate resources to help with the second step. Sequencing is critical. It is important to begin providing benefits to those now unprotected but who would qualify in the new system prior to reductions. Mauritius needs no more than 1 percent of GDP as a direct cash transfer benefit to completely alleviate poverty.

Eventually to make resources available, it will probably be necessary to reform the high cost and inequitably structured basic pension program. The current universal old age pension program is fiscally expensive. Because it is spread thinly, the amount is not adequate to protect some very poor elderly: some 27 percent of the elderly are poor even after receiving the pension. A means-tested basic pension program for the elderly in lieu of the current universal program would help free up resources to be used in other social programs.

Currently, a number of schemes under the rubric of Social Aid constitute the main social assistance cash transfer program for most vulnerable groups in the country. It is demand-driven: households have to apply providing some element of self selection as well as some mean-testing of those applying for assistance. However, in practice, applications are assessed on the basis of categories assumed to be poor and vulnerable, and the system as a whole is geared towards specific contingencies defined *a priori* (e.g., single elderly). It does not protect every household that falls below a critical minimum threshold income. Not surprisingly, analysis of household survey information for 1996-97 and 2001-02 suggest that the program is poorly targeted, inequitable and inadequate.

A number of price subsidies permeate the economy (food, housing, micro finance, electricity, water, etc.). These were examined in detail by a Bank mission in 2001, which

noted the macro economic distortions induced by these subsidies whose distributional incidence was (and is) largely regressive, an analysis reconfirmed in a recent IMF paper.[46] A number of other small scale programs are also implemented by the Department of Social Security (such as funeral grants and grants for the purchase of eye glasses) at a huge administrative cost but negligible welfare impacts.

Thus, even prior to the onset of the current adjustment-induced stress, the social protection system in Mauritius has many flaws: fragmented, poorly targeted, and expensive both in terms of high administrative costs and the distortions it imposes on the macro economy. The ongoing fiscal adjustment provides the country with a unique opportunity to reform the system of social protection.

Towards an improved safety net

A priority is to phase-out the plethora of subsidies in a carefully sequenced program that, prior to abolition, puts in place a well-targeted safety net. Where subsidies have been abolished with nothing to replace them, street protests have ensued (e.g., in Yemen and Indonesia over energy subsidies and Jordan over food subsidies). By contrast, other countries have successfully reformed subsidy regimes in response to macroeconomic crises. Mexico, for example, had an expensive, untargeted subsidy on tortilla (a type of bread). Before eliminating it, a conditional cash transfer (CCT) was piloted in 1997 which was well-targeted to the poor. Rigorous evaluation indicated very positive findings on children's health, nutrition, and educational outcomes and the CCT program was expanded nationally and the tortilla subsidy abolished. Similarly, the current Brazilian government has successfully consolidated and redirected subsidies towards the poorest groups in Brazil.

Merging small and varying benefit programs, and introducing a unified, means-tested, cash transfer benefit could improve the efficiency of the social safety net and reduce perverse incentives while eventually providing some scope for reducing the safety net budget.[47] Simulations suggest that with a poverty gap ratio between 2 to 3 percent, Mauritius needs no more than 1 percent of GDPf as a direct cash transfer benefit to alleviate poverty.[48] Under the current Social Aid program there are several small benefits – a piece-meal approach to problems with built-in inequities. These could be rolled into one single unified cash benefit program targeted to the poor.[49]

[46] IMF (International Monetary Fund). February 2006. Mauritius: Aide-Memoire.
[47] Social Aid as is currently designed has potential for adverse incentives in the labor market largely because households can manipulate "specific contingencies" to access benefits – e.g., people may forego employment opportunities and stay in the welfare system, or widowed or divorced women choose not to re-marry because of the likely loss of benefits.
[48] This simulation abstracts from administrative cost of programs. Even adding administrative costs of 10 percent, the country would need no more than 1.1 to 1.2 percent of GDP to reduce hard core poverty. By contrast, the current untargeted welfare system (comprising untargeted transfers and subsidies) costs Mauritius 2 to 3 percent of GDP.
[49] Two target groups could be used: (i) indigent people (households with working members but ultra poor, the disabled, etc) with no school-going children, which would receive an unconditional cash transfer, provided they are not in receipt of any other transfer (e.g., old age pension); and (ii) households which are

Methods for targeting the poor

No safety net can ever be perfectly targeted. There will always be targeting errors, large or small, which program design should take into account and seek to minimize. The literature refers to two different kinds of targeting problems:

- Inclusion errors—some non-poor are included in the program
- Exclusion errors—some poor are left out of the program

Inclusion errors increase fiscal cost but can help generate political support for poverty programs among the middle class, who stands to gain (by being included and sharing the benefits). Exclusion errors, in contrast, help reduce fiscal cost but also make programs less effective and fair than desired.

Additionally, the share of program resources being transferred to the poor can be reduced by corruption/leakage (where resources do not reach any beneficiary) and administrative costs. The latter can be significant (on average around 10 percent of the budget for a program) and tend to increase if targeting is very complex and fine-tuned; self-targeted and untargeted programs can have lower costs.

There are six main approaches to targeting benefits under social safety net programs:

- Categorical targeting (for example, pensions to the old, disabled, etc)
- Geographical targeting (by region)
- Means tested (based on actual or self-reported income, verified or unverified)
- Proxy means test (using a composite formula based on observable household characteristics that seeks to predict income)
- Self-targeting (for example, subsidy to inferior goods)
- Community based targeting (community members decide on eligibility)

Which targeting methods would be appropriate for Mauritius? Means testing does not seem feasible because a large part of the economy is informal (fisheries, agriculture) where incomes are hard to verify. Self-targeting does not work for cash transfers, which constitute the bulk of the proposed safety net system in Mauritius. Categorical targeting is implicit in the old-age and disability pensions currently used. However, there could be many very poor households – such as the working poor – who may not be captured. Geographical targeting could be pursued with substantial effect in Mauritius because of the pronounced differences in poverty and welfare between the main island and Rodrigues, and between regions in the main island. For example, higher program quotas could be provided for beneficiaries from poorer regions. Community based targeting has been found to often perform very well; however, it is not clear whether this will work in Mauritius.

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poor (working or unemployed poor) with school-going children, which would receive *conditional* cash transfers (along the lines of Progressa in Mexico). A key issue is ensuring that such single payments are truly directed at the poor..

A Proxy Means Test may be the most suitable way to target the umbrella cash transfer program in Mauritius. This method generates a score for applicant households based on easily observable household characteristics such as location and quality of dwelling, ownership of durable goods, demographic structure of the household, and education and occupation of adult members. The system aims to establish a technical, objective, equitable and uniform mechanism to be used by all government agencies for selecting beneficiaries of social spending.

Latin American countries (such as Chile, Colombia, Costa Rica and Mexico), Turkey and Bangladesh have used proxy-means test systems in education, health care, food and nutrition interventions, social insurance and assistance programs. These countries followed a three-step process: (i) determining variables and weights to estimate a quantitative measure of welfare for each individual family member using a random household sample; (ii) poverty mapping of small areas, including to enable identification of individual families or households; and (iii) calculation of welfare levels for individual families or households using actual household information.

Household characteristics can serve as reasonable proxies for income; more information is generally better than less, although there are diminishing returns. Proxy means tests can also be vetted by communities. In this approach, a social worker interviews the household and solicits information on income (i.e. a self reported means test) and on the variables of the proxy means test (demographics, housing characteristics, and occupation). A preliminary participatory testing with communities helps refine the selection of indicators. Once a proxy means test is done, it is good practice to go back to the communities and pre-test whether the selected indicators are good predictors of poverty in the eyes of the community. A proxy means test would then be generally accepted by the community. It is important to provide an appeal process for rejected applicants who may feel wrongly excluded.[50]

All proxy systems have significant errors of under-coverage, but they reduce leakage so much that the impact on poverty is still better with imperfect targeting than with no targeting (Grosh and Baker, 1995).

Implementation for Mauritius

Mauritius has the needed information (household survey) to construct a proxy means test. However, implementing new administrative procedures, targeting systems, flows of funds, methods for delivering benefits, monitoring and evaluation, and communicating with communities pose complex challenges for the government. A few key issues of critical relevance to the Mauritius are:

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[50] For an excellent analysis of the way a Proxy Means Test could be implemented with a household data set, and the pros and cons of its adoption, see Rafael Cortez et. al. (2005) Targeting Resources for the Poor in Bangladesh.

- *Administration:* Assistance from international consultants with experience in implementing safety net reforms with a proxy means test is recommended.
- *The unit of analysis/assistance should be the household:* For social assistance purposes, the preferred unit is the household (usually defined as a group of people that share living and eating arrangements), regardless of whether the constituent units pool income.
- *Institutional avenues for monitoring complaints*: must be in place before the program package is decided. This merits immediate attention in Mauritius.
- *Emerging technologies* can simplify and improve benefit delivery. Smart cards (with or without chips) can help identify beneficiaries, ensure benefits are claimed only by the right people, and automate financial management functions. Mauritius is well-placed to adopt smart technologies.
- *Public information campaigns* will be required.
- *Monitoring & Evaluation* should be built in from the start. Evaluation could use (i) a before-after approach to poverty/vulnerability; (ii) a control group of households that are similar to the early beneficiaries but who did not benefit initially due to the phased rollout; (iii) detailed questions on benefits received in future household surveys. A *Risk and Vulnerability Assessment* study would also help further refine program choice, design and targeting method.

Programs for Laid-off Workers and the Unemployed

Beyond the existing social safety net, if necessary to directly provide additional support through direct programs for the unemployed, the government could consider programs that have worked in other countries, including public workfare programs, unemployment assistance programs, improving severance payments regulation, and eventually an unemployment insurance scheme.[51] At present, the levels of unemployment and its type suggest that these types of programs are probably unnecessary, and that most of the governments effort should be devoted to training, education and enhancing programs to bring the unemployed back into the formal labor force.

Public workfare

During a period of adjustment and other macro-economic crisis, several countries have introduced public workfare programs as a way of providing short term employment. These programs are popular in both low income and middle income countries, both during normal times and during periods of crisis (when they are extended). Countries consider them useful for consumption-smoothing; and they perform an insurance function in countries with no formal unemployment insurance program.

[51] For an excellent overview of these options, see Milan Vodopivec, 2006, Choosing a System of Unemployment Income Support: Guidelines for Developing and Transition. Countries Discussion in the following paragraphs draws from this paper.

Three examples are worth citing: Korea (following the financial crisis in 1997), Argentina (following the macro-economic crisis in 2001-02) and Chile (after the macroeconomic crisis and deep recession of 1980-81). In Korea the unemployment rate jumped from under 2 percent to 9 percent, and in Argentina it jumped from under 5 percent to 20 percent. Though differing in the levels of unemployment following financial and/or macro-economic crisis, both countries successfully ran low-wage public workfare programs.[52] Argentina's scheme was found to be exceptionally pro-poor in its distributional impacts.[53] In Chile, unemployment surpassed 20 percent, and the economy shrunk by more than 18 percent. The government enacted a public works program that paid a minimum wage for heads of households, and it was directed to small projects in urban areas. Crucial to the adjustment success was the fact that as the economy recovered in 1983-85, salaries remained constant, just at or below the minimum wage so that workers had an incentive to seek new jobs in the by-then growing private economy.

Unemployment assistance

This is one form of means-tested income support to working age adults who have lost their jobs and for whom it is the only means of maintaining a minimum standard of living. Those receiving assistance, usually limited for a few months, must be actively searching for work. Unlike unemployment insurance, this assistance is not conditional upon work history or previous contributions, but is a pure cash grant financed out of general tax revenues. To the extent the tax system is progressive in a country, and the unemployed are largely among the very poor, the program could perform a redistributive function. However, it is generally expensive to administer, requiring careful monitoring and periodic assessment of an individual's eligibility in order to prevent adverse incentive effects. Very few countries have opted for this type of program.

Severance pay

This is typically mandated by agreements between employers and workers. A survey of the program in several countries suggests that relatively wealthier workers in the private sector benefited the most (MacIsaac and Rama, 2000). Milan Vodopivec (2006) observes that "Because it often offers inadequate income protection and may impose large efficiency costs, severance pay is often considered one of the least appropriate options of income support". The main problem is that job security is indirectly provided by such a scheme which in turn leads to a strong decline in employment (because of the reluctance of employers to hire new workers). Indeed, in Mauritius, preliminary evidence seems to suggest that overly generous severance payments are an obstacle to employment creation (see World Bank, 2006).

[52] For details, see K. Subbarao 2003, Systemic Shocks and Social Protection: Role and Effectiveness of Public Workfare Programs.
[53] For details see Martin Ravallion, 2000, Monitoring Targeting Performance when Decentralized Allocations to the Poor are Unobserved.

Unemployment insurance

Moving eventually to a system of unemployment insurance is a medium-term option worth studying. Those signing up for such insurance typically have to wait for a couple of years' service in a job to claim insurance following job losses. Nonetheless, Mauritius has a wide base of workers from which to pool resources, and hence a wider base over which to spread risk. Disadvantages are that it could generate adverse incentive effects inasmuch as workers may slow their efforts to seek re-employment and that it might prove costly in a situation of mass layoffs. Moreover, civil servants (who have near guarantee of employment) may not join the insurance scheme; in Mauritius this would mean that nearly 20 percent of the workforce would not opt for the scheme.

Again, the example worth citing is Korea. At the beginning of the 1997 financial crisis, Korea's incidence of poverty was less than 9 percent, and the unemployment rate was less than 2 percent. A few months into the crisis, the incidence of poverty and the unemployment rate shot up to 23 percent and 9.5 percent respectively. Prior the crisis, Korea already had unemployment insurance, but the scheme was limited to workers in enterprises hiring 500 or more workers – the large establishments. Following the crisis, unemployment insurance was extended to enterprises hiring fewer than five workers thus covering over 90 percent of workers in the informal sector. However, workers who signed up for the scheme could benefit only after a couple of years. In the meantime, the government also floated a public works program (see above) and expanded a livelihood protection program for the indigent elderly (who lost the traditional informal safety net of protection from children). Much of the success of unemployment insurance in Korea was due to the fact that it already existed prior to the crisis, and policy makers thus had experience in running it; all that was needed was extension of the scheme.[54] An unemployment insurance scheme is an option that merits eventual consideration and study for Mauritius, though a careful analysis of costs and benefits is needed prior to its launch.

As noted, it seems that the characteristics of Mauritian unemployment would suggest a strategy focused primarily on education and training rather than on additional benefits for the unemployed.

Education and Training

Facilitating integration of today's unemployed and those possibly laid off in the course of restructuring requires a menu of options. These might include temporary wage subsidies for employer- based retraining, and greater investments in training overall, including through particular schools (such as the hotel and tourism programs), and improvements in university courses leading to employment in high growth sectors (such as ICT).

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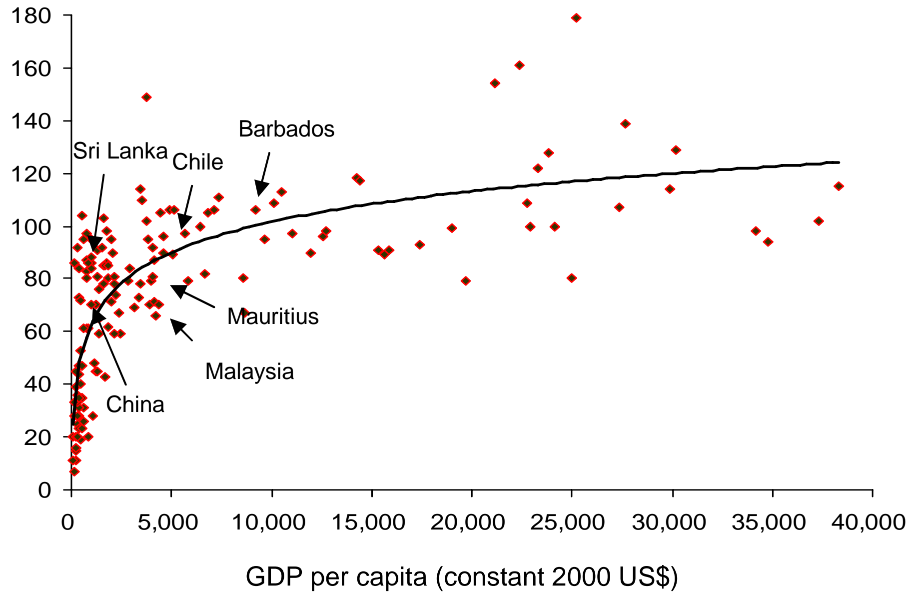
[54] For an analysis of the Korean experience, see K. Subbarao 1999Financial Crisis, Poverty and Safety Nets: Old and the New Poor in Korea.

More fundamentally, Mauritius has to redress its past underinvestment in secondary and tertiary education, since it is rapidly becoming a major bottleneck for the economy.[55] The country faces a considerable challenge: only 75 percent of the cohort graduate primary school, only 55 percent attain the School Certificate (O level), 35 percent achieve the Higher School Certificate (A level). University enrolment stands at 16 percent. Relative to its level of development, Mauritius is an outlier in educational achievement. Its level of secondary schooling, for example, is comparable to Sri Lanka, a country with less than half its standard of living; while tertiary figures are even lower (Figures 5.1 and 5.2).

A detailed discussion of education reform is beyond the scope of the present analysis; however, a specialist analysis on education has been undertaken by the Bank, the findings of which are at Annex I. A number of these echo messages from the present analysis, notably with regard to targeting the number of university graduates with regard to the needs of the new emerging sectors of the economy and expanding access to further studies by facilitating the setting up of carefully selected foreign universities.

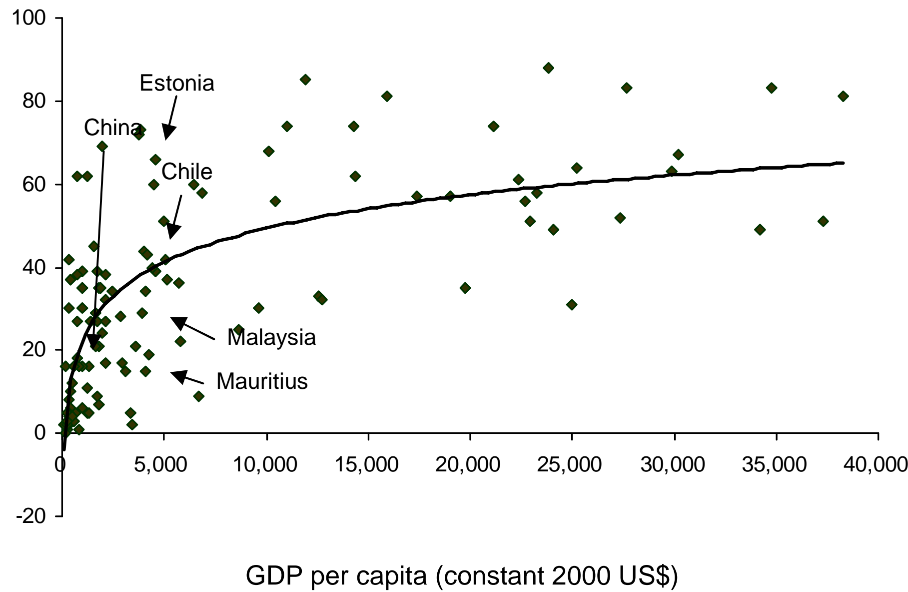
[55] See World Bank, 2006 Mauritius Country Economic Memorandum chapter 4 for specific recommendations.

Figure 5.1: Secondary enrollment rate (gross) and GDP per capita 2002



Source: World Bank staff

Figure 5.2: Tertiary enrollment rate (gross) and GDP per capita 2002



Source: World Bank staff

Training: creating opportunities for all

Mauritius currently spends around Rs1 billion per year on training, aimed at increasing the proportion of highly and multi-skilled, and skilled persons in the populace; at present most fall under the semi- and unskilled categories. This corresponds to the findings of the 2006 Mauritius Employers Federation Annual Business Trends Survey, where anticipated labor shortages are concentrated in top and middle management, followed by technicians. Shortage of skilled labor was ranked as the number one factor inhibiting productivity improvement by 41 percent of respondents, just ahead of lack of industrial culture and absenteeism (40.3 percent). That said, 54.2 percent of respondents expected their expenditure on training to remain the same as in 2006, as it had for the majority (60.4 percent) in 2005. The exception was in the hotel sector, where 73 percent of hotels and restaurants expected to increase their training expenditure.

The Mauritian system is characterized by a wide range of subsidies and incentives for training and labor market participation. There has, however, been relatively little systematic analysis within the government of the overall outcomes and effectiveness of many of these programs to date, although the Human Resources Development Council (HDRC) is currently embarking on a research program designed to partially remedy this.

Moreover, a National Human Resources Development Plan is due to be released in April 2006 as part of the government program 2005-2010.[56] The plan will assess the labor requirements of the economy and the skills and knowledge required for sustained economic development, estimate labor demand in key sectors, and guide education and HRD policies, with a view to reducing the mismatch between labor supply and demand. The Plan is based on a surveys and interviews with employers and working sessions with HRD Managers of all parastatal bodies and Personnel officers of Ministries.

The following discussion is by no means exhaustive. There are a number of bodies involved with training and HRD issues within the government and by no means all programs are outlined here. Indeed, the number of different agencies involved in training and HR issues – particularly in ICT – has given rise to coordination issues, including some overlapping mandates and programs.

Wage subsidies for on-the-job training

A general skills development program is open to all unemployed persons in Mauritius. The scheme, estimated at Rs50 million per year, subsidizes the wages of the unemployed in order to overcome employers' reluctance to hire persons without experience. Graduates receive a 50 percent wage subsidy for one year (equivalent to around Rs108 000 per graduate per year), while persons with HSC receive 6 months subsidy. There does not appear to be systematic monitoring of the type of on-the-job training persons are receiving or whether they are retained by employers once the subsidy

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[56] Specific plans and reports also exist for particular sectors, such as that produced by the Task Force on E-Education and Training.

expires. The relatively small size of the program compared to the number of unemployed also indicates a degree of under-utilization that warrants further examination.

International experience with on-the-job training programs may be useful. The objectives of Jordon's Training and Employment Support Program, for example, were to (a) test the demand for, and effectiveness of, employer-based training, and (b) stimulate jobs for unemployed. Under the program, employers picked candidates from the pool of the unemployed on the basis of assessment of their potential to be trained and the company's own skill needs. The employer was free to choose the training method – 83 percent of trainees were trained on the job, while others were sent to specially chosen training centers. The Government (out of a separately established Training Fund) financed a fixed payment per new trainee to support the company's training costs, and in return the company committed to hiring the trainee for at least 6 months after the end of the training period. The program yielded impressive results. Nearly 85 percent of those trained continued to be employed in the companies after the training was completed. After the training, average monthly income increased by 235 percent over the amount earned prior to training.

Mauritius has also experimented with sector-specific wage subsidy programs to address the needs of laid-off workers. A recent pilot program by the HRDC provided a 2 month wage subsidy for workers from the textile sector taking up jobs (mostly housekeeping) in the hotel sector with on-the-job training. However, many workers were not kept on by the hotels after the subsidy ended. Employers were unwilling to take the workers on an ongoing basis including because of their age (many were over 45) and relatively low level of skills (the majority had only primary school education). Hotels also wanted to recruit workers who lived locally, as most provide transport for their employees.

Rather than providing wage subsidies in particular sectors, the HRDC has expressed a preference for pursuing general training programs to make labor more employable (the national core skills training program – see below), coupled with short, specific training courses.

Specific training courses are planned for workers in the BPO and call centers in particular. In response to problems that have been encountered retaining workers in call centers following training (see section 4), the National Human Resource Development Plan proposes establishing attitude training, with the aim of encouraging more flexible attitudes towards the demands of the new sectors for new practices such as non-standard working hours (as required by call centers and BPO) and night work by women (often required in tourism and call centers).

Training levy

All employers in Mauritius pay a training levy equivalent to 1 percent of their wage bill. Employers can then claim a rebate on training that they finance by lodging a claim with the HRDC. Training can be provided by a range of academic and private

sector bodies, but courses must be approved under the Mauritius Quality Assurance Framework to be eligible for funding.

The procedures for claiming rebates have been tightened following the take over of the levy by HRDC in 2005. While this has caused some unhappiness amongst business (53.5 percent of the MEF survey rated training policies as incentives or adequate, down from 65.3 percent in 2004), the HRDC claims that this tightening was necessary in view of past irregularities - in FY2003-2004, Rs175-180m was collected under the levy but Rs 201m was disbursed.

Training programs require prior approval so that they can be included in the random sample where verification is undertaken, but this can be granted up to the night before. Companies have up to 4 months to claim reimbursement and complete claims are processed within 1 week. The system is due to be put on line by July 2006.

15,000 employers are registered with the system, of which 12,000 are SMEs. Benefits under the levy vary, depending on the extent of training companies provide and how actively they claim rebates. At present, however, most of the benefits go to large firms: SMEs contribute around 11 percent (Rs20.4 million) of the overall levy fund (Rs180 million), but use only 4-5 percent, with the rest absorbed by large firms (Table 5.1). The HRDC is conducting a study to examine why SMEs are not making greater use of the levy. Working hypotheses include: (i) that SME owners are not always highly educated and so may not value education and training; (ii) many are family businesses using their own labor; (iii) many are small operations that cannot spare labor to attend training; and (iv) in the hotel sector in particular, poaching by larger hotels deters SME investment in training.

Table 5.1: Contributions and Beneficiaries of the Training Levy

LEVY	No of ERS Contributing Levy FY 2003-2004	No. of Beneficiaries of Grant	% Beneficiaries	Annual Levy Contributed Rs (m)	Amount Disbursed as Grant Refund Rs (m)	% Grant/Annual Levy Contributed
Up to Rs 10,000 (SME's)	10,766	185	2%	20.4	1.0	4.9%
Rs 10,001 to Rs 30,000	1,225	157	13%	20.0	3.0	15.0%
Rs 30,001 to Rs 50,000	304	65	21%	11.2	2.6	23.1%
Rs 50,001 to Rs 100,000	318	141	44%	21.6	10.3	47.7%
Rs 100,001 to Rs 500,000	276	187	68%	59.2	38.7	65.3%
Over Rs 500,000	53	29	55%	60.7	35.6	58.7%
TOTAL	12,942	764	6%	193.1	91.2	4,724.0%

* Amount includes levy for the month of June 2005, collected in July 2005
Source: HRDC

Other incentives under the National Training Fund

Several other initiatives further support for training, although these are more limited and vary in usage rates (Table 5.2):

- Financial support for Training Needs Analysis allows companies to receive a refund of up to Rs75 000 to conduct an assessment of their training needs. The scheme is aimed at ensuring that levy monies are being used productively.
- Registered training centers can apply for up to Rs100 000 every 3 years for the purchase of multimedia facilities.
- Where local trainers are not available, use of foreign expertise can be reimbursed up to Rs100 000 per week for a maximum of 2 weeks. Foreign trainers are mostly used for management, strategic planning, project management and international accounting courses.
- Overseas Training for employees attracts a refund of 50 percent of airfare up to a maximum of Rs15 000.
- Company employees are also eligible for support for Masters degrees (mostly MBAs and MScs) in the form of a refund of up to 10 percent of the course fees.
- The Pre-Operational Training Incentive (POTI) provides an advance equivalent to 50 percent of estimated training costs for first year of operation, with the money to repayable in 7 years.

Table 5.2: Other Incentives

Incentive	No. of Beneficiaries	Amount disbursed (Rs m)
TNA	5	0.3
Financial Support (Masters Degree)	12	0.2
Foreign Expertise	10	1.2
Multi media		
Test Consultancy		
POTI		
TOTAL	27	1.7

Source: HRDC

Training for employment abroad

The HRDC is also proposing to undertake a program of training for workers to undertake employment abroad. Targeted jobs include:

- Health (e.g., Nursing officers, Health care assistants)
- Education (e.g., Primary School Teachers, Secondary School Teachers, Translators)
- Tourism (e.g., Cooks, Spa Therapists, Waiters)
- ICT (e.g., Call Centre Operators: Bilingual Tele-agents BPO: programmers, software developers)
- Finance (e.g., Economists, Accountants, Management)

- Textile (e.g., dyeing, spinning)
- Jewelry (e.g., diamond polishers)
- Maids

Many of these are jobs which Mauritians overseas already hold and active links with the diaspora network would be one element of the strategy. The aim is to use the prospect of working abroad as a lever to increase training for the domestic market as well. In the case of nurses, for example, the Mauritius Institute of Health is by law only permitted to train 250 nurses per year, but as increasing numbers of these leave to seek work in the UK, shortages have arisen. Under this scheme, nurses would be trained in much larger numbers, to supply both the Mauritian and UK markets. A similar approach could be taken with teachers and other shortage professions. Complementary efforts would aim to facilitate market entry – at present Mauritian nurses in the UK need to undertake a 6-month attachment course; however, the HRDC is interested in working with the UK authorities to allow the course to be undertaken in Mauritius prior to departure.

The working abroad proposal has some potential benefits for Mauritius in terms of increasing the overall volume of training and encouraging further remittances from workers abroad. However, careful calibration is required to ensure a sufficient supply of trained persons for the domestic market and to avoid a situation where public investment in education is exported with little public return (in view of the private returns, a fee for this training might be appropriate). A serious consideration before embarking on extensive training is the extent to which access is open for workers in target markets. Global shortages of health workers and teachers may mean relatively easy entry for those groups, however, lower skilled workers such as maids and those in non-shortage areas may confront much higher barriers to entry in target markets. Bilateral labor agreements may be used to ensure market entry, although these agreements normally impose some administrative burden on the home country of workers (e.g., with regard to selection and processing of workers and ensuring their return).

Lessons from international experience

A recent World Bank study reviewed training programs in 49 countries. The impact of training was assessed with reference to whether the trainee got employment and earnings before and after the training. Results of training programs are mixed: somewhat positive in OECD countries, but not encouraging in low income countries, where negative responses regarding both the impact on employment and on earnings exceed positive responses.

The study also underlined, however, that training alone is not a solution for unemployment. Training will not create jobs by itself. It will not solve the unemployment problem. Better results from training were achieved in economies that were generally performing well; so there appears to be no substitute for economic growth.

International experience suggests several key lessons for effective training programs:

- Training for what? A critical first consideration is labor market needs and jobs in demand.
- Targeting: carefully select participants who are likely to benefit from training.
- Scale: keep the size of the program limited and manageable – small scale training programs worked best, while large-scale training programs following mass lay-offs failed.
- Encourage employer-based and sponsored training which seems to work best.

Several additional areas are worth further examination in terms of Mauritius' existing programs:

- Better monitoring and evaluation of subsidy and training programs to ensure effectiveness and alignment with labor market needs, in the context of increased investment.
- Monitoring and evaluation of the wage subsidy program to assess training outcomes and explore further targeting. Making graduates more attractive via improvements to the relevance of their training may be more cost effective than wage subsidies. Wage subsidies, if used, may be better targeted at the lower-skilled who have much higher rates of unemployment (unemployment amongst tertiary graduates being 5.4 percent, as opposed to 56.4 percent and 38.2 percent for secondary and primary educated workers respectively).
- Calibrating training programs for working abroad to maximize positive spillovers for shortage areas in Mauritius and exploring appropriate levels and conditions of market access for trained workers prior to large public investment.
- Exempting SMEs from the training levy while retaining eligibility for rebates for training. Over time, as SME use of training increased, their contribution to the levy could be reviewed.

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Annex I: Education Sector in Mauritius

The major problems in the education sector in Mauritius, according to sector work by World Bank staff, remain a high rate of school failure and of drop-outs at all levels, accompanied by a persistent dramatic mismatch between labor market requirements and school leavers' profiles, against a background of relatively high levels of state spending on education. Accordingly, the major challenge remains the provision to all Mauritian children of 11 years of relevant and effective/successful schooling to promote social integration and employability.

That in turn implies:

- Ensuring that all children attend and remain in school up to age 16, by way of appropriate mechanisms to enforce compulsory schooling.
- Redefining learning content through curricular reforms for Primary (e.g., IT skills, citizenship education, maths and science reinforcement), General Lower Secondary (new core curriculum to include generic skills) and Pre-Vocational (generic skills and key competencies). It is important that the Ministry should engage employers` organizations in a discussion of schooling for the world of work.
- Addressing high rate of school failure at Primary through commissioning of studies and development of a policy package to include e.g., use of mother tongue in early years in low achieving schools.
- Assessing the impact of the recent government decision to revert to high competition selection at end of Primary schooling given the near certainty of a return to teaching for exams solely and a focus on nurturing small academic elite on the basis of "stuffed duck education". The government's decision also entails segregation of children at age 11 or 12 on the basis of deemed academic ability in different types of schools. Yet the challenge of the global knowledge economy is, rather than to focus essentially on a select elite, to make the most of all the potential of all young people and to bring out the best in each of them so as to bring about a whole nation of skilled persons.
- Reforming the long outdated traditional Group Certificate exams at the end of Lower Secondary (Cambridge School Certificate) and Upper Secondary (Cambridge Higher School Certificate).
- Taking advantage of the fusion of what were formally the two distinct ministries of Education and Vocational Training, to redefine pathways between Education, Training and the world of work within a lifelong learning perspective. In particular, the creation of an alternative route for LSE graduates not intending to proceed to university (the former government had announced the launching of Singapore style polytechnics) to provide skilled and employable young persons.
- Defining targets for number of Upper Secondary graduates required as well as university graduates, in the latter case having special regard to the needs of the new emerging sectors of the economy.
- Expanding access to further studies by revisiting the outdated scholarship system, defining new functional student loan schemes, launching the long announced Open

University of Mauritius, facilitating the setting up of private higher learning institutions including carefully selected foreign universities.

- Launching a new quality drive by reasserting principles of accountability and answerability e.g., defining targets of achievement with regard to subject, class level and school and monitoring educational outcomes generally; and strengthening the quality assurance mechanism by way of an efficient school inspectorate and school leadership training program. Most importantly, schools at both primary and secondary levels need to be empowered through decentralization of decision making powers to make them accountable. In this regard the establishment of school boards with local industry participation and powers to "hire and fire" is of special interest.
- Developing new quantitative indicators and statistical indices to monitor progress towards stated quality objectives and to allow for international benchmarking. The international comparative perspective is of utmost importance to confront the all too present danger of insular parochialism in the development of Mauritian education.
- Addressing globally the issue of educational financing to include a clear statement of the Education Ministry's plans during the government's mandate, costing and planning for anticipated outlays within the Medium Term Expenditure Framework, and monitoring of expenditure.