Public Disclosure Authorized

Public Disclosure Authorized

212

Report No. 9685-MAS

Mauritius: Expanding Horizons

June 12, 1992

Eastern Africa Department
Africa Regional Office

MICROFICHE COPY

Report No. 9685-MAS Type: (ECO)
MEESOOK, O/ X34031 / J10129/ AF2CO

FOR OFFICIAL USE ONLY

Document of the World Bank

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

ANNUAL AVERAGE EXCHANGE RATES

Year	Mauritian Rs/US$	US$/Mauritian Rs
1982	10.873	0.0920
1983	11.706	0.0854
1984	13.800	0.0725
1985	15.442	0.0648
1986	13.466	0.0743
1987	12.878	0.0777
1988	13.438	0.0744
1989	15.250	0.0656
1990	14.863	0.0673
1991	15.652	0.0639

CONVERSION FACTORS FOR WEIGHTS AND MEASURES

		Arpents	Acres	Hectares
Area:	1 arpent =	1.000	1.043	0.422
	1 acre =	0.959	1.000	0.405
	1 hectare =	2.369	2.471	1.000

		Short Tons	Metric Tons	Long Tons
Weight:	1 short ton =	1.000	0.907	0.810
	1 metric ton =	1.102	1.000	0.984
	1 long ton =	1.235	1.016	1.000

GOVERNMENT OF MAURITIUS

FISCAL YEAR

July 1 to June 30

ABBREVIATIONS AND ACRONYMS

ACP	African, Caribbean, and Pacific
AHRIM	Association des Hôteliers et Restaurateurs Ile Maurice
ALRDS	Agricultural Land Resource Database System
CEB	Central Electricity Board
CIF	Cost, Insurance, Freight
COLEACP	Europe-Africa-Caribbean-Pacific Liaison Committee
CPI	Consumer Price Index
CSO	Central Statistical Office
DC	Development Certificate
EEC	European Economic Community
EPZ	Export Processing Zone
FAO	Food and Agricultural Organization
FARC	Food and Agricultural Research Council
FOB	Free on Board
GDPFC	Gross Domestic Product at Factor Cost
GDPMP	Gross Domestic Product at Market Price
GIS	Geographic Information System
IFS	International Financial Statistics
IRFA	Institut de Recherches sur les Fruits et Agrumes
IVTB	Industrial and Vocational Training Board
LAMU	Land Area Management Unit
MAFNR	Ministry of Agriculture, Fisheries and Natural Resources
MGTO	Mauritius Government Tourist Office
MOTS	Ministry of Trade and Shipping
MSIRI	Mauritius Sugar Industry Research Institute
NIC	Newly Industrialized Country
NFS	Non-Factor Services
OECD	Organization for Economic Co-operation and Development
PTA	Preferential Trade Area
R&D	Research and Development
SGS	Société Générale de Surveillance S.A.
SITC	Standard International Trade Classification
UNCTAD	United Nations Conference on Trade and Development
VAT	Value-Added Tax
WTO	World Tourism Office

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

PREFACE

This report is about an exceptionally successful country which is not content to rest on its laurels; indeed, one which is striving to catch up with the "Tigers" of East Asia. The report takes as its starting point the position that, ten or twenty years from now, Mauritius will have developed further and been transformed to the point where it will no longer be heavily concentrated in sugar and textiles. The path ahead cannot be entirely clear at this stage; moreover, where Mauritius goes from here will be up to Mauritians to decide. However, the report hopes to be of some use in the debate and discussion of issues by putting forward some ideas, some of which may be right, some of which may be wrong. The objective is not to prescribe a development path for Mauritius but rather to generate ideas, stimulate discussion, and expand perspectives.

In the spirit of the above, the World Bank team enlisted outside consultants with broad experience and perspectives from other countries, people who might have something new to offer Mauritius in the way of ideas, given their expertise in their field of specialization. Agriculture was covered by Mr. Dick Schoorl, an Australian from the Department of Primary Industries of Queensland; industry by Mr. Andrew Singer, with global experience in the export of manufactures and services; and tourism by Mr. Anthony Edwards who has written extensively in this area, including many publications for the Economist Intelligence Unit, and has advised several countries in Southeast Asia and the Caribbean.

This report picks up and explores a few of the ideas originally discussed in *Mauritius: Managing Success*. In that sense, it can be viewed as a sequel to the first report. The clouds that were detected on the horizon at the time of *Mauritius: Managing Success* would appear to have become more menacing since then. The authors are nevertheless optimistic that, with prudent analysis of its problems and suitable adaptations, Mauritius has the potential to overcome its present obstacles, take maximum advantage of its natural and human resources, and eventually join the ranks of the Newly Industrialized Countries.

This report is based on the findings of three missions which visited Mauritius in April and September 1990 and February 1991. Mission members were Oey Astra Meesook (Principal Economist, AF2CO; Task Manager), Kapil Kapoor (Economist, AF2CO), Brendan Horton (Economist, AFTIE), Anthony Edwards (Consultant), Dick Schoorl (Consultant), Andrew Singer (Consultant), and Antonella Bassani (Consultant). Mimi Klutstein-Meyer compiled the Statistical Appendix. Patricia Sanchez, Roboid Covington, Caroline Milad, and Lilian Canamaso were responsible for the production of the report. The report was discussed with the Government of Mauritius in early August, 1991.

CONTENTS

Text Tables

Boxes

Figures

EXECUTIVE SUMMARY

1. Economic development in Mauritius over the past decade has been based on some exceptional circumstances. First, the country has been able to draw on a large pool of relatively well educated labor, through the reduction in unemployment as well as an increase in the labor force participation rates for women. Second, it has taken full advantage of its preferential access into the European Economic Community (EEC) market as a signatory to the Lomé Convention. Third, its Export Processing Zone (EPZ) sector has greatly benefitted from the capital investment and marketing know-how of investors from Hong Kong and Singapore. Consequently, Mauritius' spectacular success has resulted from its ability to take maximum advantage of these facilitating factors in its development strategy. Thus, in agriculture it has emphasized the production of sugar to take advantage of the Sugar Protocol, while in the EPZ it has concentrated on exports of garments for the EEC and U.S. markets, making use of preferential access and cheap labor.

2. Since this development strategy was adopted, the world environment has changed considerably. First, other developing countries have now entered the arena with many of the same advantages that Mauritius enjoyed. Many of these countries have even larger pools of cheap labor that they can draw upon; hence, Mauritius is unlikely to be able to continue competing with them on the same terms as before. Second, the pressures in the EEC to reduce protection within the Community are growing. This, in turn, puts pressure on Mauritius to become more competitive in the world economy and to take a fresh look at the opportunities open to it.

3. This report identifies a number of constraints in the existing incentive and regulatory framework to increasing Mauritius' global competitiveness. First, the overall macroeconomic situation has deteriorated over the last few years. Inflation rose to double-digit levels in 1989 and 1990 during which time most interest rates became negative in real terms, real wages increased very rapidly, and price controls were reimposed on a large number of commodities. Although inflation dropped to 7 percent in 1991, efforts must continue to contain inflation and keep real interest rates positive. Second, at the firm level, there has been an increase in unit labor costs, with labor productivity unable to keep up with wage increases. Third, regulations governing employment and wages are much more restrictive outside the sugar sector within agriculture and outside the EPZ sector within manufacturing; this not only affects overall competitiveness but also exacerbates labor shortages since it prevents the movement of labor out of the sugar and non-EPZ sectors. Fourth, the EPZ and non-EPZ sectors are subject to significantly different regimes of taxes and tariffs. This has created biases against the non-EPZ industries, making it very difficult to integrate the two sectors to take advantage of the linkages between them.

4. Within each of the growth sectors, there is urgent need to increase labor productivity and reduce the vulnerability to external fluctuations in demand conditions. Although there is some scope for doing this within sugar and the apparel industry, the possibilities for increasing labor productivity through agricultural and industrial diversification are far greater and could usefully be explored. The Government has a clear role in all of this by providing an environment which is conducive to such productivity enhancement, for example in areas such as the incentive and regulatory system, infrastructure, information and investment. Moreover, it should encourage forward and backward linkages between agriculture, industry and tourism and, within industry, between the EPZ and non-EPZ sectors.

5. In the agricultural sector, sugar is already a mature industry. There is limited scope for increasing efficiency in sugar production, since sugar yields in Mauritius already compare very favorably with the leading producers in the world. Moreover, given labor shortages, rising labor costs, and pressures within the EEC to reduce subsidies to sugar producers, it has become imperative to investigate the possibilities of increasing the production of other highly profitable crops which could supplement sugar income and provide a cushion in the event of a fall in sugar prices. The 1988 Sugar Industry Efficiency Act is a move in the right direction; the Act gives explicit encouragement to agricultural diversification by granting incentives to nonsugar agriculture. Horticulture, for example, could hold the key to agricultural diversification in Mauritius; the production of fruits, vegetables and cut flowers for export can potentially yield many times the profit per hectare that sugar can. Fruit trees can co-exist with sugar since they can be grown on marginal land which is less suitable for sugar. However, there are a few constraints which need government intervention because of the externalities and scale economies involved. These include finding ways to reduce the vulnerability of the trees to cyclones; eradication of fruit flies; transportation; and research and development. The Government has a clear role in these areas, while leaving it to the private sector to find the right crops into which to diversify.

6. As has been the case with agriculture, past growth in the manufacturing and services sector in Mauritius has benefitted from cheap labor; the concentration in textiles, a labor-intensive industry, bears this out. The need to increase labor productivity means that labor for the manufacturing and services sector will either have to compete with other sectors or use existing labor resources more productively. In a sector which is so dependent on the export market, it is essential to start from the "givens" of the external international market which is highly competitive and demanding. From this vantage point, a number of constraints have been identified. The constraints which apply to all industries include poor access to capital and lack of worker motivation. In the apparel industry, the tendency to undervalue outside expertise and the lack of a transfer market in quotas are also disadvantages. For the new and emerging industries, the constraints include red tape and the lack of subcontractors and parts stockists for the precision-assembly industries; and higher education for the brain-service sector.

7. The motivation behind suggesting that the Government could relieve some the above constraints is not to suggest that it should be in the business of "picking winners". On the contrary, we see the Government's role purely as a facilitator,

leaving the choice of specific new ventures entirely in the hands of the private sector. As with sugar, and subsequently with the production of anthurium for export, the Government has amply demonstrated that selective interventions aimed at the removal of production and marketing bottlenecks, along with the creation of supporting institutions, can go a long way to complement private sector initiative. Within agriculture, the domestic production of fruits, flowers, and vegetables for the buoyant tourism sector has proved to be very profitable. In manufacturing, there has been encouraging growth in the number of new ventures involved in the areas of precision assembly and "brain-service" exports. Given the potential in these areas, this report suggests that it might be prudent for the Government to pay particular attention to the environment within which these industries operate.

8. Although Government's stated policy in the tourism sector is to encourage high-end tourism with a low impact on the environment, recent policy actions contradict this. The supply of hotel rooms has been rising sharply and is projected to rise further. This is because of the high profitability in recent years of the hotel industry and the ease with which government certificates have been granted for hotel construction. This increase in the supply of hotel rooms has taken place at a time when there has been a considerable slowdown in the growth of demand for hotel rooms owing to a decline in the growth from the major sources (France and South Africa); increases in air fares and hotel costs; inadequate promotion; and a shift by tourists to informal accommodation. The result is a tendency in the growth of the tourism sector which goes completely against Government's stated policy, with the pressure on hotels to fill their rooms and tourists looking for ways of having cheaper holidays. Thus, the Government faces a real dilemma. On the one hand, it could adhere to its policy of promoting low-impact, high-end tourism. This would mean drastically limiting the growth of new hotels, including the cancellation of permits already granted; limiting air access; and strictly regulating the operation and growth of informal tourist accommodations. On the other hand, as is already the case, it could continue to yield to the pressure of the hotel industry to grant new permits which in turn will lead to pressure to increase air access so as to allow larger numbers of tourists to enter the country. This strategy is likely to lead to a degradation of the environment and social reactions against tourists. At this juncture, it is critical for the Government to articulate its overall policy towards the tourism sector and ensure that supporting policies (hotel certificates, tourism promotion, air access, infrastructure, and training) are fully consistent with it.

9. A review of recent economic developments highlights the need for more rigorous macro-management. While the situation today is much more complex and challenging than when Mauritius originally embarked upon its initial adjustment effort, prudent macro-management and policies aimed at enhancing productivity will go a long way in moving the country into the next phase of its developmental effort and transforming the economy into a Newly Industrialized Country (NIC). This process of increasing productivity and diversifying the production base of the economy does not necessarily imply competition between the different sectors. On the contrary, what emerges from this study is that there could be considerable synergy in the diversification process; developments in one sector of the economy can generate forward and backward linkages in other sectors, thereby stimulating additional growth. As the Government embarks upon this challenging next phase

of development, this report strongly recommends that the Government explicitly incorporate such cross-sectoral linkages into its planning process. In so doing, the Government stands to succeed in creating the facilitating environment that will lead to the most productive use of land, labor, and capital in the future development of Mauritius.

1

Introduction

A. Background

1.1. In the late 1970s and early 1980s, the Mauritian Government implemented a program of stabilization and adjustment which succeeded in creating an economic environment in which most of the preconditions for sustained, export-led growth were satisfied. The liberalization of the exchange and trade regimes, improved resource mobilization, restrained public expenditures, restricted credit expansion, and strengthened institutional capability all contributed to a solid foundation upon which Mauritius was subsequently able to build. Consequently, it was poised to take full advantage of the favorable developments in the international economy in the 1980s. Having laid a suitable foundation, the Government embarked upon a labor-intensive, export-oriented growth strategy which was powered by the three main sectors of the economy: sugar, manufactured exports, and tourism.

1.2. Until the advent of the Export Processing Zone (EPZ) industries, sugar production was the predominant economic activity in Mauritius. The country is highly suited to the cultivation of sugarcane, which still covers about 88 percent of the cultivated area; the bulk of the sugar output is exported. The economic importance of sugar to the Mauritian economy hinges upon the preferential price arrangements under the Sugar Protocol of the Lomé Convention, the signatories to which are the European Economic Community (EEC) and the African, Caribbean and Pacific (ACP) countries. Mauritius has greatly benefitted from this arrangement, which has shielded the country against cyclical price fluctuations in the world market and enabled the sugar industry to become a major source of investment funds for the manufacturing sector.

1.3. Financed largely by the start-up capital provided by sugar, EPZ companies have mushroomed throughout the island. They have greatly benefitted from the incentives provided by the Government: tax holidays on corporate profits and dividends; free repatriation of capital and dividends; and duty-free entry of capital goods and raw materials. Aided by these incentives, the Mauritian private sector has been able to take advantage of the preferential access into the European markets; EPZ value added has grown at an impressive annual average growth rate of about 15 percent per annum over the past six years. A number of East Asian entrepreneurs, particularly from Hong Kong, have also set up operations in Mauritius, for whom an added attraction has been the reassuring presence of a local Chinese community. A major factor in EPZ growth has been the country's relatively cheap labor and the ready pool of women who have been drawn into the labor force. As in the case of sugar, the EPZ sector has benefitted from the preferential treatment that Mauritius receives from the EEC through the Lomé Convention under which it has more or less free access for its exports to the EEC.

Table 1.1
MAURITIUS: Real GDP and Value Added by Sector
(Annual average growth rates, percent)

	Annual Growth		<—— % of GDP ——>		
Sector	1980-85	1986-91	1980	1985	1991
Agriculture	1.1	0.2	12.4	15.3	11.0
o/w Sugar	..	-1.3	..	11.1	7.2
Industry	3.6	9.8	25.9	29.2	32.7
o/w EPZ	..	14.8	..	9.6	12.8
o/w Sugar	..	-1.4	..	3.2	2.0
Services	2.6	6.4	61.8	55.5	56.3
GDPFC	2.4	6.6	100.0	100.0	100.0

Source: Central Statistical Office. Data refer to calendar years. Growth rates from 1988-91 are based on 1987 prices, from 1982-87 on 1982 prices, and prior to 1982 on 1976 prices.

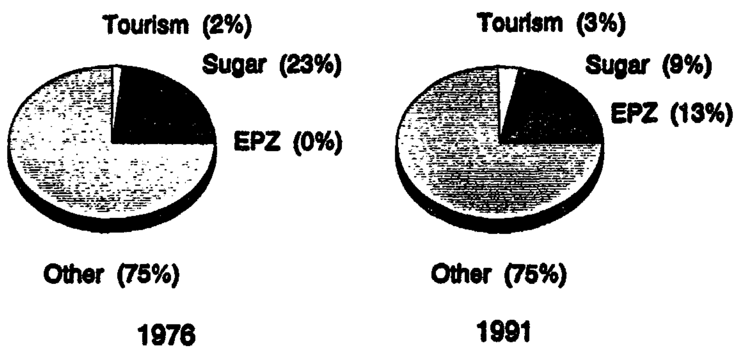
The Convention gives Mauritius a considerable advantage over non-ACP countries, such as Hong Kong and the Republic of Korea, which are some of Mauritius' main competitors, since their exports are subject to a 17 percent duty on entry into the EEC.

1.4. Mauritius has also been very effective in developing a tourism industry which caters principally to the affluent, long-haul market. With its gorgeous beaches, great variety of landscapes, an educated, multilingual, multiracial society, excellent hotels of international standard and a tradition of courtesy to foreigners, Mauritius holds a great attraction for tourists. Tourism in Mauritius has grown faster than the worldwide average and year-round hotel bed occupancy rates are very high for a beach resort destination.

B. The Need for Diversification

1.5. Notwithstanding the remarkable success discussed above, the economy now faces a number of constraints and vulnerabilities that leave its success fragile. The Mauritian economy is highly dependent on the external economic environment, specifically within the EEC and in the US, and the continuation of preferential trade arrangements. Moreover, the economy is now close to, or at, full employment and thus the supply of labor has become less elastic. The tightening in the labor market is now a binding constraint on economic growth in the short and medium term. The associated upward pressures on wages and prices which are now being felt have adverse implications on the international competitiveness of Mauritian industries and, in addition, threaten the financial stability which has been crucial for the country's outstanding economic performance over the past few years. Given these developments, it is imperative to review the incentive and regulatory regime in Mauritius to determine what might be done to increase the country's international competitiveness. Such a review is given in Chapter 2. In addition, for the successful transformation of the economy from adjustment with growth to sustained development, it is essential that the factors behind the economy's vulnerability be examined critically and suitable policy actions be taken so as to minimize the risks associated with the occurrence of adverse exogenous events. One of the central elements of such a strategy would be to increase labor productivity through the diversification of agriculture, industry, and tourism.

Figure 1.1: Changes in GDP Composition



Source: Central Statistical Office.

Agriculture

1.6. There is little doubt that, for many years to come, Mauritius will continue to be heavily dependent upon sugar and hence on the terms of the Sugar Protocol. The Government should therefore seriously encourage the private sector to explore nonsugar alternatives, while continuing to take maximum advantage of the Sugar Protocol.

1.7. Although Mauritius has already gone some way towards diversifying its agricultural sector, this effort has so far been concentrated in cultivating foodcrops, largely but not exclusively in the interlines of sugarcane. Agricultural strategy, as articulated in the Government's 1983 White Paper on agriculture, has placed greater emphasis on attaining self-sufficiency in a number of food crops, where necessary by subsidizing domestic producers. This emphasis has in the past resulted in a certain amount of resources being devoted to the production of food crops like maize and rice which cannot be produced economically, given the conditions on the island. There has been increasing realization on the part of the Government that such a strategy could potentially become a drain on the economy and consequently the resources allocated to some of the food crops have been gradually reduced. It has been argued that the best way of reconciling the legitimate concerns relating to food security with efficiency considerations is to ensure that scarce resources, particularly land and labor, are devoted to crops that yield the highest returns, be they for export or efficient import substitution. This would ensure that any shortfall in domestic food production would be met through export earnings from high-value crops.

1.8. Several studies have revealed that Mauritius has great potential in horticulture, i.e., tropical fruits, vegetables, flowers, and potted plants. It already successfully exports cut flowers to Europe; its annual export of anthurium is second only to Hawaii. Hybrids can now be produced on a large scale through tissue culture. Possibilities for other flowers, such as vanda orchids, also exist.

1.9. Mauritius also has the potential to export profitably a wide variety of tropical fruits. The island's soil and climate are highly suitable for these fruits which are already grown on a backyard basis and cater to the growing domestic demand from the tourist industry. This is specially true for litchis and pineapples. The demand for fruits, especially in the off-season, already exists in Europe and is growing quite rapidly, and this should be Mauritius' primary target market because of its large and affluent population, reasonable shipping distance, and EEC preferential treatment.

1.10. Thus the issues regarding diversification in the agricultural sector include: the appropriate level of sugarcane production; the identification of suitable additional crops; and the role of the Government in providing a suitable environment for agricultural export diversification. These issues are discussed in Chapter 3.

Industry

1.11. To reduce its vulnerability to fluctuations in demand conditions in foreign markets, Mauritius also needs to increase productivity and diversify its portfolio of export industries, both within and outside the wearing apparel industry. EPZ activities are presently highly concentrated in wearing apparel and the degree of concentration has increased over time. Within wearing apparel, there has been increasing concentration in textile garments, reflecting the relative decline of the knitwear industry. In addition, EPZ exports are concentrated in terms of their markets, with almost 90 percent of total EPZ exports, in value terms, going to the EEC and the US. The Government is concerned about the vulnerability that this product concentration brings to the economy and has actively sought to reduce it, both by discouraging further investment in wearing apparel and by encouraging diversification into other products, such as leather goods, electronics, jewellery, optical goods, and so on. It has also commissioned a number of industry-specific studies which have examined the potential for establishing electronics, informatics, and agro-processing industries in Mauritius.

1.12. It has been pointed out that, rather than having the Government get involved in identifying specific industries, a better approach would be to leave private investors to make individual decisions concerning the choice of industries while strengthening the Government's role in providing information and guidance to potential investors on conditions in export markets. Such guidance would include the provision of information regarding restrictions that may affect specific industries under the rules of origin of the Lomé Convention; the labor and skills requirements of the proposed industries and their availability in Mauritius; and the compatibility of the industries with other objectives, such as environmental protection. The key is to maintain flexibility so as to be ready for changes in the perceptions of investors.

1.13. It also needs to be established whether Mauritius might be ignoring its comparative advantage by fighting against specialization. There are many factors that have contributed to the success of the wearing apparel industries, including a number that are specific to these industries and give them a special advantage in the EEC and the US. The potential for expanding wearing apparel exports to the EEC and the US markets has by no means been exhausted. The EEC market offers the best hope for the future while in the US market there are still many categories of wearing apparel that are not yet under quota. In any case, even in the categories under quota, it should still be possible to move to higher-value products to take advantage of the fact that quotas are specified in volume, not value, terms.

1.14. Recently, the Government has attempted to equalize the incentives given to EPZ and import-substituting firms, defined as those that are given development certificates (DCs). There has been a reduction in the level of tariffs levied on imports, while at the same time DC firms are now granted duty drawbacks on their exports, such that DC firms exporting 100 percent of their output get the same level of incentives as EPZ firms. As would be expected, the tariff reduction has created problems for some DC firms which now face increased competition from imports. Another promising area for DC firms is to take advantage of backward linkages in the EPZ industries by, for example, establishing ancillary industries for the garment industry and packaging materials.

1.15. Thus, a number of issues present themselves in considering industrial export diversification in Mauritius: the incentive regime, particularly as it pertains to the DC firms compared to the EPZ industries; the advisability of moving away from the garments industry; the appropriate strategy for diversifying within the garments industry; the development of exports other than garments; and the role of the Government in supporting and facilitating the diversification process. These issues are discussed in Chapter 4.

Tourism

1.16. The Government's policy towards tourism has been to pursue a select clientele, emphasizing the island's distaste for high-rise buildings, mass tourism, and charter flights. Accordingly, official policy now limits the capacity of new hotels to 200 rooms and bans high-rise construction. However, despite the Government's predisposition to the more affluent end of the tourist market, the sector has grown rapidly, with tourist arrivals reaching 298,500 in 1991 and likely to exceed 500,000 by the turn of the century if current trends continue. The rapid expansion of tourism has strained the island's infrastructure, with the existing road, telephone, and electricity networks being stretched to capacity. The mushrooming of new hotels has added to the pressures on the construction industry and several projects are running behind schedule. The high visibility of the tourist sector has also led to a link in the minds of the Mauritians between tourists and the island's environmental degradation.

1.17. A number of issues need to be addressed by the Government as it assesses the future prospects for the tourism sector. There is growing concern about the social impact of the large volume of tourists on the local population; consequently, the question of the optimal size of the tourist population, and hence of related hotel and airline capacities, will need to be addressed. To ensure that Mauritius maintains its reputation of excellent service, suitable training programs will have to be devised and room capacity and hotel quality closely monitored. To guarantee a consistent supply of high-spending tourists, efforts will need to be made not only to diversify the markets but also to enhance the menu of local activities offered the tourist. Most importantly, to maximize the net foreign exchange earnings from the tourists, a program will need to be developed to make Mauritius an attractive place where the tourist can purchase both locally produced and imported products. These issues are discussed in Chapter 5 of this report.

2

Incentive and Regulatory Regime

2.1. This chapter reviews the incentive and regulatory regime for production and investment in Mauritius with a view to determining how to increase Mauritius' global competitiveness, both within and outside the EPZ sector. A related issue is the need to move towards a fully integrated economy, i.e., one in which the EPZ and non-EPZ sectors are subject to similar regimes of taxes and tariffs, with a view to increasing the local content of exports in an economically efficient manner.[1]

A. The Macroeconomic Context

2.2. Mauritius has shown an impressive economic performance during the 1980s. Following the onset of stabilization and the adoption of an export-oriented adjustment program in 1982/83, the GDP annual growth rate increased from just under 0.4 percent in 1983 to nearly 7 percent two years later. Since then, it has gradually declined to just over 4 percent in 1991. During the same period, unemployment has declined from 19 percent to less than 3 percent of the work force. The economy is now considered to be at full employment. Labor force participation rates are about 80 percent for males and a little over 40 percent for females.

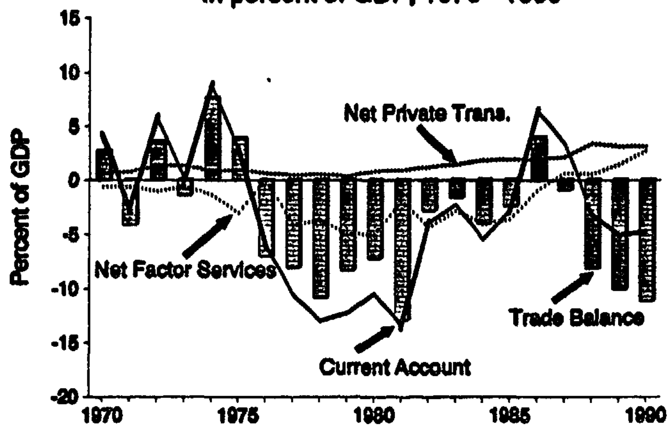
2.3. As may be seen from Figure 2.1, Mauritius' external current account has fluctuated sharply over the last fifteen years. Following the collapse of the sugar boom in the mid-1970s and the second oil shock, the external current account deficit reached almost 15 percent of GDP in 1981. Under the influence of drastic stabilization and rapid export growth, the deficit was eliminated around 1985, and a surplus of about 5 percent of GDP appeared two years later. There has been

---

1 Legislation in Mauritius provides special incentives for companies incorporated under the Export Processing Zones Act, 1970, as amended. Such companies which, in principle, export all their production, are exempt from import duties and domestic sales taxes on their purchases of raw materials and capital goods. They benefit from a preferential rate of corporation tax (15 percent) and dividends are exempt from personal income tax for the first ten years of their existence. Such companies are generally referred to as EPZ companies, even though there are no geographical Export Processing Zones in Mauritius. In the past, certain companies producing for the domestic market could obtain special incentives (Development Certificates), but this regime has fallen into almost complete disuse. There is a third category of companies that receive neither EPZ certificates nor DC certificates. In the text, these are referred to as non-EPZ, non-DC, or sometimes non-certificate companies.

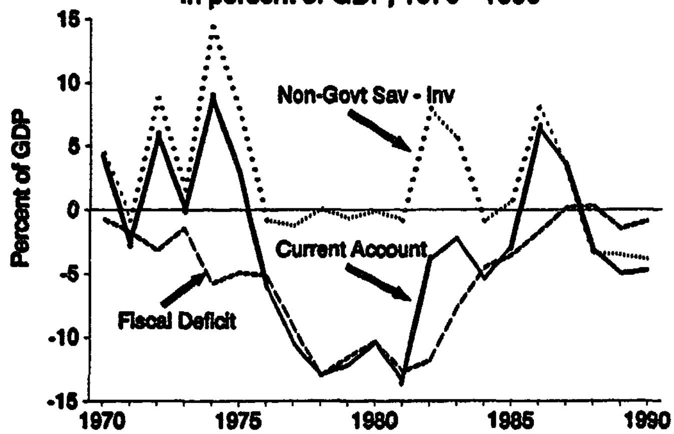
continual deterioration since then, primarily on account of a declining trade balance. Traditionally, Mauritius has nearly always had a negative balance on merchandise trade and net factor services. Net private transfers have usually been positive, however, as may be seen from Figure 2.1.

Figure 2.1: External Current Account
In percent of GDP, 1970 - 1990



Source: IMF, IFS.

Figure 2.2: External Current Account
In percent of GDP, 1970 - 1990



Source: IMF, IFS.

2.4. The influence of budgetary behavior on the external current account is clear from Figure 2.2. There is a clear correlation between the evolution of the two, whether the external current account is deteriorating or improving. In this connection, the impact of an increase of nearly 40 percent in wages and salaries in

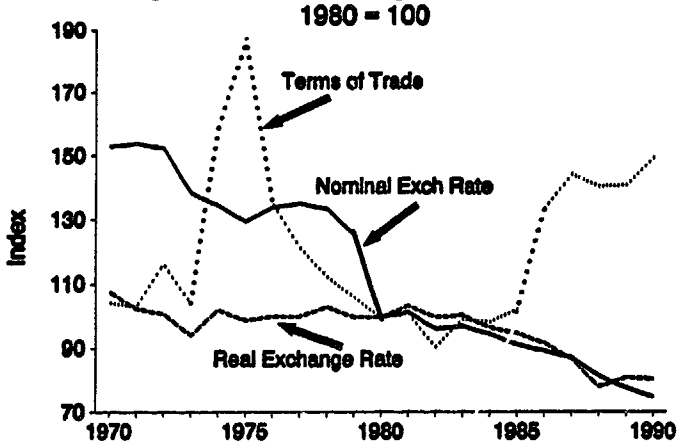
1987/88 should be noted. During the period 1987/88-1989/90, current transfers and subsidies rose by over 35 percent. Capital expenditure also rose by about 19 percent, in part on account of the long-delayed implementation of several large public investment projects. Although this analysis indicates that the budget deficit is quite small at the present time, it has to be remembered that receipts include social security taxes. After adjusting for this, the deficit is somewhat larger, approximating 2.5 percent of GDP.

2.5. Until 1976, the Mauritian Rupee was linked to the pound sterling. Subsequently, it was initially pegged to the SDR. Since then, a flexible exchange rate policy has been followed. Figure 2.3 shows a steady downward tendency in nominal terms during the 1970s, which accelerated sharply at the end of the decade and in the early 1980s under the influence of two major devaluations. In real terms, however, there was a slight appreciation in the 1970s, followed by a steady depreciation in the 1980s until 1988, since when there has been an upward trend.

2.6. Figures 2.4(a) and 2.4(b) show the evolution of real bilateral exchange rates against a number of real or potential competitors. It can be seen that the Mauritian Rupee has shown marked depreciation against some countries (Hong Kong, Singapore, and Sri Lanka), whilst the reverse is the case for others (China, Morocco, Tunisia and Turkey). Thus, the country's competitive position is deteriorating against an important group of competitors.

Figure 2.3: Exchange Rate Indices

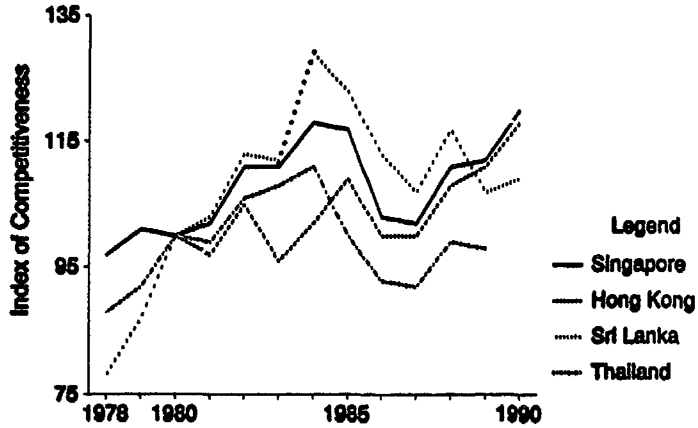
1980 = 100



Source: IMF, IFS.

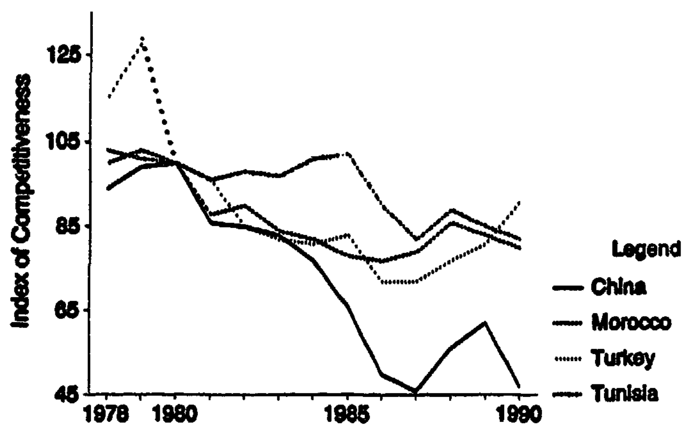
2.7. Real exchange rate movements in Mauritius are heavily influenced by the evolution of wages and prices. The declining rate of inflation during the first half of the 1980s has been reversed since 1987. The annual increase in the consumer price index (CPI) exceeded 10 percent in 1989 and 1990, although it fell to 7 percent in 1991. Primary explanatory factors for the increases in 1989 and 1990 have been: (a) the nearly 40 percent wage increase given to civil servants in 1987/1988, which prompted similar, if somewhat smaller, adjustments in the private sector; (b) the tightening labor market; and (c) some rise in import prices attendant upon the gradual depreciation of the Rupee. The challenge which the Government now faces is to contain the future level of inflation.

Figure 2.4a: Index of Competitiveness
1980 = 100



Source: IMF.

Figure 2.4b: Index of Competitiveness
1980 = 100



Source: IMF.

2.8. In fact, minimum wage levels and their adjustment are heavily regulated in Mauritius, as discussed in the next section. During the early part of the 1980s, the stabilization period, Government consciously pursued a policy of ensuring that wage awards were less than the rate of price inflation. This policy changed sharply after 1986/87, however, since when increases have tended to be in line with the rate of inflation on an across-the-board basis. Moreover, available evidence suggests that wage increases have exceeded productivity gains during this period, so that unit wages have risen. In part, the decline in productivity has been manifested by a significant rise in absenteeism.

2.9. After several years of negative real interest rates on deposits and almost certainly for some categories of lending operations, in particular for lending to EPZ companies, real interest rates turned positive in 1991. However, during the last six years, the significant rise in the level of reserves has increased liquidity in the economy and generated inflationary expectations, thus exerting upward pressure on the Rupee. This development indicates the need for an appropriate monetary policy that sterilizes the impact of the increase in reserves.

2.10. Thus, the impressive economic performance of the 1980s of high growth and declining unemployment has been accompanied, since 1987, by a rapid upsurge in prices, wages and, more importantly, unit labor costs. This state of affairs must now be regarded as a cause for serious concern.

B. Regulation of Prices, Wages and Employment

2.11. Wages are tightly regulated in Mauritius, at least with regard to minimum levels by skill category. So are some prices. In addition, the consumer prices of rice, flour, sugar and potatoes are subsidized. In all areas, Government's intent is to protect consumer purchasing power in real terms and to contain inflation. To this end, prices of over 100 consumer goods were reduced by government decree in February 1991. Despite these price controls and consumption subsidies, inflation reached 13 percent in 1990/91, but fell to an average of 7 percent for calendar year 1991.

2.12. The resurgence of price controls was sharply criticized, for all the conventional reasons, by firms outside the EPZ sector which are the most directly affected. Complaints were made not only of the directly stifling effect of price controls on private sector initiative, but also of the distortions that these continue to introduce into the structure of incentives and competition. For example, in an attempt to lower the consumer price of one commodity, tariffs were eliminated on competing imports whilst being left in place for imported inputs used to manufacture the domestic products.

Prices

2.13. During the early to mid-1980s, price controls on domestically produced goods and imports had been reduced to a bare minimum. Some products were subject to maximum prices while, in other cases, distribution markups were regulated. Details are provided in Table 2.1. This list remained unchanged until

Table 2.1
MAURITIUS: List of Products Subject to Price Control

Products Subject to Maximum Prices				Distribution Markups
Local Products		Imported Products		Imported Products
1985	1990	1985	1990	1985
Bread	Bread	Cement	Cement	Pharmaceutical Products
Edible Oils	Edible Oils	Petroleum Products	Petroleum Products and LPG	Sports Goods
Onions	Onions	Rice and Flour	Rice and Flour	Timber
Potatoes	Potatoes		Edible Oils	School Text Books
Sugar	Sugar		Butter and Cheese	
	Canned Foods		Fresh Fruits	
	Whole Wheat Flour		Powdered Milk	
	Margarine		Frozen Chicken	
	Frozen Chicken		Iron and Steel Bars	
	Toilet Soap		Fertilizers	
	Toothpaste		Pesticides, Herbicides and Fungicides	
	Iron and Steel Bars			
	Fertilizers			
	Construction Aggregates			
	Aerated Beverages			

Source: Data provided by Mauritian Authorities.

October 1988, when there was a gradual re-introduction of controls on prices and markups. This reversal of liberalization was partly in response to perceived abuses on the part of some manufacturers, importers and distributors, and partly to minimize inflation as measured by the CPI. By July 1990, price controls, in the form of maximum prices, extended to about 17 classes of products, both imported and locally manufactured. In addition, the list of products subjected to maximum distribution margins was also widened to include motor vehicle tires.

2.14. With the decline in inflation in 1991, the number of commodities subject to price controls has once again been reduced and efforts are underway to limit the number of commodities under such controls to a minimum; i.e., only those commodities which are considered essentials.

Wages

2.15. There is an elaborate set of administrative arrangements for wage rate determination and adjustment in Mauritius, with several bodies advising the Government on wage policy matters and mediating in industrial disputes. These bodies include the Pay Research Bureau, the National Remuneration Board, the Permanent Arbitration Tribunal and a Tripartite Committee. While this system, to date, has succeeded fairly well in terms of maintaining industrial peace, since 1987 the interplay of these forces has led to sizeable wage increases that considerably exceed the rate of inflation, as documented below. This situation is a cause for some concern, since wages appear to be rising faster than productivity; the rising unit cost of labor could seriously undermine Mauritius' international competitiveness. Studies undertaken by the Central Statistical Office (CSO) in 1989 indicate that there has already been a significant increase in unit labor costs.[2]

2.16. The Tripartite Committee has been meeting for the last ten years, and has generally given wage increases that are close to the increase in the consumer price index. This is very clear from Figure 2.5(a). Figure 2.5(b) shows, however, that wages have in fact risen much faster than the consumer price index — as measured by the dotted line which represents the ratio between the wage index and the CPI.[3] This development reflects several factors. In the first place, there has clearly been some upward pressure on wages because of the tightness in the labor market. But it is also clear that part of the increase has resulted from National Remuneration Board recommendations, which have been adopted by Government, and part from delayed spillover effects from pay increases granted to the civil service and parastatal sectors in 1987. In both cases, it seems that supplemental wage increases have been given over and above the award emanating from the Tripartite Committee.

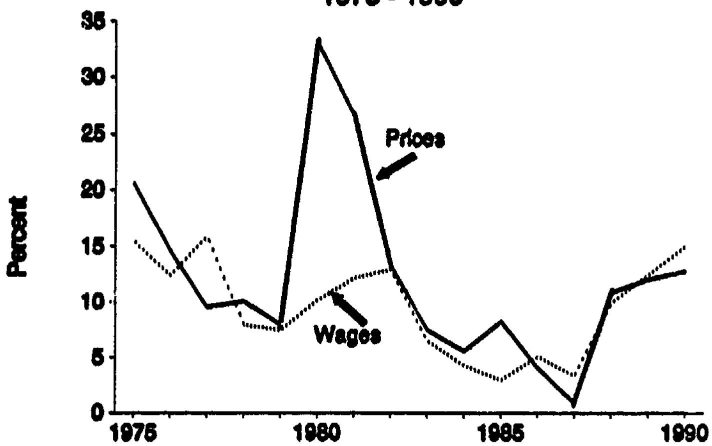
2.17. For example, the 1987 Remuneration Order awarded Export Enterprises employees increases of 10-15 percent, with effect from July 1, 1987. The Additional Remuneration Act for 1987-1988, which was voted in December and made retroactive to July 1, led to an additional increase of 10 percent for the lowest category of workers and somewhat less for higher grades. This same Remuneration Order also increased fringe benefits. In the same vein, deliberations of the Permanent Arbitration Tribunal led to an 18 percent exceptional increase in the sugar sector in 1990, over and above the 11 percent across-the-board increase granted as of July 1 by the Additional Remuneration Act. In this case, the problem appears to have been that sugar sector employees felt aggrieved by the massive increase granted in 1987 to agricultural employees in the parastatal sector, which made them about 10 percent better off than private sector agricultural employees.

2.18. Overall, then, it appears that a combination of circumstances has led to increases in wages that exceed the rate of inflation. As already indicated, this is very clear from the dotted line in Figure 2.5(b). This has had repercussions on the evolution of nominal wages in foreign currency terms, for which an index has also been presented in Figure 2.5(b). Specifically, the foreign exchange wage index

2 For further details, see *Digest of Industrial Statistics 1990*, Central Statistical Office, Mauritius, June 1991.

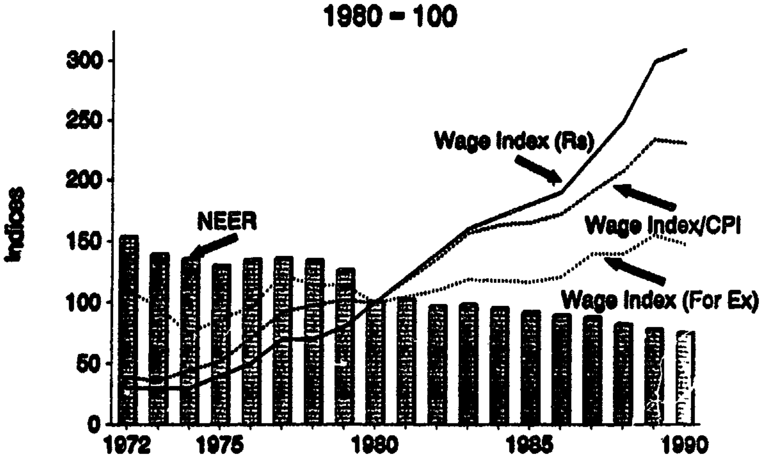
3 The wage index has been calculated using the average monthly earnings reported to the Central Statistical Office in March and September in the Bi-Annual Survey of Employment and Earnings in Large Establishments.

Figure 2.5a: Annual Wage & Price Increases
1975 - 1990



Source: National Remuneration Board, Pay Research Bureau

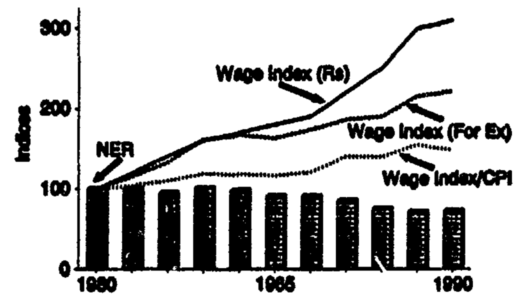
Figure 2.5b: Wage Indices
1980 = 100



Sources: Biannual Survey of Wages and Employment; IMF.

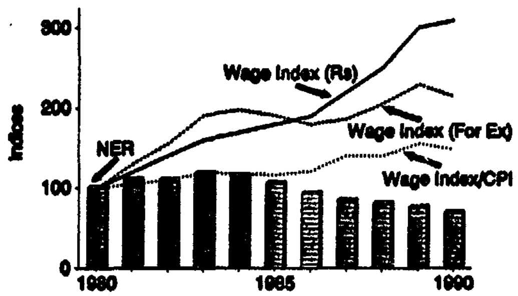
deflates the nominal wage index by an index of the trade-weighted nominal exchange rate. The beneficial impact of continual currency depreciation in nominal terms on the foreign exchange "wage" is immediately apparent but, nevertheless, the foreign exchange wage still shows a pronounced upward trend. The impact on competitiveness in real terms would require some direct comparison of wages and their evolution in Mauritius and its competitors. These are not currently available. However, Figures 2.6(a)-(d) show the evolution of wages in pounds sterling, French francs, German marks and US dollars. In all cases, it is clear that the depreciation of the exchange rate has resulted in a somewhat lower rate of increase of wages expressed in foreign currency. This has undoubtedly helped maintain competitiveness, even though the wage level in foreign currency has showed an upward trend in all cases.

Figure 2.6a: Wage Indices (British Pound)
1980 = 100



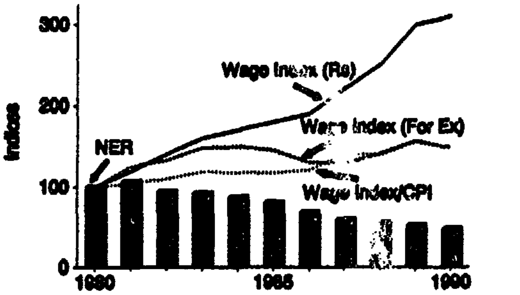
Sources: Biannual Survey of Wages and Employment; IMF.

Figure 2.6b: Wage Indices (French Franc)
1980 = 100



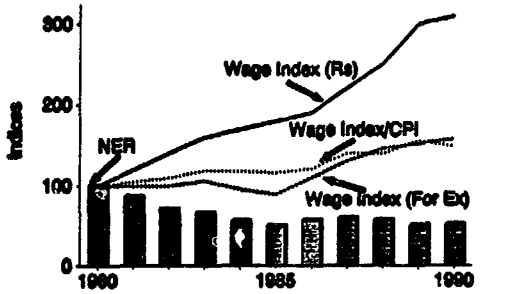
Sources: Biannual Survey of Wages and Employment; IMF.

Figure 2.6c: Wage Indices (German Mark)
1980 = 100



Sources: Biannual Survey of Wages and Employment; IMF.

Figure 2.6d: Wage Indices (US Dollar)
1980 = 100



Sources: Biannual Survey of Wages and Employment; IMF.

2.19. The above analysis suggests that great care is needed in the conduct of wage policy in the near term in order to avoid a precipitous loss of competitiveness. Specifically, wages should not be allowed to increase faster than the rate of growth of productivity. This will at least avoid an erosion of competitiveness. To the extent, however, that nominal wages do continue to drift up compared to competitors, it may be necessary to continue to use a downward flexible exchange rate to maintain competitiveness. Here again, it is obvious that this will be all the easier to manage if wage increases can be contained, and/or productivity increased.

2.20. An additional issue that needs to be addressed is whether the existing institutions for wage setting could be streamlined; and eventually, whether it is desirable, on economic grounds, for there to be any government intervention in wage determination beyond the establishment of a minimum wage. Might it not be better simply to let wages be freely determined by market forces for the most part?

2.21. The Government has identified the lack of a well-trained labor force as a major constraint to further sustained growth and has developed a broad strategy towards industrial and vocational training, both within the context of the existing educational system and through the creation of the Industrial and Vocational Training Board (IVTB). The Government's emphasis on enhancing the productivity of labor through industrial and vocational training is entirely appropriate and it is strongly recommended that it be continued. However, it appears that, given the rapid and unforeseen growth in its mandate, the IVTB risks becoming a major provider of training programs which are supply-driven, whereas they should be demand-driven. Thus, IVTB's overall mandate needs to be more properly defined and its responsibilities and activities prioritized. The identification of priority areas for training programs should be based on the fundamental concept that all training should be done as a result of demand from the private sector (see Annex to this chapter).

Regulation of Employment

2.22. Employment is regulated by the Labor Act and the Industrial Relations Act. EPZ companies are subject to all dispositions except, in part, those regarding the termination of employment. The present section reviews labor legislation, paying particular attention to differences in regulations between EPZ and non-EPZ companies, and seeks to identify whether the legislation might itself be a barrier to increasing labor productivity.

2.23. **Hiring.** In the firm-level interviews conducted, employers reported no administrative obstacles to hiring workers of their choice, but rather significant problems with absenteeism (5-15 percent) and high turnover (sometimes as much as 50 percent).[4] Poaching is also a problem, particularly in EPZ companies. Foreigners planning to work in Mauritius need a residence permit from the Passport and Immigration Office and a work permit from the Ministry of Employment. Work permits are usually granted to foreigners holding professional and technical qualifications in fields where Mauritians are not available. These permits have in the past taken a long time to obtain (up to nine months) although the situation has improved markedly with the establishment of the Work Permit

[4] There is no obligation to hire workers through the Employment Office of the Ministry of Employment, although firms are free to do so if they wish.

Committee; work permits are now being issued within about three months.[5] It also appears that some firms have been authorized to import workers from Madagascar and Sri Lanka in order to alleviate the labor shortage on the factory floor.

2.24. Under the Sugar Industry Efficiency Act of 1988, employees in the sugar sector receive special protection in the form of an entitlement to work during the intercrop season. Section 4(b) stipulates that every sugar employer shall, during an intercrop season, employ his "regular" labor force, and all other workers employed by him in the preceding harvest or, in a designated year, a supplementary labor work force, consisting of 15 percent of all other workers employed by him during the preceding harvest. The "regular" work force consists of all workers who became entitled, under the Security of Employment (Sugar Industry) Act 1966, to be offered employment in the 1967 intercrop season. Employers are not required to fill vacancies in the regular workforce. But in any designated year, when the number of vacancies exceeds the supplementary work force, the employer is required to employ additional workers to make up the difference. These and other dispositions of the Labor Act and corresponding regulations are a direct barrier to increasing labor productivity in the sugar sector and should be removed.[6] It also appears that there is complete security of employment in the government sector, as well as substantial overemployment. Both tend to reduce the supply of labor to other sectors of the economy.

2.25. **Termination.** Individual termination and reduction in the work force are governed by Part VI of the Labor Act, which requires both employers and employees to give suitable notice prior to the termination of employment. Workers employed for less than three years get, at most, two weeks' notice. This increases to three months for workers employed for over three years. Workers under notice of termination must receive reasonable time off, without loss of pay, to seek further employment. The notice regulations seem to be applied asymmetrically, in that firms are "advised" not to reclaim compensation from employees who leave without providing notice. This obviously facilitates poaching, if workers feel that they may leave with impunity. This problem might be solved by ensuring proper application of the legislation regarding notice by employees as well as employers. Employers are also required to pay a severance allowance to workers who have been in continuous employment for at least one year. However, employers may deduct from the severance allowance gratuities granted by the employer, or any contribution made to pension or provident funds they set up for the benefit of their employees.

---

5 The Work Permit Committee consists of representatives from the Prime Minister's Office, the Ministry of Industry and Industrial Technology, and the Ministry of Civil Service Affairs and Employment.

6 It appears that their scope of application has been considerably reduced by the Sugar Industry Efficiency Act, 1988.

2.26. **Work Force Reduction.** Firms employing more than 10 workers that wish to reduce their work force, either temporarily or permanently, are required to give written notice to the Minister of Labor, together with a statement of the reasons for the proposed reduction. The employer must specify the workers who will be laid off and must, according to jurisprudence, first lay off those who were most recently hired, although the principle is not prescribed and is not rigidly applied.[7] The request is referred to the Terminations of Contracts of Service Board. It is illegal to proceed with the proposed reduction in employment until the Board has taken its decision and, in any event, less than 120 days after giving notice of intent to the Minister. Note in this connection that the Board often takes longer than 120 days to reach its decisions. Failure to abide by these provisions entails the payment of 120 days' remuneration, together with a sum equal to six times the amount of the severance allowance.

2.27. Firms rightly complain that these dispositions are excessively restrictive and make the adjustment and upgrading of the labor force unduly difficult. In the end, this results in a situation in which knowledgeable firms try to avoid the problem by minimizing the number of jobs created, either by limiting the scale of their enterprise or by choosing more capital-intensive techniques. In particular, the dispositions regarding the order in which employees can be fired — last-in, first-out — are a great deal less flexible than elsewhere. Some countries allow firms to retain workers showing the most aptitude for the jobs that will be maintained. The last-in, first-out rule applies to the remaining workers. Such a disposition can be particularly important where younger workers are more literate or better qualified than older workers, and so have a greater potential for increasing productivity.

2.28. It was also pointed out that these dispositions are much more restrictive than those applied to EPZ firms which are exempt from the dispositions of the Labor Act regarding termination of employment. In other words, EPZ firms are not required to give notice or pay severance allowances. Consequently, the last-in, first-out rule does not apply concerning the order of layoffs. Domestic market firms see no reason why they should be treated less favorably. The EPZ Act does indeed provide special regulations regarding labor. Section 14(9) effectively dispenses them from the obligations of Section 6 of the Labor Act regarding termination, except regarding unjustified dismissal. Neither notice nor severance allowances are required, for both individual terminations and work force reductions. However, the EPZ Act, Section 14, requires companies to pay compensation of two weeks per year of service to workers who are terminated, provided that they have more than three years of continuous service. These are equivalent to the termination allowances paid to workers in non-EPZ companies

---

7 Layoff provisions are governed by the Industrial Relations Act (1974) as amended, Third Schedule, Sections 33-34. In fact, Section 34 stipulates only that the employer "establish which employees are to be made redundant and the order of discharge". The last-hired, first-fired principle has been handed down by the courts. An exception may be granted in the case of incompetent workers. Incompetence cannot, however, be interpreted to mean inaptitude.

in respect of whom contributions are not made under the National Pensions Act. Thus, an EPZ employer receives preferential treatment only to the extent that compensation payments are not required for terminated workers having less than three years continuous service. In fact, the firm could avoid compensation for periods of greater than three years so long as it is prepared to fire workers after two years and eleven months and rehire them more than 28 days later.[8] But this practice is not widespread.

2.29. Although the normal work week for EPZ workers and most non-EPZ workers is 45 hours, there are several differences between EPZ and non-EPZ companies which relate to hours of work and overtime payments.[9] Non-EPZ workers may be required to work for a maximum of 48 hours during a six-day week, as compared to 60 hours in the case of an employee of an EPZ firm. Furthermore, marginal overtime in a non-EPZ company must be paid every day, whereas it does not have to be paid in an EPZ firm until the worker has completed 45 hours. This appears to have led to a situation in which the number of obligatory hours worked in the EPZ can easily amount to 60 hours on a regular basis. According to a small sample of workers, this is a partial explanation of absenteeism. Because of excessive hours, workers simply take the time off and charge it to sick leave. This strategy is considered preferable to refusing overtime, even if this leads to more than the statutory maximum of ten hours work per day, on account of the fear of termination. Even though finding another job would not be difficult in the present full employment situation, starting over would imply loss of seniority accumulated in the preceding job.

2.30. This explanation appears to be consistent with the findings of a recent study on absenteeism which interviewed both employers and employees. The firm-level responses found a clear, and statistically significant, correlation between the amount of overtime and the degree of absenteeism. Other explanatory factors for absenteeism suggested by employees include sickness or illness; care of other family members; weddings, funerals, births, etc.; fatigue; outings; personal business; etc.[10] The two principal causes of absenteeism, in descending order of magnitude, were sickness and the need to look after other family members. The need for additional rest and recreation (outings) is a distant third, together with the need to attend to personal business. Other explanations, such as participation in a second job, the need to look for another job, or the absence of work at the principal establishment, were completely insignificant. The study points out that firm-level and employee findings are not necessarily inconsistent, since employees may have

---

8 In the non-EPZ sector, the same device could be used, but it would be necessary to terminate the worker every year.

9 Normal working hours for the bus industry are 40 hours weekly while those for the catering industry are 48 hours weekly. The Labor Act is presently under review by a technical committee appointed by the Ministry of Labor and Industrial Relations.

10 R. Lamusse and others, *Study on Absenteeism among Production Workers in the Mauritian Export Processing Zone*, University of Mauritius, 1990.

simply reported sickness as the justification for time that was in fact used to rest. This seems entirely plausible since annual leave in the EPZ is only two weeks a year, whereas there are 21 sick days.[11]

2.31. In conclusion, the preceding analysis, cursory as it may be, indicates that labor regulations are much more flexible in the EPZ than outside, particularly with regard to overtime and termination. Furthermore, in certain cases, it is probable that present regulations are protecting employment unnecessarily and discouraging the growth of labor productivity. This would not be desirable, given the economy's overall need to increase productivity in the present era of rising wages.

2.32. The Government has recently announced its intention to revise and amend the Labor and Industrial Relations Acts. This should be the occasion for a complete and thorough re-examination of the current philosophy towards regulation of the labor market and employment, as well as the enhancement of productivity, in light of the needs for the second stage of industrial development. In this connection, it would therefore be useful not to proceed with the elaboration of new laws without a thorough review of international developments regarding employment regulation, both in developed and developing countries. Work recently done by the OECD could perhaps be a good starting point for this work.

C. Trade, Foreign Exchange, and Finance

Export Controls

2.33. All exports require an export permit from the Ministry of Trade and Shipping (MOTS). This Ministry also used to deliver Certificates of Origin (EUR1) which are needed, among other things, to gain duty-free entry into the EEC under the Lomé Convention.[12] With a view to increasing efficiency and minimizing duplication of functions, the EUR1 certificates are now issued by customs authorities. Possibilities for making further improvements exist and these should be explored as part of a broader review of international trade procedures aiming at their simplification to the utmost.

2.34. The issuing of export permits is governed by the "Supplies Control Act of 1974" which empowers the Minister of Trade and Shipping to approve or reject an application for an export permit. The rationale for the existence of export permits is given as the need to exercise control over the export of prohibited goods such as sand, coral and limestone and also to regulate the export of agricultural and seasonal products. Furthermore, export permits are also used to control the export price of goods in order to discourage under-invoicing.

---

11 Note also that the employer may decide on the timing of one of the weeks of leave, whereas the other is negotiable.

12 A CD3 form from the Bank of Mauritius is also needed.

2.35. Normally, export permits are given without difficulty except for quota-restricted textile exports to the US and some agricultural commodities, the latter appare. 'ly in order to guarantee an adequate supply to the domestic market. As a general rule, restricting exports in order to ensure supplies to the domestic market cannot be justified on economic grounds. Accordingly, if this is their raison d'être, the corresponding export permits should be eliminated. As for export quotas for textile garments, consideration could be given to introducing an auction in order to maximize foreign exchange earnings (see Chapter 4).[13] To the extent that export permits are required for exchange control purposes, they should be delivered directly to exporters by commercial banks acting in their capacity as approved foreign exchange dealers.[14] The incentive study to be conducted under the UNDP-World Bank Trade Expansion Program is expected to examine this issue in greater detail.

Import Controls

2.36. Imports, both by EPZ and non-EPZ companies, require an import permit from MOTS.[15] These are normally delivered quickly and without difficulty, except for food items for which delays can be considerable. A few goods continue to be prohibited, but otherwise there appear to be no formal import licenses or restrictions. However, there is a system of "advising" EPZ companies to purchase some goods through domestic trading houses (and manufacturers) when these are available. In part, this policy has to be seen as a response to deficiencies in the customs regime, which make it difficult for non-EPZ companies to deliver duty-free tax-free to EPZ companies, and for EPZ companies to claim a drawback on goods indirectly imported on a duty-inclusive basis.

2.37. These import permits must be obtained before shipment on the basis of a pro-forma invoice. When the goods arrive, the final invoice must be presented to MOTS, which compares the quantity and value to those declared on the import permit. After adjustment for any difference, the invoice is stamped, approved, and the goods are then allowed entry into the country, otherwise not. Goods that are imported without having first obtained the import permit may be subject to a 5 percent penalty tax at the time of arrival.

Foreign Exchange Regulations

2.38. All exporters are required to repatriate their export proceeds, via sale to an authorized dealer, within 180 days of shipment. However, certain exporters may be authorized to retain their export proceedings temporarily in special foreign

---

13 The quotas are fixed in volume terms.

14 This would also be the case for the ADC certificate that is currently delivered by the Bank of Mauritius.

15 Except those included in Schedule No 1 of Government Notice 260 (1982).

exchange accounts. These accounts, which are non-interest bearing, may be used to make payments for purchases of imported raw materials.[16] On the import side, all exporters purchase foreign exchange for imports through their commercial banks. At present, the latter may only deliver foreign exchange against an import permit duly stamped by MOTS.[17]

2.39. Payments for invisibles related to imports are permitted without restriction, provided that they can be justified. Foreign exchange may be made available by commercial banks for bona fide business travel up to 200 pounds sterling per day, without prior authorization from the Bank of Mauritius. Residents may also hold international credit cards and use them for paying travel expenses abroad.[18] Airline tickets purchased by residents bear an 11 percent tax (including a 1 percent surcharge) for all international travel. Outward transfers of capital are subject to certain restrictions. Foreign-owned companies may freely transfer interest, dividends and profits, but permission is required for the repatriation of capital, essentially to ensure that the 15 percent stamp duty is paid on capital gains.

2.40. At present, most foreign exchange is purchased through authorized dealers, i.e., commercial banks, who in turn obtain it from the Bank of Mauritius. Although there are a number of offshore banks, direct foreign exchange borrowing from them is as yet fairly limited and, in any case, restricted only to EPZ companies for a period of 90 days at most. Some offshore banks feel that this is too short. In this connection, the Banking Act of 1988 indicates that EPZ companies will be allowed to bank with, and borrow from, offshore banks on a restricted basis, that is for short-term loans (less than 90 days) for working capital purposes. The 1988 Act was very restrictive and gave no liberty to the Bank of Mauritius to authorize any operations other than those strictly spelled out above. The 1990 Banking Act, however, grants the Bank of Mauritius more discretion which the offshore banks hope will permit them to become more active players in the provision of trade finance to EPZ companies. On the other hand, the onshore banks may be expected to resist any tendency towards giving the offshore banks more business. On balance, there would seem to be no problem in allowing offshore banks to compete freely with onshore banks for both export and import financing. However, to begin with, the offshore banks do not expect to do that much business because of the legal difficulties of taking onshore collateral to cover themselves against borrower

---

16 The maximum holding period is not specified. The commercial banks generally deposit these funds in their "nostro" accounts located in their overseas correspondents.

17 Importers must be licensed under the Licenses Ordinance. Under the 1982 Supplies Regulations (Control of Imports), all imports require import permits from the Ministry of Trade and Shipping. This requirement is, however, waived for goods specified in the third and fourth schedules, respectively.

18 When a credit card is used, approved travel allowances may be exceeded, subject to the payment of a 15 percent charge. This may be waived if it can be documented to the Bank of Mauritius that the additional expenses were indeed bona fide travel expenses.

default. Resolving these problems will apparently require modification to certain aspects of the civil code. These issues will need to be examined in more detail.

2.41. The Bank of Mauritius maintains a forward exchange cover mechanism, albeit on a whole turnover basis, for the imports and exports of EPZ companies, and for foreign currency borrowing by banks for the purpose of onlending to the sugar sector. EPZ companies, other exporters and certain importers may also contract foreign exchange cover through their local banks, subject to specified conditions. Some banks feel that the present arrangements are too restrictive, and that it would be appropriate to create an interbank market in foreign exchange, both for spot and forward transactions. The need for whole turnover policies would then be obviated. This possibility could usefully be examined.

Access to Finance

2.42. Current legislation allows firms to seek working capital finance from onshore and, to a lesser degree, offshore banks, as indicated above. Several issues are of concern in this area. First, some companies contend that access to finance is unduly restricted, both for working capital and term finance. In general, this was the position of EPZ companies (see Chapter 4), but generally not domestic companies. However, foreign companies, EPZ and non-EPZ alike, contend that, compared to Mauritian companies, they are required to maintain lower debt-to-equity ratios (1:1 at most) in order to be able to obtain working capital from commercial banks without prior authorization from the Bank of Mauritius. They would also like to make greater use of offshore financing, but this is currently limited by the Bank of Mauritius to 90 days. Secondly, non-EPZ non-DC (Development Certificate) companies claim that current interest rate policy discriminates unfairly against them. As a result, they have to pay interest rates that are too "high".

2.43. The perceived shortage of working and term capital is puzzling, since the commercial banks appear to be replete with liquidity. It is possible that Bank lending ceilings are unduly restrictive. On the other hand, it seems more plausible that individual firms may find working capital more difficult to come by than in the past, as a result of stricter lending requirements on the part of commercial banks in the wake of recent failures and closures in the EPZ which have resulted in losses and a decline in the quality of portfolios for commercial banks.[19] To this end, commercial banks pointed out that many firms, both inside and outside the EPZ, are undercapitalized and hence are not good credit risks.

2.44. Regarding interest rate policy, present policy does appear to be unduly favoring the EPZ sector, as the following analysis shows. In Mauritius, credit policy is directly managed by the Bank of Mauritius via a system of credit ceilings on each bank. Banks that exceed their lending ceilings are penalized through a

---

[19] Non-performing and problem loans appear to be on the rise, particularly in the EPZ sector, and to have attained over 5 percent of claims on these companies.

system of penalty interest rates and fines. Moreover, banks must direct their lending in such a way that EPZ firms and other producers in key sectors (category 1) receive at least 50 percent of available credit. Loans to traders and other non-preferential customers (category 3) cannot exceed 25 percent of the ceiling. The remaining credit can go to category 2 borrowers. The Bank of Mauritius also refinances nonsugar export (post-shipment) bills at 12.25 percent. The corresponding advances do not count against the commercial bank's credit ceiling. This is not so, however, for preshipment working capital loans for exporters.

2.45. Lending rates, as differentiated by sector, are summarized in Table 2.2. It is apparent that the structure of interest rates continues to be distorted in favor of exports and other preferential sectors. Banks reported that these distortions entail a significant opportunity cost for them; this is equal, on average, to the difference between the preferential and non-preferential rates. Certain banks even claimed that their gross spreads are close to negative, for customers borrowing at 13 percent. This assertion is entirely consistent with Table 2.3 which indicates the minimum and maximum spreads for different classes of borrowers.

Table 2.2
MAURITIUS: Structure of Lending Rates for Lending by Commercial Banks

	Sectors and Activities	Minimum and Maximum Rates	
Preferential:		Minimum	Maximum
	Export bills rediscountable at the Bank of Mauritius	13.5	15
	Sugar, EPZ, agriculture, transport, development certificate companies	13	18
	Small-scale industries	13	19
	Transport	13	19.5
Non-preferential:			
	Hotels	16	19.5
	Other industries and manufacturers, parastatals, housing	17	19.5
	Traders	17.5	19.5
	Others	19.5	20.0

Source: Bank of Mauritius.

Table 2.3
MAURITIUS: Lending Rates, Cost of Funds and Spreads, by Class of Borrower

Class of Borrower	Lending Rates on Required Deposits		Earnings on Required Deposits		Spread on Required Deposits	
	Min	Max	Min	Max	Min	Max
Category 1	13.0	18.0	17.1	22.1	0.22	5.22
Category 2	17.0	19.0	21.0	23.1	4.12	6.22
Category 3	19.5	20.0	23.6	24.1	6.72	7.24
Average cost of required deposits			16.88			
Average spread for all lending (base March 1990 distribution of credit)					2.99	6.03

Source: Bank of Mauritius, Quarterly Review, March 1990 and World Bank estimates.[20]

2.46. It also has to be borne in mind that at least 50 percent of bank loans must go to EPZ companies and other category 1 borrowers and no more than 25 percent to category 3. These rules have apparently made banks increasingly unwilling, at the margin, to lend at the lower end of the range for category 1 borrowers. Moreover, banks have now become much more prudent vis-à-vis low-quality EPZ borrowers, given the portfolio losses that have been incurred over the last year or so, when about 100 EPZ companies have closed down. Many of these companies were undercapitalized and significantly so, in the words of several bankers, when compared to norms in Singapore and Hong Kong. The same is true for many remaining EPZ companies. At the same time, banks contend that rates on top-quality category 3 borrowers may be unreasonably high, especially given that they are less risky than some EPZ customers borrowing at 13 percent. Thus, current policy compels banks to discriminate between clients but in a way that results in completely different lending conditions, and hence, portfolios than would result from the application of strictly commercial banking criteria. It was also pointed out that the high rates on category 3 borrowers may not be desirable from an economic point of view.

2.47. Overall, therefore, it would be important to undertake a review of interest rate policy in order to reduce present distortions between preferential and non-preferential sectors, and improve the overall efficiency of allocation of financial resources. In this regard, a particular concern is the possibility of deliberate overborrowing at preferential rates, the resources being onlent by the primary

---

20 In order to lend Mau Rs 100, a commercial bank has to mobilize about Mau Rs 150 because of reserve requirements: 10 percent in cash (non-interest-earning Bank of Mauritius deposits, and 23 percent in Treasury bills). The spreads in the Table are calculated per Mau Rs 100 lent.

borrower to non-preferential activities.[21] The review of interest rate policy should also take account of the fact that deposit rates and some lending rates have been negative in real terms in the recent past.

2.48. Regarding lending practices for working capital, it appears that commercial banks do use transaction-based self-liquidating financing techniques, and in particular advances against confirmed letters of credit and other commercial papers of acceptable quality, provided that the risk of non-performance by the exporter is acceptably low for the lending bank. It is possible that there is greater scope for this kind of working capital financing; however, there would appear to be a number of technical barriers. One is that many orders are received in the form of simple telexes. Payment terms may be open rather than in the form of letters of credit. Thus domestic commercial banks do not have adequate financial collateral against which to make advances. Other problems are poor working capital management by firms, as well as the reduced degree of non-performance risk that the banks are now prepared to tolerate. In this regard, it should be noted that the preshipment export credit guarantee system, operated by the Development Bank of Mauritius, appears to be hardly, if at all, functioning at the moment. There are apparently plans afoot to revise it. At least one bank felt, however, that this was not necessarily desirable — and that it would be better to liberalize interest rates so that they could more effectively self-insure their prefinancing operations.

2.49. Great caution should be exercised regarding possible extension of export credit insurance and preshipment guarantee mechanisms, given that the volume of business is likely to be low and highly risky for the insurer, who could well be the Government. The capital for any system should come, in majority, from the private sector and be run on a profit-making basis, at least where commercial risks are concerned. The company should also reinsure internationally and become a member of the Berne Union. But, overall, one must be skeptical as to the financial viability of an export insurance and preshipment guarantee scheme in the Mauritian context. The market is very small and the information requirements enormous. It would perhaps be better to let the private sector banks manage performance and commercial risk as best they see fit in the context of market-determined interest rate and pricing policies that will reflect the riskiness of different foreign buyers and domestic producers.

D. Import Duties and Indirect Taxes

2.50. This section reviews the system of customs duties and taxes, and their implications for the structure of protection. It further reviews the structure of internal indirect taxes, their relation to trade taxes, and how they affect the structure of production incentives.

---

21 Another response of the banks to thin margins to preferential borrowers may be to increase fees and commissions, which are reported to be unusually large in Mauritius, compared to competitor countries.

Box 2.1

Levy	Range of Rates
Import Duty	0 - 60 for non-preferential countries; always zero for preferential countries
Fiscal Duty	0 - 600 for all countries
Import Levy	17 percent; zero for exempt goods
Sales Tax	5 percent, levied on the CIF value plus the import levy, customs and fiscal duties. The rate is increased to 6 percent for non-registered producers

Introduction

2.51. Imports may be subject to four kinds of fiscal levies at the point of entry, as shown in Box 2.1. The customs valuation basis for all ad valorem duties is generally the CIF value. Contrary to many African countries, there is no obligation to insure imports in Mauritius. Neither is there any preshipment inspection by companies such as SGS. Customs, however, reserves the right to adjust the declared value if this is considered not to represent the true transactional value.[22]

2.52. An unusual feature of tariff policy in Mauritius is that it has a general, as well as a preferential, customs duty. The preferential rate applies to most members of the EEC and the Commonwealth, the US, and a variety of other countries. On the other hand, some important countries do not have preferential status, including Japan, Taiwan, and Korea.[23] The degree of discrimination can be considerable, since the preferential rate of customs duty is always zero, as compared to modal values of the non-preferential rate of 15, 25, 30, 40 and 50 percent. Thus the degree of preference varies by product. At the same time, in many cases, the preference has been eliminated through zero-rating of the customs duty. The advantages and disadvantages of maintaining these preferences should be carefully weighed, as they may entail sizeable balance of payments costs for Mauritius in the form of

---

22 As explained in the section on import controls, the Ministry of Trade and Shipping also has this authority, either when the import permit is obtained before shipment, or when it is verified after arrival of the merchandise. In this connection, the import permit must be stamped by the MOTS after arrival as a sine qua non of customs clearance.

23 The same is true for many ACP countries, for example the CFA Franc countries, as well as other middle-income countries -- Morocco, Tunisia, and Turkey.

trade diversion towards higher-cost sources for goods that are consumed on the domestic market.[24]

Structure of Collections

2.53. Between 1982/83 and 1989/90 the ratio of duty and sales tax collections to all imports averaged between 18.1 and 22.5 percent. However, this overlooks the fact that all imports by EPZ companies are totally exempt. It is more significant, therefore, to measure the ratio of collections to non-EPZ imports, for which the corresponding ratios are between 27.6 and 36.0 percent, as shown below (Table 2.4, column 2). But again, these averages mean relatively little, on account of the great variety of rates of the import and fiscal duties. In the same vein, the import levy has two rates, zero and 17 percent. Moreover, many goods are exempt from the sales tax that is normally levied at 5 percent. Hence, a significant proportion of taxable goods may be completely exempted, so that effectively taxed taxable goods support on average much higher rates than those suggested by the second column of Table 2.4.

Table 2.4
MAURITIUS: Ratio of Import Duty and Tax Collections to Imports
1982/83-1989/90
(Percent)

	All Imports	All Non-EPZ Imports	Effectively Taxed Non-EPZ Imports
1982/83	20.8	n.a.	n.a.
1983/84	22.5	29.4	n.a.
1984/85	21.1	33.2	n.a.
1985/86	21.5	36.0	66.0
1986/87	21.6	27.6	72.0
1987/88	18.1	31.0	55.0
1988/89	19.5	31.4	61.2
1989/90	19.8	n.a.	62.8

Source: Customs Administration and Ministry of Economic Planning and Development.

2.54. In fact, in fiscal years 1986/87 to 1989/90, between 45 and 50 percent of all non-EPZ imports were exempted from the import levy. Most of these goods were also exempt from the sales tax. Hence, only between 50 and 55 percent of non-EPZ taxable goods were effectively subject to some combination of the import levy, customs duty, fiscal duty and the sales tax, implying a much higher ratio of collections to imports than is suggested by the second column of Table 2.4. Since

24 The preferences might be defended on the grounds that they are the price of the concessions granted to Mauritius by the EEC and the United States. This argument may be countered, at least in the case of the EEC, by the fact that exports to the EEC only obtain "Mauritian origin" in the ACP sense of the term if they use goods of ACP or EEC origin.

1985/86, this ratio has fluctuated between 55 and 72 percent, depending on the composition of effectively taxed imports (Table 2.4, column 3).

2.55. Here again, the average collection ratio does not give a good idea of average rates of taxation, since the collection ratio is, by definition, "biased" by the composition of imports. To get a better understanding of the rate structure per se, another exercise has been carried out and is summarized in Table 2.5.

Table 2.5
MAURITIUS: Ratio of Collections to Taxable Value of Imports by SITC Section, 1989
(Non-EPZ imports only)

	SITC Section	Ratio of Collections to Taxable Imports
0:	Food and live animals	5.6
1:	Beverages and tobacco	233.0
2:	Crude materials, inedible except fuels	1.0
3:	Mineral fuels, lubricants and related	37.0
	materials	-
4:	Animal and vegetable oils and fats	9.1
5:	Chemicals	15.0
6:	Manufactured goods, classified chiefly	23.7
	by material	42.2
7:	Machinery and transport equipment	-
8:	Miscellaneous manufactured articles	
9:	Not elsewhere specified	

Source: Ministry of Economic Planning and Development.

2.56. Table 2.5 gives a breakdown of import and fiscal duty collections by SITC category for 1989, and indicates that raw materials are significantly less taxed than finished goods. It also appears that capital goods support, on average, import and fiscal duties of about 24 percent (SITC Section 7). In this connection, it must also be pointed out that capital goods imported by non-EPZ companies may pay the 17 percent import levy as well as the 5 percent sales tax which is not deductible, as explained later. Hence, the total effective rate of taxation of capital goods for a non-EPZ company would probably be in the range of 48 percent. The comparable figure for miscellaneous manufactures would be between 67 and 69 percent.

2.57. This was confirmed in interviews with non-EPZ firms. More generally, they pointed to a highly distorted structure of import duties and taxes, in which capital goods, spare parts and precision tools are frequently subject to much higher rates than those indicated above, and frequently greater than 100 percent. At the same time, they pointed to the difficulties they face when trying to supply to EPZ companies or the sugar sector, which are entitled to import capital goods and spare parts on a duty-free basis. The problem is that non-EPZ companies, whilst technically capable of meeting some such orders, may not be competitive because they support import duties on their raw materials whereas, as pointed out above, the buyer may be able to import free of duties and taxes.

2.58. In order to throw additional light on this question, a detailed review of the tariff structure should be undertaken, line by line, by SITC section as well as by end use. This has not yet been possible because of data constraints. However, a perusal of the tariffs indicates a highly uneven structure. In some cases, the tariff is now perfectly flat, with no differentiation by stage of processing; this is the case in particular for the majority of textile products. In other cases, the principle of positive escalation seems to have been preserved and to be gaining acceptance. It is certainly the principle used in the various concessions granted to manufacturers serving the local market. In other cases, an attempt has been made to remove "anomalies", that is when the rate of duty on imported raw materials exceed that on the finished goods. A variety of special customs regimes (exemptions or concessions) have been introduced to redress these anomalies. These regimes generally try to remove the disincentive to local production by lowering, if not totally eliminating, the duties on raw materials needed by the non-EPZ company. But this does not always work as well as might be expected, and runs the risk of being limited on account of revenue considerations. The tariff regime therefore remains significantly distorted, with some industries receiving strong positive effective protection, whilst others are effectively penalized. Continuing to try to solve these problems on an ad hoc basis by the use of exemptions and concessions will become increasingly complicated and is likely to generate an even more distorted structure of tariff incentives. In addition, such a policy is likely to cause increasing revenue losses for the Treasury.

2.59. Revenue losses are likely to increase as the overall level of tariffs on competing imports is lowered in order to enhance economic efficiency. Such a policy will indeed be essential if Mauritius is to increase the domestic content of its exports of textiles and other industrial goods in an economically efficient manner. Revenues from customs duties could also be affected if Mauritius is to be transformed into a Free Port.[25] Thus, for both economic and budgetary reasons, tariff rationalization and reform should be a major preoccupation in the months ahead. In particular, it will be necessary to find a means to recover the revenue losses that will result from the tariff reductions that are essential to fostering global economic efficiency, that is of export and import-substitution activities. In this connection, the sales tax will have an increasingly important role to play.

Sales and Excise Taxes

2.60. The structure of producer prices, protection and production incentives may also be affected by internal indirect taxes, in particular the sales tax, hotel and restaurant tax, the foreign travel tax, and excises.

---

[25] This is a high priority of the Government, in the words of the Governor General in his speech at the opening of the second session of the Legislative Assembly in November 1990.

Table 2.6
MAURITIUS: Sales Tax Collections and Corresponding Tax Base
1983/84-1989/90
(In millions of Mau Rs)

Year	Domestic Deliveries	Imports	Total Sales	Other Import Levies
1983/84	71.0	135.2	206.2	1161.8
1984/85	79.2	147.8	227.0	1361.2
1985/86	84.3	189.2	273.5	1627.8
1986/87	111.3	237.9	349.2	2055.1
1987/88	127.8	335.4	463.2	2638.6
1988/89	159.9	412.3	572.2	3054.7
1989/90	196.6	513.8	710.2	3703.0

Source: Sales Tax Administration and Customs and Excise Department.

2.61. The sales tax is governed by the Sales Tax Act, 1982, as amended. It is normally levied at 5 percent on domestic deliveries and imported goods, effected by registered persons.[26] Exports are exempt by virtue of the fact that they do not constitute domestic deliveries. Also exempt are deliveries to EPZ firms.

2.62. As shown in Table 2.6, receipts are much larger on imports than on domestic transactions. This is explained in part by the fact that the tax collected on imports may be credited against that levied on domestic transactions, at least by registered persons. The statutory rate of 5 percent is very low by international standards, and the average level — that is the ratio of collections to the gross value of transactions — even more so, because of the very significant level of exemptions. From a revenue-raising viewpoint, the combination of low rates and significant exemptions means that the sales tax is under-performing in terms of its revenue potential. This necessarily increases revenue dependence on other indirect taxes, most notably customs duties, and can have significant costs in terms of forgone economic efficiency and resource allocation.

2.63. This imbalance in the structure of indirect tax and customs duties receipts will have to be redressed if the Government wishes to proceed towards a significant lowering of import duties, as part and parcel of its policy to increase overall economic efficiency. It is apparent from Table 2.6 that there will need to be a sizeable increase in the sales tax in order to offset the decline in revenues from import duties, since collection from the sales tax is only about one-sixth of revenues from other import levies. For this reason, compensating the reduction in import duties should not be tackled just by increasing sales taxes. Rather, a comprehensive tax reform will be required to address this issue, covering all indirect and direct taxes.

26 The rate is increased to 6 percent for non-registered persons, on imports alone, however. Any merchant whose annual turnover exceeds Mau Rs 100,000 must be registered.

2.64. The sales tax is of the multi-stage credit variety, with provision made for registered producers to deduct the tax paid to their suppliers. However, deductions are limited to the tax paid on organic and inorganic materials that are effectively transformed and incorporated into taxable finished goods. The tax on some kinds of packaging can also be deducted. Thus, the tax paid on consumables, office supplies and capital equipment cannot be recovered.

2.65. The law provides that registered taxpayers may obtain a refund of any excess payments over collections concerning taxable goods. This is particularly important for exporters, who do not charge sales tax on their foreign deliveries, but who may incur the tax on the raw materials incorporated into the exported goods. However, no deductions are permitted to producers of statutorily exempted goods even when these are exported. This is a potentially significant tax-induced anti-export bias.

2.66. Overall, this tax is a rather embryonic value-added tax (VAT) applied to imports, domestic resales and manufactures. It has very little direct effect on the EPZ sector, but a somewhat greater impact on firms in the non-EPZ sector. This is because they must all pay the tax on machinery and equipment. In addition, those that produce exempted goods are unable to recover the tax paid on their raw materials. At the same time, competing imports enter net of sales tax, which clearly puts the domestic producer at a disadvantage, particularly if the import comes from a country which applies a full-fledged value-added tax that effectively exempts exports completely. This may be thought of as a tax-induced anti-production bias.

2.67. Many of these problems appear insignificant today because of the relatively low level of the tax (5 percent). However, the shortcomings of the present system would become much more evident if rates were to rise, as might well be necessary if Mauritius is to become a fully integrated economy in which all sectors are exposed to international competition behind minimal tariff protection. An increase in rates would augment the anti-export bias; this could become significant if the rate were to reach 15 percent. However, the problems are not insurmountable and could be overcome by transforming the current sales tax into a full-fledged consumption tax of the value-added variety. It would be appropriate to initiate some technical work on this transformation relatively quickly as the modification of the sales tax could well be an important component of the overall diversification strategy.

Hotel and Restaurant Tax

2.68. Hotels and restaurants levy a 10 percent tax on their transactions, including the sales of cooked foods to be consumed on or off the premises. In addition, hotels are charged a special levy, equal to 50 percent of the standard rate of tax. In all, then, there would be a 15 percent tax on hotel rooms and restaurant meals. However, no provision is made for crediting any sales tax that may be charged on intermediate consumption and capital goods, so that there is some potential for cascading. This is not likely to be a problem at the present rate of sales tax, but could become so if the rate rises substantially.

2.69. In general, the hotel and restaurant tax is desirable in that it taxes foreign as well as national tourist consumption in Mauritius, as should be the case under the destination principle. The present rate of 15 percent, including the 50 percent levy, does not leave much room for increase.[27] At the same time, if the sales tax is raised, consideration should be given to allowing it to be credited against the hotel and restaurant tax liability. Otherwise, the cascading problem could become serious.

Foreign Travel Tax

2.70. The Foreign Travel Tax Act of 1978 introduced a 10 percent tax on travel by Mauritian residents, and more specifically on the value of any international ticket. This is a tax on international trade that applies to both business and leisure travel. While possibly justified in the latter case, this is not so for business travel, particularly that related to marketing. The tax probably imposes a larger burden on small companies. The problem is easy to solve in the context of a value-added tax, when a deduction would be allowed, ex post, for justified business travel. Under the present arrangements, provision would have to be made for a refund, under arrangements similar to those used for the sales tax. Consideration should be given to this option until such time as the foreign travel tax is incorporated into the sales tax, with right of deduction.[28]

E. Investment Incentives

2.71. Mauritian law provides a variety of tax incentives for investment in different sectors. These consist of both income tax relief, investment allowances, and investment tax credits. In addition, resident investors may be exempt from personal income taxation on dividends derived from companies operating under one or other of the incentive regimes. There is no capital gains taxation in Mauritius, except on land. However, foreign firms that repatriate capital are subject to a stamp duty of 15 percent, recently reduced from 35 percent, on capital appreciation. If these transactions take the form of a sale of shares, the foreign buyer would have to pay the registration tax.[29] It is correctly argued in some quarters that this combination of taxes is a potential deterrent to foreign investment. Dividends received by individual shareholders are normally subject

27 Revenues amount to about Mau Rs 200 million per year, roughly the same as domestic collections from the sales tax.

28 Revenues from the Foreign Travel Tax are Mau Rs 40 million per year.

29 The registration duty is levied on any deed that witnesses a transfer of immovable property and shares. The rate, including a 10 percent surcharge, is 11 percent for values of less than Mau Rs 100,000 and 13.2 percent thereafter. This is levied indifferently on Mauritian and foreign investors.

to personal income tax. However, dividend income derived from preferentially taxed corporate profits is exempt from personal income taxation during the first ten years of the company's life.[30] However, this is disallowed if the company declares a dividend in a year in which it is reporting a tax loss. Similarly, intercompany dividends are not taxed, provided that they have been derived from effectively taxed profits. Personal income tax rates are now capped at 35 percent, with a system of abatements for expatriate staff employed in offshore banks and companies.

2.72. Effective tax rates on corporate income differs substantially from sector to sector. A Mauritian individual investing in a non-certificate company will pay an effective tax rate of 57.75 percent, assuming that all profits are distributed. An investor in an EPZ company will pay only 15 percent. This, however, overlooks the fact that a non-certificate company may have paid taxes of between 23 and 50 percent on machinery and equipment, whereas the EPZ investor is completely exempt. So the effective tax rate for the non-certificate investor could be significantly higher than the 57.75 percent suggested above. In both cases, of course, the effective rates are reduced by the investment allowances, hence the marginal effective tax rate for an EPZ company could be well below 15 percent. Rates could be even further reduced to the extent that interest payments are deductible and that real interest rates are negative.

2.73. Another example of differential tax treatment concerns labor training. Section 55(A) of the Finance Act allows for a double deduction from corporate taxable income for expenditures incurred in respect of, or in relation to, manpower training under training programs approved by the Industrial and Vocational Training Board. Differential tax treatment arises in that the employers receive a grant that is inversely proportional to their rate of corporate income tax. For example, under the existing system, the share of training expenditure effectively borne by an employer will be 13 percent in the case of a company paying 35 percent corporate income tax; zero for a company paying the 25 percent rate; and 6 percent for an EPZ or other company benefitting from the 15 percent rate.

2.74. Thus, the above analysis suggests that there could be rather important distortions in the tax system that tend to penalize non-certificate companies. There could be two important conclusions from this: (a) the possibility of significant resource misallocation; and (b) significant imbalance in the structure of tax receipts, with non-certificate companies paying a disproportionately high, and preferential companies a disproportionately low, share of direct taxes. The second conclusion would appear to have some basis in fact, since corporate income tax receipts from EPZ companies (for 1990/91) are estimated to have been less than Mau Rs 20 million out of a total of about Mau Rs 800 million.

---

30 This is reduced to 8 years for housing development companies and housing construction companies.

2.75. For all these reasons, it is essential to undertake a complete review of the tax system using the marginal effective tax rate methodology. This analysis should calculate marginal effective tax rates by sector, by asset class, and by source of finance. The analysis should also precede the announcement of any new investment incentives and indicate what measures are needed, if any, to achieve a more even structure of the tax burden across different sectors of the economy. This is indispensable not only on economic efficiency grounds, but also for revenue mobilization reasons.

F. Customs Regime

2.76. Customs clearance is governed by the Customs Act of 1988 and associated regulations. All goods may be entered for home consumption or warehousing. Though not explicitly stated, these are storage warehouses with no right of manufacture or transformation. Warehouses must be bonded by two or more sureties. Warehoused goods may be entered for home consumption, rewarehousing, export (including as ships' stores), or for supply to companies operating under the Export Processing Zones Act or the Export Services Zones Act. Generally, goods may only remain in a warehouse for a period of three months. However, the importer may be allowed to rewarehouse the goods for one further period of three months, provided that adequate security is provided in the form of a bank guarantee. Provisions also exist for temporary admission (Section 21) and drawback (Sections 106-109).

2.77. The provisions concerning temporary admission appear somewhat restrictive by international standards as they do not authorize the processing of goods admitted under temporary admission. In fact, however, Section 21(9) does authorize temporary admission for processing but stipulates that the sales tax must be levied at the time of import and the processed goods must be re-exported. These provisions appear to prohibit goods from being entered for warehousing or delivered to an enterprise operating under the auspices of the EPZ Act. It seems that, in fact, such deliveries are authorized by the Customs Department on an ad hoc basis. It would be helpful if the legislation were clarified to ensure that processed goods, manufactured under the Temporary Admission regime, may indeed be delivered to an EPZ company, or entered for warehousing, or transferred, under the Temporary Admission regime itself, to another company for further processing. Furthermore, the six-month admission period could be extended up to one year, as is the custom in many countries. All in all, the purpose should be to bring the present system into line with the Kyoto Convention regarding temporary admission in the same state, on the one hand, and temporary admission for inward processing, on the other.

2.78. While the dispositions relative to drawback appear broadly satisfactory in theory, they are quite limited compared to more modern regimes of this kind, as for example practiced in Taiwan. There, the drawback payment is made on virtually the same day as the goods are exported, whereas delays in Mauritius may exceed six months according to some firms. This may of course be due to incomplete dossiers being presented to the Customs Department. In Taiwan, it is also possible for indirect exporters to benefit from the drawback, which does not seem possible under Mauritian law. Finally, current legislation requires that goods benefitting from a drawback regime be exported and does not provide for entry under warehousing, or temporary admission, or delivery to an EPZ company. Again, in practice, it seems that the Customs Department is quite prepared to authorize such operations on ad hoc basis. Accordingly, provision should be made for this under the law.

2.79. Thus, as in the case of Temporary Admission, the objective should be to bring the drawback regime into line with the dispositions of the Kyoto Convention.[31] In the Mauritian context, and specifically its links with Taiwan, it would be appropriate to see whether the Taiwanese system can be adapted for application in Mauritius. In any event, particular attention should be given to ensuring rapid payment of drawback claims, if possible within 24 hours of export. This would be possible for firms posting a bond to cover the possibility of overpayment that would come to light during ex-post verification by the Customs Department. This system is used in the United States.

2.80. The Kyoto Convention also includes another regime, known as Duty Free Replenishment, that might be applied in the Mauritian case. Under this scheme, a domestic company may fill an export order using goods that have been previously imported for home consumption, and then apply for permission to import the same quantity of goods duty free for home consumption. This is another form of drawback which can be extremely useful for firms filling unexpected orders. It has been used quite successfully in Morocco, where it has also been authorized for indirect exporters.

2.81. Overall, then, it is clear that much remains to be done to improve customs regimes for companies that do not have EPZ certificates, in order to promote their exports and deliveries to EPZ companies.

Customs Regimes for EPZ Companies

2.82. The EPZ Act introduced special customs legislation for companies operating under its auspices. Basically, Section 3 of the Act empowers the Minister of Industry to designate any factory, or area that surrounds a factory, to be an Export Processing Zone. Section 4 stipulates that any commercial or industrial activity within an Export Processing Zone must occur within a bonded factory. Moreover, only duly certified export enterprises, in possession of an Export Enterprise Certificate granted under Section 6 of the Act, may operate a bonded factory in an EPZ. Moreover, bonded factories are defined as factories situated in an EPZ.

---

[31] The Kyoto Convention defines international norms for customs regimes as agreed by the member states of the Customs Cooperation Council.

2.83. Under Section 6, export certificates are issued to firms for specific scheduled products. In addition, the certificate establishes a schedule of capital goods and raw materials which may be imported under a complete waiver of import duties, levies and sales tax. Section 12 provides that scheduled raw materials or export goods may be removed from a bonded factory for export, transferred to another bonded factory with the permission of the Comptroller of Customs, or consumed in Mauritius with the approval of the Minister of Industry, after payment of duty. The Customs Administration is empowered to request adequate security to cover any customs duties and taxes that may be due when goods are in, or being transported between bonded factories. In the event of a Customs inspection or audit that finds a deficiency in the quantity of scheduled goods or equipment, the export duties are payable within 30 days.

2.84. This system works very well for two reasons. First and foremost, the customs administration does not, in general, require bank guarantees but rather general sureties from two guarantors. Second, the accounting reporting requirements are not excessively demanding, consisting only of a monthly report of imports and compensating exports. In addition, the goods move rapidly through the port and customs on arrival. This means that the companies are not constantly at odds with the customs administration regarding outstanding balances on their duty relief accounts. These three features have undoubtedly made important contributions to Mauritius' success.

2.85. However, the system is not without its weaknesses. In the first place, it is not really an EPZ system but a kind of bonded manufacturing warehouse, with quite limited rights of interregime switching ("mutation de régime"), rather like in Tunisia. As in Tunisia, the EPZ does not facilitate integration between EPZ and non-EPZ companies.

2.86. The EPZ regime was conceived for exports and does not easily permit joint production for both exports and the domestic market. Yet certain industries, for example electronics, say that they need such a regime. They consider that in the early years of production, it is essential to be able to sell part of their production on the domestic market because they will not be ready to export all of their production. At the present time, setting up under the EPZ regime effectively forecloses access to the domestic market; about 10 percent of the output can be sold on the local market. Yet, setting up as a non-EPZ non-DC company in the hope of selling on the domestic market and exporting is unattractive because capital goods would have, in principle, to pay all import duties, levies and sales taxes, and it would not be easy to obtain duty-free imported raw materials that are needed for exports. The third alternative — setting up separate companies for exports and domestic market sales — is not considered feasible. This has been tried by some companies and found to be excessively complicated from an administrative standpoint.

2.87. Solving this problem will require a clear choice on the part of the authorities concerning the overall incentive regime they wish to give to industries that sell abroad and at home regarding corporate income taxation and customs duties. The customs problem to be solved is the same in each case — the entry of part of the raw materials on a duty-paid basis for the domestic market, and part under a duty-waiver system for processing into exported goods, the problem being that the percentage going to each market is unknown ex ante.

2.88. The problem could be solved using the EPZ regime as follows. The company would be allowed to import all of its raw materials duty free as at present, regardless of their final destination. If they are transformed into goods for sales on the domestic market, then the company would enter the raw materials for home consumption at the time of sale, but charge the sales tax on the finished good.[32] This would be entirely consistent with the EPZ Act (Section 12, Subsection 1), and is standard customs practice for a bonded manufacturing warehouse, where the duties on the raw materials are paid when they leave the factory either in their original state or after processing.[33] The accounting and reporting arrangements would, however, become more complicated. This regime exists in Tunisia under the name of "entrepôt industriel".

2.89. The alternative approach would suppose that the company would not have EPZ status, and that it would not be entitled to operate in a bonded warehouse. In this case, imported raw materials would normally pay import duties on the assumption that they would be used in the production of goods for the domestic market. Export orders could be filled using such imported raw materials, and then claiming drawback, or, if the order comes with sufficient lead time, the corresponding raw materials could be imported under the temporary admission or other equivalent duty waiver system, appropriately transformed into the temporary admission for inward processing system as described earlier. The accounting and reporting requirements would be broadly similar to those under the EPZ system, as described in the preceding paragraph. This approach would be akin to the Temporary Admission regime in Morocco and elsewhere.[34] However, capital goods would continue to pay import duties and sales taxes; these can easily exceed 20 percent, thus reducing competitiveness. In addition, the company would pay corporate income tax at the standard rate of 35 percent.

2.90. A third option for key sectors, such as electronics, would be to use the approach recently adopted for textiles, that is, the introduction of a free trade regime via the suppression of all import duties and taxes on imported raw

---

32 Alternatively, the sales tax could also be paid to customs on the raw materials, and the difference between this and the sales tax on the finished good paid to the sales tax commissioner.

33 Such a regime also exists in Senegal.

34 In Kyoto Convention language, it would be called "Temporary Admission for Inward Processing".

materials and finished goods.[35] The disadvantage of this approach is that it might cause transitory difficulties for non-EPZ companies to the extent that they pay: (a) import duties and sales tax on capital goods, whereas EPZ companies get them duty and tax free; and (b) the corporate income tax of 35 percent as against the 15 percent rate granted to EPZ companies. The first problem could be solved by zero-rating the capital goods in question, but the second is a direct tax issue that cannot be solved by customs techniques.

2.91. A related issue concerns access to imported components, consumables and spare parts, through Mauritian trading houses. At present, these must be imported on a duty-paid tax-paid basis. Resale to an EPZ company or to a non-EPZ non-DC company under the drawback system is not allowed under the law, but is allowed on an exceptional basis by the customs administration as already explained. This process does not facilitate the growth of specialized commercial warehousing that will be indispensable for the growth of support industries for electronics, informatics, plastics, etc. Serious consideration should be given to modifying customs legislation to foster specialized commercial warehousing of this kind. It is possible also that these warehouses would find not only national outlets, but also regional outlets within the Preferential Trade Area (PTA).

2.92. The main conclusion from the preceding analysis is that the Mauritian customs regimes include some highly desirable features from an export development point of view. This is particularly the case regarding EPZ companies, but significantly less so for non-EPZ companies. Furthermore, existing regimes do not facilitate backward and forward linkages between EPZ and non-EPZ companies. Accordingly, it would be appropriate to undertake a complete review of customs regimes, EPZ and non-EPZ alike, and to modify them, as necessary, to alleviate the problems identified above and others that may be revealed by the proposed study.

G. Infrastructure and Logistics

2.93. Global competitiveness, for a country like Mauritius, requires first-rate physical infrastructure and logistics management relating to production, international trade and investment. Of particular importance in this connection are industrial estates, internal and external transport, ports and roads, telecommunications, etc.

Production

2.94. The guiding principle is that a completed international trade transaction requires processing and transport of: (a) goods; (b) money; and (c) all transactions-related information. Competitiveness in production can be offset by inefficiency of

---

35 Free trade should generally be construed to mean suppression of all import duties and levies, excluding the sales tax. This should normally be levied on both imports and domestic production.

transport, not only of goods but also information. In a word, good logistics is indispensable to successful exporting. This is all the more so in a country like Mauritius, where the initial and traditional competitive edge of low wages is being eroded. It is essential to ensure that competitiveness is not further handicapped by increasing logistical diseconomies, regarding not only goods but information.

2.95. It is important to understand the key role of information processing and transportation in the completion of international trade transactions. Orders may be lost because of poor telecommunications and so on. More importantly, accepted orders may not be delivered on time, because goods, either exports or related raw material imports, remain blocked in ports, airports, or elsewhere in the transportation chain on account of critical transaction-related information being unavailable in the right place at the right time.

2.96. In general, Mauritius has made impressive strides in the area of logistics, both relating to goods and information. The port is well run, and clearance delays are generally minimal, at least for EPZ companies. The customs administration uses selective inspection techniques, at least for full-load containers. However, companies outside the EPZ apparently incur more problems with port/customs clearance than their EPZ counterparts, as shown in Table 2.7.

Table 2.7
MAURITIUS: Distribution of Clearance Times for Non-EPZ Companies
Last Quarter 1990

No. of days between opening of dossier and release of goods	No. of dossiers	Percent
0-5	77	16
6-10	133	28
11-15	94	20
16-20	52	11
21-25	46	10
26-30	21	4
>30	52	11
Total	**475**	**100**

Source: Freight forwarding company.

2.97. These data indicate that 475 dossiers were dealt with during the period concerned. In only 77 cases, i.e., just under 16 percent of the time, was the customer in possession of the goods in less than five days. Overall, 56 percent of goods take more than 10 days to clear the port, for a variety of different reasons attributable not only to the complexity of procedures per se, but also to the inefficiency of the various parties concerned, including the importer himself. The time cost of these delays is considerable, because they involve stoppages in production and so on. The reasons should be researched and remedies found to minimize the delays as much as possible.

2.98. Internal transport does not appear to be a major problem, while the telephone is getting better by the day, both internally and internationally. The one area where significant bottlenecks are emerging concerns the transport of personnel (see Chapter 4). This appears quite inefficient, slow and often uncomfortable, and could be a factor which decreases the supply of effort on the part of workers. This problem should be looked at more carefully in the near future.

2.99. This progress notwithstanding, much remains to be done to improve the situation in all areas. One that is of particular importance concerns electronic processing of trade-related information. A good start has been made with the computerization of customs information using the ASYCUDA (Automated System for Customs Data) package prepared by UNCTAD. This has led to customs documents being aligned with international norms and should be extended to all other international trade and commercial documents (import and export permits, certificates of origin, bank documents, etc.), as is happening across the world. This documentary alignment should also be done in line with UN norms, not only with regard to layout but also data elements. In particular, UN-EDIFACT norms should be adopted in order to facilitate international electronic computer-to-computer transmission of trade-related data using the EDIFACT language, the emerging international norm in this area. By the same token, consideration should be given to allowing shipping companies, customs agents, importers and exporters to make their customs entries into the Customs Department computer from factory or office terminals. This will lead to considerable reduction in information processing times. Examples that Mauritius might follow in this connection include, among others, Singapore and Felixstowe (United Kingdom). Imitating their example would undoubtedly increase Mauritius' competitive edge, both globally and regionally.

2.100. The first key step here will be the reform of all international trade documents and their alignment with international norms (UN layout key). In turn, this will imply normalization of the underlying data elements in line with EDIFACT norms. Secondly, and in parallel with the documentary reform, there should be a thorough review and reform, if necessary, of all international trade information requirements and corresponding procedures. The key idea is to rationalize and simplify procedures in order to facilitate international trade to the maximum.

Investment

2.101. The picture with respect to investment logistics is considerably less rosy, despite the efforts being made to improve the situation. Procedures for setting up companies and obtaining EPZ and other certificates remain complicated and time-consuming. Following the recommendation of a recent Government-commissioned study, a One-Stop Shop which would "act as a focal point for receiving and transmitting to the authorities concerned all the applications for the various approvals, clearances and services, and for ensuring that they are obtained expeditiously" has been established in the Ministry of Industry and Industrial Technology in June 1990. This Unit, as it is called, will act as a coordination body and will consist of a Coordinating Committee, chaired by the Minister of Industry and comprising liaison officers who are senior officials designated by the different ministries and organizations which deliver the permits and clearances required by industrialists, and a Secretariat. The Unit is under the overall responsibility of a principal assistant secretary; it has a total professional staff of three, including one typist.

2.102. Investors are not obliged to use the One-Stop Shop. Those who wish to do so receive assistance in filling out and verifying all application forms, and with the supplementary information needed for the various permits. Completed applications are then forwarded to the liaison officers concerned, who are informed, at the same time, of the date at which the Coordinating Committee will examine the relevant applications. Liaison officers must convey the decision of their respective ministries to the Coordinating Committee in a timely manner or report on delays and indicate a date at which the decision will be taken. In turn, the Coordinating Committee meets every fortnight, ensures that rapid decisions are taken and that bottlenecks are removed expeditiously. If the Coordinating Committee is notified of a particular decision, the Secretariat immediately asks the applicant to request official confirmation directly from the ministry or organization concerned. In addition, the One-Stop Shop will assist firms in the event of grievances relating to public services and other formalities. The One-Stop Shop caters not only to new investors but also existing enterprises in connection with their day-to-day dealings with the different ministries and state organizations.

2.103. The reality is a little different. The One-Stop Shop has no executive power, so neatly avoiding the difficulty of appearing to usurp the powers of any one administration concerned with manufacturing. In a typical case, the Unit will contact the appropriate liaison officer and press for a decision, whether favorable or unfavorable. The Unit does not seek to impose its decision on other ministries. However, in the event that a given approval is not forthcoming, the Unit can request a meeting of the One-Stop Committee, where all relevant ministries are represented, in order to seek a definitive and binding solution to the problem at hand. The essence of the problem is that, as long as statutory powers to grant certain clearances (e.g., land use, work permits, utilities, etc.) continue to be vested in various ministries and agencies, the One-Stop Shop can at best only act as a coordinating body. The complexity arises from the fact that, unlike other export processing zones, the Mauritius EPZ covers the entire island and is not limited to a mere geographical area.

2.104. To date, this low-key and pragmatic approach appears to have worked well, at least in the eyes of the Ministry of Industry. But ministry officials have been rather surprised by the infrequency of requests for assistance — perhaps reflecting the fact that the Unit was only created in June 1990.

2.105. One problem, however, is that the present approach facilitates the existing set of procedures, without examining whether or not these are well or badly executed, or more importantly, justified. Here, as in the case of trade facilitation, a thorough examination is needed. This will be a major piece of work because it must call into question fundamental options concerning the kind and extent of investment and production regulation that are appropriate to the next stage of Mauritius' development.

2.106. In the same vein, it must be remembered that a myriad of decisions are required during the life of a company. Not all of this can or should be addressed by a One-Stop Shop located in the Ministry of Industry. This is particularly true of financial regulation which is the domain of the Ministry of Finance and the Bank of Mauritius. Consequently, one should not expect the One-Stop Shop to be the answer to every problem.

H. Main Findings and Action Plan

2.107. This chapter has examined the regulatory and incentive framework. Its intent has been to identify the constraints to increasing the global competitiveness of the Mauritian economy, both inside and outside the EPZ sectors. A second concern has been to identify whether there are substantially different regulatory and incentive frameworks in these two sectors. The third focus has been on whether the present regimes facilitate backward and forward linkages between the EPZ and non-EPZ sectors. In other words, what can be done to increase, in an economically efficient manner, the domestic content of exports both within and between the EPZ and non-EPZ sectors.

Main Findings

2.108. On the macroeconomic front, there have been rapid increases in wages and prices over the last few years. Inflation, as measured by the CPI, reached 14 percent in 1990, during which time the real interest rate was negative even on deposits. This was also the case for working capital loans to EPZ companies and to some other borrowers as well. Bank operating margins for this category of loans may well have been negative. During 1991, owing to a decline in the level of inflation, real interest rates turned positive. Efforts must continue to contain inflation to ensure future positive real interest rates in the future.

2.109. At the firm level, the increases in wages have been accompanied by a rise in absenteeism, increasing turnover rate, and a decline in productivity. The result has been a significant increase in unit labor costs which, if it continues unabated, could seriously undermine the country's competitiveness. The Government's focus on increasing productivity is therefore entirely appropriate. One may, however, wonder whether there is too much focus on training to the relative exclusion of productivity improvements in the work place.

2.110. The regulation of employment outside the EPZ sector is considerably more restrictive than within the sector. In certain cases, this is preventing firms from shedding labor as quickly as they would like. Apart from adversely influencing their competitiveness, this may also be exacerbating labor shortages.

2.111. The present structure of tariffs, indirect taxes and direct taxes clearly provides different operating regimes for the EPZ and non-EPZ sectors. It will prove difficult to integrate the two sectors under the present circumstances.

2.112. The same comment applies to the customs regimes. The EPZ scheme is fairly simple and works well. However, the customs regimes for non-EPZ firms will need substantial improvement to foster both direct exports and deliveries to EPZ firms.

2.113. First-rate logistics are an essential component of global competitiveness. Merchandise and information logistics for production appear broadly satisfactory, though perhaps more so for EPZ than non-EPZ companies. However, there is room for substantial improvement in both cases. The situation is less satisfactory regarding investment logistics, though it is to be hoped that the recently created Coordinating Committee within the Ministry of Industry (One-Stop Shop) may help in this regard. However, it should not be expected that the One-Stop Shop should be able, or even try, to solve all the problems faced by new investors and existing firms. Its view of itself as a facilitator is broadly correct. At present it is, however, facilitating excessively complicated procedures. The next step should be to simplify the procedures themselves.

Action Plan for the Future

2.114. In the first place, it is essential to ensure stability in the overall macroeconomic framework. In particular, there is a need for greater wage and price stability, in real terms, compared to Mauritius' competitors. Interest rate policy must be reviewed to continue to ensure a return to positive real interest rates.

2.115. The second issue concerns factor productivity. Government's present emphasis on increasing the productivity of labor through industrial and vocational training is entirely appropriate. It is also important that this concern be broadened to include employment regulation and issues relating to working conditions. A review of these, both in the EPZ and non-EPZ sectors, should be undertaken to ensure that labor laws enhance productivity and do not exacerbate labor shortages.

2.116. Third, improving factor productivity implies improved management at the firm level, especially concerning finance, production and marketing.

2.117. Fourth, for Mauritius to attain its objective of internationally competitive industrial diversification and enhanced backward linkages between the EPZ and non-EPZ sectors, it will be necessary to continue gradually to reduce and rationalize the structure of tariffs. Budgetary stability will require compensatory fiscal measures, all the more so if the objective of turning Mauritius into a Free Port is to be attained. This will almost certainly involve a simultaneous reform of the internal indirect taxes and, in particular, the sales tax.

2.118. It may not be appropriate to limit the scope of the tax reform to indirect taxes; direct taxes should be included as well. The issue is that there appears to be a severe imbalance in the structure of direct tax receipts, with the EPZ sector making only a marginal contribution to corporate income tax receipts. This would reflect the fact that their tax rate is 15 percent, as against a standard rate of 35 percent for non-certificate companies. In addition, non-certificate companies pay significant duties and taxes on their capital equipment, etc. The consequences of this state of affairs should be examined in a thorough review of the structure of enterprise taxation using the marginal effective tax rate methodology. This study should examine the structure of effective taxation in both the EPZ and non-EPZ sectors, and make proposals to redress any excessive differentials without compromising the economy's competitiveness. This will also be necessary to promote integration between the EPZ and non-EPZ sectors.

2.119. The next issue concerns customs regimes, both within and outside the EPZ. A detailed study is needed to identify how these regimes may be reformed in order to maximize export growth from both zones, and the linkages between them.

2.120. Last but not least, efforts must continue to improve infrastructure and logistics relating to production and investment. While a good start has been made in this area, much remains to be done to close the gap with East Asian countries such as Singapore and Taiwan. The first step should be a set of studies on trade and transport facilitation, covering all aspects of international trade. This will identify the priority issues to be addressed; on the basis of this study, an action program would be formulated for implementation.

ANNEX

A.1. The Government has identified the lack of a well-trained labor force as a major constraint to further sustained growth and has developed a broad strategy towards industrial and vocational training, both within the context of the existing educational system and through the creation of the Industrial and Vocational Training Board (IVTB).

A.2. The IVTB is conceived as a joint venture between the private and public sectors with three roles: first, to support, encourage and finance training in the private sector in major established existing industries, namely textiles; second, to provide a locus for training for the smaller sub-sectors of the industrial and services sectors; and third, to provide the drive and impetus to training for new and emerging industries. The IVTB is currently funded through a training levy, a government grant for recurrent expenditures and capital investments, and through government funding for all the costs of pre-vocational training. The training levy is currently set at 1 percent of basic payroll (i.e., excluding overtime) on all establishments. Collection is automatic at source through the National Pension Fund.

A.3. As a first step, the IVTB held a national seminar in April 1989, which brought together representatives of Government, the private sector, academia, the labor unions, the Mauritius Chamber of Commerce and Industry, and the Mauritius Chamber of Agriculture to discuss and review the industrial training strategy. Priority areas for training program development were identified for both existing and emerging industries. The development of an industrial training strategy led to the preparation of a number of training projects which were presented to the Donors' Meeting in Geneva in March 1990.

A.4. Since then, the Industrial and Vocational Training Board has made progress in many areas. It has begun, for example, to assume additional responsibilities for pre-vocational training, an activity which was not envisioned in its original mandate. Twelve pre-vocational training centers have been, or are being, planned and two are currently in operation. Training in jewellery has started and the initial courses have been expanded in response to industry demand. Technical assistance is being sought for training in printing, precision engineering and information technology. Training in electronics has already started, while plans are well advanced for the construction of a Hotels and Catering School at Ebene. A course has been held in fashion and design for the textile industry and consultants have reviewed the training needs of the sector. In footwear and leather craft, a new proposal has been submitted and consultants have reviewed both the needs of the sector and the training required. In addition, some 29 private training institutions have been registered by the IVTB and a system of trade testing has been established for some skills and about 100 tradesmen were tested last year. The pass rate (around 45 percent) indicates that the system was being introduced on a serious basis. The IVTB is also in the process of taking over responsibility for the Industrial Trade Training Centres at Piton and Beau Bassin, as well as other vocational training centers.

A.5. The private sector is benefitting from the grants paid for approved in-house training (up to 75 percent of costs), but the grant system currently in place is not yet transparent. For the IVTB training activities, the overall response from industry has been mixed. Where companies have taken advantage of the services of IVTB, the reaction and feedback are positive. Other companies manifest little interest in the training services offered by the Board and continue to rely on in-house training. Finally, several companies criticize the IVTB training strategy as being too generic and often more geared to small-scale, artisanal activities. This indicates the need to tailor IVTB training activities more to the needs of the more sophisticated and up-market manufacturers and to focus on quality assurance and specific trade skills improvement rather than on basic training. In addition, differential tax treatment for deductions of labor training expenditures tends to penalize non-certificate companies, thus distorting the incentives offered for training across sectors (see paragraph 2.74).

A.6. The Government's emphasis on increasing the productivity of labor through industrial and vocational training is entirely appropriate and it is strongly recommended that it be continued. However, it appears that, given the rapid and unforeseen growth in its mandate, the IVTB could risk becoming a major provider of training programs which are supply-driven, whereas they should be demand-driven. Thus, the IVTB's overall mandate needs to be more properly monitored and its responsibilities and activities prioritized. The identification of priority areas for training programs must be based on the fundamental concept that all training is initiated as a result of demand from the private sector, either in support of existing industries or new and emerging industries.

3

Agricultural Diversification

A. Introduction

3.1. The agricultural sector in Mauritius is currently undergoing fundamental changes. Domestically, the rapid pace of industrialization has resulted in increasing labor shortages, necessitating rapid movements towards agricultural mechanization. Internationally, the external pressures on EEC countries to liberalize, i.e., to reduce the levels of subsidies granted to EEC farmers, will eventually affect the trade regime of ACP countries, including Mauritius. Moreover, the growth of incomes in industrialized countries implies changing patterns of food consumption over time, with likely shifts to commodities with high income elasticities of demand such as fresh fruits and vegetables. The growth of the tourism and EPZ sectors also opens up many opportunities for agriculture. These developments will have far-reaching implications both for existing crops, such as sugar and tea, and new and emerging ventures, such as fruits, vegetables, aquaculture and horticulture.

3.2. These developments highlight the necessity and desirability of broadening the base of Mauritian agriculture by diversifying and moving into higher value-added, more profitable areas. Government will have a role in designing and implementing policies to make this transition as smooth and painless as possible. This chapter presents a selective menu of options and recommendations for consideration by Government. That being the case, it is not an attempt to present a comprehensive strategic framework for agricultural diversification, since the articulation of such a framework will necessarily require much more detailed analysis.

3.3. Until the last few years, agricultural diversification was mostly confined to the use of the interlines of sugarcane for growing food crops such as potatoes, onions, etc.[36] The objective was not so much to reduce the country's reliance on sugar for foreign exchange and income, but rather to encourage import substitution and increase the total returns to sugar land. This initiative has been very successful for a number of crops, the most notable being potatoes, while for others it has helped to reduce the dependence on imports to varying degrees. On the whole though, agricultural diversification was not regarded as a means of broadening the

---

36 See World Bank, *Mauritius: Managing Success,* A World Bank Country Study, November 1989.

country's export base, the one notable exception being anthurium (see paragraph 3.20). Prior to 1984, the Government was reluctant to allow exports of fruits and vegetables on the ground that this would reduce the supply to the domestic market. There is a greater appreciation now that, on the contrary, the stimulation of production for exports increases the domestic supply; this has already been observed with anthurium and fresh fruits.

3.4. Anticipating some of the changes outlined above, the Government has already embarked upon a program, through the Sugar Industry Efficiency Act of 1988, aimed at promoting agricultural diversification. The Act grants incentives to nonsugar agriculture similar to those given to EPZ industries, provides incentives for the use of sugar by-products, such as molasses and bagasse, and offers export duty rebates to sugar producers based on the extent to which they diversify out of sugar. As a result, within the sugar sector, increasing diversification is already taking place through crop rotation, interline cultivation, and more effective utilization of by-products. Moreover, sugar companies have set up several important agricultural diversification projects, including anthurium and deer ranching. Sugar funds have also provided the start-up capital for numerous industrial and tourism enterprises, and the technical and managerial expertise within the sugar sector has also facilitated the expansion of manufacturing. Outside sugar, export opportunities for fruits, vegetables, and flowers have been identified and exploited in Europe; these developments complement those within the sugar industry. At the same time, the rapid growth of the tourism and EPZ sectors has created a whole range of new opportunities which directly affect the allocation of land, labor, and capital in agriculture. These sectors are providing new opportunities for investment, diversifying the economy and making it more robust. In this changing environment, an additional role for agriculture could be that of an employment buffer for the extremely dynamic, and sometimes volatile, manufacturing sector.

3.5. One fundamental issue that the agricultural sector faces now is whether the traditional practice of promoting small holdings is in keeping with these changed circumstances; increasing farm size and the introduction of more capital-intensive techniques may be more appropriate at this stage. The Prime Minister's National Derocking Scheme and the Small Farmer Efficiency Scheme address the derocking and mechanization issues, respectively. While the Government is keenly aware of the vital role that smallholder agriculture will continue to play in the economy, efforts are already underway to consolidate the cultivated areas of smallholder farmers into Land Area Management Units (LAMU) in order to reap the benefits of economies of scale. In this connection, the Solitude LAMU-Drip Irrigation Pilot Project covering some 100 hectares is of particular interest. A Small Planters Efficiency Study is currently underway with the objectives of: examining the technical, economic, social and institutional constraints on small planter productivity; reviewing present government policies in relation to such constraints; and recommending an agenda for policy and institutional reform.

B. Existing Crops

Sugar

3.6. The importance of sugar and its numerous contributions to the Mauritian economy has been well documented in a number of reports.[37] Sugar, for a very long time, has been the backbone of the Mauritian economy, providing it with a vital source of income, employment, and foreign exchange. It is widely looked upon as the mainstay of the country, to be counted on as a secure source of foreign exchange earnings.

3.7. For several very good reasons sugar continues to be the principal crop of choice. First, Mauritius has some clear natural advantages for growing sugar. The climatic and soil conditions on the island are exceptionally well-suited to the cultivation of sugarcane, as evidenced by the fact that as much as 90 percent of the cultivable land is devoted to sugar. The sugarcane plant needs relatively little care and maintenance; for example, replanting is only required every eight years or so. Thus, it is favored by smallholders who grow sugar on a small-scale basis and use it to augment their incomes from full-time employment elsewhere. Sugarcane is also tolerant to cyclones; this greatly enhances its attractiveness to farmers, since Mauritius is periodically subjected to cyclonic activity. Second, the special prices for sugar negotiated periodically with the EEC in the context of the Sugar Protocol under the Lomé Convention have insulated the sugar industry from the effects of the levels and fluctuations of the world market prices. Third, the profitability of sugar has been further enhanced through the use of land between crop rotations and in the interline for the production of crops like potatoes and onions which are supplied to the local market. Fourth, over the years the Government has reinforced the natural advantages of Mauritius in sugar production through a number of supporting institutions. Sugar farmers are now offered a high degree of stability and security in terms of their incomes. For example, the Mauritius Sugar Industry Research Institute (MSIRI) is widely reputed to be among the best in the world; the Mauritius Sugar Syndicate is extremely efficient in marketing Mauritian sugar abroad; and the Sugar Insurance Fund Board insulates the farmers from adverse weather conditions, e.g., drought and cyclone. With most elements of risk eliminated, the industry has become remarkably stable in terms of production and income generation, making sugar an ideal crop for most farmers.

3.8. In the medium term, however, three factors will have a major impact on the sugar industry: limited potential for increasing efficiency and growth in sugar production; rising labor costs and the relatively low profitability of sugar compared

---

37 The World Bank, *Mauritius: Managing Success*, A World Bank Country Study, November 1989; FAO/World Bank, *Mauritius: Agricultural Diversification Project Reconnaissance Mission*, Report No 75/86 CP-MRI5, 1986; K.R. Chapman and D. Schoorl, *Tropical Fruits Study of Mauritius*, Australian Development Assistance Bureau, February 1986.

with the potential return from alternative uses of sugar land; and the future of the preferential price arrangement with the EEC under the Lomé Convention.

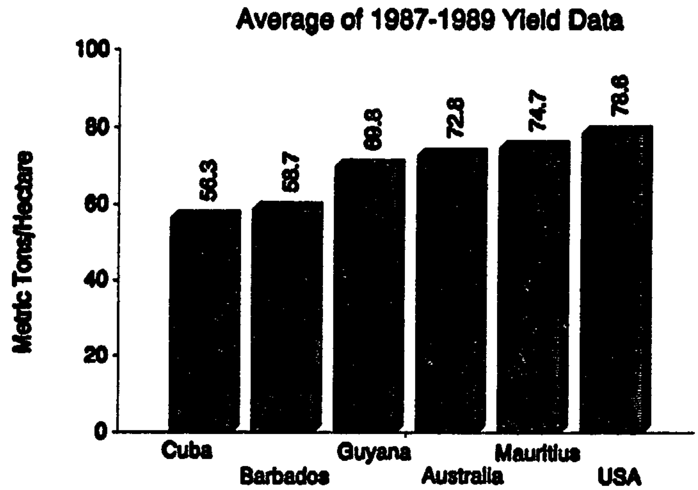
3.9. **Increasing Efficiency.** The sugar industry in Mauritius is a mature industry, with limited prospects for future growth and increased efficiency. Sugar production is already highly efficient by world standards, both in terms of cane production and milling, although there is still scope for improving the recovery at the mill level. Sugarcane yields, presently around 71 tons per hectare, are comparable to those in Australia, South Africa and the United States (see Figures 3.1 and 3.2). Similarly, the milling of cane is very well organized and efficient. While small planters' yields are approximately 15 percent below those of miller-planters in good years and about 25 percent below them in drought years, these figures can be almost entirely attributed to differences in land quality, the presence of rocks, and the effects of drought and limited irrigation. Stepping up extension efforts for better crop production methods is, therefore, unlikely to lead to substantial improvements and the prospects for major yield increases are by now limited. As mentioned above, the Small Planters Efficiency Study is expected to examine these issues in greater detail. Nonetheless, the returns from expenditures on improving efficiency in sugar production are likely to be very limited. Further improvements, for example through derocking and irrigation, are uneconomic at prevailing sugar prices on the world market. Although they should be seen as part of a long-term strategy to release land and generate water for the production of crops which have higher economic returns than sugar, in the short-to-medium term, they do allow increased sales of special and white sugars, reduce the burden on the Sugar Insurance Fund, ensure a steady supply of bagasse to electrical power stations, and enhance food crop production.

3.10. One positive way in which the sugar industry is increasing its efficiency and diversifying its revenue base is by enhancing the utilization of sugar by-products, as was stressed by the Sugar Action Plan adopted by the Government and the sugar industry in 1985. Bagasse, the fibrous material contained in sugarcane, has traditionally been used by sugar factories to generate steam for crushing cane and manufacturing sugar. It is a domestic renewable source of fuel, with few, if any, alternative uses, which currently supplies about 15 percent of the national electricity supply. There is considerable potential that this contribution could be raised significantly.

3.11. The main constraint to the development of energy from bagasse has been an inadequate regulatory framework governing the purchase of electricity by the Central Electricity Board (CEB) from co-generators of power in the sugar sector. Efficient energy pricing, the establishment of appropriate contractual arrangements between the public power utility (CEB) and private sector industrial co-generators, and the establishment of a Bagasse Energy Fund for investment support and technology development are key elements of the Bagasse-Energy Development Program now being implemented. The optimization of the use of bagasse will also allow the sugar factories to be modernized.

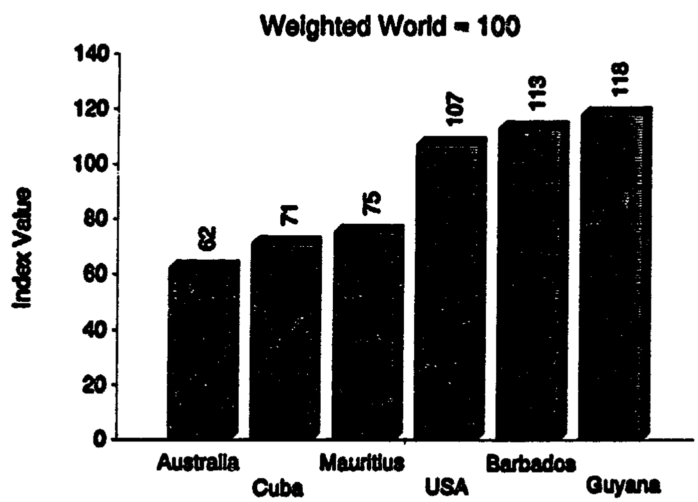
3.12. **Labor Costs.** Rising labor costs reflect new employment opportunities in the EPZ and tourism sectors, away from the hard manual work in the sugar sector. Seasonal labor is becoming increasingly hard to find and is generally considered

Figure 3.1: Comparison of Sugar Cane Yields



Source: Food and Agricultural Organization database.

Figure 3.2: Comparison of Sugar Production Costs



Source: Brown, The International Sugar Industry.

to be unreliable. The situation mirrors that in Australia during the 1950s when European immigrant labor was used to cut cane. As the Australian economy developed, there was no option but for the cane industry to adopt mechanization in order to remain competitive; a prerequisite for mechanization is a properly derocked field. Following derocking, land preparation can be undertaken by whell tractors instead of crawler tractors, which results in cost savings. Mechanization is increasingly being adopted in Mauritius, with approximately 50 percent of loading already being done mechanically, although most of the cane is still cut manually. About 50 percent of the sugar land currently in use is considered suitable for mechanical harvesting and loading when derocked. There are several disadvantages of increased mechanical harvesting, however, including some reduction in yield (by up to as much as 10 percent in some regions of the super-humid zone), largely as a result of the compaction of the ground, and the increased cost of land preparation and planting. Sugar profitability is presently estimated to be in the range of Mau Rs 10,000 per hectare, down from about Mau Rs 12,000 in 1985,[38] owing to the higher labor costs in the face of stable prices. The use of land between crop rotation and in the sugar interline for the production of potatoes, onions and other crops can improve the profitability of sugarcane production to about Mau Rs 17,000 per hectare. The decline in the profitability of sugar production, coupled with an increase in mechanization, should result in a gradual release of sugar land for alternative uses with prospects for higher returns; this applies especially to land that is sloping or rocky, that is, land that is unsuitable for mechanization.

3.13. **Preferential Prices.** Most of the output of the sugar sector is exported and hence earnings depend crucially on conditions in the export markets, by far the most important of which is the EEC where over 80 percent of Mauritian sugar exports go. Mauritius has a large quota (507,000 metric tons) with the EEC through the Sugar Protocol, which is annexed to the Lomé Convention but can outlive it, and has benefitted from an EEC price which is related to the price guaranteed to EEC beet producers. The EEC price for Mauritian sugar has in fact been about three times the free world market price during the past few years.[39]

3.14. Given the close economic, political and social ties between the EEC and the ACP, there appears to be a consensus among the parties to the Sugar Protocol that it is here to stay. This notwithstanding, Mauritius' continued dependence on sugar leaves it vulnerable to adverse changes in the terms of the Sugar Protocol. With pressures within the Community to contain its budget, and strong external opposition to EEC agricultural subsidies, questions could arise with respect to its internal pricing policies for sugar and hence the price paid to ACP sugar exporters.

---

38 See Chapman and Schoorl (1986).

39 The World Bank, *Managing Success*, November 1989. It is important to note, however, that the world market in sugar is a residual one, accounting for only about 15 percent of world production, thus making the world market price an imperfect yardstick for measuring production efficiency.

Thus, while continuing to take full advantage of the Protocol, it would nevertheless be prudent for Mauritius to be prepared for a much less favorable environment for its sugar exports. As sugar resources are gradually redeployed in nonsugar agriculture or outside the agricultural sector altogether, efforts should simultaneously be put into finding ways to maintain its earnings from sugar by taking maximum advantage of the Sugar Protocol, improving efficiency in sugar production to the extent possible, and taking advantage of opportunities for sales in special sugars especially in non-EEC markets.[40]

Tea

3.15. Tea is the second most important cash crop in Mauritius after sugar. In 1989, tea value added amounted to approximately Mau Rs 84 million, or about 2.5 percent of the value added of the agricultural sector and about 4 percent of the value added of sugar.[41] Tea is grown in the super-humid to humid zone (3,000-5,000 mm of rain per annum) on humic acid soils, which are very prone to erosion. Since very few alternative crops can be grown in such an environment, tea represents the best use of land under these conditions. It is also not affected by cyclones and is a good soil stabilizer. Potential alternative crops, such as timber, do not give returns which are as high as tea, are more vulnerable to cyclones, and do not protect the soil as well.

3.16. The tea industry has been under intense pressure to restructure because of its low profitability. Mauritius produces a low-to-medium quality of tea which is not competitive given existing world market prices. The plantations are very capital-intensive to set up, owing to the cost of preparing the ground and planting, the investment in building drains, roads and other equipment, and the waiting period before the crop starts producing. The profitability of a tea planter's plot is about Mau Rs 10,000 per hectare (see Table 3.1) compared to average earnings of about Mau Rs 12,500 in other sectors of the economy. As a consequence, there has been a gradual reduction in the area under tea production.

3.17. Other crops which could be grown on the soil presently used for tea include citrus fruits, bananas, passionfruit and guava. Of these, citrus (in particular, mandarins) shows the most promise. Citrus is well adapted, so long as sound, clean planting materials (rootstock, scions and virus-free planting trees) are used. The biggest advantage of citrus is that it can be interplanted with tea without sacrificing tea yields. It can also be planted where tea has died out or where boulders are too numerous. The economics of citrus production is shown in Table 3.1. The returns per hectare of citrus on tea land are estimated to be about Mau

---

40 *Ibid*, pp. 29-32.

41 The tea industry has been described in some detail in the following documents: FAO/World Bank, *Mauritius: Agriculture Diversification Project Reconnaissance Mission*, Report No 75/86 CP-MRI5, 1986; *Mauritius: Tea Board Annual Report*, 1987; *Mauritius: Chamber of Agriculture*, Annual Report, 1988-89.

Rs 16,000 which, together with Mau Rs 10,000 from tea, can provide the tea planter with a viable income. Citrus interlining with tea is, therefore, quite profitable and can help to make the whole tea industry more viable. In this connection, it should be mentioned that about 90 arpents of unutilized land in tea areas at Plaine Sophie and Chartreuze have been granted to small tea planters for foodcrop and citrus production.

Table 3.1
MAURITIUS: Tea Statistics
1989

Criteria	Units	Value
Tea Production		
Tea land	Hectare	3,070
Production	Black Tea, Million Kg	5.5
Local Consumption	Black Tea, Million Kg	1.1
Local Value	Million Mau Rs	45.0
Price	Mau Rs/Kg FOB	19.4
Export Earnings	Million Mau Rs	89.8
Tea Industry Value, Domestic + Export	Million Mau Rs	134.8
Citrus within Tea Plantation		
Domestic Citrus Consumption[a]	tons	1,250
Production per Hectare	tons	10
Hectares for Domestic Consumption	Hectare	125
Hectares Tea Land (capacity = 1/3 average	Hectare	375
production)	Mau Rs/Kg	30
Prices	Mau Rs/Hectare	300,000
Returns (if in citrus alone)	Mau Rs/Hectare	100,000
Returns to Tea Plantation (1/3 average production)		
Total Returns for Tea Industry (Hectare x returns/Hectare)	Million Mau Rs	37.5
Profitability (Tea Planter/Hectare)		20,000
Gross Returns from Tea	Kg/year/Hectare	8,000
Leaf Production	Mau Rs/Kg	2.5
Price	Mau Rs	10,000
Costs - Rent, Fertilizer, Labor, Transport, etc.		
	Mau Rs	10,000
Profit: Tea	Mau Rs	16,000
Profit: Citrus	Mau Rs	26,000
Profit: Tea and Citrus Combined		

[a] *Based on a per capita consumption of 0.25 kg per week.*

Source: Ministry of Agriculture, Fisheries and Natural Resources

3.18. The major limitation to realizing the profits from citrus interlining is the shortage of clean citrus trees for planting since the Ministry of Agriculture, Fisheries and Natural Resources (MAFNR) has insufficient funds to produce the number of trees required. In order to get this industry started, consideration should be given to privatizing nurseries operating under government supervision. Trees currently cost about Mau Rs 10 each and the returns would justify even higher costs of planting.

3.19. A strategy of improving tea quality, reducing the costs of harvesting through increased use of mechanization, and interline production of citrus will boost profitability to the tea farmer considerably. A pilot project on mechanization has already been started on some 60 arpents of land at Petit Merlo. With the introduction of proper management, tea quality can be upgraded to medium-to-high quality, which could result in a price increase of about 40 percent. Proper management would involve correct leaf plucking, prevention of leaf damage during harvest handling and transport, and ensuring that various steps, such as withering, processing, fermentation, drying and grading are correctly performed. This is an area where government intervention, aimed at educating tea planters in production techniques, interline citrus cropping and post-harvest technology, can yield considerable dividends. If world prices continue to improve, the prospects for the tea industry will become even better. Another fundamental problem that will need to be addressed is that of re-organizing the parastatal tea company and redefining its relationship with smallholders. One advantage of the tea plantation is that it can be neglected for several years and subsequently rehabilitated when prices are high or labor costs are low because of high unemployment. Careful consideration should therefore be given before tea plantations are eradicated because such resilient industries are few in number and tea land should be considered a long-term asset. The tea sector rehabilitation plan was launched in July 1991 with the help of a team of consultants from India.

C. New Directions

Fruits, Vegetables, and Cut Flowers

3.20. The topography of Mauritius is such that rainfall, humidity, temperature and wind are widely variable, thus providing a range of microclimates and general climatic zones conducive to the production of a large variety of tropical fruits and vegetables. A number of studies and reports have documented Mauritius' export potential for horticultural products.[42] These provide an excellent overview of the potential for cut flowers, such as anthurium, as well as fruit and vegetable exports. That such potential exists is evident from the fact that fruits and vegetables almost

---

42 K.R. Chapman and D. Schoorl, *Tropical Fruits Study of Mauritius*, Australian Development Assistance Bureau, February 1986; Food and Agricultural Research Council, *Mauritius: Seventeen Ad Hoc Committee Reports on Agricultural Research and Experimental Work*, 1987; J. Monty, *Fruit Production Committee First Report*, Ministry of Agriculture, 1989; Chambre d'Agriculture de l'Ile Maurice, *Séminaire sur l'Exportation et la Transformation des Products Agricoles Frais*, 1988; Institut de Recherches sur les Fruits et Agrumes, *Mauritius: Onzième Commission Mixte Franco-Mauricienne Projet de Développement Fruitier*, Réunion, May 1989.

doubled in production and value between 1985 and 1989 and anthurium production increased by about 60 percent, with a three-fold increase in returns, over the same period. Between 1986 and 1989, the volume of fruits and vegetables airlifted by Air Mauritius increased by more than four-fold, while that of cut flowers nearly tripled. The share of flowers, fruits and vegetables in agricultural value added is already in excess of 10 percent. By far the largest destination for the export of these products is Europe, which accounts for about 70 percent of the total value of exports, with small quantities of vegetables going to Réunion and a few other recently discovered markets.

3.21. Given the prominence of the sugar industry in Mauritius, there is sometimes a tendency to consider the objectives of agricultural diversification to be at odds with the continued well-being of the sugar industry. In fact, sugar, fruits, vegetables and flowers when combined effectively can form an industry grouping with mutually reinforcing elements. This synergism comes from making better use of land, increasing overall economic stability (as when one crop fails and another takes its place), better labor utilization and a broadening of the technical skills base. Fruit tree orchards can co-exist with sugarcane, thereby enhancing economic rates of return, particularly when marginal lands (steep slopes and rocky land) are used for orchards. A similar situation already exists for vegetable crops which are grown on rotational land between cane crops and in the sugarcane interlines. The practice of rotating sugar and vegetables improves yields through better fertilizer use, as well as improved pest and disease control. Irrigation and derocking also become profitable when both sugar and vegetables are grown, whereas this may not be the case when sugar is cultivated on its own. Similarly, there is also no conflict between sugar and flower crops like anthurium, as developments over the past few years have shown. The marketing of anthurium is now well established and this industry provides a model for developing other horticultural industries. Other flowers, such as orchids and heliconia, can also be grown which will help give the flower industry a broader base. The financial and technical support provided by the Government to small planters in this sector has been remarkable and should be emulated.

3.22. At this stage, it is not yet clear which particular fruits and vegetables might be the most suitable ones for Mauritius to develop. Table 3.2 compares the potential profitability of pineapple, papaya, litchi, mango and anthurium with that of sugar. These are crops that already thrive in Mauritius and have been successfully supplied to the tourist market; they are used here merely as examples of what may be possible. The figures on profitability per hectare have been calculated on the basis of yield and cost of production data collected by the Ministry of Agriculture, Fisheries and Natural Resources (MAFNR) and by the Institut de Recherches sur les Fruits et Agrumes (IRFA), Réunion, as part of a 1989 study on the prospects for Mauritian horticultural exports. Information on export prices has been taken directly from the weekly price information bulletin of the Europe-Africa-Caribbean-Pacific Liaison Committee (COLEACP). Anthurium profitability has been estimated on the basis of a Food and Agricultural Research Council (FARC) report issued in 1987; it is likely to be underestimated for 1990.

Sugar profitability has been calculated from estimates of costs of production and sugar prices provided by the Mauritius Chamber of Agriculture. The comparison suggests that the alternative crops have potential profitability levels which are many times that of sugar. Given the poor database, however, these numbers need to be treated with caution. In effect, they indicate what might be possible under certain ideal circumstances, which do not as yet exist. In particular, the cost estimates are likely to underestimate the costs of collecting, preserving, transporting and marketing the fresh produce. Moreover, export prices might be overstated by not adequately taking into account product quality, the reputation of the supplier in the market place, and quantity supplied. Despite these data limitations the numbers suggest that the potential exists for the export of fruits and flowers; this potential should be explored in greater detail.

Table 3.2
MAURITIUS: Approximate Crop Returns
(Per hectare)

	Pineapple	Papaya	Litchi	Mango	Anthurium	Sugar
Yield, Metric Ton	40	30	15	15	..	..
Costs[a]:						
Production	2.56	3.08	2.22	3.17	..	..
Freight/Packaging, etc.	18.00	18.00	18.00	18.00	..	..
Total Cost	20.56	21.08	20.22	21.17	..	..
Export Market Price[a]	45	44	68	47	..	..
Profit[a]	24	23	47	26		
Profit per Hectare, Mau Rs	960,000	690,000	705,000	390,000	318,000[b]	10,000[c]
Profit-Ratio, Crop to Sugar	96	69	70	39	31	1

Note: Prices are from. 'EACP November, 1989; Litchi - Average for Mauritius; Pineapple - Réunion (Victoria variety); Papaya - Côté d' Ivoire; Mango - Kenya.

[a] *Mau Rs per Kg. These figures should be treated with caution, given the poor database and the underlying assumptions.*
[b] *Anthurium profitability - Food and Agriculture Research Council (1987).*
[c] *Sugar profitability - Estimate, Mauritius Chamber of Agriculture.*

Source: MAFNR, COLEACP, IRFA, etc.

3.23. For this significant potential to be realized, there are several constraints, real and perceived, which could usefully be addressed jointly by the Government and the private sector. These relate to the successful production and marketing of fresh fruits and vegetables and include the availability of land, research and development, periodic occurrences of cyclones, the presence of fruit flies, and transportation.

3.24. **Availability of Land.** Land is generally regarded as a major constraint to the expansion of fresh fruits and vegetable production. While there is recognition of the fact that orchard-scale development is necessary if the horticultural or fruit and vegetable export industry is to take off, it is widely believed that there is little agricultural land left for developing such large-scale orchards. Moreover, there is evidence that existing agricultural land is already being lost to other uses such as tourism, EPZ companies, urban development and speculation at an annual rate of about 500 hectares, or 0.6 percent of the total land area.

3.25. While it is true that Mauritius does not possess vast quantities of land like some of its potential competitors, land is far from being a binding constraint for Mauritius at this stage. As mentioned above, the labor shortages, which have emerged during the last few years, will necessitate an increase in mechanization which will gradually release sugar land for other purposes, including orchard development. This will be specially true of sugar land which cannot be mechanically harvested, in particular steep slopes and rocky soil. To deal with the land constraint, Mauritius can also turn towards some of its neighbors within the Preferential Trade Area (PTA). Just as the labor constraint has prompted Mauritian entrepreneurs to set up industries in neighboring Madagascar, Mauritian agriculture might usefully explore the agricultural potential of some neighboring countries, for example Madagascar and Uganda, which can provide exceptionally fertile land. Mauritian entrepreneurs in turn can offer their marketing know-how and reputation for which they have come to be known over the years. The macroeconomic environment and investment climate in several neighboring countries are steadily improving, which should make such collaborations increasingly feasible.

3.26. **Research and Development.** Research and development (R&D) efforts in Mauritius have traditionally been narrowly focussed, with little or no integration of research findings. There is a widespread feeling among staff of research organizations that the research conducted is not directly relevant to the present development needs of Mauritius and that the focus of much research is on isolated issues, problems and experiments. Consequently, there is a need for shifting emphasis to areas such as increasing productivity, marketing, and environmental issues. This implies that a new approach towards conceiving and conducting agricultural research is warranted. Efforts are already underway to reorganize nonsugar-related research under an Agricultural Services and Management Project financed by the World Bank.

3.27. Research organizations need to take into account the structural changes taking place in the economy and be receptive to new ideas in order to be effective. The industrialization of Mauritius is forcing agriculture to adapt. In addition to providing the traditional support to small planters, this means that R&D will need to devote increasing attention to some of the new crops which show promise and assist in the development of systems and management packages for the newly emerging agricultural businesses. Accordingly, funding sources for agricultural research, which are fairly limited at present, will need to be augmented. Funding sources could include government grants, special allocations by statutory authorities, industry levies, donations and foreign aid. Additionally, services of research organizations could also be marketed more effectively, for example, by the sale of books, seminars, courses and consultancy. Funding should encourage research officers to document research proposals, be responsible for the research, provide adequate funding to carry out the work, and encourage greater independence. Government funds should be used to fund basic infrastructure, such as computing, office equipment, library books, journals and electronic media aids. At present, 96 percent of funds go to staff salaries, leaving little for the support of research activities. Research managers should also focus attention on more long-term issues where the pay-off may take longer to realize.

3.28. Research can be usefully carried out in a number of areas: production of seeds, the optimal plant varieties and breeding techniques; orchard management, including grafting and pruning techniques to reduce the vulnerability of the trees to cyclones; the proper post-harvest handling and packaging for the various fruits and vegetables; and pest control. One of the most important areas for research and development at this stage is tissue culture which provides a rapid and safe means of introducing large quantities of high-yielding, disease-resistant varieties. The use of tissue culture requires modern research facilities, as well as supporting infrastructure such as conditioning stations.

3.29. **Degree of Care and Cyclones.** Another constraint which presents a problem is the high degree of care that is necessary for horticultural plants, particularly when compared with the minimal demands placed by sugarcane, and the specter of calamitous losses during a cyclone. The risk associated with such losses has presumably been a major hindrance to the development of a large-scale horticultural industry. Mauritius is located in a region which experiences tropical cyclones fairly regularly; the frequency has been about one cyclone every two years since 1876. Wind speeds from cyclones in Mauritius between 1876 and 1983 have ranged between 48 and 130 km/h, with the majority between 60 and 70 km/h. Every 50 years or so 3-second gusts of 240 km/h are experienced, while 3-second gusts of 275 km/h can be expected every 100 years or so.[43]

3.30. Against this background, it should be pointed out that sugarcane, which is considered to be tolerant to cyclones, is itself nevertheless affected once every ten years or so by yield reductions of up to 50 percent as a result of cyclones. Furthermore, there are a number of strategies available to minimize the damage from cyclones, including orchard planting, proper selection of tree type, pruning, and the creation of artificial or natural windbreaks, for example, trees and other natural shelters. Close orchard planting with micro-irrigation would enable tree crops to come into production within three years, giving early production and returns. Selecting fruit trees which are tough, pruning them to reduced height and allowing wind to pass through the tree canopy can minimize damage. Windbreaks should ideally allow 30 to 70 percent of the wind to pass through; the idea is to

---

[43] Meteorological Office, *Mauritius: The Climate of Mauritius*, 2nd Edition, 1984.

create turbulence to dissipate the energy of the wind. Windbreaks not only serve to reduce cyclone damage, but also retard the spread of pests and diseases and wind blemish on the fruit. They should therefore be seen as part of the overall strategy for orchard management.

3.31. The Government, together with organizations like the Food and Agriculture Research Council, can establish small test blocks where alternative strategies of dealing with cyclones can be tested. Within the test blocks, anemometers (wind speed measuring devices) can be set up to measure wind speed within the tree canopy. The anemometer readings give a direct measure of the effectiveness of the various windbreak strategies. Similar measurements should be made on building structures used for anthurium and orchids. Cyclones or hurricanes are a common phenomenon in many fruit-growing areas, e.g., Bowen, Queensland, where mangoes are grown, and Florida where citrus orchards abound. The approach adopted in Mauritius should be one which emphasizes damage control in the event of a natural disaster. This can best be achieved by studying what is done in similar circumstances in different parts of the world, that is, studying windbreak research, experimenting with the best findings known and measuring the results. The Government could also examine the possibility of establishing an insurance scheme, similar to that in the sugar industry, to remove some of the uncertainty associated with horticultural development.

3.32. **Fruit Flies.** The presence of fruit flies in Mauritius is a major impediment to the entry of fruits and vegetables into European and other markets. Thus, the significance of fruit fly eradication in fruit and vegetable export development has long been recognized. Several important studies have been conducted in Mauritius on how to deal with the fruit fly problem and excellent work has been done on collecting information on fly species, fly biology, population dynamics and dispersal.[44] There is now a very good understanding of the land, climate, food, fly biological-ecological relationships and the population dynamics in relation to all these factors. A further series of studies aimed at integrated pest management is also underway at the MAFNR. Effective management of the fruit fly problem requires the integration of all of this information. The fruit fly situation is complex and reflects the various interactions over time and space between the many species of flies, the numerous sources of food supply, and variations in the weather. It is necessary, therefore, to get a dynamic picture of what is going on by analyzing all the information available.

3.33. Before intervention strategies to deal with fruit flies can be designed, they need to be modelled for their effectiveness, cost and future benefits. These intervention strategies, such as the release of sterilized males, genetic sabotage,

---

44 B.S. Fletcher, *Report on an Assignment on Mauritius Fruit Fly Situation*, International Atomic Energy Agency, October 1987; C. Hammes, *Projet de Lutte contre la Mouche du Natal, Pterandrus Rosa, à l'Ile Maurice*, Ministry of Agriculture, Mauritius, October 1982; Ministry of Agriculture, *Mauritius: Fruit Fly Project - Position Paper*, July 1989; R. Soonoo, *Ecological Studies of Natal Fruit Fly in Rodrigues*, Ministry of Agriculture, 1989.

trapping, and baiting, tend to be very expensive and should not be undertaken unless the success of the intervention strategies has been accurately modelled and the results have been analyzed and evaluated. One of the major constraints in doing this in Mauritius is that it is not yet possible to integrate the information available and show what is happening at any point in time, making it difficult to evaluate the management options that might exist. What is needed is the establishment of a suitable database which can then be analyzed using software systems such as the Geographic Information System (GIS).[45] Such systems enable the integration of various components, such as space, attribute, process, and time, to give a dynamic picture of what is happening to the fruit flies. Intervention strategies either for control or eradication can then be modelled for effectiveness over the island. The benefits of dealing with the fruit fly problem within such a framework can be substantial. Effective use of fruit fly modelling technology can provide Mauritius with a unique opportunity in which the country can design effective fruit fly intervention strategies which can then not only be used domestically by the agricultural sector, but also packaged and sold to neighboring African economies, several of which are experiencing similar problems with pestilence.

3.34. **Transportation.** Given the distance of Mauritius from major markets and the perishability of cut flowers, fruits and vegetables, transportation is clearly a vital ingredient in the development of export markets. All fruits, vegetables and cut flowers are currently transported by air. It is a quick method of transportation and most markets can be reached easily in this way. Table 3.3 gives the tonnage of produce airlifted during 1986-89 by Air Mauritius which commands about 45 percent of the total market share, with most of the remainder going to Air France. The figures show a steady growth of cut flower exports and rapid but somewhat erratic growth of fruits and vegetables.

3.35. One problem with cut flower exports is their low weight in relation to volume; only 60 percent of the permissible weight is used up for a given volume. This increases the cost per unit of weight. Moreover, given the variability in production, space requirements for fruit and vegetable exports have fluctuated widely, making planning difficult, although Air Mauritius confirms that cut flower exporters are very professional and book their loading requirements well in advance. Some of the production-related problems encountered include adverse climatic conditions affecting the volume of production, bans on exports, non-payment for exports, robbing of orchards, and damage in packaging. Table 3.4 shows that there is considerable excess air cargo space. If two-way loading can be organized, that is, from Europe to Africa and Mauritius and vice versa, then cargo planes could be organized to transport more produce. At present, there is too much unused capacity to warrant additional service.

---

45 This would be done using the necessary software, for example Arc Info and SPANS.

Table 3.3
MAURITIUS: Perishables Airlifted by Air Mauritius
(Tons)

Season	1986	1987	1988	1989
		Cut Flowers		
January - June	43.8	65.8	106.0	110.0
July - December	47.5	89.1	97.1	153.0
		Fruits and Vegetables		
January - June	47.6	51.3	505.4	475.6
July - December	67.5	72.6	255.8	140.0
Combined Total	206.4	278.8	964.3	878.6

Source: Air Mauritius.

Table 3.4
MAURITIUS: Unused Air Capacity ex Mauritius 1989
About 80% to Europe
(Tons)

Month	
January	424.5
February	477.0
March	255.0
April	286.5
May	722.7
June	341.7
July	373.8
August	351.6
September	262.5
October	394.2
November	419.4
December	456.9
TOTAL	4,765.8

Source: Air Mauritius.

3.36. Further, the costs associated with air transportation can be very steep. At present, passengers and courier rates are some 10 to 20 times greater than produce charges and are being used to subsidize the freight costs of fresh produce, keeping the commodity rates for perishable products very low in comparison to other charges (see Table 3.5). The industry, therefore, needs to give careful consideration to the potential of sea transportation to Europe for those products which do not deteriorate rapidly. Sea transport is more suitable for shifting large commercial tonnages - the costs can be from one-third to one-half that of air transport, unlimited tonnage can be shifted, i.e., up to 8,500 tons per reefer container ship, and shipments can be scheduled as required. Trial shipments could be made by containerized sea transport to familiarize Mauritian exporters with this method. This could be done with existing shipping routes, for example, from Mauritius to Livorno, Italy. Container trials could be done with Victorian pineapples, small Mauritian bananas, litchi, mangoes and melons. From these trials, the pre- and post-harvest management necessary to control the quality and perishability of produce can be determined. Post-harvest treatment, packaging and good temperature control are essential. For example, for litchis, post harvest dipping in a hot benlate solution, packing in punnets with a plastic overwrap, combined with precooling, can extend the shelf life of this crop to about four or five weeks, with the fruit still retaining its red color. Similarly for mangoes, post-harvest dipping in hot benlate solutions, drying, and washing to remove sap stains, combined with precooling, controlled atmosphere storage and subsequent ripening, can pave the way for exporting this crop by sea.

Table 3.5
MAURITIUS: Cost of Air Freight from Mauritius to Europe
(Mau Rs)

Commodity	Mau Rs/Kg
Flowers	20.0
Vegetables	15.0
Fruit	15.0
Clothing	22.4
Passengers	266.2
Courier Parcels	350 - 500

Source: Air Mauritius

3.37. Some new developments in transport also need to be considered to retard deterioration in quality. Air ride suspension trucks are now being introduced in several produce-exporting countries for the haulage of fruit; these offer much better ride characteristics when the vehicle is partly laden. An additional benefit is that the vehicles require less maintenance, last longer and are cheaper to operate. Pallet handling with well-designed plastic crates or bulk bins would also mean less damage from manual handling. Estimates indicate that handling damage, i.e., the bruising and cracking of fruit, is 15 times greater for manual handling than when pallet handling and forklifts are used.[46] Temperature management in transit is

[46] J.E. Holt and D. Schoorl, *Fruit Packaging and Handling Distribution Systems: An Evaluation Method*, Agricultural Systems 7, 3, pp. 209-218, 1981.

also important and new curtain-sided trucks, which protect the product from the weather, offer not only ease of loading and unloading but also better environment control to maintain produce quality.

3.38. In addition to the constraints already listed, there are a number of other difficulties faced by entrepreneurs, for example, the lack of a constant supply of produce, export shipments competing with domestic supplies, and so on. These are largely growing pains which will resolve themselves once fruit orchards and commercial vegetable production are established and markets for out-of-season produce are found. In the meantime, it is clear that some experimentation will be required to find out which products are most suited to Mauritius' conditions. The most successful role models for fruit exporters for Mauritius to follow are Delmonte, Dole, Chiquita, Geecht, and South African and Israeli exporters. All of these organizations use shipping extensively, and have good quality control, market intelligence and management. A joint venture with any one of these companies to get capital, technical and management expertise might be worthy of consideration.

Deer Farming

3.39. Deer farming and ranching is a comparatively new industry which developed in Mauritius during the late 1970s and which complements the extensive presence of wild deer in the forests. The intensive raising of deer commenced in 1976; the management of deer is now sufficiently well understood that a new industry is emerging. There are now nine deer farms, utilizing 400 hectares, with about 10,000 head of deer being extensively managed in natural forests and grasslands and receiving supplementary feeding in the dry season. Deer farming is being carried out under an integrated plan which makes the best use of economic resources and the land and its natural beauty. Hence it can provide the basis for a new tourist industry which takes advantage of inland scenery and deer hunting, complementing the traditional tourist industry which relies primarily on beaches.[47]

3.40. The economics of the industry are not yet clearly understood since a number of management issues are still being studied. The major factors which will affect the development of the industry are: a) breeding and selection; b) fawning and weaning percentages, where there is room for improvement; c) feeding in the dry season, using a mixture of molasses, bagasse, mineral supplements and cottonseed meal; d) the need to reduce the high costs of fencing through the use of electric fencing; e) pasture, forest and ground cover management to prevent overgrazing, land degradation and parasite buildup; and f) disease eradication.

---

[47] Several articles have been written documenting the development of this industry. These include: J.A. Lalouette, "Deer Farming in Retrospect and in Prospect", *Prosi*, 240, Mauritius, January 1989, pp. 24-29; R.M. d'Unienville, *Cervus Timorensis Russa, Une Briève Note sur le Cerf*, Mauritius Report; Jean Li Yeun Fong, "Un Bref Survol des Activités de la Mauritius Meat Producers' Association", *Prosi*, February 1990, pp. 42-46.

3.41. Fong (1990) documents the rapid expansion in trade in deer carcasses and live animals from Mauritius, from 350 in 1986 to 1,400 by 1989. Preliminary estimates indicate that the economic returns from deer farming could be between Mau Rs 3,000 and 5,000 per hectare. With continuing improvements in institutional arrangements and management practices and with the development of new markets for live deer, hides, antlers, and venison, it appears likely that the returns will continue to improve.

3.42. These developments complement the deer-hunting industry which has no room for expansion and is limited to a harvest of about 10,000 head annually. The naturally hunted deer is limited to a seasonal shoot and consequently venison is either in glut supply or not available, since freezing facilities are as yet limited. The ranching and farming of deer can even out the venison supply and this provides the basis for a promising livestock industry. Deer farming naturally complements the sugar industry since it uses the more marginal land and climatic regions, as well as sugar by-products (molasses and bagasse). The industry also has great prospects for assisting inland tourist development through the promotion of stag shoots and related tourist activities.

D. Proposed Action Plan

3.43. This chapter offers a few preliminary ideas for consideration; it does not give a comprehensive strategy for agricultural diversification in Mauritius. Nevertheless, the conclusions are that a number of actions might be considered by Government to put Mauritius on the path towards increased profitability and increased diversification in agriculture. As outlined above, despite the island's potential, there are at present several constraints which require government intervention.

3.44. **Fruits, Vegetables, and Flowers.** In this area, further work is required to determine the kind of government support necessary to enable this emerging industry to take off. Such support is no more than what has been provided to the sugar industry over the years. Such work would entail dealing, in some detail, with issues related to orchard development, new varieties suitable for export, trial shipments by sea, market analysis and the institutional support necessary, e.g., insurance fund, marketing intelligence, etc. There is need for an in-depth demand analysis, keeping in mind the strong competition that countries like Kenya, Ghana, and Zimbabwe offer, so that Mauritius can carve out a suitable niche for its products. Further, a material handling and packaging committee needs to be formed to study and make recommendations on the standardization of pallets and returnable crates. Given the potential threat of cyclones, studies also need to be carried out on modelling windbreaks for orchards and flower shade houses, orchard layout, tree size and pruning, and natural shelter.

3.45. **Tea.** In the tea industry, economic returns could be improved through restructuring, improving tea quality, and making maximum use of the land by interlining tea plantations with complementary crops like citrus. At the same time, studies could be undertaken to determine the potential for the mechanical harvesting of tea. For example, the tea industry might derive lessons from North Queensland, Australia, where the industry is highly mechanized and profitable.

3.46. **Fruit Flies.** Fruit flies pose a serious threat to both domestic and export produce. It is therefore recommended that a fruit fly information system be set up by the Government so that fly intervention strategies can be modelled and eradication strategies implemented.

3.47. **Deer Farming.** It is recommended that the deer industry be given livestock support funds for investigating breeding, management techniques, new markets and the potential for agro-tourist development.

4

Manufactured and Service Exports

A. Background

4.1. Manufactured exports have brought about a structural transformation of the Mauritian economy which, until a few years ago, was a mono-crop economy wholly dependent upon sugar for its merchandise exports. The combination of political stability, a greatly improved macroeconomic environment, a large pool of educated, highly trainable workers, and generous fiscal incentives enjoyed by the Export Processing Zone (EPZ) attracted foreign investors who flocked to Mauritius to take advantage of the tremendous benefits from its association with the European Economic Community through the Lomé Convention.[48] Between 1980 and 1990, there was a five-fold increase in the number of EPZ companies as investors from France, Germany, Hong Kong, the Netherlands and Singapore sought the preferential access into European markets. During this period, employment in the EPZ grew from approximately 21,000 to well over 88,000 (Table 4.1). Between 1984 and 1991, value added increased at an annual average real rate of 17 percent. From around 20 percent unemployment in the early 1980s, EPZ growth has enabled Mauritius to achieve full employment. The EPZ now accounts for over 65 percent of gross export earnings, 30 percent of employment, and its share of GDP has risen to well over 11 percent in 1991, compared with 4 percent a decade earlier.

4.2. However, it is interesting to note that, within the EPZ sector itself, more than 85 percent of employment is in apparel manufacturing. This underlines the fact that growth of the EPZ sector during the past few years has been generated by the absorption of more and more workers into labor-intensive manufacturing, primarily of apparel. In other words, Mauritius has achieved its spectacular economic success primarily by absorbing the available slack in the labor market into labor-intensive export manufacturing. With full employment now achieved, this engine of growth is no longer available. Consequently, the fundamental issue which now needs to be addressed is what the new engine of growth will be. If manufactured and service exports continue their growth by employing more labor, from now on they will only be able to do so at the expense of other sectors. In this case, increased growth will only come about if this sector is able to make more productive use of labor than the other sectors. If, instead, manufactured and

48 See *Mauritius: Managing Success*, A World Bank Country Study, November 1989.

service exports continue their growth without employing more labor, then this will necessitate making more productive use of the labor already employed.

Table 4.1
MAURITIUS: Key Indicators for the EPZ

	1980	1985	1990	1991
Number of Enterprises	101	290	568	586
Employment	21,642	53,951	89,906	90,861
Exports (Million Mau Rs)	894	3,283	11,474	12,136
Imports (Million Mau Rs)	658	2,530	7,348	7,068
Net exports (Million Mau Rs)	236	753	4,126	5,068
Value added (Million Mau Rs)	321	1,333	4,000	4,615
Value added per worker	14,845	24,708	44,491	50,792
Total investment (Million Mau Rs)	..	340	750	..

Source: Digest of Industrial Statistics, various issues.

4.3. Either way, the only route to continued export growth in this sector will be a steady and continuing growth in labor productivity, specifically, exported value added per worker. Hence, the emphasis now should be strongly and clearly on diversifying the industrial base and improving labor productivity in export production as the only means available for achieving continued export growth.

B. Facilitating Export Expansion

Harsh External Realities

4.4. What distinguishes export development from most other types of development is that one is obliged to start from the "givens" of the external international market. All export development efforts must be directed towards improving the acceptability in this given external market of the export production facilities being offered. Only in this way will more orders be obtained, thus fuelling export growth.

4.5. The most important characteristic of nearly all available potential markets for developing country exports is that they are extreme "buyers' markets". In other words, each potential buyer can choose between many would-be suppliers, in many different countries, all very hungry for his order. The result of this harsh reality is that each buyer is able to insist on virtually every important aspect of supply meeting his requirements. Typically, these might cover not only price itself, but also quality level, quality consistency, speed of response to changing buyer requirements, delivery reliability, incorporation of specified components or labels, usually imported, quality of packaging and outer presentation, and terms of payment offered.

4.6. The new would-be supplier does not win the order unless he at least matches other potential or actual suppliers in all of these various aspects and beats them in at least one, such as price. At the level of the individual buyer, there are no preferential terms or special concessions given to developing countries. The reality is one of highly competitive and demanding markets. Countries that facilitate their exporters in meeting all these various requirements stand to increase their share of the huge world import market. Countries that ignore these realities, and believe that the solution lies elsewhere (for instance, in lobbying for ever-better concessions and preferences), on the other hand, allow the available benefits to go to other countries.

The Challenge for Government

4.7. The reality in most developing countries is that the capacity of an exporter to meet these various buyer requirements is severely constrained. The essential reason, usually, is that the local markets for the various inputs that he needs do not operate as buyers' markets. Here are some typical examples. First, the available ports operate as a protected monopoly; they are regularly congested; red tape delays individual consignments; and the reliability of the individual exporter in terms of delivery suffers drastically. Second, utilizing imported components, even when supplied by the potential buyer, is virtually impossible because of costly, complex and time-consuming controls and taxes on imports. Third, the ability of an exporter to respond to new export opportunities by investing in new productive capacity is constrained by restricted access to loan capital, owing to government controls on credit allocation and pricing. Fourth, every change in buyer requirements takes much longer to organize, because of pervasive controls on every aspect of the production process. Shedding or switching workers, importing new machines or quality control instruments, using a special steel that has to be imported, all simple tasks for competitors in less regulated countries, become major costly and time-consuming hurdles in most developing countries. Buyers who can obtain fast responsiveness elsewhere are intolerant of these difficulties.

4.8. For a developing country government wishing to increase exports, the task is essentially a simple one. In addition to maintaining a stable macroeconomic environment and favorable investment climate, what is needed is to facilitate the operation of effective buyers' markets in the various key input markets facing the would-be exporter. In other words, the external reality of an extreme buyers' market has to be extended back into the domestic economy, if exporters are to be able to match external buyer requirements. However, with many input markets operating far from effectively, the practical dilemma that most governments generally face is not knowing where to start. The methodology adopted here has been to concentrate on the following four areas. First, examine what is already being exported and identify the next most promising directions for export expansion. Second, for each of these promising directions, find out what input market constraints are holding back this expansion.[49] Third, delve into each constraint and identify the core problems that need to be addressed in order for that constraint to be overcome. Fourth, develop an action plan, with priorities and timetable, for Government to address the various core problems in a manner that will give the fastest pay-off in terms of increased exports. The results of the analysis are described below.

Assessment of Constraints

4.9. Broadly speaking, the manufactured exports sector in Mauritius can be classified in terms of two distinct categories of industries. First, there is the group of existing industries consisting predominantly of either knitwear exports to Europe or quota-limited exports to the US. Second, there is the set of new and emerging industries comprising primarily "precision assembly" companies, for example, jewellery, sunglasses and watch movements, and "brain-service" exports, for example, slow-turnaround data entry, computer software, translation services, digitizing of maps and drawings, and so on. The analysis confirmed that all of these directions have substantial potential for achieving a steady and continuing improvement in labor productivity, and thus for continuing export growth under full employment. However, the work also highlighted the fact that significant input market constraints exist in Mauritius which are adversely affecting both groups of industries and are presently constraining further development. While many of these constraints are industry specific, several of them cut across sectors, presenting the Government with a wide spectrum of areas where immediate action is warranted on the part of the Government.

C. Constraints Across All Industries

Access to Capital

4.10. There appears to be very little doubt that the existing financial system is fast emerging as a major constraint to growth.[50] While much has already been achieved in the liberalization of financial markets, the new focus on labor productivity now demands much more of the financial sector. The core problem appears to be a continuing lack of real competition within the financial sector and the absence of a market-determined system for the allocation and pricing of credit. This problem is aggravated by the weaknesses in the credit delivery systems which constrain exporters' access to outside borrowing.

---

49 If input markets were working well, and if indeed these directions represent attractive profit opportunities, then the requirements of external buyers would work themselves back automatically through the domestic input markets into the required supply adjustments, and the new opportunities would be taken up without the need for further intervention.

50 For an analysis of financial sector constraints and issues, see *Mauritius: Financial Sector Review*, World Bank, 1992. Some of the issues and recommendations in this section have been discussed in greater detail in that report.

4.11. It has not been possible to evaluate the relative impact of the core problems on the workings of the various credit delivery markets. Some potential exporters were convinced that all that was wrong was the dominance of the banking market by one large commercial bank; however, others were convinced that formal and informal pressure on commercial banks by the central bank was the root of the problem. Accordingly, an in-depth review of the credit delivery system needs to be given high priority. Such a study should itself give particular emphasis to the development of effective buyers' markets facing exporters seeking the various forms of finance useful to their export production operations. It will be up to such a study to propose specific actions that would facilitate the workings of the various markets. Such a study should focus on, for example, the provision of equipment leasing for which there is presently only one supplier owned by four of the banks, the provision of longer-term project capital which appears to be distorted by continuing implicit controls on pricing and allocation of bank credit and the widely-advertised but narrowly-available subsidized funds from the Development Bank of Mauritius, and the lack of variety in instruments and suppliers (e.g., merchant banks, private longer-term finance houses, and venture capital funds). The study would also cover the provision of competitive forward foreign exchange cover, the option to borrow for working capital in foreign exchange, the provision of letters of credit services by banks which appear to be exceptionally costly in Mauritius, and the provision of export credit guarantees and insurance, which should allow banks to move from the present collateral-based lending for export working capital towards lending based on firm orders.

Worker Motivation

4.12. Increasing automation will require increasing shift work to achieve high utilization rates on expensive equipment. Increasing automation will also require more flexibility with regard to overtime work when needed. There must also be a willingness to adjust to more flexible working practices, if the benefits from automation are to be realized. However, it is evident that firms are already finding it difficult to motivate workers to work regularly even on single shifts without overtime, let alone motivating them to make these various adjustments. One indicator of poor motivation is high absenteeism rates. Figures as high as 25-35 percent have been reported by some firms with absenteeism on Mondays consistently higher.

4.13. The core problem appears to be that, having achieved their basic food and clothing needs plus a few luxuries (for example, a television and a video cassette recorder), all within just a few years, there is no clear affordable and attractive incentive to motivate factory workers to make these next adjustments. There was a widespread feeling among employers that the most attractive next step would be affordable housing for workers. For a variety of reasons, this is at present unavailable. Key building materials are in short supply, partly because of the rapid expansion in construction activity during the past few years and partly because of the existence of monopolies, both state and private, that control their importation. Moreover, the provision of workers' housing has been presumed to be a government task and has been entrusted to the Central Housing Authority, which is said to be ineffective. The availability of loan finance for housing is constrained by the same problems in the financial sector that have already been discussed. What is urgently needed, therefore, is an effective market in affordable housing for factory workers and their families. The facilitation of such a market could have a substantial impact on the willingness of workers to make the necessary work-related adjustments that will increasingly be demanded by automation. Furthermore, it would enable Mauritian workers to gain real benefits in terms of their quality of life from the automation process.[51]

4.14. A secondary underlying problem is in the provision of transport to and from work, with commuting time along certain corridors being as high as two to three hours per day. The density of vehicles on the roads has increased from 44 per kilometer in 1986 to 86 per kilometer in 1990; traffic congestion in certain places has resulted, with increases in commuting time of up to 40 percent on certain inter-urban routes. Again, the detailed reasons that the public transportation market does not operate efficiently are not entirely clear. Indications are that the bus licensing system is not entirely effective in achieving such a market. Minibuses are not able to assist with peak rush-hour longer-distance loadings because of their lack of comfort, inconvenience to passengers and the economics of their operation; bus operators opting for larger buses can carry more passengers and hence increase their revenue without significantly increasingly their fixed costs. A large number of minibuses, however, are licensed as contract buses for the conveyance of industrial workers and tourists. The large bus companies have traditionally operated on a regional basis; this geographical concentration has become entrenched over time. More than 300 contract buses have been licensed to meet the transport needs of industrial workers, both during normal working hours and for overtime work. Industrial operators reportedly instruct their drivers not to leave the terminals during rush hours until the buses are full, implying long waits for passengers at the terminals, and even longer waits for passengers attempting to join already-full buses at later stops. If workers are to be motivated to work overtime, or on shifts, or to arrive for work fresh rather than exhausted, they need effective and fast transportation to and from work. In spite of efforts to redirect bus services to overcome inadequacies along certain routes, the present situation in public transport is not conducive to increasing worker productivity, and needs detailed examination so as to make this particular input market more effective.

D. Constraints Within Existing Industries

4.15. The apparel industry presently dominates the Export Processing Zone (EPZ), and the degree of concentration has increased with time. Whereas in 1983 wearing apparel accounted for about 44 percent of firms and 80 percent of employment, in 1990 they accounted for 60 percent of firms and 84 percent of

---

51 In order to address this situation, the Government established in 1991 the Mauritius Housing Development Company, a private sector organization which will facilitate the provision of affordable housing for Mauritians.

employment (see Table 4.2). Consequently, given its size and importance, the most important direction for possible gains in productivity and exports are within apparel production itself.

Table 4.2
MAURITIUS: Percentage Distribution of EPZ Enterprises and Employment
1984 to 1991

	1984	1985	1986	1987	1988	1989	1990	1991
				ENTERPRISES				
Product Group:								
Flowers	8.2	6.6	5.1	5.3	4.7	5.9	7.6	8.4
Food	..	..	2.9	2.1	1.9	2.3	2.3	2.6
Textiles	5.6	4.5	4.4	4.3	4.6	5.3	5.6	6.1
Wearing Apparel	52.3	60.0	67.6	68.5	69.0	63.8	59.7	56.7
o/w Pullovers	19.0	15.2	13.0	11.5	10.8	10.5	9.9	8.7
Gloves	33.3	44.8	54.7	57.1	58.2	53.3	49.8	48.0
Leather Prods/Footwear	3.1	2.4	2.2	2.3	2.0	2.0	2.3	1.9
Wood, Furniture, Paper	3.6	3.1	2.5	2.4	2.5	2.5	2.6	3.4
Optical Goods	1.0	1.0	0.7	0.8	0.7	0.7	1.1	1.0
Watches & Clocks	3.1	2.1	1.2	1.1	1.0	1.1	1.1	1.4
Jewelry	5.6	4.5	2.2	2.3	2.4	3.0	3.3	3.2
Fishing Tackles & Flies	2.1	1.4	1.0	0.6	0.5	0.5	0.0	0.0
Toys & Carnival Articles	3.1	2.4	1.5	1.3	1.2	1.2	1.4	1.4
Other	12.3	12.1	8.6	9.0	9.5	11.7	13.0	14.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	195	290	408	531	591	563	568	586
				EMPLOYMENT				
Product Group:								
Flowers	0.5	0.4	0.3	0.4	0.4	0.5	0.6	0.7
Food	..	..	0.7	0.8	0.8	1.0	1.3	1.4
Textiles	4.0	3.3	3.2	3.8	4.3	4.8	5.3	5.6
Wearing Apparel	82.8	86.3	88.3	88.0	86.7	84.8	84.2	84.1
o/w Pullovers	50.7	46.7	42.6	39.4	35.5	33.4	32.0	30.1
Gloves	32.1	39.7	45.7	48.7	51.2	51.4	52.2	53.9
Leather Prods/Footwear	1.1	0.8	1.[illegible]	1.0	1.2	1.4	1.5	1.4
Wood, Furniture, Paper	2.6	1.8	0.[illegible]	0.5	0.6	0.6	0.6	0.7
Optical Goods	0.6	0.5	0.5	0.7	0.6	0.7	0.6	0.6
Watches & Clocks	1.2	1.2	0.8	0.8	1.0	1.0	0.9	0.8
Jewelry	2.1	1.6	1.3	1.4	1.7	1.9	1.5	1.6
Fishing Tackles & Flies	1.3	0.9	0.8	0.2	0.2	0.2	0.2	0.0
Toys & Carnival Articles	1.7	1.3	0.9	0.8	0.9	1.0	1.1	1.1
Other	2.2	1.9	1.3	1.6	1.6	2.0	2.1	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	37,532	53,951	74,015	87,905	89,0[illegible]	88,650	89,906	90,861

Source: Statistical Appendix Table VIII.4.

4.16. The apparel sector is dominated by two rather different production activities; each of these contains promising immediate directions for increasing labor productivity. First, Mauritius is particularly strong in the export of **knitted items**, achieving sufficient added value locally to satisfy the rules of origin and qualify for ACP preferential entry into the European Community under the Lomé Convention. This small island is now the third largest knitwear exporter in the world, with knitwear exports amounting to US$293 million in 1989. Knitwear production has excellent opportunities for steadily upgrading production machines and methods so as to achieve improved labor productivity. The other important activity is the export of **quota-limited garments** to the US, mainly items sewn from imported cloths. In this, Mauritius functions essentially as a subsidiary source of quota for marketing operations based in Hong Kong. Although sewing has less potential for increasing productivity, since even the best machines require one operator for each machine, improved working methods can achieve dramatic improvements in labor productivity. Moreover, productivity gains can be achieved by moving steadily into higher-value garments. Thus, there would appear to be substantial scope for productivity enhancement in this area as well.

Access to Capital

4.17. A substantial proportion of knitwear exports is still based on simple hand-operated flatbed knitting machines, with an average output of around four garments per worker-shift. The latest Japanese knitting machinery, which allows one operator to look after three machines, achieves output levels of around thirty garments per worker-shift. This gives some indication of the potential for increasing labor productivity within this particular direction. A steady shift away from simple flatbeds is what is now required in order to continue productivity improvement within this business. While this shift has already begun, the investment requirements will be substantial and will necessitate knitwear manufacturers having effective access to loan capital. In addition, changes in the target markets are already putting pressure on working capital. Suppliers are under increasing pressure to offer open-account credit terms instead of letters of credit. As competition from new sources increases, Mauritian exporters will need to stay competitive in the credit facilities they offer. Thus, for these potential productivity gains to be exploited, exporters must have effective access to a competitive market for longer-term investment borrowing as well as working finance borrowing.

Undervaluing Outside Expertise

4.18. It is quite clear that there is substantial scope for increasing productivity through improvement in production systems, particularly in knitwear, but also in wovens. However, this in turn will usually require bringing in outside expertise so as to introduce the latest systems ideas from higher labor-cost countries, and to train Mauritian labor on the new systems. Large forward-looking firms are already investing substantial resources and employing the best foreign know-how in production systems. However, at present, this process is still relatively slow, and it is this slowness that constrains export growth.

4.19. It is quite typical for exporters in developing countries to undervalue the benefits to be gained from systems improvements; they are put off by the seemingly high costs of buying expertise from higher-income countries. Unless active encouragement from the outside is given, Mauritius will be slow in reaping the productivity benefits available. The core problem appears to be that the present scheme for encouraging this process is inadequate in coverage, and so far is having very little of the desired motivating effect. Although the Government has made a positive start by collecting the one percent levy on wages to cover assistance through the Industrial and Vocational Training Board (IVTB), some exporters are still unclear as to what activities, if any, qualify for assistance under the new scheme. Some are still unaware that assistance could be available for in-company training. In addition, there are complaints about the degree of red tape involved in obtaining assistance from IVTB, and about the initially unrealistic restrictions imposed on the coverage of the scheme; this reflected IVTB's slow start-up and is beginning to improve with time.

4.20. Consequently, there is a very real need to re-orient this scheme in order to widen and improve its motivating effect. Assistance in the form of cost-sharing grants, in addition to the double taxation relief, serve to motivate currently unprofitable firms, as well as profitable ones; thus, all firms should have access to the grants irrespective of profitability. Eligibility criteria should be simple and clearly stated, with eligibility based primarily on the expected impact of productivity, with coverage otherwise very wide. The choice of source of expertise should be left to the user firm and the approval process should be easy and fast. In time, coverage could be extended beyond training into all uses of outside expertise that go towards increasing labor productivity.

Lack of a Transfer Market in Quotas

4.21. A special problem exists for firms exporting under quota to the US market. In the quota year ending September 1990, several quota categories were less than 50 percent utilized, including some that are currently fetching high premia on the Hong Kong quota transfer market. This represents a serious loss of potential revenue for Mauritius. At the moment, US quotas are allocated mainly on past performance, and cannot be officially transferred. As the process of adjusting to higher productivity levels gathers momentum, not all existing firms will be equally able to make this adjustment. Consequently, this arrangement for quota allocation will increasingly constrain the pace of adjustment itself.

4.22. What is required is an active market in quota transfers. Such a market will enable those exporters who hold quotas based on past performance that they are unable to utilize to sell this "right to export" to the highest bidder, and to do so early enough in the quota year to make this attractive to the quota buyer. Such a quota transfer market will also increase the pressure on the individual exporter to increase unit value. In this way, it will further assist the process of productivity improvement. The Government should be aware, however, that such a move is likely to be resisted by holders of large past performance quotas. They will rightly suspect that the move to a quota market will mean that they will have to pay a market rate for at least a proportion of what they presently obtain free of charge. This opposition is understandable, but should not detract the Government from initiating a system that will, firstly, speed the process of productivity improvement and, secondly, minimize the under-utilization of valuable quota entitlements. The other argument likely to be used against a quota transfer market is that it would concentrate quotas in the hands of a few large producers. If indeed it turns out that a few large exporters are able to make significantly better unit returns in all quota categories, then a transfer market could indeed concentrate quotas in their hands. But that would not mean that smaller producers would have no place in the market. On the contrary, it is very likely that their future as specialist suppliers and sub-contractors would be more assured than at present. Besides, there is no evidence that a few large producers would indeed be able to bid higher in all categories. And, if that were the case, then the Government would have to balance considerations of fairness to less efficient smaller exporters against the desirability of increasing unit realizations and quota utilizations. The latter are surely more important considerations in the present situation.

4.23. The introduction of a quota transfer market is likely to require expert assistance from seconded officials with relevant experience elsewhere. The best-known quota transfer market is that operated by Hong Kong, which has developed by experience a complex and sophisticated system to regulate the market. It would be sensible to learn from the experience of the Hong Kong Trade Department when introducing this innovation.

E. Constraints Affecting New and Emerging Industries

4.24. Outside the wearing apparel industry, there are as yet few significant export flows. The only non-textile items achieving over Mau Rs 200 million of exports in 1991 were fish and fish preparations, watches and clocks, and pearls, precious and semi-precious stones (see Table 4.3). However, based on field investigations of these and other emergent export activities, it would appear that there is substantial potential for extending the presently limited existing investments in higher-productivity export activities outside apparel. This potential exists primarily in the following two directions: (a) **"precision assembly"**, i.e., starting with jewellery, sunglasses, and watch movements, and developing later into a range of other more sophisticated mechanical, optical and electronic assembly operations; and (b) **"brain-service exports"**, i.e., starting with slow-turnaround data entry, developing later into telecommunications-based data entry, computer software, translation services, digitizing of maps and drawings, and eventually professional consulting services.

Precision Assembly

4.25. **Lack of Local Sub-Contractors and Parts Stockists.** Much of the precision assembly so far attracted to Mauritius appears rudimentary. Watch movement

Table 4.3
MAURITIUS: Main EPZ Exports by Main Commodities, 1988-1991
(In millions of Mau Rs)

	1988	1989	1990	1991
Fish and fish preparations	173	190	142	296
Textiles yarn, fabrics, made-up articles	180	361	498	480
Pearls, precisous and semi-precious stones	302	325	354	392
Articles of apparel and clothing accessories	6,446	7,038	9,085	9,621
Optical goods	88	133	124	145
Watches and clocks	563	500	616	550
Toys, games and sporting goods	85	91	126	121
	69	80	139	156
	273	340	390	375
Total EPZ Exports	8,179	9,058	11,474	12,136

Source: Quarterly External Trade Statistics.

assembly is undertaken on an "assembly fee" basis, with no involvement in sourcing, product design, or marketing. Assembly of the electronic elements of watches is just beginning. Attempts to attract more sophisticated assembly operations have come up against the problem of a lack of local support facilities on the island.

4.26. In electronics, for instance, substantial potential exists in low-volume assembly of items such as laboratory equipment and instruments. But such operations depend on the local availability of flexible sub-contractors and their ability to produce to specification key custom-made items such as printed circuit boards, metal chassis and precision injection-moulded plastic casings. Local production of printed circuit boards has already begun, but neither precision metal nor precision plastic fabricating is apparently available yet to serve such needs. A similar problem exists for firms using moulded plastic components. Because there is apparently no local toolroom able to make and repair moulds for plastic moulding machines, these are presently being imported from as far away as Italy. For more standardized components and materials, precision assembly operations depend in a similar way on local stockists of such items. As with custom-made parts, there is as yet very little of this kind of stock-holding, and apparently none able to supply free of duties and taxes to EPZ plants.

4.27. There are two core problems. First, without a few key sub-contract functions available, as mentioned above, precision assembly, particularly in electronics, is unlikely to take off. Second, without a simple and fast mechanism that will encourage stockists and converters of imported raw materials and components to stock for duty-free sales to EPZ exporters, these important support services will not develop.

4.28. To solve the first problem, a more detailed study to specify those sub-contract activities most likely to stimulate investments in precision assembly is urgently required. This could lead to a highly specific incentive scheme to stimulate the development of these activities, ahead of expected demand. To solve the second problem, elimination of the remaining import duties and stamp duty on all raw materials and components likely to be of interest in assembly operations would be desirable. These duties serve no protection function, and they are counter-productive as a means of raising revenue.[52] In addition, positive incentives could be extended to stimulate the development of local stock-holders serving assembly operations.

4.29. **Red Tape.** This continues to hold back foreign investment. It might be tempting to believe that, with full employment now achieved, foreign investment no longer needs to be actively encouraged. This belief might possibly be justifiable within the core industry of garment production. But, if Mauritius is to attract higher-productivity assembly operations, and thus diversify its export base, then foreign know-how and market links will be vital. The new precision assembly and "brain-service" activities are likely to be predominantly foreign-owned or joint ventures.

4.30. Setting up an industry in Mauritius is still a long, frustrating and complex process, particularly for foreigners. The Mauritius Export and Development Investment Authority (MEDIA) and private consultants do their best to help new entrants through the maze, but still this major constraint remains. Higher-tech operators, for instance in electronics, are less likely to be tolerant of such impediments than the early entrants, who were attracted then by the more obvious benefits of quota-free US entry, or ACP preferences. Even after the establishment of the enterprise, the red tape problem continues. Obtaining the various permits and clearances to import a piece of equipment for production is said to take typically three to five weeks. For example, customs clearance of a customer's countersample recently took three weeks, even though it had deliberately been made unusable, and thus had no commercial value. One new exporter estimated that dealing with the various regulatory departments of Government involved him in an average of around four phone calls each day while another exporter had to abandon a particular export expansion plan because he could not get work permits for two key foreign individuals vital to the process.

4.31. The reality is that no one element of red tape dominates. But, when taken together, all the various controls and regulations add to the costs, delays and uncertainties of doing business in Mauritius. The core problem appears to be a continuing excessive reliance by the authorities on regulation, as opposed to facilitation. This reliance on regulation is increasingly inappropriate, as Mauritius seeks to increase productivity and chase the "Tigers" of East Asia. What is required is a thorough review of the various controls, concentrating on those facing new investors, both during and after the process of business establishment. The aim of this review should be simple. For those investors offering genuine gains in

---

52 These issues are being addressed in greater detail by the joint UNDP-World Bank Trade Expansion Program study.

exportable productivity, the costs, delays and uncertainties involved in starting up should be minimal. Conditions should be superior to those in the other new NICs, with which Mauritius is competing for these kinds of new business, and which do not have its location disadvantage.

Brain-Service Exports[53]

4.32. **Higher Education.** As living standards improve and parents can afford to educate their children better, the demand for "white-collar" employment by Mauritians is likely to increase. As Mauritius seeks to continue export expansion via productivity improvement, export industries of all sorts will demand higher education levels of their employees. As yet, it would appear that higher and further education has not begun to meet these significant challenges. Software firms complain that very few of the private software training companies provide the quality of training required by the industry. Firms in other fields complain that very few school-leavers obtain Advanced Level qualifications. Firms recruiting graduates are even worse off, being still mainly dependent on the few who return from expensive college education overseas.

4.33. The core problem appears to be that the educational system is not yet geared to meeting the demands of the changing industrial environment. Only about 30 percent of the Ordinary Level students proceed to Advanced Level education and although the pass rate at the Advanced Level has been going up over the years, it was still only 56 percent in 1990. This represents a serious underutilization of the educational, and thus the export productivity, potential of the country's youth. The Government is making efforts to expand Advanced Level facilities and to improve the pass rate further through better staff training and the provision of facilities and materials. The vocational schools, on which industry depends for its supply of mechanics, technicians, and so on, are roundly criticized by industrialists as being too theoretical, and inadequate for the task. The private software schools that have sprung up to fill one particularly serious gap are not properly supervised by an accreditation body, with recognized examination standards. The local university has only just started courses in subjects like economics, engineering, accounting and computer science. Financial assistance is apparently not available for those wishing to take degrees abroad which are not available locally; around a hundred scholarships are offered each year under bilateral and multilateral agreements. In short, the building blocks needed for the development of higher-level brain-service exports are not yet in place. The Ministry of Education has prepared an Education Sector Master Plan which addresses these various elements of the problem.

4.34. As has already been mentioned, the Government has started a program whereby the IVTB has been assigned the responsibility of administering the industrial and vocational training program, for which a one percent levy on wages

53 The discussions on red tape and the undervaluation of foreign expertise also apply to this category of exports.

is collected. At present, there is still an ongoing debate about the scope of the program and its coverage stemming from the need to distinguish clearly between pre-vocational training to be provided by the formal education system and hence funded out of taxation, on the one hand, and employment-specific training, for which partial or total funding by employers can be obtained, on the other. The training levy from employers should only be used to fund employment-specific training, along with other firm-specific activities aimed at productivity improvement. In addition, if IVTB is to continue administering this levy fund, it should not itself be a provider of employment-specific training services. It should leave the choice of the training service provider to the individual firm, and restrict its involvement to partial funding. If, on the other hand, IVTB is nevertheless to become a major provider of employment-specific training services, these services should be provided at fully commercial rates, and IVTB should give up to some other body its administration of the levy fund.

4.35. Finally, the effectiveness of a centralized approach to the provision of industrial training, as is planned by the IVTB, is seriously questionable. Centralized state institutions have a clear role to play in the provision of higher and further education. But in the area of industrial training, such institutions may not be the answer, particularly in the type of training that industry is expected to pay for, at least in part.

F. Proposed Action Plan

4.36. The recent achievement of full employment represents a wonderful and unique opportunity for the Government to take bold initiatives that will stimulate and speed the next stage of export growth in the manufacturing sector.

4.37. As a first step, there is a great deal of analytical work that will be necessary to provide the underpinnings for the actions necessary to usher in the next phase of industrialization. A number of key input markets are not functioning effectively as buyers' markets, and are thus constraining export expansion. The Government needs first of all to understand in detail why this is so, and what would need to be done to facilitate these markets. The following actions would be involved in this first stage.

- Commission an in-depth review of the credit delivery markets facing exporters, giving special attention to the adequacy of the provision of the following financial services to exporters: equipment leasing, longer-term project capital, forward foreign exchange cover, working capital in foreign exchange, letters of credit and export credit guarantees and insurance.

- Commission an expert study on the workings of the market in affordable housing for factory workers.

- Commission an expert study on the workings of the public transport market.

- Determine what sub-contract services and what stock-holding services are most likely to stimulate new investments in precision assembly.

- Carry out a thorough review of the various controls and regulations facing new investors, both before and after establishment. Determine how to create entry conditions superior to those in competing NICs.

4.38. With the above studies and reviews completed, the Government would enter the second phase of the program where it would be in a position to spell out in detail how it intends, over the next two to three years, to achieve effective buyers' markets for the various key inputs identified in this report as presently holding back the second phase of export-led growth. During this second stage, it would also be possible to initiate actions in some areas where quick and simple actions are called for. This would be useful in giving a clear signal to the business community as to the seriousness of government intent. The particular actions initiated at this stage would, of course, depend on the findings of the various studies, but the following examples look promising at this stage.

- The licensing of bus routes could probably be modified quickly and relatively simply, so as to stimulate real competition in that particular market.

- Import and stamp duties on standard parts for precision assembly could be removed in stages, so as to begin the process of stimulating local parts stockists.

- Positive and attractive investment incentives could be introduced for a few obvious sub-contract services, such as making chassis and plastic casings for electronic assemblies.

- The employment levy scheme could be quickly expanded to cover cost-sharing grants for all forms of technical assistance at the firm level which are aimed at increasing productivity in export production.

- Quotas could be made transferable, initially under close supervision, so as to begin the development of a market in quotas.

- After publication of the Education Sector Master Plan, specific actions aimed at boosting the education level of new entrants into the job market might also be included.

4.39. The aim would be for the Government to have facilitated successfully within three years the operation of effective buyers' markets in all the various inputs indicated in this report. It would also have improved its facilitation of entry by foreign investors, by changing over to a regime viewed by such investors as being superior to those in competitive NICs.

4.40. As the economy becomes more and more linked to continued export expansion, particularly in manufacturing and services, the existing high-duty regime will become less and less appropriate. High duties on production equipment may have made sense in colonial times, e.g., to protect industry in the United Kingdom, but they make little sense now. High duties have remained, not for purposes of protection, but as a convenient way of raising revenue. As export production gradually becomes more dominant in the economy, the Government would be well advised to take up the idea, already put forward locally, of turning Mauritius eventually into a Free Port. This would require tariff elimination in stages, with revenue generation shifting to other less obstructive forms of taxation, such as perhaps a value-added tax. The positive impact of such a move, however, could be dramatic. It would substantially increase the attractiveness of Mauritius as a base for more sophisticated production activities. It would attract industries and services serving the nearby East African markets. It would also eliminate at a stroke many of the red-tape problems. It would free up labor resources, and enable many of the staff involved in controlling imports and collecting duties to transfer to directly productive tasks.

4.41. This could be part of a longer-term vision for the economic future of Mauritius: a duty-free country, gradually moving up the labor productivity and thus the income ladder; moving steadily from a start in flatbed knitting into more and more sophisticated and skill-intensive processes; and following the example of another island state, Singapore, by becoming the wealthiest country in its region, and an advertisement for sustained export-led growth.

5

Tourism

A. Introduction

5.1. Since 1988, Government's stated policy towards tourism in Mauritius has been to emphasize low-impact, high-spending tourism and, by maintaining the island's upmarket profile, to increase expenditure per tourist and per tourist night. The argument is that a move downmarket could create unacceptable environmental and social pressures and seriously damage Mauritius' image as a luxury beach holiday destination. Thus, the *1988 White Paper on Tourism* sets clear targets on the number of tourists based on the ratio of tourists to population of 1 to 3, restricts high-rises on the island, and puts a limit on the maximum size of each resort hotel complex at 200 rooms.[54]

5.2. However, two recent developments have already undermined this stated policy and will continue to do so in the absence of prompt action on the part of the Government. First, Government's *applied* policy has been at odds with its 1988 *stated* policy, to the extent that hotel certificates granted imply a hotel capacity which is totally out of line with the stated targets for tourists (see Section C). Second, there has been a gradual shift downmarket, as evident in the increase in the number and share of tourists using informal accommodation; this in turn may be partly a response to the relatively high room rates of Mauritian hotels (see Section B).

5.3. These developments pose a serious and urgent dilemma for the Mauritian Government and raise several issues about the appropriate strategy for the tourism sector in Mauritius. First, there is likely to be strong downward pressure on hotel room rates, causing average earnings per tourist to fall. Second, if this decline in prices results in a shift towards lower-end tourism, there could be adverse effects on the environment. Third, lower prices could in turn lead to a rapid increase in tourist arrivals which will put even greater demands on an already stretched infrastructure. Finally, training needs will have to rise to meet the demands of the additional hotel facilities and the quality of hotel services will deteriorate if training cannot keep up with demand.

5.4. In order to pursue successfully its stated policy of encouraging high-end tourism, the Government will have to decelerate drastically the growth in the total

54 Ministry of Tourism, *White Paper on Tourism*, Mauritius, 1988.

number of tourists visiting the island and ensure that downmarket tourists are discouraged; the policy instruments at its disposal include revoking hotel certificates already granted, scaling back on incentives given to the hotel industry, limiting air access, and taxing tourist arrivals and activities (tariffs on airline tickets, hotel charges, restaurants, etc.). This is obviously not without costs to at least some Mauritians and even then it is not clear how successful the Government can be in keeping out low-end tourists. Alternatively, in the absence of government intervention, the trend downmarket may continue and the Government will then have to face up to the erosion in the island's image at some point in the future. The predicament for Mauritius today is whether to tackle the emerging problem at a relatively early stage or postpone it till a later date.

5.5. This chapter first analyzes the trends in the demand for, and supply of, hotel rooms (Sections B and C respectively). Noting the emerging imbalance between projected demand and supply, it goes on to discuss the necessity for planning in the tourism sector and for weighing the trade offs between permitting more-rapid-than-planned growth of the sector and promoting high-end tourism (Section D). Promotion and diversification of tourism are discussed in Section E; the issue of how to increase net earnings per tourist in Section F; and the supporting infrastructure for tourism in Section G.

B. Tourism Demand

Characteristics of Tourism in Mauritius

5.6. Mauritius is overwhelmingly a holiday destination; this accounted for 90 percent of all arrivals excluding those in transit in 1990.[55] And, apart from most of those staying with friends and relatives (9 percent of the total in 1986), it is also almost entirely a beach holiday destination; 95 percent of tourist accommodation is on or fairly near the beach. For European tourists, who probably account for over 60 percent of all tourist spending, it is essentially seen as an "exotic" distant beach destination, rather more exotic and unspoilt than the Caribbean (with which it is fairly comparable in terms of price), and definitely upmarket of beach resorts in Kenya, the Gambia and Sri Lanka. Beach holidays in Bali, Malaysia and Thailand lack the tropical island image, but are seen as having more to offer in terms of sightseeing and cultural image; they are also, of course, considerably cheaper (see Statistical Appendix Table VIII.5). The Maldives, Seychelles and much further afield Pacific destinations such as Fiji and Tahiti are also direct competitors, but attract many fewer European visitors, presumably because of the great distances involved. Non-European travel to Mauritius is heavily dominated by visitors from Réunion and South Africa (Table 5.1). For these it is essentially a convenient, rather than an exotic, beach holiday destination; they tend to stay for shorter periods than Europeans, and those from Réunion are relatively low spenders per night.

---

55 The proportion may be slightly overstated because of those who believe that frontier formalities may be easier for tourists.

Table 5.1
MAURITIUS: Characteristics of Tourists from Main Origin Countries in 1988

	Arrivals	Percent of total nights in Mauritius	Average length of stay (nights)	Percent staying in AHRIM hotels [a]	Expenditure per night in Mauritius (Mau Rs) [b]
France	21.0	21.6	12.5	55.9	636
Germany	6.3	7.8	15.0	79.9	828
UK	5.8	7.9	16.8	83.9	616
Italy	6.2	5.6	10.9	82.5	992
Switzerland	3.8	4.5	14.6	67.0	807
Total of above	**43.1**	**47.4**	**13.4**	**68.0**	**728**
Réunion	23.8	18.1	9.3	21.3	490
South Africa	15.0	13.7	11.1	79.8	666
All others	18.1[c]	20.8	12.9	35.8	597
World total	**100.0**	**100.0**	**12.2**	**52.8**	**649**

a Around 85 percent of all tourist arrivals in hotels are in those which are members of Association des Hôteliers et Restaurateurs Ile Maurice (AHRIM).

b 1986. Total gross tourist receipts per night in the country were 29 percent higher in 1988 than in 1986, but expenditures per night for individual origin countries probably all grew at much the same pace.

c 6.4 percent were from the nearby African countries, 1.8 percent from India, 1.4 percent from Japan and Singapore and 1.0 percent from Australia; probably most of the remainder (7.5 percent) were from minor European origin countries.

Sources: Central Statistical Office and Association des Hôteliers et Restaurateurs Ile Maurice (AHRIM).

5.7. In terms of average expenditure per night while in Mauritius, European tourists are clearly the most valuable to the country; this reflects the very high proportion, other than those from France, who stay in hotels. Moreover, they stay relatively long. South Africans are also quite high spending. The highest-yielding group of all consists of those from Japan and the new industrial countries of the Far East, but their numbers are still small. Visitors from Réunion and from other neighboring African countries and India are low spenders and mostly stay in relatively low-cost informal accommodation. There are two big distinct groups of French visitors: those who stay in large hotels, usually not for very long, and are high spenders, and those, frequently travelling on cheap fares via Réunion[56], who mostly use low-cost informal accommodation and stay much longer.

56 Currently around Fr4,500 return, about two-thirds of the cheapest official fare.

Demand Trends

5.8. Mauritius has, in recent years, substantially increased its still tiny share of total world tourism and of total long-haul beach tourism. While this growth in tourist arrivals is still well above the worldwide figure, it has slowed since 1988. Data indicate 298,510 foreign tourist arrivals in Mauritius in 1991, staying an average of 12.0 nights in the country — a total of 3.6 million nights — and yielding Mau Rs 3,875 million in total gross receipts. As Table 5.2 shows, from 1989 to 1991 there was a considerable slowdown from the exceptionally rapid growth achieved in 1987 and 1988. Indeed, if hotel receipts per bed-night sold and hotel room rates are taken as the most appropriate indication of tourist prices (around 70 percent of gross expenditure goes to hotels), real receipts per arrival and per night appear to have declined in 1989. Of course on a longer-term basis, growth rates remain well above the worldwide tourism growth rate of about 6 percent a year in terms of arrivals (World Tourism Office estimate). In terms of its own market segment too, essentially long-haul beach tourism, Mauritius performance has also been relatively good.

5.9. Temporary slowdowns in growth rates of tourism, even falls, have from time to time been experienced by most destinations around the world. In the case of Mauritius, there appears to be two main reasons for recent trends. First, as shown in Statistical Appendix Table VIII.6, the slowdown has been mainly due to sharply reduced growth rates in travel from France, one of the three most important individual origin countries for travel to Mauritius. Travel from South Africa picked up in 1990 after a slowdown in the previous year, and travel from Réunion has continued to grow relatively rapidly. While travel from Germany and the United Kingdom performed well in 1990, arrivals from Italy decreased slightly. To a large extent these reflect worldwide trends in travel from individual origin countries. In particular, the persistent weakness of the rand has made all travel abroad from South Africa increasingly expensive, while economic problems in France have had a general depressing effect on French travel abroad. The second major factor which has slowed the growth of travel to Mauritius is cost. Mauritius has long been a relatively expensive beach holiday destination. For most Europeans, staying predominantly in the better class hotels, only the Caribbean is comparable in cost as a long-haul beach destination. But, while prices of inclusive tours in some competitive destinations (notably Bali, Malaysia and Thailand) have stabilized or even fallen in the last few years, prices for Mauritius have risen sharply, reflecting both the lack of truly concessionary air fares[57] and a very substantial increase in hotel prices (see later). A comparison of inclusive tour prices available from the United Kingdom[58] appears in Statistical Appendix Table VIII.5

---

57 Apart from cheap fares via Réunion, of which tourists other than from France are largely unaware; in any case few are prepared to change aircraft twice during the course of a flight.

58 Inclusive tour prices are for half board in comparable grade accommodation in each destination (typically the average charged in five different hotels, of three and four star grade) using scheduled flights.

and a similar comparison could be made for other European origin countries. A final factor affecting Mauritius' market share has probably been the relatively meager spending on promotion at a time when many competitive destinations have been stepping this up.

A Shift to Informal Accommodation

5.10. The especially rapid growth in travel from Europe in recent years (notably from Germany and the United Kingdom which continued to perform well in 1990) in itself implies a shift upmarket; but this is offset by the stagnation of what used to be almost equally high-yielding traffic from South Africa. Moreover, there is evidence of a general shift away from the expensive hotel sector to more modestly priced accommodation, such as bungalows, guest houses and rented private rooms. In consequence gross tourist receipts in 1988 and 1989 rose appreciably more slowly than the rises in nights spent plus hotel price increases imply (Table 5.2). It is also notable that the average length of stay in the country (12.0 nights in 1991) is nearly double that in hotels (6.3 nights for all hotels, including those which are not members of the Association des Hôteliers et Restaurateurs Ile Maurice (AHRIM); the figure for AHRIM hotels only is 7.6 nights (Table 5.3)). Thus long-stay visitors are heavily concentrated outside the hotel sector. Some, of course, are Mauritians living abroad visiting friends and relatives. But there does seem to be a clear trend for the hotel share of the remainder to shrink. It would indeed be surprising if this were not the case in view of the sharp increase in prices. Consequently, only about half of all tourist nights spent in the country are spent in tourist accommodation. Of the remainder, of some 1.62 million nights in 1988, about 0.58 million were by Mauritians living abroad; perhaps some 85 percent of these were staying with friends and relatives and half the remainder in hotels. The balance of 1.04 million nights implies the existence of 5,400 beds used by tourists in non-hotel accommodation in 1988 even at 50 percent occupancy (probably on the high side as much of the travel by those using informal accommodation, especially from Réunion, is very seasonal). Yet the capacity of bungalows and beach area boarding houses listed with the Mauritius Government Tourist Office (MGTO) amounted to only 1,000 beds. There consequently could be as many as 5,000 beds in commercial accommodation regularly used by tourists which are not listed with MGTO. Both the absolute number and their share of all tourist nights appear to have risen in recent years.

Prices

5.11. As already noted, Mauritius has long been a relatively expensive beach resort destination. And, it has been becoming relatively more expensive as prices in Mauritius have escalated while those in some competitive destinations have been stable or even declining. In particular, South East Asian destinations have become relatively cheaper owing to the easier availability of cheap air fares and some excess capacity in beach resort hotels. Partly reflecting a shortage of hotel capacity (occupancy rates rose quite rapidly from 1986 to 1988, but then declined in 1989), revenue per bed night in AHRIM hotels was pushed up by 21 percent in 1987 and

Table 5.2
MAURITIUS: Growth Rates in Foreign Travel to Mauritius, 1986-90
(Percent)

	1986	1987	1988	1989	1990	1991
All arrivals	11.0	25.6	15.3	9.8	11.0	2.4
Nights spent	8.0	26.1	26.6	6.7	11.2	0.6
Gross tourist receipts						
Current prices	40.8	50.1	33.3	17.4	29.8	6.7
Constant prices [a]	31.3	41.0	21.1	4.2	14.1	0.2
Constant prices [b]	...	28.6	7.4	0.4	...	...

[a] *Deflator as in national accounts data for all restaurants and hotels, including local use.*
[b] *Deflator from increase in gross hotel revenue per bed night sold in AHRIM hotels (1987 and 1988) and from increase in hotel room rates (1989).*

Source: Central Statistical Office (CSO), National Accounts of Mauritius, Association des Hôteliers et Restaurateurs Ile Maurice (AHRIM) and Mauritius Government Tourist Office (MGTO).

Table 5.3
MAURITIUS: Proportion of Foreign Visitor Stays in Hotels
1986-91

	1986	1987	1988	1989	1990	1991
Nights						
Total tourist nights in country (million)	1.88	2.37	3.00	3.20	3.56	3.58
Hotel beds available (mid-year)	5,671[a]	6,187[a]	6,563	7,196	8,743[a]	10,027[a]
Hotel bed occupancy by tourists (percent)	47.2	54.0	57.4	55.3	54.3	47.1
Hotel nights by tourists (mn) [b]	0.98	1.22	1.38	1.45	1.73	1.72
(% of all tourist nights)	52.1	51.5	46.0	45.3	48.6	48.0
Stays						
Total tourist arrivals ('000)	165	208	239	263	292	299
Estimated average stay in hotels (nights) [c]	7.76	7.74	7.62	7.60[d]	7.60[d]	...
Tourists staying in hotels ('000) [e]	126	158	181	191	228	...
(% of all arrivals)	76.4	76.0	75.7	72.6	78.1	...

[a] *Average of year beginning and year end.*
[b] *Beds x bed occupancy x 365.*
[c] *Average stay in AHRIM hotels x 1.21 (matches 76.4 percent who stayed in hotels in the 1986 tourist expenditure survey).*
[d] *Assumed.*
[e] *Nights/stay.*

Sources: CSO and AHRIM.

32 percent in 1988. These increases far outstripped the depreciation of the rupee against the currencies of most tourist origin countries (though the South African rand has been even weaker), and price rises in other destinations. So hotel prices in Mauritius have become relatively much more expensive for tourists from abroad (Table 5.4). The sharpest past rises and the greatest pressure on current rates are in medium-sized and smaller hotels. They certainly largely explain the shift away from the hotel sector. Comparable data reflecting actual prices paid are not as yet

available for 1989, but a weighted average of nominal hotel room rates showed a rise of 19 percent. However, 1990 room rates were only about 6 percent up on the 1989 level, and it seems that discounts on normal rates granted to tour operators increased in 1990 and 1991.

Table 5.4
Percentage Increases in Average Mauritian Hotel Prices
Adjusted for Exchange Rate Changes

For residents of:	1987	1988	1989
France (including Réunion)	11	25	12
South Africa	14	41	21
Germany	5	24	12
United Kingdom	14	16	14
Switzerland	5	25	16
Italy	10	27	10

Source: Mission estimates.

Seasonality and Length of Stay

5.12. Overall, seasonal peaking of travel to Mauritius is not particularly pronounced. Arrivals in the high months (August, December and January) are typically only around two-thirds higher than those in the low months (June and February). For many competitive destinations, peak-month arrivals are more than double those in the low months. Seasonal peaks in Mauritius vary by country of origin. For European-origin countries they are in October and November, while for Réunion there is a very big peak in August (20 percent of the annual total) and a less pronounced one in December/January. Travel from South Africa peaks in September and December (see Statistical Appendix Table VIII.7). Thus the peaks for different countries tend to cancel each other out. But this is less of an advantage than might be thought, because tourists from different countries do not use the same facilities. In particular, those from Réunion tend to stay in much more modest accommodation than Europeans, with the partial exception of French tourists. Nor can airline capacity be switched from long-haul to short- or medium-haul routes. The not-very-pronounced peak in December as a whole also disguises a very big peak over the Christmas/New Year period. And, as Mauritius is primarily a holiday destination, there is a heavy concentration of flights on weekends.

5.13. Linked to seasonality is length of stay. The overall average of 13-15 nights for European tourists, as against 9 for those from Réunion and 11 from South Africa, disguise a tendency for most stays to be of either one week (especially from Réunion and South Africa) or two weeks (though Germans, particularly, often come for three), while a small minority, many of them Mauritians living abroad, stay for a month or more at a time. Inevitably, too, length of stay reflects flight timings. When Air Mauritius flights to Europe are used, the tendency is for stays in Mauritius to be of 12 nights, or 19 nights, when the tourists concerned might well have preferred a full two or three weeks' stay; this is particularly evident for Swiss tourists. Use of European-based airlines, which turn round back-to-back flights in Europe rather than in Mauritius, thus has favorable effects on length of stay and overall hotel occupancy (a hotel relying primarily on European travellers carried on Air Mauritius tends to be half empty two nights a week).

C. Hotel Supply

Growth in Hotel Rooms

5.14. At the end of 1990 Mauritius had 75 hotels with a total of 4,603 rooms and 9,572 bedspaces. Around 40 percent of this capacity was in high-grade hotels (nominal tariff for two occupying a room in the main season in excess of Mau Rs 3,000 a night, half board), and about another 15 percent was in reasonable-grade hotels (Mau Rs 2,000-3,000 a night). Many of the remaining hotels offer only modest facilities and several charge under Mau Rs 1,000 a night for two, half board. Accommodation in MGTO-registered bungalows amounts to only about 500 rooms; some of these offer facilities, including restaurants, comparable with those in reasonable-grade hotels. Accommodation in registered beach area boarding houses amounts to only about 100 rooms. But, as already noted, there may be as many as 5,000 beds, or say 2,000 rooms, in non-registered commercial accommodation regularly used by tourists. Though some of these, mainly bungalows, are of reasonable quality, a great many are not. Some rooms with basic facilities are let for extremely low prices. Rates per night in these may be less than one-tenth of those in high grade hotels — an unusually large differential by international standards. The 1990 estimates referred to above include some of the 24 new hotel projects involving 2,358 rooms that are currently under construction plus some 380 rooms in extensions of existing, predominantly good grade hotels.

5.15. Rather over half of the new rooms were scheduled to have been completed in 1990, and all except 200 rooms of the balance in 1991. But construction delays (largely responsible for pushing into 1990 some completions originally expected in 1989) have pushed the schedule back significantly. Some projects are also believed to be running into problems and, in view of the impending overcapacity situation, may well be frozen or even abandoned by promoters at this late stage. Nonetheless, there was an increase of over 25 percent in room capacity in 1990, an implied increase of a further 15 percent in 1991, and 10 to 15 percent in 1992. Thus, by 1992 probably around 2,000 to 2,300 extra hotel rooms are likely to be in existence, or some 60 percent more than at the end of 1989. Around two-thirds of these are in fair-sized hotels (over 100 rooms) and about two-thirds, predominantly the same ones, are planned to be of reasonable or good quality (projected investment per room, often in practice substantially underestimated, in excess of Mau Rs 650,000). Though somewhat downmarket of Mauritius' best existing hotels, the focus of the new construction is thus significantly upmarket of the current hotel sector as a whole. This projected capacity means that Mauritius could accommodate well over 400,000 tourists per year by 1992, compared with the targets set in the *1988 White Paper on Tourism* of 325,000 in 1992 and 400,000 by the year 2000. Thus Government's *applied* policy is already putting its 1988 *stated* policy in jeopardy. From 1993 to 1995, a further 15 to 20 percent increase appears to be in the pipeline. Even allowing for a few closures of existing hotels, this implies a capacity of between 6,500 and 7,000 rooms in 1995, not far short of double the existing number.

5.16. In addition to these hotels under construction, development certificates have been granted to a further 19 projects (1,565 rooms), but construction has still to start. In addition, a further number of large projects are in the pipeline. While projects now under construction, like Mauritius' existing hotel industry, are dominated by Mauritian-owned concerns, these new projects appear to have a greater involvement by international groups. They also show a further trend upmarket. In March 1990, the Government announced a temporary freeze on all projects where construction had not started. However, it now appears that this is to be relaxed, at least for the larger projects where substantial funds have been committed in advance of construction. It is also appreciated that to go back on authorizations already granted would affect Mauritius' reputation for straight-dealing with investors, both local and foreign, especially in relation to the EPZ sector. Moreover, a significant proportion — probably at least a quarter, possibly half — of these projects are in any case likely to be abandoned by investors, in view of the rise in investment costs and the evidence that it may become increasingly difficult to fill a greatly expanded hotel capacity at worthwhile charging rates.

5.17. The bulk of the increase would be in reasonable quality hotels well suited to "inclusive" tourists, notably from Europe. The increase in nationwide tourist room capacity would be a good deal less, though, as the growth in bungalows and rooms in informal accommodation is likely to slow — partly because the main growth in demand should be by higher-spending tourists, and partly because the more modest hotels will be forced to become more price competitive. Though price cutting in hotels should mean that these attract a higher share of visitor-nights, especially by Europeans, non-hotel commercial accommodation is bound to continue to dominate travel from Réunion and from most African and some Asian origin countries. Moreover, many will continue to stay with friends and relatives. Overall, the share of total tourist-nights spent in hotels seems likely to rise only fractionally from the 1989 level (47 percent).

Hotel Costs and Profits

5.18. In part, the escalation of hotel prices has reflected mounting costs. In particular, staff costs have clearly increased very rapidly; but they typically account for only about a quarter of all operating costs. Most other costs are local, notably food and drink and, for some hotels, quite substantial rental charges; these have risen a good deal more slowly. Especially with the increase in occupancy up to 1988, total costs have been rising appreciably more slowly than hotel charges. The resulting boost to profits was undoubtedly a major factor in the current boom in hotel construction. Rough estimates based on first returns to the hotel survey

(Table 5.5) indicate generally healthy profits, though there are obviously wide variations. Margins are appreciably larger in the more expensive hotels, mainly because of higher accommodation charges; lower price hotels depend far more on revenue from food and drink. Breakeven bed occupancy levels are generally a good deal higher in the lower-priced hotels. A rough estimate puts the average breakeven level at 57 percent in the lower-priced hotels, against only 46 percent in the higher-priced ones.

Table 5.5
Estimated Hotel Receipts and Operating Costs per Bed Night Sold
(Mau Rs)

	Higher price hotels[a]	Lower price hotels	Total
Gross receipts [b]	1,229	615	1,009
of which:			
for accommodation	718	358	589
Staff costs	232	114	190
Other operating costs [c]	750	405	626
Gross margin [d]	247	96	193

a *Gross receipts per bed night in excess of Mau Rs 800.*
b *Net of discounts.*
c *Purchases of goods and services, including rent, insurance, commissions, promotion costs, and repairs and maintenance.*
d *Before depreciation, interest payable and profits tax.*

Source: Mission estimates based on preliminary returns to Ministry of Tourism/CSO Hotel Survey (period covered varies, but typically from mid-1988 to mid-1989).

D. Tourism Planning

5.19. The rapid increase in hotel capacity has resulted from individual investors responding to mounting profitability of existing hotels and a case-by-case approach to granting development certificates. Many within the industry now feel that certificates were granted too easily. For the large number of hotels now under construction, little account appears to have been taken of the risk of overconcentration in some areas, or of the problems posed for water supply and the road network. Some also feel that certain developments are overlarge or inappropriate for the particular sites in question and will damage the general image of Mauritius as an uncrowded, relaxed tourist destination. Above all, it does seem that more new developments were authorized in the mid-to-late 1980s than the market could realistically be expected to support. Essentially, developments have been granted on an ad hoc, case-by-case basis rather than in the context of an overall tourist strategy or a spatial plan.

5.20. There are a number of externalities which would argue strongly against leaving the decision of whether and where to build hotels to the private sector. With limited financial resources, infrastructural facilities cannot be laid on wherever development takes place. As a minimum, it has to be made clear which are the preferred areas where necessary infrastructural facilities will be laid on. Furthermore, it is arguable that on a small island some stretches of prime coastline should be left free of all building (though there should be road access) and so be earmarked primarily for day visitors. Moreover, development in the most popular areas should not be allowed to continue to the point where there could be serious environmental damage. This would drive foreign tourism to Mauritius downmarket (as has happened in some Mediterranean resorts). Individual investment decisions would therefore impose costs on other parts of the economy.

5.21. All the above implies a need for long-term strategic planning for the tourist sector as a whole and for linked broad spatial planning (see also paragraph 5.25). Priorities and objectives have to be clearly spelt out. The growth in hotel capacity should be related to the carrying capacity of the island, as well as a realistic appraisal of market potential and of aircraft capacity. Promotional plans, staff training and infrastructural needs will have to be developed accordingly. In the tourist sector, the knowledge and necessary skills already largely exist in Mauritius. It is coordination which is needed, both of the planning exercise as a whole and of the necessary decisions to be taken and implemented by different government departments. Nor should the strategy be rigid. It must be able to respond continually to changing circumstances and be indicative, rather than prescriptive, in its application to particular projects. By developing an appropriate long-term strategy, the need would be eliminated for stop-gap measures such as the recently announced freeze on new hotel projects (in practice it seems already partially lifted).

Strategy Issues

5.22. The first key issue to be addressed is how large an annual inflow of tourists is acceptable. This is ultimately a political decision which only Mauritians can make; there is no hard-and-fast rule that can be applied. Comparisons with competitive destinations are interesting and informative but still do not provide the answers for Mauritius. While it is true that the current level of tourism relative to total population is still far below that in some other destinations (see Statistical Appendix Table VIII.8), this does not mean that Mauritius would want to continue to allow increasing numbers of tourists and follow the pattern of tourism development in these resorts. If there is a problem of absorptive capacity, it probably lies in the social impact of tourism on Mauritius' traditional established way of life. The *1988 White Paper on Tourism* has set guidelines on the basis of a ratio of tourists to population of 1 to 3, based on what Mauritians feel is the tourist carrying capacity of the island.

5.23. Although Mauritius would have little difficulty in physically absorbing greater numbers of tourists, the policy of emphasizing higher spending and so predominantly long-haul visitors should be continued. Indeed, if possible it should be reinforced, especially in view of the recent shift to more modestly priced accommodation (with consequent adverse effects on Mauritius' image and on the environment) and the continuing strong performance of tourism from Réunion and the lower-value segment of French tourism. But there are several steps that need to be taken to implement this policy. It would almost certainly be impracticable to squeeze out low-value tourism; the numerous, inexpensive flights between Réunion and Mauritius are an obvious reason. But the cheaper end of the market can be upgraded to yield more in terms of net earnings, which in turn might discourage some. More acceptable accommodation in the moderate price bracket (say between Mau Rs 500 and 1,000 per night for a double room) is needed. This does not necessarily imply a greater number of modest price hotels or bungalows. There is also considerable scope for reasonable quality rented holiday apartments - preferred as holiday accommodation to hotels by many French in particular. Suitably sited developments should be encouraged. At the same time, there could be greater control on informal accommodation. The MGTO could require a license for the letting of accommodation upon payment of a license fee and after getting approval for meeting quality standards by the MGTO or some other agency. The Government could also impose a tax on imputed income and mandate periodic checks on sanitary conditions and waste disposal. By publicizing those bungalows, apartments and rooms which have been approved, by allowing an official sign to be displayed, and by prosecuting or fining those found operating without licenses, the MGTO could also make it increasingly difficult for other operations to compete. Finally, a squeeze on camping by foreigners could be exercised by requiring advanced booking and allowing this only on designated sites with appropriate waste disposal facilities.

5.24. The question also arises of the value of the present system of hotel development certificates. Though it probably has helped Mauritius escape very large and visually obtrusive (especially high-rise) hotels which have spoilt resorts in some other parts of the world, ordinary building regulations could achieve this equally well. The system has not prevented an overconcentration of hotels in some areas, or overbuilding on some sites, or the development of sites which may be inappropriate on wider planning grounds. Nor has the permitted expansion of capacity been linked to any overall appraisal of market potential. As even Singapore has found, it is in practice very difficult, perhaps impossible, to use hotel supply limitation to keep demand and supply in balance. Finally, the present system is open to abuse.

5.25. Arguably what is needed is not just control of hotel development but overall land use planning for all coastline areas with touristic potential.[59] Low-quality, creeping urbanization and villa building along the coast are probably equally serious problems for the environment, for Mauritius' tourist image and even for the provision of infrastructural services than is hotel development as such — as has also been the case in many Mediterranean resorts. But land use planning could be used to ensure that hotels are only built in appropriate places on sufficient land to prevent overdense developments and without encroaching too closely to

59 While this does imply projecting probable hotel capacity growth, it would nonetheless be consistent with the scrapping of development certificates.

the beach[60] or to existing buildings. Such a system would encourage the upgrading or rebuilding of existing lower or mid-range hotels to higher standards.

5.26. Especially in view of the likely hotel oversupply situation over the next few years, air access policy represents another major issue. As discussed in Section E, air access policy is an instrument that Government can use to influence the number and composition of tourists coming to the island. The question is how to design air access policy in such a way that the right numbers of upscale tourists visit Mauritius without encouraging perverse reaction which undermines the Government's policy. This may in fact imply that there should be a more positive attitude to traffic rights negotiations with foreign carriers, which should be given more freedom to operate in the manner which suits their commercial interests best.[61]

5.27. As also discussed in Section E, the main potential for increased tourism to Mauritius lies in Europe, including some origin countries of only very minor significance at present (e.g., the Netherlands and Scandinavia). And, it is in Europe that promotional efforts should be concentrated. The MGTO needs a substantial increase in its budget; a close coordination of the promotional programs by the MGTO, Air Mauritius and the main hotel groups is desirable.

Planning and Implementation Capabilities

5.28. As noted in paragraph 5.21, the knowledge and skills for long-term strategic planning of the tourist sector already largely exist in Mauritius. Capabilities for general land use planning of tourist areas are possibly rather less adequate. The main problems lie in coordinating the process of both tourism strategy planning and land use planning, in reaching agreement on measures to be taken by different government departments and in implementation.

5.29. It is evident that both the Ministry of Tourism and the MGTO need strengthening. In the MGTO, a core of perhaps two or three additional professional staff should be recruited to plan and use increased resources effectively both in Mauritius and abroad. The Ministry of Tourism also needs more full-time professional staff. In addition, there is need to build up the Ministry's capabilities to analyze tourist trends in both origin countries and competing destinations, and to coordinate the technical aspects of long-term strategic planning for the sector. The Government also needs to be able to draw on advice in relation to aviation policy, especially in negotiations on air traffic rights.

---

60 Some hotels are built so close to the sea and are so aggressively protected by guards that the beach becomes effectively private; ordinary Mauritians cannot easily or comfortably exert their legal right to access.

61 The preference which many tourists have for using their own national airlines, increased promotion of Mauritius by these airlines, and the favorable effects on hotel occupancy and average length of stay of using aircraft based in Europe rather than in Mauritius, are also important reasons for allowing an increased market share to foreign airlines.

5.30. Finally, a key element in the strategic planning for the tourism sector is to get close involvement of the industry. The industry should be consulted in major decisions affecting the sector's development. And its collaboration in matters such as promotion is essential. A National Tourism Board, as was proposed in the *1988 White Paper on Tourism*, would be an appropriate mechanism by which this could be effected. The Board might comprise perhaps eight to ten members drawn partly from the government departments primarily affected, plus representatives of the hotel industry, tour operators and Air Mauritius. Meeting possibly once a quarter under the chairmanship of the Minister of Tourism, it should be primarily concerned with strategy and policy issues and should be able to make recommendations for consideration at the Cabinet level. If it were decided to retain the system of hotel development certificates (probably unnecessary — see paragraphs 5.24 and 5.25), decisions on these could probably most suitably be taken by this National Tourism Board, excluding the hotel representatives; spreading responsibility for such decisions implies that the system would be less open to suspicions of possible abuse.

E. Promotion and Diversification

5.31. It is very important to maintain, and if possible reinforce, Mauritius' upmarket image as a beach holiday destination. Beach holidays, particularly in South East Asia, have become increasingly price competitive for Europeans and now overlap with the more expensive Mediterranean holidays, while prices in the Caribbean have also become relatively lower. It is, therefore, necessary to pay far more attention than in the past to attracting the right kind of tourists and to making it easy for them to get to Mauritius. The availability of convenient flights from Europe particularly is a major potential problem. Moreover, coordination of promotional strategies and country programs between Air Mauritius, the hotel industry, and the Mauritius Government Tourist Office (MGTO) is needed. This, of course, implies agreement on priority markets.

Promotion

5.32. Given the Government's overall policy towards tourism, the Government's budget for tourism promotion at this point in time should be directed towards attracting tourists from upscale destinations rather than increasing the numbers of tourists as such. The MGTO 1989/90 budget of Mau Rs 35 million (US$2.3 million) is, by international standards, modest for a relatively small, but upmarket, beach holiday destination. Several comparable destinations spend around US$20 million annually, two to three times as much per visitor or as a percentage of gross tourist receipts. Some, such as Tahiti, spend far more still. A comparison appears in Statistical Appendix Table VIII.9. Inevitably, small destinations have to spend relatively more than major ones. Though the promotion budgets of larger countries such as Hong Kong, Singapore and Thailand are roughly ten times that of Mauritius in absolute terms, they are smaller per visitor or as a proportion of gross receipts. The point is that it is difficult to make a real impact in a number of different destinations with a total budget of under US$15-20 million. Indeed, the US market alone can easily absorb spending on this scale. Moreover, inevitably, a large part of MGTO spending goes to general expenses, rather than to advertising and public relations in individual markets. Even the largest advertising budget, of Mau Rs 2.2 million in France, is far too small to have any real effect.

5.33. In common with many other destinations, the bulk of the promotion of Mauritius is by airlines, hotels and tour operators. Air Mauritius and the two main hotel groups spend around Mau Rs 150 million between them on marketing and promotion abroad. But this is far less than some other national airlines are in a position to spend (compared, for instance, to the massive campaigns mounted by Singapore Airlines and Thai International). The featuring of Mauritius in foreign tour operators' brochures probably represents the largest single element in promoting the destination and a large slice of MGTO efforts go to persuading operators to give sufficient prominence to Mauritius. However, in contrast with some other destinations, foreign airlines do relatively little to promote travel to Mauritius. This is partly because air traffic agreements give little incentive to those who operate joint services with Air Mauritius to push the island. It also reflects the lack of joint promotional campaigns between foreign airlines and the MGTO. Some beach holiday destinations, in the Caribbean for instance, need to do little in the way of promotional activities because foreign airlines, and foreign travel journalists, do it all for them.

5.34. In the increasingly competitive market for long-haul beach tourism, and especially in view of the need to emphasize an upmarket image, it is clear that a major increase in the MGTO's budget is needed. However, there is little point in doing this until clearly defined plans have been developed in conjunction with Air Mauritius, the hotel groups and the Ministry of Tourism for allocating the increase. Limited funds should be concentrated in a very few priority markets so as to make maximum impact in these, even at the cost of ignoring some promising secondary markets. Cost effectiveness — the anticipated promotional cost per additional visitor — should be an important criterion in selecting these priority markets. Once this strategy begins to yield results, additional priority markets could be added. Within a very few years an MGTO budget in excess of Mau Rs 100 million should prove worthwhile. To compete effectively with other upmarket beach holiday destinations, it could well be significantly more.

5.35. To use increased resources effectively, the MGTO clearly needs strengthening, both domestically and abroad. More professionals with a real understanding of promotion are needed. While full-blown tourist offices abroad in prestigious locations would certainly be excessively expensive, continued reliance primarily on modest retainers to public relations concerns cannot be expected to produce much; an intermediate approach is indicated. More attention also needs to be given to the promotion of tourist activities after their arrival in Mauritius. They should be made more aware of the full range of attractions on the island, including special interests which operators' tours cannot cater to. As in other destinations, well presented, illustrated brochures should be placed in hotel bedrooms and could also be available at the airport. As Hong Kong, Singapore and Hawaii, for example, have shown, widening the "menu" of attractions to tourists stimulates spending, increases the likelihood of repeat visits, and tends to lengthen the average length of stay.

Market Diversification

5.36. Current policy puts considerable emphasis on market diversification. Clearly Mauritius has been excessively dependent on three main markets — France, Réunion and South Africa. The last of these has little growth potential at present, in view of the country's many problems and the weakness of the rand, while tourism from Réunion and a fair proportion of that from France yields relatively low returns per visitor-night. So diversification is needed. But it will always be difficult to get much traffic from countries from which no direct flights are available. Moreover, each new market requires a substantial addition to promotional spending. So diversification should not be carried too far. Furthermore, Mauritius' share, even of the French long-haul beach holiday market, is still quite small; so there is not the same urgency in diversification which faces some other destinations.

5.37. As is widely appreciated, market diversification and air access are two sides of the same coin. Hence current emphasis has been on building up travel from origin countries with which traffic rights have recently been established, especially in the Far East. However, it must be appreciated that Far Eastern travellers have a wide choice of nearer and cheaper tropical beach holiday destinations, both north and south of the equator. Australia, Fiji, Hawaii, Indonesia, Malaysia, New Zealand, the Philippines, Tahiti, Thailand and many small Pacific islands are competing for the same market, for under half the price of a holiday in Mauritius. Moreover, the facilities in these destinations are generally tailored to the needs of Far Eastern holidaymakers, with heavy emphasis on extensive shopping facilities and with a wide range of modestly priced gourmet restaurants. Shopping and eating are the major holiday pursuits of most Japanese and Chinese travellers. Finally, Japanese travellers, particularly, tend to favor large Japanese owned and run hotels (which have consequently come to dominate areas of the Australian and Hawaiian coasts); their poor linguistic skills are a major factor. And, keen though they are on golf, it is doubtful whether this would be the major draw which some in Mauritius believe; even closer tropical destinations have found it difficult to tap a substantial part of this market. For all these reasons, it is doubtful whether Far Eastern travellers will ever constitute more than a very small proportion of visitors to Mauritius. The honeymoon market is perhaps the most promising market segment. An additional problem is the lack of direct flights from Japan. Lack of airport capacity in Japan until at least the mid-1990s poses serious problems; nor is the use of Hong Kong as a hub a satisfactory solution, because of shortage of capacity there and the preference for direct flights. Australia possibly represents a more interesting market as the distance from Western Australia to Mauritius is competitive with that to popular Pacific island destinations and there is a strong tradition (in contrast to Far Eastern origin countries) for pure beach holidays.

Traffic rights remain, however, a long-standing problem; until this is resolved, Australia will be only a minor market for Mauritius.

5.38. Consequently, the main growth potential remains in Europe, and it is there that the vast bulk of promotional resources should continue to be focussed. Attracting European tourists, preferably with a shift away from the low-spending French tourists coming in through Réunion, would be consistent with the focus on upmarket destinations. As was seen in Section B, European tourists stay relatively long and are high-spending. Mauritius has done relatively well in attracting tourists from France; around 1.7 percent of French long-haul tourists worldwide go to Mauritius. Linguistic affinity and relatively good air access (including cheap flights via Réunion) are the main reasons, but France also absorbs the largest single share of promotional spending. For no other European origin country, except Switzerland (around 1.0 percent), does Mauritius' share reach 1 percent of the long-haul total. Even for relatively important origin countries such as Germany, Italy and the United Kingdom, only about 0.4 percent of all long-haul travellers go to Mauritius. The Scandinavian countries and the Netherlands, which between them account for considerably more long-haul beach holiday travel worldwide than does France, are perhaps the most obvious almost-total gaps in terms of travel to Mauritius. Air access is, of course, a major reason.

Air Access

5.39. Air access policy is one of many tools that the Government can use to further its overall objectives in the tourism sector. However, such a policy can only be determined in the context of a clearly articulated government policy concerning the number and type of tourists that Mauritius wants to attract. Under the current *stated* policy, the Government could use air access policy to limit the total number of tourists while encouraging a move upmarket. This implies a strategy which does not go after numbers of tourists as such, but rather those from selected upscale destinations. However, if the Government were to decide that it cannot reverse the existing boom in hotel construction, for example because of pressure from the hotel industry, then it may well want to use air access policy to support the additional tourist traffic.

5.40. **Limiting Air Access.** Air Mauritius currently dominates air transport to the island; a large majority of traffic is either on Air Mauritius flights or on joint Air Mauritius/foreign airline flights operated with Air Mauritius equipment. Indeed, Air France, British Airways, Singapore Airlines, and South African Airways are the only important carriers operating wholly independently. This contrasts with the situation in most other long-haul beach destinations, the bulk of traffic to which is by airlines of the passenger's own country of residence. Reasons include the weakness of many developing country airlines, the strong preference which most passengers have for travelling either by their own national airlines or in other big carriers with an international reputation for quality and safety, and the policies of many tourist destinations which have given priority to developing tourism as a whole rather than to the interests of national airlines. This last is, in some cases, reflected in a large share of charter operations.

5.41. In the conditions which have operated to date, with relatively limited numbers of passengers coming long haul from individual countries of origin, Air Mauritius has clearly served the island well. It plans to continue to do so and a study is currently in progress on the strategy it should pursue in the 1990s; this will of course have to be part and parcel of the Government's overall tourism strategy.

5.42. Assuming that the Government reaffirms its policy to **limit the total number of tourists** and to encourage low-impact, high-spending tourism, there would not be great pressure to increase the seat capacity to Mauritius as such. Air Mauritius' policy of restricting the operations of other airlines and keeping air fares to the island high also serves to keep down the total number of tourists visiting the island. Certainly there are foreign airlines that feel that in traffic rights negotiations the Government has favored Air Mauritius and that they have accordingly been forced into accepting joint operations on Air Mauritius terms. On the other hand, certain foreign airlines with rights into Mauritius have chosen not to operate because they have other priorities or they find the route unprofitable. Other carriers which started operations decided to withdraw their services or to operate jointly with Air Mauritius, for example, Qantas, Alitalia, Air India and Lufthansa. Generally, of course, the volume of traffic has not so far been sufficient to support separate operations by two carriers. It is also true, however, that conditions have been imposed, for instance on the mix of different classes in flights, which have a significant effect on the viability of operations by independent airlines. Certain specific arrangements also turn out to be of clear benefit to Air Mauritius; for instance, the royalty which British Airways pays Air Mauritius for the carriage of fifth freedom traffic (a usual practice in the industry) on every tourist brought from the Middle East (where there are no Air Mauritius services) clearly deters traffic by increasing the cost advantage of holidays in the Seychelles and South East Asia — of particular interest to expatriates and their families.

5.43. Air Mauritius has also shown an interest in keeping fares to Mauritius relatively high; it considers that its fares are in line with the high standards that it sets and with the Government's policy of selective and high-spending tourism. Other airlines serving Mauritius have likewise shown little interest in pushing for lower fares as this would neither generate much traffic nor take any substantial part of the market share away from Air Mauritius. As Statistical Appendix Table VIII.10 shows, though official fares to Mauritius are not dramatically different in terms of US cents per kilometer to those on other long-haul routes, discount fares are substantially less attractive (except from France via Réunion). Rates paid to airlines by tour operators for travel to Mauritius are also unusually high — more than the all-inclusive cost of one-week holidays from Europe in some competitive destinations. There are some legitimate reasons why fares have to be fairly high. Though peak load factors are high, year-round load factors are not. There is little, normally highly profitable, first class and business class travel which on many routes subsidizes the concessionary fare and inclusive tour passenger. Crew costs are high because the long flight necessitates a crew change and low frequency necessitates long crew stopovers. Whatever the reasons for Air Mauritius' policy concerning fares and the operations of other airlines, it has clearly helped to keep down the total tourist traffic to the island which is consistent with the Government's stated policy. The issue for the Government is whether the de facto monopoly rents should accrue to the country as a whole instead of only Air Mauritius as is the case at present.

5.44. Nevertheless, the existing situation has some shortcomings in relation to the goal of encouraging **high-end tourism**. First, current arrangements give little incentive to foreign airlines to promote Mauritius as a destination, thus depriving the island of some high-spending tourists who should be targeted, including those from Europe and Australia. Moreover, German tourists, for instance, who have booked on a Lufthansa flight are sometimes disconcerted to discover that in practice it is, in essence, an Air Mauritius operation.

5.45. Second, when Air Mauritius equipment is used in flights to and from Europe, hotel occupancy is reduced because beds are often unoccupied for two nights a week in each fortnight's holiday when back-to-back flights turn round in Europe (paragraph 5.13). It almost certainly also reduces the average length of stay. This is not, of course, the result of any Air Mauritius strategy, simply the consequence of its market domination.

5.46. One of the problems facing airlines serving destinations like Mauritius is that the bulk of their fleets of long-haul aircraft are too large in capacity for a fairly low-volume destination. Although the economies of using these long-haul aircraft on flights to Mauritius will become more worthwhile as traffic volume increases, the availability of a suitable 200-seater aircraft would make it easier in the meantime to step up frequencies and thus the choice available to travellers. Delivery delays for these aircraft are substantial, however.

5.47. **Improving Air Access.** If, however, the Government cannot resist the pressure from the hotel industry to limit, or even curtail, hotel capacity, then it will also come under pressure to improve air access. If the incidence of peaking and average length of stay remain unchanged, fairly conservative estimates would suggest a need for around 1,200 extra seats a week by 1992 and 2,750 extra by 1995, based on the projection of hotel capacity. This includes estimated arrivals from minor origin countries and those coming via Réunion. But even if half the additional French visitors, plus a small proportion of those from other European countries, travelled via Réunion, this would only cut the additional number of long-haul seats required between Mauritius and Europe by between a fifth and a quarter.

5.48. To cater for even half this additional traffic (less than its current share) plus the increase in its traffic from other areas of origin, both long haul and short/medium haul, Air Mauritius would need to expand its long-haul fleet from six aircraft to seven by 1992 and certainly eight, possibly nine, by 1995. However, this may be difficult, given that manufacturers' order books for suitable aircraft are now full until around 1997. With many other airlines around the world also desperate to acquire new capacity, secondhand and leased aircraft are becoming increasingly difficult and costly to obtain. Financing a major expansion in its fleet and building up staff and related facilities could also pose problems for Air Mauritius.

5.49. Under this strategy, if Air Mauritius will not be in a position to put on the bulk of the additional capacity needed, then other airlines, especially European airlines, will have to be encouraged to build up services to Mauritius. Particularly in view of the capacity constraints these are also facing and the relatively low priority most give Mauritius (a fairly small and not especially profitable destination), these possibilities will need to be explored seriously.

5.50. In the event, the question also must be posed whether charters should be permitted. It is natural that airlines now serving Mauritius should be opposed to these. Charters would siphon off traffic in peak months, while not operating in the low season. They thus make the economics of a low-volume route even more difficult for scheduled services. They could also imply a move downmarket; the upper-income tourists, whom Mauritius is particularly keen to encourage, generally have a preference for scheduled flights. However, it is only the French market which is likely to be large enough to support a viable charter operation in the next few years. As many French visitors to Mauritius are already coming on charters to Réunion, little would be lost by allowing direct services. It is recognized that, once in Réunion, tourists cannot be effectively discouraged from coming on to Mauritius. The competition opened up would also restrain prices charged to tour operators by scheduled carriers (who would otherwise be tempted by the general shortage of capacity to boost rates).

5.51. There is some disquiet at reported plans to develop Réunion as a regional air traffic hub served by a regional airline. Mauritius would appear to be better placed to perform this role, being linked to a wider range of destinations and with a more substantial and more diversified economy. The main potential for a regional hub is in relation to travellers from outside the region. Apart from the well developed flow between Mauritius and Réunion, the scope for intraregional travel is more limited. Mauritius should actively seek to develop the island as a regional tourism center and pursue cooperation with nearby islands. Action is needed to sell the region as a whole. As in the Caribbean, "island-hopping" tourism could be encouraged, and Mauritius could be the starting and finishing point for Indian Ocean fly-cruises and yacht charters.

5.52. Finally, increased tourist traffic would soon necessitate an increase in the terminal capacity at the airport. At peak periods it is already under some pressure, though there is room for changing this through modest improvements to facilities. With the heavy predominance of tourist traffic and an emphasis on travel from

Europe, bunching of arrivals and departures and a high proportion of weekend traffic is, of course, inevitable.

5.53. To conclude, it needs to be clearly understood that air access policy must serve the Government's overall objective in the tourism sector. Limiting air access through high prices and restrictions on the operations of airlines other than Air Mauritius is quite consistent with the current stated policy, although it does lead to some problems in being able to attract tourists from certain targeted markets. However, there are tremendous pressures to allow an expansion of hotel capacity and hence on increasing aircraft seat capacity. The latter policy is consistent with an overall strategy of expanding tourism, not one of moving upmarket and encouraging high-end tourism.

F. Increasing Tourist Earnings

5.54. One of the effects of the surplus of hotel space which is already emerging will be that nominal rupee hotel rates will stabilize (a decline in real terms) and discounting increase. Up to 1993 at least, this will probably more than offset increased emphasis on typically high-spending tourists from Europe. Mauritius' quality image has also naturally attracted many who are unable or unwilling to pay the high rates charged by hotels, when far cheaper accommodation is available outside the hotel sector. This is the main reason why real expenditure per tourist night after a rapid rise up to 1987 has declined slightly since. The trend for a substantial and rising proportion of tourist nights to be spent in informal accommodation will be difficult to reverse. Some possible means, however, have been discussed in Section B.

5.55. Although average spending on accommodation, food and drink per tourist night may well fall in real terms in the years ahead, there is scope for a substantial increase in other areas of tourist spending, especially on shopping and on tours. The latest available tourist expenditure survey (for 1988) indicates that accommodation, food, drink and related gratuities absorbed about 66 percent of all tourist spending, while shopping absorbed 16 percent and car hire and tours 10 percent.[62] There has probably been little change since.[63] By international standards this is a low proportion of spending on items other than accommodation,

---

62 These numbers refer to tourists not on package tours. For tourists on package tours, the share of expenditure on accommodation, food, drink and related gratuities was about 71 percent, for shopping it was 13 percent, while car hire and tours accounted for about 10 percent of expenditure.

63 On the one hand, there has been the shift to informal accommodation which implies relatively more spending on internal transport and shopping. On the other hand, there has probably been a rise in the proportion on all-inclusive tours (certainly more come from Europe, travel from which is dominated by inclusive tourists). Though in absolute terms the average inclusive tourist spends more on shopping, but less on transport than the average independent traveller, the proportion of total spending going to accommodation, food and drinks is considerably higher.

food and drink. In 1989, the average visitor to Mauritius probably spent only around US$70-75 on shopping, plus US$65-70 on transport and other elements apart from accommodation, food and drink while on the island. In contrast, in many Far Eastern destinations the typical tourist spends US$300-400 on shopping alone on visits averaging well under a week; in Hong Kong and Singapore, over half of all tourist spending goes to shopping. Obviously Mauritius cannot yet expect to approach this level. The type of tourist is very different, and there are still few Japanese and Chinese visitors for whom shopping is a major holiday pursuit. Nonetheless, there is scope for considerable improvement; data on spending by European tourists in some competitive destinations suggest that their shopping expenditure in Mauritius could be boosted to US$200 per visitor, while spending per head on transport and tours might be increased by half.

Net Tourist Earnings

5.56. No recent estimate exists of the proportion of gross tourist earnings which is retained in Mauritius. The analysis of 1980 data in a World Bank-sponsored study[64] suggested that, when direct, indirect and induced effects were taken into account, only 9 percent of gross foreign exchange earnings were retained in Mauritius as net foreign exchange earnings. However, a large part — around a third — of additional imported goods and services were "induced" effects, resulting from a high import propensity among Mauritian households receiving remuneration on profits from hotels, restaurants and other tourist undertakings, or from enterprises operating as suppliers or contractors to these (e.g., laundry services and building firms). Such induced imports are, of course, an intrinsic part of the development process in all sectors. Thus, the results of this study are not as different as might at first appear from the unofficial preliminary results of recent work carried out within the Ministry of Tourism based on a breakdown of the 1981 national input/output table to give more detailed coverage of the tourist sector. This work estimates imports of the tourist sector plus those generated in industries supplying this sector as equivalent to 29 percent of its gross output. Probably another 5 percent were profits paid directly abroad, but most of the industry's gross operating surplus (36 percent of gross output) was retained within Mauritius. Excluding induced effects from higher incomes, this work implies that net tourist earnings were the equivalent of 60 percent to two-thirds of gross.

5.57. This is high by international standards for a relatively small island economy, especially one which at the time was still at a fairly early stage in the development process. The main reasons were the quite substantial profits of a mainly locally-owned industry, with few hotels being run by foreign companies under management contracts and most construction being by Mauritian firms and financed locally. The contrast in these respects with the Caribbean, the main competitor area as a long-haul beach holiday destination, is striking.

---

64 *Economic Impact Study of Tourism in Mauritius* by Brian Archer and Steve Wanhill, September 1981.

5.58. Moreover, it is probable that, since the early 1980s, the share of net export earnings has increased. The more developed state of the economy as a whole means that more inputs can be purchased locally. Owing in part to the EPZ, the range of Mauritian-made manufactures is wider and their quality improved, while construction and other skills are also better. The increase in the tax surcharge on hotel bills to, in effect, 15 percent is another factor. Profitability of an industry which is still predominantly locally owned has probably also risen as hotel occupancy has improved and room rates have been boosted. Relatively low imported inputs are also implied by the first preliminary returns to the 1988/89 Ministry of Tourism/Central Statistical Office hotel survey. Direct purchases of goods and services abroad appear to be equivalent to under 5 percent of gross revenue. A modest proportion of food purchases — especially meat — though bought in Mauritius, has also been imported, as have all fuel and a number of lesser material inputs. The imported component in services other than quite substantial rents to government and local property owners is probably higher than for goods, while a small part of staff costs is for expatriate salaries paid or transferred abroad. The substantial profits of the industry are generally either reinvested or accrue to local investors. Hardly any is transferred abroad. Overall, it seems that the local component of hotel receipts is about 80 percent of the total, taking account of second-round effects (the imported component of goods and services bought locally) but not of induced effects. The local component could be higher still for restaurants, but lower for local transport and tours (in spite of the high taxes on vehicle imports) and for shopping; even locally manufactured goods bought by tourists have a big import content. The implication is of a combined current local content for the whole tourist sector of around 75 percent.

5.59. There appears very little scope for increasing the already high local content within existing tourist sector operations. There are few examples of imported products being bought where equivalent quality local ones are now available. Indeed it is striking how keen a locally run industry is to maximize the use of Mauritian products. The contrast with some other destinations, such as the Caribbean, is very pronounced. Nor do there seem to be many imported products which could potentially be produced locally within the next five to ten years. Agricultural diversification should, however, improve the supply of locally produced foodstuffs, and industrial development through the EPZ should widen the range of manufactures available. On the other hand, the squeeze on hotel margins implies a decline in local content, as does the serious shortage of skilled staff; for the next few years a higher proportion of key workers are likely to be expatriates. And, it is becoming so difficult for hotels and restaurants to obtain adequate supplies of fish that a rising share of imports seems unavoidable.

Improving Shopping Opportunities

5.60. The single biggest way in which spending per tourist can be increased is by substantially improving shopping facilities. It will be appreciated that even imported, duty-free goods have a substantial local content — sometimes as much as 50 percent — because of high trade markups. The need for better facilities is already widely appreciated and a new venture, The Mauritian Shopping Paradise, plans to set up outlets in different parts of the island. The present shops in tourist areas, including hotel shops, offer only a meager range of generally low-quality goods of little interest to upper-income visitors. Handicrafts and cheap beachwear predominate. Many of these are not even local in origin — cheap handicrafts are largely from Madagascar. The prestige name, high-fashion articles, quality jewellery, and camera equipment readily available in or close to hotels in competitive destinations are noticeable only by their absence. Nor is the situation much better in the main urban centers of Mauritius. In any case, they are too distant and difficult to access for tourists who usually prefer to shop after a day on the beach, or only when the weather is poor. Consequently it is likely that the average tourist spends significantly less on shopping than originally envisaged when leaving for his or her holiday.

5.61. From the upper-income tourist's point of view, the ideal is a shopping complex with cafés, restaurants and several shops of each type (fashion, shoes, cameras, etc.) so that goods and prices can be compared. There are two main problems in establishing profitable modern tourist-oriented facilities in Mauritius. First, the tourist population is relatively scattered. Even in Grande Baie, there is not a large number of potential shoppers staying within easy walking distance or a short taxi ride away. Consequently, shopping facilities would have to be on a more modest scale than in the big complexes in Far Eastern beach holiday destinations. Second, to have a good range of high-quality products available implies that most will have to be imported (exactly as they are in shopping centers in Europe and the Far East). And for these to sell to tourists, they have to be attractively priced, implying low or even no duties. Inevitably, many in the local population would also be attracted. This could stimulate imports and lead to a loss of tax revenue.

5.62. To prevent Mauritians from using tourist shops, as some countries have sought to do, would naturally cause resentment and, as elsewhere, would be almost certainly ineffective, especially with the planned abolition of exchange controls. Rebates of taxes on leaving the island might be practicable, but could prove an administrative nightmare, not least because of the temptations to issue falsely-inflated invoices to give the customer a bigger refund. The need to get refunds or the alternative of a dual price system (lower prices for goods delivered directly abroad or at the airport) would also significantly deter tourist purchases. The only way to give sufficient stimulus to shopping by tourists may therefore be to reduce sharply or eliminate tax on sales in Mauritius of the products concerned, on the presumption that tourists will in practice prove to be the main purchasers; if so, the local content of sales to tourists arising from trade markups should roughly equal, or even exceed, the import content of additional purchases by Mauritians. Duty-free local sales are already allowed for EPZ products. There would obviously be some risk in this approach, though there would be compensating benefits to the local population. The key may lie in carefully defining a limited range of products of particular interest to tourists which would benefit from the tax cuts. The more limited range of goods would also mean that centers would not have to be overly large.

Tours and Car Hire

5.63. Tour operators believe that around half of all visitors to Mauritius take one or more full or half-day tours while on the island. The proportion tends to be relatively high among first-time visitors, while repeat visitors, especially those from Réunion, are more likely to take taxis (highly competitive with organized tours in terms of price) or hire self-drive cars. Many take two or three tours while in Mauritius. Around half of all tours are boat excursions. The remainder are by bus, predominantly day trips visiting a range of inland attractions, plus a fair number of half-day shopping visits. Prices are very competitive, around Mau Rs 450 on average for a full-day, guided tour; but the local tour operator's take may be as little as Mau Rs 250 (hotels and foreign operators extract substantial shares). One of the problems is that local tour bus capacity is geared to what is needed mainly on weekends for transfer between the airport and hotels. Midweek, this capacity is largely unutilized, leading to intense price competition especially in sales to foreign operators. Moreover, the extremely heavy duties on small luxury buses make it impracticable to import them. This deters tourists from taking full-day tours (bad roads are perhaps an even more important factor in this, especially from east coast hotels), and means that there is no comfort distinction between bus tours and trips offered by taxis. Total tourist expenditure on tours is probably Mau Rs 100-150 million annually, half of which is for boat excursions, or between 3 and 5 percent of gross tourist receipts.

5.64. Taxis do, of course, provide a valuable and flexible service to tourists, though there is, perhaps, some justice in the complaints that safety and other standards are often lower than they should be. The volume of day and half-day trips in taxis, including the cheaper minibus taxis, can only be roughly estimated, but is clearly well below that handled by organized tour operators. There are believed to be around 25,000 car-hire contracts a year, generally divided between two or more tourists and typically for five days. Thus approximately 20 percent of all tourists have a hired car at their disposal, especially those staying in bungalows or informal accommodation some distance from the beach. Relatively small vehicles, especially the open Mini Mokes, are the most popular. Total gross revenue of car hire operators is around Mau Rs 125 million a year, or 4.5 percent of gross tourism receipts.

5.65. While the potential for boat excursions appears well developed, there is considerable scope for increasing tourist spending on bus tours. Cost is not a constraint, as prices are modest for those spending considerable sums on a holiday in Mauritius. The lack of comfort in non-luxury buses travelling in a hot climate over, in some cases, very poor roads is a more serious problem. It limits the number taking excursions from some hotels. Bad roads also increase vehicle maintenance and repair costs and shortens their useful life. There is a case on grounds of equity to giving tour operators and car hire firms the same tax-free privileges as other export concerns but, much as they would like this, it is doubtful whether they need it to attract many more tourists. It would also put taxi drivers, who currently pay considerably lower duties on vehicles, at a disadvantage. But import duties on buses, especially luxury types, are excessive. A substantial cut, to perhaps the same rate as on taxis, could be justified for both buses and rental cars.[65]

5.66. It is also important to make tourists better aware of the full range of attractions on the island, including those such as mountain walking, forest visits and special interests which commercial tour operators cannot cater to. The Mauritius Government Tourist Office (MGTO) needs to give more attention to promotion to tourists once in the country (paragraph 5.35). Tourists seem largely unaware of the scenic attractions away from the beaches. Many might also welcome the opportunity to visit some agricultural undertakings (few will ever have seen, for instance, a sugar estate and mill at harvest time). In short, especially in view of the quite substantial number of repeat visits to Mauritius, the "menu" of potential places to visit needs widening. To do this, road surfaces need improving in some areas, while at many attractions there is much that could be done to enhance tourist appeal and generate additional income at the same time. The ease of visiting Port Louis could be improved by parking facilities for coaches together with a meeting place.

5.67. Visits to Mauritius' inland tourist attractions generally need to be made more convenient, interesting and memorable. Café and restaurant facilities are often poor or even non-existent. Some could probably also support a tourist shop. The possibility of additional activities, such as mountain mule treks or swimming in mountain streams, might be explored and introduced at suitable locations. All this would help to encourage visitors to stay longer and spend more.

5.68. Perhaps the prime example of an underexploited tourist resource is the Royal Botanic Gardens at Pamplemousses. An entrance fee could be charged to non-Mauritian visitors.[66] Some refreshment facilities are needed. A shop could sell souvenirs, including pictures of plants and other specifically botanically-oriented items. Some of this additional revenue could go to improve the appeal of the gardens to tourist visitors. There should be more emphasis on flowers, especially orchids. (The orchid garden within the Singapore Botanic Gardens is a major tourist attraction). Tree and plant labelling and explanations of uses could be greatly improved (though the guide book is good). Possibly too, in time, a wider variety of trees and plants could be established to enable it to live up to its reputation as one of the world's prime tropical botanic gardens. The French

---

65 When vehicles are resold, the difference in duties could be levied on the secondhand value.

66 It is generally obvious which visitors are Mauritians. An entrance fee equivalent to Mau Rs 24 has had little impact on the massive flow of tourists, both foreign and British, to Kew Gardens in London, and in 1991 it was tripled.

Government has already agreed with the Government on a management plan for the Gardens which will be implemented by the French.

Sports Facilities

5.69. All the leading beach hotels have good facilities, mostly free to guests, for water sports and many also have tennis courts. Facilities for yacht charter and deep-sea fishing are also well established. There are nine-hole golf courses at St Geran and Trou aux Biches, and deer hunting can be arranged at Domaine du Chasseur. Though there is potential for mountain walking and rock climbing in some parts of the island, few of those visitors who might be interested are aware of this in advance and it would be difficult to take advantage of them without preparation.

5.70. Many in Mauritius believe that there is a sufficiently good holiday market to be tapped to justify the construction of one or more 18-hole golf courses. Some doubts can be expressed as to whether this is the case. Few travel long haul for specifically golf holidays, as this is not necessary. Americans take winter golf holidays predominantly in the Caribbean; Europeans mainly in southern Spain, Portugal and Tunisia.[67] Europeans rarely take golf holidays in the Caribbean and Americans rarely in Europe. This is largely because, apart from distance and cost, Europeans have a tropical island image of the Caribbean (as they do of Mauritius) where golf does not fit, while, for Americans, the image of Spain and Portugal certainly does not suggest golf. Additionally, playing habits vary. Europeans play relatively rapidly, rarely use buggies and do not regard golf as a suitable hot-weather activity, while in the United States golf is played throughout the summer but is generally impracticable in the winter in many parts of the country. Of course some Americans play the odd round of golf whilst in Europe, while some Europeans take their clubs to the Caribbean. But this is generally only a minor element in their holidays. Golfers from Japan and the Far East are closer to Americans in speed of play and adaptability to hot weather; but few could be expected to come to Mauritius on primarily golf holidays when warm-weather golf can be found far closer to home during their winter. In short, the opportunity to play golf in Mauritius would for all except perhaps a tiny minority be secondary to the island's prime attraction as a beach holiday destination. In this context, and in a hot climate, it is doubtful whether an 18-hole course is a much more substantial draw than a 9-hole one.

G. Supporting Infrastructure

Staff Shortages and Training

5.71. The increase in hotel capacity potentially implies an almost proportionate rise in the demand for trained hotel workers; though staff ratios are generous by

---

67 The undoubted benefits which Mediterranean region resorts draw from golf courses are in the winter season when hotel occupancy would otherwise be even lower than it now is. Golf courses contribute little to summer season occupancy.

international standards, a substantial improvement in average skill levels would be needed to reduce significantly the number of staff per visitor. The immediate impact of the expansion in capacity could, however, be a lowering of standards, which would also affect Mauritius' reputation of high quality. Staff recruitment and training are clearly one of the most serious operational problems facing hotel managements. Shortages are particularly acute in the higher skill and supervisory grades. They have led to a sharp rise in staff costs.

5.72. The larger hotels have well established training programs for the more junior grades, but only the two big groups, Beachcomber and Sun, and those with strong international links can attempt training in higher skills. Often, as with smaller hotels and restaurants, staff shortages are mitigated by poaching. The Mauritius Government Hotel and Catering Training School has long been starved of resources. Its facilities and staff are quite inadequate to supply the industry's needs in both quantitative and qualitative terms. If, as it seems, it has been decided to transfer responsibility for the school to the Industrial and Vocational Training Board (IVTB), this should be effected immediately. The IVTB envisages the establishment of an entirely new school with French assistance. It is recognized, however, that this cannot be operational for some years (both site and design have still to be finalized). Pending this, priority must be given to establishing a crash training program based on revamped existing facilities plus those which the industry can make available. For the next few years significant numbers of trainers and some of the key personnel within hotels will clearly have to be recruited abroad.

Tourism and the Environment

5.73. Many in Mauritius, both inside and outside the tourist industry, note that the current rapid expansion of hotel capacity and of tourism generally has gone ahead with little thought to environmental or social impact. There are even more widespread complaints of increasing water and beach pollution in the main tourist areas, especially in the north of the island and particularly around Grande Baie. The coral reef is said to be seriously damaged and fish stocks affected. But it has not as yet been possible to take scientific measurements over a sufficient period of years to establish the extent of ecological damage or its likely causes. The creeping urbanization of some tourist areas, with resulting increases in discharges and solid waste, is, however, clear. While the visible signs of damage are on a minor scale compared with many resorts in other parts of the world, the "unspoilt tropical paradise" reputation of Mauritius will obviously evaporate without action soon.

5.74. Foreign tourism is not the sole cause of environmental damage. Industrial discharges and agricultural fertilizers and other runoff also appear to be important factors. Moreover, the greater mobility which rising prosperity has brought has encouraged an increasing number of Mauritians to move to the prime tourist areas or to visit them on weekends. Some of the development in the Grande Baie area appears completely unrelated to foreign tourism. So, much of the environmental damage which has occurred in Mauritius in recent years results from the general development process. This does not, however, imply that it is an inevitable effect of economic development. Steps can, and should, be taken to mitigate it.

5.75. Following the World Bank environmental report for Mauritius,[68] a number of projects are being initiated which will help reduce pollution and protect the coastline in the north of the island. Consultants have been short-listed for a nationwide master plan for sewage financed by the African Development Bank. An important subcomponent, to go ahead faster, is a special study on the Grande Baie area. Two separate projects are involved in a master plan to restore and protect the coastline in the north; there are hopes of French aid. Finally, the Nordic Development Bank/Fund has expressed interest in financing the implementation of a 10-year solid waste management plan, which is expected to be prepared by a technical assistance team from the Overseas Development Administration (United Kingdom).

Infrastructure

5.76. The concentration of tourist development in the northern part of Mauritius puts an appreciable strain on water resources. In total, around two million cubic meters a year of water are used in tourist hotels. Like all communal users, hotels get piped supplies at subsidized prices (around 25 percent below the cost of supply). However, price increases are planned. But many hotels have to bring in a large part of their needs by road tanker, often from the Central Water Authority, at much higher prices. The great majority of hotels, especially the larger ones, have water treatment plants and an increasing number of them are now re-using the waste water for hotel gardens and nearby agriculture. Residential units in tourist areas discharge their waste water into septic tanks; this can be a problem in areas where ground water levels are high because of seepage and eventual runoff into the sea. The studies shortly to be undertaken on sewage treatment should be considering the options, but there may well be a case for establishing, and encouraging hotels to establish, water recycling in major deficit areas.

5.77. As noted in paragraph 5.65, road conditions are very poor in some tourist areas of the island, especially on the east coast, and this deters many from seeing more of Mauritius, and consequently from spending more while on the island. Programs for road rehabilitation should give greater priority to needs in these areas, although it is doubtful that the volume of tourist traffic alone would provide economic justification for a road rehabilitation program. Other infrastructural facilities appear generally adequate, though the incidence of electricity supply interruptions, often due to cyclones, has forced most hotels and many restaurants to invest in standby generators.

---

68 The World Bank, *Economic Development with Environmental Management: Strategies for Mauritius*, Report No. 7624-MAS, November 1, 1988.

H. Action Plan

5.78. The above analysis suggests the need for consideration of an overall master plan for tourism in Mauritius. While the *1988 White Paper on Tourism* gives a clear vision of how the Government would like to see the sector develop over the next few years, the analysis in this chapter points to areas where the stated objectives are being frustrated. The following should be given consideration:

- In light of existing and projected hotel capacity, review government policy on the target for the number of tourists with a view to clearly restating government policy towards the tourism sector. Ensure consistency between stated policy and actual hotel capacity.
- Review the system of hotel certificates and make a decision on certificates already granted. Review incentives given to hotel developers in light of government policy and targets.
- Ensure proper and close coordination between tourism strategy planning and land use planning.
- Carry out a comprehensive review of air access policy to ensure that it is consistent with the policy of attracting upmarket clients.
- Explore and develop a plan for the regulation of informal accommodation, including licensing and establishing standards for sanitary conditions and waste disposal.
- Increase the budget for the Mauritius Government Tourist Office and review promotional strategy so as to direct resources at selected upscale destinations in an effective manner.
- Strengthen the institutional capacity of the Ministry of Tourism and the Mauritius Government Tourist Office.
- Develop an action program for increasing net tourist earnings, including shopping facilities, tours, sports, and inland activities.
- Create a National Tourism Board as a forum for consultation in matters relating to the tourism industry.
- Review the adequacy of the proposed arrangements for the Mauritius Government Hotel and Catering Training School in order to maintain Mauritius' upmarket reputation. In addition, devise a training plan for the interim period.

6

Synergy in Diversification

6.1. The economy of Mauritius is at a crossroads. The successes achieved during the 1980s, which exceeded even the most optimistic forecasts of the Government, have structurally transformed the country from an agriculture-based, mono-crop economy to one with a dynamic manufacturing sector and a rapidly growing tourism sector. There can be little doubt that the first phase of development has been achieved and the Government deserves a great deal of credit for laying the foundations for sustained, export-led growth. The country now stands poised to enter into the second phase of development, a phase which is likely to transform it into a Newly Industrialized Country (NIC). The situation today is much more complex than it was when Mauritius embarked upon its initial adjustment effort and, consequently, the path ahead will be even more challenging. While pragmatic macro-management of the economy will continue to be a prerequisite, the Government will have to focus more and more on policies aimed at enhancing the productivity of its factors of production. It will have to do this at a time when there are rapid changes taking place within the international economic environment which could have far-reaching implications for the Mauritian economy.

6.2. However, this process of increasing productivity and diversifying the production base of the economy does not necessarily imply competition among the major growth sectors. Rather, what emerges from this study is the feasibility of peaceful co-existence between the major sectors in the economy and, within agriculture, between sugar and nonsugar crops. Developments in one sector can generate backward and forward linkages in other sectors, thereby stimulating additional growth.

6.3. The recent rapid growth of the EPZ and tourism sectors has created a whole range of new opportunities which have directly affected the allocation of land, labor and capital. These sectors have provided new opportunities for investment and, in the process, have made the economy more diversified and more robust. They have also enabled agriculture to participate in, and contribute to, the boom: for example, the increased profitability of sugar estates through diversification into other crops, the backward linkages into the packaging industry from the fruits and vegetables export industry, and the production of fruits and vegetables for the tourist industry, as well as for the export market.

6.4. Similarly, there are important linkages between "brain-service" exports, as discussed in Chapter 4, and, for example, the eradication of the fruit fly, as discussed in Chapter 3. Mauritius has unique advantages in dealing with both of these areas. Having an educated and bilingual work force, it is quite easily capable of installing the information base and modelling techniques necessary for designing fruit fly intervention strategies. Indeed the development of an "informatics" industry, i.e., one that specializes in different types of information-providing databases, is already underway in Mauritius. Moreover, being a small island with many micro-climates, a range of agricultural activities, offshore reefs and fishing industries, Mauritius offers a "closed system" where studies can be made in isolation and tested for effectiveness, a marketing advantage few countries in Africa can offer. The informatics industry, by combining service roles with direct applications in Mauritius, could spawn a new service industry. Mauritius is already the leader in sugarcane training for the area. It could similarly take the lead in the development of informatics and transfer this technology to the African region. This is another example of synergy and complementarity between the EPZ and the agricultural sectors. Agricultural diversification also assists in offering many more opportunities for developing information management systems; in short, informatics is a growth industry.

6.5. The growing tourism industry, combined with diversification in agriculture, creates new opportunities for tourist businesses. The scenic beauty of inland Mauritius can be combined with agriculture to develop agro-tourism. Centers like Le Val and Domaine du Chasseur which could be developed to offer stag hunting, beautiful scenery, ebony forests, kestrel birds, restaurants, and overnight accommodation are particularly attractive. The tourism and agriculture industries can both benefit from this sort of development. The economic benefits of these attractions need further study and market research, and a strategy needs to be developed to realize the tourist potential of agriculture and the natural interior beauty of the island.

6.6. In addition to the more obvious linkages between sectors, there are a number of issues which are cross-sectoral and further highlight the synergies generated by the diversification process. This report strongly recommends that, as the Government embarks upon this second phase of development, it explicitly incorporate such cross-sectoral linkages into its planning process. At this critical juncture of Mauritius' development effort, the Government needs to target its efforts at creating the kind of facilitating environment which will put scarce resources, be they land, labor, or capital, to their most productive use.

A. Land Resource Management

6.7. One area in which the Government will have to place major emphasis, and which has far-reaching cross-sectoral implications, is land resource management. Land provides the resource base for a wide range of pursuits. The interaction between land, climate, productivity, management practices and markets governs the allocation of land for agriculture, industry, tourism, and other uses. These interactions are exceedingly complex and a thorough understanding of their impact is required before an optimal allocation of land can be achieved. Given its peculiar importance in the Mauritian context, the Government needs to adopt the best technology available to assist it in making its decisions.

6.8. An extremely important tool that can assist in such allocation decisions is an integrated information system such as the Geographic Information System (GIS) referred to earlier (see paragraph 3.33). GIS is a powerful tool for integrating and analyzing data from diverse sources such as land ownership, land parcels, soil surveys, land suitability, irrigation surveys, land use topographic maps, climate regions and remote-sensed data. These geographic data are spatially registered so that various types of data can be compared and analyzed together. The data can be "digitized" and stored in computers so that they can be manipulated, reconfigured, updated, compared, displayed and mapped in a format to meet management needs. Such systems are now widely used in several parts of the world; two of the largest applications are the Sydney Water Board and the Brisbane City Council and, although they are complex to set up, provide benefits which can far exceed the costs. Installation of such a system would greatly facilitate the analysis of the various alternative uses of land and assist the Government when it decides whether to issue the necessary licenses and permits for industry, tourism development, or agriculture.

6.9. The Sugar Protocol, which sets quotas for sugar exports and hence production targets, has been one of the overriding concerns in the allocation of land in Mauritius. Sugar has traditionally been a major source of export income; the guaranteed EEC market, together with the institutional infrastructure, have dictated that sufficient land be devoted to sugar to meet production targets. With the growth of the manufacturing and tourism sectors, there has been a gradual erosion of the amount of land devoted to agriculture and increasing concern has been expressed by the Government on the need to manage land resource allocation more effectively. The need for a better information base has also emerged in discussions on the availability of suitable land for horticultural production.

6.10. These alternative land uses need not be in conflict with each other but act synergistically. For example, agro-tourism could combine agriculture, natural scenery and tourism to create a new inland tourist industry. Similarly, as has been pointed out earlier, there need not be competition between sugar and other crops for land resources. A great deal of land is still available for other agricultural pursuits through sugar crop rotation, interline cultivation, use of marginal land better suited to other industries like deer farming or fruit orchards, and high-value intensive crops like anthurium which do not require large tracts of land and hence have little impact on sugar land. In some climatic zones like super humid or very dry regions, crops like tea or mangoes are better suited. Some of the sugar land which is marginal because of rockiness or lack of irrigation could in fact be derocked and irrigated on the basis of improved economic returns from high-value vegetable crops. Steep and excessively rocky land is also more suited to high-value orchard development. Using the cutting-edge of technology and developing the necessary database will greatly facilitate the Government's task and assist it in designing appropriate interventions.

6.11. The Ministry of Environment and Land Use is very conscious of the need for effective land resource management to service all sectors of the economy. The development and use of an agricultural land resource database system (ALRDS) in Mauritius is well underway. The data already captured and stored within ALRDS comprise terrain characteristics, climatic factors, soils, land suitability, crop data, etc. These multiple data layers should now be able to provide, through a process of integration, different thematic maps on topics such as land areas suitable for food crop production, wetland and rocky areas affecting cane growth, land areas which have not been derocked, land ownership and parcelling pattern, land areas for erosion control, and the impact of cyclones in relation to terrain and windbreaks, etc. The development of GIS capability from the ALRDS is a natural progression and the only major constraint at present is the lack of appropriate computer software and some training in its use. Given the importance of land resource management in Mauritius, it is recommended that this area be accorded high priority.

B. Human Resource Management

6.12. The single biggest asset of Mauritius is its people. With a literacy rate of well over 90 percent, the people of Mauritius present a harmonious blend of different ethnic origins. Combined with the island's political stability, they have proved to be a magnet for foreign investment from all over the world. As Mauritius embarks upon the next phase of development, it will have to pay particular attention to further developing its rich human resource base.

6.13. Mauritius has a young population, of whom more than two-thirds are of working age. Most of this population is bilingual, fluent in English and French, which, over the past decade, has acquired considerable experience and knowledge about international trade and commerce. The task of effectively managing this young, politically active, upwardly mobile population and channelling its energies in the right direction will be a challenging one for the Government.

6.14. At the heart of the challenge lies the Mauritian education system and its capability for delivering well educated, easily trainable, young men and women. Formal education is accorded a great deal of importance in Mauritius. Both primary and secondary education in Mauritius are free and the enrollment ratios of 105 percent and 53 percent in primary and secondary schools, respectively, compare favorably with those of other middle-income economies.[69] However, the structural transformation of Mauritius into a more sophisticated economy has changed the traditional manpower requirements and created the need for technical and specialized skills. While participation in secondary education has increased from 26 percent in 1965 to its present level of 53 percent, this is still not sufficient to provide the intellectual foundations of a country that would want to move in the general direction of "brain-service" exports. In contrast, secondary school participation is 69 percent in Singapore and more than 74 percent in Hong Kong.

---

69 World Bank, *World Development Report, 1991*, pp. 260-261.

Between 1965 and 1988, Korea was able to increase secondary school enrollment from 35 percent to 87 percent.[70]

6.15. With the increasing mechanization in agriculture, the potential growth of high technology industries in the EPZ, and developments in the financial sector like the stock market and offshore banking, the demand for higher-level skills is bound to increase, calling for urgent action on the part of the Government. Moreover, in addition to facing competition from other developing countries like Sri Lanka, China and Indonesia, Mauritius now faces the spectre of increased competition from Mediterranean economies like Tunisia and Morocco and from the recently liberalized economies of Eastern Europe. It is therefore imperative that the Government establish an education system that will provide the average Mauritian with the necessary tools to respond effectively to the emerging competition. In May 1990, the Government embarked on the preparation of an Education Sector Master Plan, aimed at making the education system more responsive to the country's socioeconomic needs. As discussed earlier (see Chapter 4), efforts are also underway to introduce a system for industrial and vocational training. This report strongly recommends that continued emphasis be placed on this vital area in order to prevent it from emerging as a constraint to future growth.

C. Management of Capital

6.16. Despite the introduction of innovations such as offshore banking, the stock market, and a leasing company, the financial system in Mauritius has not kept pace with the developments in other sectors of the economy. The continued reliance on direct controls and credit ceilings has restricted competition in the financial system and has inhibited the development of capital and money markets. Several reports of the World Bank and the International Monetary Fund have documented these weaknesses and have proposed a reform program but implementation continues to be slow.[71]

6.17. As discussed in Chapter 4, there are widespread indications that the financial system is fast emerging as a major constraint to the future growth of the economy. At a time when the two most productive sectors of the Mauritian economy, industry and agriculture, are in the process of upgrading plant and equipment in an attempt to shift emphasis from labor-intensive techniques of production to a greater reliance on capital, this weakness in the financial system can become particularly obstructive. For Mauritius to be able to compete successfully, the existing system will need to be overhauled.

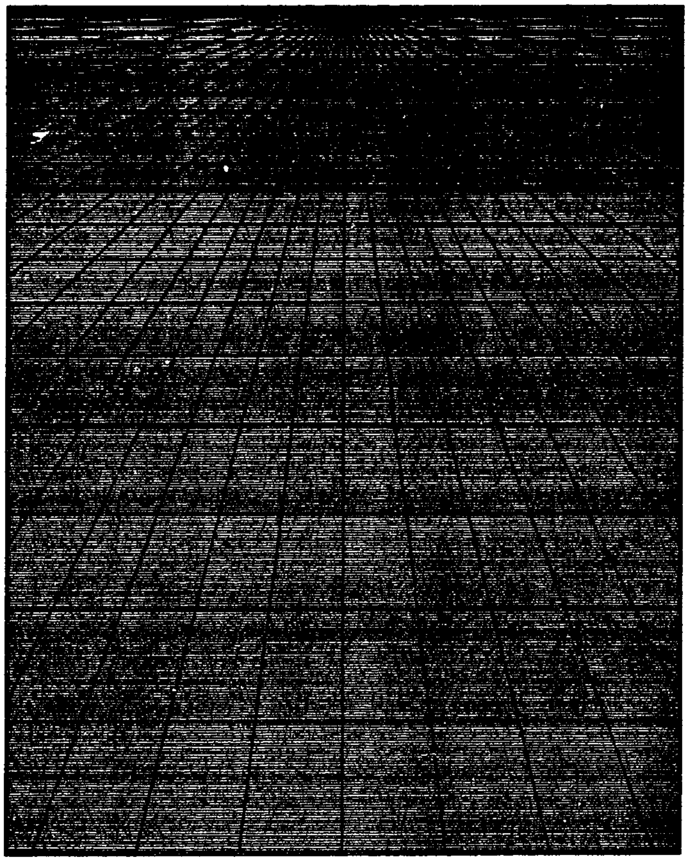
---

70 *Ibid.*

71 See International Monetary Fund, Central Banking Department, *Mauritius: Proposals for Reform of the Framework of Monetary Control*, June 30, 1988; and The World Bank, *Mauritius: Managing Success*, Chapter 6, November 1989.

6.18. While the banking system is fairly well developed, it will be necessary to develop new financial markets, increase the competition for financial services, and increase the number of financial instruments. The Government needs to review the present system of directing credit to the productive sectors of the economy and to promote dealers and money brokers with a view to develop secondary capital and money markets. As the demand for financial services grows, Mauritius will need to encourage the development of nonbank financial institutions (such as finance companies and mutual funds) and securities markets in order to broaden the range of services and to stimulate competition and efficiency.

STATISTICAL APPENDIX



The data in this appendix reflect their availability as of December 31, 1991.

POPULATION AND VITAL STATISTICS 1/

	1952	1962	1972	1983	1986	1987	1988	1989	1990
Island of Mauritius	501,415	681,619	826,199	956,863	993,851	1,003,794	1,016,596	1,026,813	1,054,546
Male	252,032	342,306	413,580	481,368	497,659	501,221	506,710	510,627	524,085
Female	249,383	339,313	412,619	485,495	496,192	502,573	509,886	516,186	530,461
Island of Rodrigues	13,333	18,335	24,769	33,082	35,588	36,537	36,485	37,046	37,782
Male	5,947	9,062	12,270	16,552	18,070	18,673	18,661	19,034	19,806
Female	7,386	9,273	12,499	16,530	17,518	17,864	17,824	18,012	17,976
Other Islands	..	..	366	487	500	500	500	500	500
Male	..	..	272	337	350	350	350	350	350
Female	..	..	94	150	150	150	150	150	150
Total Population	514,748	699,954	851,334	1,000,432	1,029,939	1,040,831	1,053,581	1,064,359	1,092,828
Crude Birth Rate 2/									
Island of Mauritius	44.3	38.5	24.8	20.6	18.3	19.1	19.7	20.4	21.0
Island of Rodrigues 3/	..	49.3	42.1	34.7	25.1	24.7	24.1	23.0	21.2
Crude Death Rate 2/									
Island of Mauritius	14.7	9.3	7.9	6.5	6.7	6.6	6.6	6.8	6.6
Island of Rodrigues 3/	..	10.1	9.3	6.4	5.3	4.9	5.1	5.0	4.7
Infant Mortality Rate 2/									
Island of Mauritius	81.3	60.1	63.8	25.6	26.3	24.2	22.0	21.6	19.9
Island of Rodrigues 3/	..	76.0	75.4	51.6	48.8	42.4	44.4	40.7	34.9
Fertility Rate 4/	..	..	104.5	76.2	66.9	69.4	71.3	73.4	75.2

Definitions:

Crude birth rate refers to the number of live-births in a year per 1,000 mid-year population.
Crude death rate refers to the number of deaths in a year per 1,000 mid-year population.
Infant mortality rate refers to the number of infant deaths, aged under one, in a year per 1,000 live-births during the year.
Fertility rate refers to the number of live births occurring in a year per 1,000 women aged 15 to 49 years at mid-year.

1/ As of March 27, 1992 population estimates for the State of Mauritius for 1991 are 1,078,072 and for 1990 are 1,065,990. These estimates are based on the 1990 census rather rather than on a "de facto" basis (used in the above table) which included non-residents but excluded residents who were away.
2/ 1952 data refer to the average for 1951-55.
3/ Except for 1990, which refers to same-year data, rates have been calculated by taking the average for three years to remove fluctuations in yearly data.
4/ Island of Mauritius; 1990 data are provisional.

Note: 1952, 1962, 1972, and 1983 were census years. Population estimates are mid-year.

Source: Central Statistical Office, Digest of Demographic Statistics.

SOCIAL INDICATORS

	1972	1983	1987	1988	1989	1990
Population						
Life Expectancy at Birth - Male	61	64	65	..	65	65
Female	66	71	72	..	73	73
Crude Birth Rate	25	21	19	..	21	21
Crude Death Rate	8	7	7	..	7	7
Infant Mortality Rate	64	26	24	..	20	20
Labor Force						
Participation Rate - Male	83	80	82	83	83	83
Female	20	28	42	43	43	44
Unemployment Rate	16	19	5	3	3	3
Education						
Primary Enrolment Ratio (%) (gross)	92	95	89	100 1/	99 1/	102 1/
Pupil-Teacher Ratio	31	21	22	22	22	21
Secondary Enrolment Ratio (%) (gross)	34	44	45	48	50	50
Pupil-Teacher Ratio	22	22	19	20	21	21
Food, Health & Nutrition						
Per Capita Supply 2/	103	112 3/	113 4/	..	..	..
Proteins 5/	52	59	60	..	..	..
Doctor/Population Ratio 6/	27	71	80	..	..	..
Hospital Bed/Population Ratio 6/	328	292	285	..	..	..
Housing						
Percent Owner Occupied	52	66	..	..	..	76
Percent with Electricity	70	93	100	..	..	97
Percent with Piped Water	99	99	98	..	..	99
Percent with Telephone	13	24	31	..	..	..
Energy Consumption per capita 7/	200	385	490	..	..	..

Definitions:

Crude birth rate refers to the number of live-births in a year per 1,000 mid-year population.
Crude death rate refers to the number of deaths in a year per 1,000 mid-year population.
Infant mortality rate refers to the number of infant deaths, aged under one, in a year per 1,000 live-births during the year.
Fertility rate refers to the number of live births occurring in a year per 1,000 women aged 15 to 49 years at mid-year.

1/ Ratio calculated on population aged 6-11; formerly age-group 5-11 was used.
2/ Calories as a percentage of requirements.
3/ Average of 1982,1983 and 1984.
4/ Estimated.
5/ Grams per day.
6/ Per 100,000.
7/ Kg of oil equivalent.

Source: National Development Plan, 1988-90, Ministry of Economic Planning and Development, Vol 1, p.26.

GDP BY SECTOR IN CURRENT PRICES, 1984–1991

In millions of Mau Rs

	1984	1985	1986	1987	1988	1989	Rev. Est. 1990	Est. 1991
Primary Production	1736	2123	2510	2884	3067	3370	3880	3887
Agriculture	1736	2123	2510	2884	3067	3370	3880	3887
o/w Sugar	1166	1538	1905	2124	2177	2355	2670	[illegible]
Other	570	585	605	760	890	1015	1210	1347
Secondary Production	3188	4056	5194	6401	7541	8707	10184	11523
Mining & Quarrying	19	20	22	25	27	30	36	43
Manufacturing	2183	2864	3830	4841	5627	6365	7375	8205
o/w Sugar Milling	326	438	605	676	597	652	735	705
Export Processing Zone	865	1333	1860	2585	3125	3450	4070	4615
Other Manufacturing	992	1093	1365	1580	1905	2263	2570	2885
Construction	690	775	880	1045	1370	1735	2220	2570
Electricity, Gas, Water	296	397	462	490	517	577	553	705
Services	7126	7701	8746	10410	12573	14877	17436	19850
Hotels & Restaurants	300	340	415	535	660	815	1020	1130
Trade	1340	1494	1885	2427	3125	3725	4460	5010
Transport, Storage & Communication	1372	1510	1775	2075	2365	2880	3450	4060
Finance, Real Estates, etc.	2050	2190	2335	2482	2723	3210	3735	4265
o/w Housing	1460	1535	1580	1610	1715	1900	2100	2305
Government Services	1379	1447	1560	2035	2680	2987	3291	3700
Other Services	685	720	776	856	1020	1260	1480	1685
GDP at Factor Cost	12050	13880	16450	19695	23181	26954	31500	35260
o/w Sugar Sector	1492	1976	2510	2800	2774	3007	3405	3245
Other	10558	11904	13940	16895	20407	23947	28095	32015
Net Indirect Taxes	2310	2738	3250	3881	4622	5191	6200	6900
Indirect Taxes	2355	2784	3305	4071	4890	5535	6600	7310
Subsidies	45	46	55	190	268	344	400	410
GDP at Market Prices	14360	16618	19700	23576	27803	32145	37700	42160

Note: Data refer to calendar year.

Source: Central Statistical Office, National Accounts of Mauritius.

GDP BY SECTOR IN CONSTANT PRICES, 1984-1991

In millions of Mau Rs

	<--- *In 1982 Prices*			--->	<------ *In 1987 Prices*				------>
	1984	1985	1986	1987	1987	1988	1989	Rev. Est. 1990	Est. 1991
Primary Production	1341	1492	1652	1601	2884	2732	2518	2759	2681
Agriculture	1341	1492	1652	1601	2884	2732	2518	2759	2[illegible]1
o/w Sugar	876	1008	1139	1089	2124	1924	1684	1881	1768
Other	465	484	513	57[illegible]	760	808	834	878	913
Secondary Production	2698	3068	3579	4023	6401	6983	7431	8031	8511
Mining & Quarrying	17	17	18	19	25	26	27	29	31
Manufacturing	1768	2038	2450	2810	4841	5225	5478	5900	6190
o/w Sugar Milling	244	293	330	317	676	608	532	587	558
Export Processing Zone	650	845	1140	1391	2585	2895	3069	3314	3513
Other Manufacturing	874	900	980	1102	1580	1722	1877	1999	2119
Construction	646	698	768	834	1045	1223	1357	1527	1649
Electricity, Gas, Water	267	315	343	360	490	509	569	575	641
Services	6502	6704	7033	7670	10410	11189	11896	12612	13218
Hotels & Restaurants	292	312	355	430	535	599	656	722	751
Trade	1163	1215	1322	1586	2427	2706	2896	3055	3208
Transport, Storage & Comm.	1209	1260	1345	1486	2075	2262	2431	2626	2757
Finance, Real Estate, etc.	1872	1935	1993	2076	2482	2599	2754	2903	3064
o/w Housing	1335	1366	1390	1416	1610	1644	1685	1727	1770
Government Services	1320	1330	1343	1383	2035	2116	2193	2290	2382
Other Services	646	652	675	709	856	907	966	1016	1056
GDP at Factor Cost	10541	11264	12264	13294	19695	20904	21845	23402	24410
o/w Sugar Sector	1120	1301	1469	1406	2800	2532	2216	2468	2326
Other	9421	9963	10795	11888	16895	18372	19629	20934	22084
Net Indirect Taxes	1791	1916	2200	2640	3881	4269	4440	4773	4965
GDP at Market Prices	12332	13180	14464	15934	23576	25173	26285	28175	29375

Note: Data refer to calendar year.

Source: Central Statistical Office, National Accounts of Mauritius.

GDP BY EXPENDITURE IN CURRENT PRICES, 1984–1991

In millions of Mau Rs

	1984	1985	1986	1987	1988	1989	Rev. Est. 1990	Est. 1991
Consumption (C)	11676	13033	14076	17117	20724	24716	29324	32410
Private	9841	11118	12000	14395	17215	20780	24890	27430
Government	1835	1915	2076	2722	3509	3936	4434	4980
Gross Domestic Investment (I)	3165	3900	4312	5961	8502	9867	11256	11665
Fixed Investment	2595	3100	3890	5090	7990	8565	11865	12250
o/w Private	1770	2100	2515	3375	4610	6280	7500	8180
Public	825	1000	1375	1715	3380	2285	4365	4070
Change in Stocks	570	800	422	871	512	1302	-609	-585
Gross Domestic Expenditure (C+I)	14841	16933	18388	23078	29226	34583	40580	44075
Exports (G+NFS)	6989	8895	11919	15639	18565	21363	25264	27135
o/w Goods	5201	6639	9056	11493	13455	15166	17677	18673
Services	1788	2256	2863	4146	5110	6197	7587	8462
Imports (G+NFS)	7470	9210	10607	15141	19988	23801	28144	29050
o/w Goods	5723	7050	8286	11701	15628	18384	21821	22135
Services	1747	2160	2321	3440	4360	5417	6323	6915
Resource Balance (RB)	-481	-315	1312	498	-1423	-2438	-2880	-1915
GDP AT Market Prices (GDX+RB)	14360	16618	19700	23576	27803	32145	37700	42160
Net Factor Service Income (FSY)	-626	-700	-729	-533	-593	-303	-304	-217
Net Current Transfers (NCT)	267	336	402	523	962	1038	1222	1283
GNP at MP (GDPMP+FSY)	13734	15918	18971	23043	27210	31842	37396	41943
Gross Domestic Saving (GDS) (GDP-C) = (I+RB)	2684	3585	5624	6459	7079	7429	8376	9750
o/w Private	2679	3413	4991	5381	5962	6325	6544	7151
Public 1/	6	172	633	1078	1117	1105	1832	2599
Gross National Saving (GNS) (GDS+FSY+NCT)	2325	3221	5297	6449	7448	8164	9294	10816
o/w Private	2634	3388	4982	5693	6679	7413	7962	8759
Public (incl foreign interest) 1/	-309	-167	315	756	769	751	1332	2057
Memorandum Items:								
Average Exchange Rate (Rs/US$)-IFS	13.800	15.442	13.466	12.878	13.438	15.250	14.863	15.652
Population (Thousands)	1012	1021	1030	1041	1054	1064	1093	1104
GNP (US$ Million)	995	1031	1409	1789	2025	2088	2516	2680
GNP Per Capita (US$)	984	1010	1368	1719	1921	1963	2302	2427

1/ Derived by averaging fiscal current account deficit/surplus to obtain calendar year data.
Note: Data refer to calendar year.
Source: Central Statistical Office, National Accounts of Mauritius.

GDP BY EXPENDITURE IN CONSTANT PRICES, 1984–1991

In millions of Mau Rs

	<-- *In 1982 Prices* -->				<----- *In 1987 Prices* ---->				
	1984	1985	1986	1987	1987	1988	1989	Rev. Est. 1990	Est. 1991
Consumption (C)	10571	11022	11700	13782	17117	18496	19693	20770	21431
Private	8844	9295	9945	11904	14395	15633	16727	17647	18177
Government	1727	1727	1755	1878	2722	2863	2966	3123	3254
Gross Domestic Investment (I)	2520	2690	3267	4124	5961	7300	6944	8407	8281
Fixed Investment	2300	2530	3035	3785	5090	7175	6670	8225	7980
o/w Private	1570	1715	1960	2510	3375	4140	4890	5200	5330
Public	730	815	1075	1275	1715	3035	1780	3025	2650
Change in Stocks	220	160	232	339	871	125	274	182	301
Gross Domestic Expenditure (C+I)	13091	13712	14967	17906	23078	25796	26637	29177	29712
Exports (G+NFS)	5810	6504	8258	9761	15639	17531	18074	19249	19711
o/w Goods	4235	4819	6202	7173	11493	12706	12831	13468	13564
Services	1575	1685	2056	2588	4146	4825	5243	5781	6147
Imports (G+NFS)	6578	7031	9000	12195	15141	18154	18426	20251	20048
o/w Goods	4843	5424	7526	9059	11701	14194	14232	15701	15276
Services	1735	1607	1474	3136	3440	3960	4194	4550	4772
Import Capacity	6154	6791	10113	12596	15639	[illegible]	16539	18179	18726
Terms-of-Trade Adjustment (TTADJ)	344	287	1855	2835	0	-669	-1535	-1070	-985
Resource Balance (RB)	-768	-527	-742	-2434	498	-623	-352	-1002	-337
Discrepancy (DISC)	9	-5	239	462	..	..	..	..	..
GDP at Market Prices (GDX+RB+DISC)	12332	13180	14464	15934	23576	25173	26285	28175	29375
Net Factor Service Income (FSY)	-551	-534	-619	-429	-533	-539	-235	-219	-150
Net Current Transfers (NCT)	235	257	341	421	523	874	804	879	885
GNP (GDP+FSY)	11781	12646	13845	15505	23043	24634	26050	27956	29225
Gross Domestic Saving (GDS) (GDP-C) = [illegible]+RB+DISC)	1761	2158	2764	2152	6459	6677	6592	7405	[illegible]
o/w Private	1756	2003	2228	1408	5381	5766	5760	6115	6246
Public 1/	5	155	536	744	1078	911	832	1290	1698
Gross National Saving (GNS) (GDS+FSY+NCT)	1445	1880	2486	2144	6449	7012	7161	8066	8680
o/w Private	1736	2030	2220	1623	5693	6385	6595	7127	7335
Public 1/	-291	-150	266	521	756	627	566	938	1344
Gross Domestic Income (GDP+TTADJ)	12676	13467	16319	18769	23576	24504	24750	27105	28390
Gross National Income (GDY+FSY)	12125	12932	15700	18340	23043	23965	24515	26886	28241

1/ Deflated by Government consumption deflator.
Note: Data refer to calendar year.
Source: Central Statistical Office, National Accounts of Mauritius.

BALANCE OF PAYMENTS, 1983/84-1990/91
In millions of Mau Rs

	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	Rev. 1989/90	Est. 1990/91
Exports of Goods & NFS	6145	7784	10062	13868	17082	20158	22702	26243
Merchandise, FOB	4763	5769	7539	10467	12377	14493	15925	18210
o/w Sugar	2643	2742	2961	4239	4258	4701	4728	5224
EPZ	1644	2409	4079	5660	7369	8940	10014	11720
Other	476	618	499	568	750	852	1183	1266
Non-Factor Services	1382	2015	2523	3401	4705	5665	6777	8033
Import of Goods & NFS	6306	8178	9801	12190	18617	20983	25536	28351
Merchandise, FOB	4996	6272	7529	9651	14558	16137	20019	21965
Merchandise, CIF	5755	7163	8630	10593	16190	17789	21973	24153
o/w Rice and Flour	429	517	465	375	489	597	568	595
Petroleum	935	1121	865	660	906	1048	1401	1972
EPZ	1216	2051	3162	4217	5556	6447	7850	6883
Other	3175	3474	4138	5341	9239	9697	12154	14703
Non-Factor Services	1310	1906	2272	2539	4059	4846	5517	6386
Resource Balance	-161	-394	261	1678	-1535	-825	-2834	-2108
Net Factor Income	-508	-715	-745	-591	-530	-482	-240	22
Net Current Private Transfers	231	311	361	444	740	1062	1133	1180
Current Account Balance	-438	-798	-123	1531	-1325	-245	-1941	-906
Long-Term Capital Inflow	152	707	326	622	2373	431	1535	1789
Direct Foreign Investment	86	198	299	234	359	131	126	75
Official Transfers (Grants)	40	93	117	128	294	374	705	355
Net Medium- & Long-Term Loans	-27	746	-17	589	1906	-159	738	909
Disbursements	715	1354	549	1044	2667	1184	1442	1724
Repayments	742	608	566	455	761	1343	704	815
Other Inflows, Net	53	-330	-73	-329	-186	85	-34	450
Errors and Omissions	-96	470	440	609	1680	1810	3447	2230
Overall Balance	-382	379	643	2762	2728	1996	3041	3113
Change in Net Reserves (- indicates increase)	382	-379	-643	-2762	-2728	-1996	-3041	-3113
Net Credit from IMF	175	-262	-251	-330	-483	-490	-918	-960
Purchases	437	437	439	122	0	0	0	0
Repurchases	262	700	690	452	483	490	918	960
Other Reserve Changes	207	-117	-392	-2432	-2245	-1506	-3959	-4073
Memorandum Item:								
Stock of Reserves	1223	1016	1133	1525	3957	6202	7708	11667

Source: Bank of Mauritius and Staff Estimates.

BALANCE OF PAYMENTS, 1984-1991

In millions of Mau Rs

	1984	1985	1986	1987	1988	1989	1990	Est. 1991
Exports of Goods & NFS	6989	8895	11919	15639	18565	21363	25264	27135
Merchandise	5201	6639	9056	11493	13455	15166	17677	18673
Non-Factor Services	1788	2256	2863	4146	5110	6197	7587	8462
Import of Goods & NFS	7470	9210	10607	15141	19988	23801	28144	29050
Merchandise	5723	7050	8286	11701	15628	18384	21821	22135
Non-Factor Services	1747	2160	2321	3440	4360	5417	6323	6915
Resource Balance	-481	-315	1312	498	-1423	-2438	-2880	-1915
Net Factor Income	-626	-700	-729	-533	-593	-303	-304	-217
Factor Receipts	40	30	76	180	357	778	832	945
Factor Payments	666	730	805	713	950	1081	1136	1162
Current Private Transfers, Net	267	336	402	523	962	1038	1222	1283
Current Account Balance	-840	-679	985	488	-1054	-1703	-1962	-849
Long-Term Capital Inflow	287	147	303	1040	1912	637	2194	2003
Direct Foreign Investment	102	221	370	767	2120	1376	2222	2333
Official Transfers (Grants)	124	220	268	327	284	111	134	125
Net Medium- & Long-Term Loans	-51	156	-15	230	-207	24	-79	-456
Disbursements	607	697	380	701	1028	496	361	375
Repayments	658	541	395	471	1235	472	440	831
Other Inflows, Net	112	-450	-320	-284	-285	-874	-83	0
Private Capital, Errors & Omissions	263	790	428	1260	1608	3291	3210	1284
Overall Balance	-290	258	1716	2788	2466	2225	3442	2438
Change in Net Reserves (- indicates increase)	290	-258	-1716	-2788	-2466	-2225	-3442	-2438
o/w Use of Fund Credit	-110	-187	-257	-389	-525	-566	-645	-671
Other Reserve Changes	400	-71	-1459	-2399	-1941	-1659	-2797	-1767
Memorandum Item: Stock of Reserves	570	882	2450	4428	6428	8049	11062	13500

Source: Bank of Mauritius and Staff Estimates.

MERCHANDISE IMPORTS AT CURRENT PRICES (CIF), 1983–1991

In millions of Mau Rs

ITEM	1983	1984	1985	1986	1987	1988	1989	1990	1991
Food and Beverages	1288	1543	1636	1375	1675	1974	2642	2934	3060
Rice	210	270	280	163	209	299	412	401	314
Wheat Flour	176	225	243	248	254	281	162	24	76
Meat & Meat Preparations	116	130	144	148	205	212	240	328	361
Fish - Fresh & Preserved	76	92	98	107	96	107	173	259	..
Animal & Vegetable Oil	155	230	262	159	147	163	220	233	255
Milk & Cream	158	170	181	161	196	255	473	513	547
Fruits & Vegetables	125	115	128	113	178	200	256	289	370
Other Food	250	285	274	242	334	391	630	797	1024
Beverage & Tobacco	23	26	26	34	57	66	75	90	113
Other Consumer Goods	343	429	631	733	1040	1363	1684	1869	2160
Petroleum Products	954	1024	1096	707	116	866	1509	1939	2074
Gasoline	144	156	156	98	116	..	..	..	..
Distillate Fuels	292	349	365	227	..	..	..	..	..
Other Petroleum Products	519	519	575	382	..	..	..	..	..
Intermediate Goods	1946	2749	3643	4794	6450	7736	9648	10744	11164
Crude Inedible Material	227	296	394	366	408	523	748	765	802
Fertilizers	61	75	96	74	77	84	133	126	..
Chemical Products	342	381	458	523	754	999	1187	1493	..
Textiles	593	1084	1575	2520	3584	3972	5086	5207	5095
Cement	163	187	182	201	174	186	286	415	523
Iron & Steel	137	191	235	257	289	414	533	539	700
Manufacture of Metal	111	122	158	252	379	443	410	717	665
Other Intermediate	314	413	545	601	784	1115	1266	1482	..
Capital Goods	624	750	1114	1591	2871	5165	4734	6533	6215
Machinery (non-electric)	275	318	439	878	1176	1730	1975	1501	..
Machinery (electric)	150	184	257	414	903	967	1319	1237	..
Transport Equip. & Parts	79	100	176	292	772	2431	1345	2716	..
Other Capital Goods	120	148	242	8	14	37	95	1079	..
Total Imports	5156	6495	8120	9199	12151	17104	20217	24019	24673

Source: Central Statistical Office, Quarterly External Trade Statistics.

MERCHANDISE EXPORTS AT CURRENT PRICES (FOB), 1983–1991
In millions of Mau Rs

ITEM	1983	1984	1985	1986	1987	1988	1989	1990	1991
Sugar	2679	2523	2867	3553	4310	4467	4946	5212	5221
Molasses	63	62	89	90	73	92	66	102	96
Tea	97	249	178	104	90	88	87	84	84
Fish & Fish Preparations	76	106	143	138	132	210	217	161	..
Textiles	67	79	90	128	169	239	438	594	..
Processed Diamonds & Stones	49	89	127	176	192	317	335	363	..
Clothing	928	1592	2548	4056	5593	6582	7205	9192	..
Other Manufactured Goods	224	317	430	485	576	828	831	1164	..
Other Domestic Goods	40	50	61	188	200	397	417	447	..
Total Domestic Exports	4223	5067	6533	8918	11335	13220	14542	17319	18006
Re-exports	123	134	106	138	158	235	624	358	667
Total Exports	4346	5201	6639	9056	11493	13455	15166	17677	18673

Source: Central Statistical Office, Quarterly External Trade Statistics.

EXPORTS AND IMPORTS OF MAIN EPZ COMMODITIES, 1983–1991

In millions of Mau Rs

	1983	1984	1985	1986	1987	1988	1989	1990	Jan–Sept 1991
Exports (fob)									
Fish and Fish Preparations	68	99	114	97	100	173	190	142	200
Textile Yarn and Fabrics	66	78	86	101	138	180	361	498	359
Wearing Apparel	921	1585	2539	4012	5407	6446	7038	9085	6838
Optical Goods	33	60	82	90	90	88	133	124	101
Watches and Clocks	65	84	146	246	337	563	500	616	399
Pearls and Precious Stones	49	89	127	172	185	302	325	354	282
Jewellery	31	48	58	82	65	69	80	139	109
Toys and Games	34	50	44	57	78	85	91	126	88
Other	40	58	87	94	167	270	340	390	278
Total	1307	2151	3283	4951	6567	8176	9058	11474	8654
Imports (cif)									
Synthetic Fibres	26	44	46	61	50	37	52	49	40
Wool and Animal Hair	94	154	192	169	192	250	337	258	183
Leather	18	25	39	59	56	68	97	104	74
Textile Yarn and Fabrics	397	872	1347	2250	2861	3236	4172	4182	3004
Chemicals	24	40	59	99	121	182	234	289	217
Machinery and Transport Equipment	77	191	304	500	595	834	963	794	554
Watches, Clocks and Optical Goods	67	101	182	231	314	443	511	450	262
Pearls, Precious and Semi-Precious Stones	31	65	109	154	158	239	379	336	257
Jewellery	24	34	60	70	46	46	43	65	94
Miscellaneous	89	125	192	270	408	555	714	821	644
Total	847	1651	2530	3863	4801	5890	7502	7348	5329
Net EPZ Exports	460	500	753	1088	1766	2286	1556	4126	3325

Source: Central Statistical Office, Quarterly External Trade Statistics.

EXTERNAL DEBT, 1981–1990

In millions of US$

	1981	1983	1985	1986	1987	1988	1989	1990
Total External Debt	545	561	629	671	813	860	835	938
Long-Term Debt	347	331	413	471	629	709	740	886
Public and Publicly Guaranteed	323	317	398	449	582	643	634	739
Private Nonguaranteed	24	14	15	22	46	66	106	147
Use Of IMF Credit	159	181	165	162	152	103	63	22
Short-Term Debt	39	49	51	38	33	48	32	30
Long-Term Debt:								
Debt Outstanding & Undisbursed	496	545	591	687	867	884	930	1134
Public & Publicly Guaranteed	472	531	576	665	820	818	824	987
Official Creditors	342	426	477	557	720	699	697	859
Multilateral	192	269	281	325	419	392	339	376
IDA	20	20	20	20	19	19	19	19
IBRD	100	169	164	205	248	226	191	214
Bilateral	150	156	195	233	301	307	358	483
Private Creditors	130	106	99	108	101	119	127	128
Private Nonguaranteed	24	14	15	22	46	66	106	147
Debt Outstanding & Disbursed	347	331	413	471	629	709	740	886
Public & Publicly Guaranteed	323	317	398	449	582	643	634	739
Official Creditors	193	213	308	367	496	526	526	624
Multilateral	105	122	187	225	283	298	284	301
IDA	20	20	20	20	19	19	19	19
IBRD	55	62	117	148	193	190	175	176
Bilateral	88	90	120	143	213	228	242	323
Private Creditors	130	104	90	82	87	117	108	115
Bonds	0	0	0	0	0	0	0	0
Commercial Banks	127	103	88	80	83	27	23	106
Suppliers	4	1	2	2	4	90	85	1
Other Private	0	0	0	0	0	0	0	8
Private Nonguaranteed	24	14	15	22	46	66	106	147
Memo: Total Commercial Banks	150	117	103	102	129	93	129	254
Commitments	53	85	41	109	113	162	103	136
Public & Publicly Guaranteed	53	85	41	109	113	162	103	136
Official Creditors	53	83	35	88	113	71	86	136
Multilateral	35	81	13	47	72	20	10	38
IDA	0	0	0	0	0	0	0	0
IBRD	30	72	0	30	25	10	0	30
Bilateral	18	1	22	41	41	51	76	97
Private Creditors	0	2	6	21	0	91	17	0
Bonds	0	0	0	0	0	0	0	0
Commercial Banks	0	1	6	18	0	0	0	0
Suppliers	0	1	0	2	0	91	0	0
Other Private	0	0	0	0	0	0	17	0
Private Nonguaranteed	0	0	0	0	0	0	0	0

Continued

External Debt, 1981-1990 - *Continued*

	1981	1983	1985	1986	1987	1988	1989	1990
Disbursements	73	38	61	49	123	226	100	150
Public & Publicly Guaranteed	66	36	57	42	102	201	52	93
Official Creditors	63	36	54	37	86	106	52	85
Multilateral	31	18	34	16	32	58	15	19
IDA	0	0	0	0	0	0	0	0
IBRD	22	6	31	11	22	29	8	6
Bilateral	32	18	19	21	53	48	36	66
Private Creditors	3	1	4	5	16	95	0	8
Bonds	0	0	0	0	0	0	0	0
Commercial Banks	0	0	3	5	14	5	0	0
Suppliers	2	0	1	0	2	91	0	0
Other Private	0	0	0	0	0	0	0	7
Private Nonguaranteed	8	2	4	7	21	25	48	57
Memo: Total Commercial Banks	8	3	6	12	35	30	48	58
Principal Repayments	22	61	43	39	49	104	52	59
Public & Publicly Guaranteed	16	56	39	36	46	100	47	42
Official Creditors	6	12	16	22	32	36	40	38
Multilateral	3	7	9	12	19	22	22	22
IDA	0	0	0	0	0	0	0	0
IBRD	2	5	6	7	13	16	15	16
Bilateral	3	6	7	10	13	14	18	16
Private Creditors	10	44	22	14	14	64	7	4
Bonds	0	0	0	0	0	0	0	0
Commercial Banks	9	43	22	13	14	59	2	4
Suppliers	1	1	0	0	0	5	5	0
Other Private	0	0	0	0	0	0	0	0
Private Nonguaranteed	6	5	4	3	3	4	5	16
Memo: Total Commercial Banks	15	48	26	16	17	63	8	20
Net Flows	51	-22	18	11	74	122	47	91
Public & Publicly Guaranteed	50	-20	18	6	56	101	5	50
Official Creditors	57	23	37	15	54	70	12	47
Multilateral	29	11	25	4	14	36	-7	-4
IDA	0	0	0	0	0	0	0	0
IBRD	21	1	25	4	9	13	-7	-10
Bilateral	28	12	12	11	40	34	19	51
Private Creditors	-7	-43	-19	-9	2	32	-7	3
Bonds	0	0	0	0	0	0	0	0
Commercial Banks	-9	-42	-20	-9	0	-55	-2	-4
Suppliers	1	-1	1	0	2	86	-5	0
Other Private	0	0	0	0	0	0	0	7
Private Nonguaranteed	2	-3	0	4	19	21	42	41
Memo: Total Commercial Banks	-7	-45	-20	-4	18	-34	40	37

Continued

External Debt, 1981-1990 - *Continued*

	1981	1983	1985	1986	1987	1988	1989	1990
Interest Payments	35	28	28	30	34	42	42	41
Public & Publicly Guaranteed	33	27	27	29	32	41	39	35
Official Creditors	8	12	15	21	25	31	29	31
Multilateral	5	8	11	14	17	20	19	19
IDA	0	0	0	0	0	0	0	0
IBRD	3	6	8	12	13	15	14	14
Bilateral	3	5	5	6	8	11	10	12
Private Creditors	25	15	12	8	7	10	10	4
Bonds	0	0	0	0	0	0	0	0
Commercial Banks	25	15	12	8	7	7	2	4
Suppliers	0	0	0	0	0	3	7	0
Other Private	0	0	0	0	0	0	0	0
Private Nonguaranteed	2	1	1	1	1	1	3	6
Memo: Total Commercial Banks	27	16	13	9	8	9	6	10
Net Transfers	16	-51	-10	-19	41	80	5	50
Public & Publicly Guaranteed	16	-47	-9	-23	23	60	-34	15
Official Creditors	49	11	22	-5	29	39	-17	16
Multilateral	24	3	14	-10	-3	16	-26	-22
IDA	0	0	0	0	0	0	0	0
IBRD	18	-4	17	-8	-5	-2	-21	-24
Bilateral	25	8	7	5	32	23	9	38
Private Creditors	-32	-58	-31	-17	-5	21	-17	-1
Bonds	0	0	0	0	0	0	0	0
Commercial Banks	-34	-58	-31	-17	-7	-62	-4	-8
Suppliers	1	-1	1	-1	2	83	-13	0
Other Private	0	0	0	0	0	0	0	7
Private Nonguaranteed	0	-4	-1	3	17	20	39	35
Memo: Total Commercial Banks	-34	-61	-32	-13	10	-42	35	28
Debt Service	57	89	71	69	83	146	95	100
Public & Publicly Guaranteed	49	83	66	65	78	141	86	78
Official Creditors	14	24	32	43	57	67	69	69
Multilateral	7	14	20	26	36	42	41	41
IDA	0	0	0	0	0	0	0	0
IBRD	5	10	14	19	26	31	29	30
Bilateral	7	10	12	16	21	25	28	28
Private Creditors	35	59	34	22	21	74	17	8
Bonds	0	0	0	0	0	0	0	0
Commercial Banks	34	58	34	21	20	66	5	8
Suppliers	1	1	0	1	1	8	13	0
Other Private	0	0	0	0	0	0	0	0
Private Nonguaranteed	8	6	5	4	4	5	9	22
Memo: Total Commercial Banks	42	64	39	25	25	72	13	30

Continued

External Debt, 1981-1990 - *Continued*

	1981	1983	1985	1986	1987	1988	1989	1990
Average Terms of New Commitments								
All Creditors								
Interest (%)	7.4	9.7	4.9	6.7	7.6	7.6	5.0	6.2
Maturity (Years)	18.0	16.6	16.4	16.9	17.7	15.5	16.1	18.5
Grace Period (years)	4.5	4.2	5.8	4.6	4.1	3.2	6.3	6.3
Grant Element (%)	15.8	-0.1	33.3	20.7	13.7	15.0	30.1	25.9
Official Creditors								
Interest (%)	7.4	9.8	4.6	6.0	7.6	5.9	4.6	6.2
Maturity (Years)	18.0	16.8	17.4	18.3	17.7	19.6	16.9	18.5
Grace Period (years)	4.5	4.2	6.3	5.1	4.1	7.0	7.0	6.3
Grant Element (%)	15.8	-0.6	36.8	25.9	13.7	28.5	33.3	25.9
Private Creditors								
Interest (%)	0.0	6.9	7.0	9.8	0.0	9.0	7.0	0.0
Maturity (Years)	0.0	10.5	10.0	11.1	0.0	12.3	12.0	0.0
Grace Period (years)	0.0	2.7	3.0	2.6	0.0	0.3	2.5	0.0
Grant Element (%)	0.0	18.3	12.5	-1.2	0.0	4.5	13.6	0.0
Memorandum Items								
Concessional/Long-Term DOD (%)	26.8	34.2	35.0	35.7	37.2	35.1	35.9	40.3
Variable Rate/Long-Term DOD (%)	40.8	34.3	24.2	20.6	19.6	26.9	31.2	31.7

Source: World Bank, Debtor Reporting System.

CENTRAL GOVERNMENT OPERATIONS, 1985/86–1991/92
In millions of Mau Rs

	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	Budget 1991/92
Total Revenue:	3899	4941	6141	7214	8373	9560	10880
Tax Revenue	3504	4316	5516	6656	7685	9049	9921
Taxes on Income and Profits	355	519	704	980	1232	1387	1620
Taxes on Property	160	200	313	373	469	609	624
Taxes on Goods and Services	777	951	1196	1582	1832	2275	2491
Taxes on International Trade	2180	2605	3250	3665	4078	4699	5130
on Imports	1721	2055	2639	3055	3703	4269	4730
on Exports	459	550	611	610	375	430	400
Other Tax Revenue	32	41	53	56	74	79	56
Nontax Revenue	395	625	625	558	688	511	959
Property Income	270	473	437	340	440	220	714
Other	125	152	188	218	248	291	245
Total Expenditure & Net Lending	4771	5424	6644	8232	9255	10399	11771
Current Expenditure	3938	4273	5298	6519	7566	8505	9347
Wages and Salaries	1387	1484	2019	2587	2858	2946	3486
Interest Payments	1069	1081	1049	1119	1629	1902	1532
o/w Domestic Interest	736	777	709	764	1277	1562	1243
o/w Foreign Interest	333	304	340	355	352	340	289
Transfers to Local Governments	160	171	224	298	315	359	402
Subsidies	956	1116	1460	1800	2000	2429	2849
Other	366	421	546	715	764	869	1078
Capital Expenditure	567	935	1183	1110	1410	1658	2310
Net Lending	266	216	163	603	279	236	114
C/A Def/Surp (excl For Int)	295	972	1183	1050	1159	1395	1822
Current Account Deficit/Surplus	-39	668	843	695	807	1055	1533
Overall Deficit/Surplus	-872	-483	-503	-1018	-882	-839	-891
Financing:	872	483	503	1018	882	839	891
External, Net	119	336	815	-110	556	-285	116
Budgetary Grants	233	188	214	68	116	..	..
Budgetary Loans	-114	148	601	-178	440	..	..
Disbursements	362	529	1146	932	850	..	..
Amortization	476	381	545	1110	410	..	..
Domestic, Net	752	147	-312	1128	326	1124	775
Banking System	271	-457	-680	-97	-334	..	..
Non-Bank Borrowing	481	604	368	1225	660	..	..

Source: Ministry of Finance and Staff Estimates.

CENTRAL GOVERNMENT REVENUES, 1985/86–1991/92

In millions of Mau Rs

	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	Budget 1991/92
Taxes on Net Income and Profits	355	519	704	980	1232	1387	1620
Individuals	186	245	312	424	564	544	630
Corporate	169	274	392	556	668	843	990
Taxes on Property	160	200	313	373	469	609	624
Land and Real Estate	21	22	35	52	60	84	85
Estate and Gift	3	7	6	1	..	..	..
Financial Transactions	136	171	272	320	409	525	539
Taxes on Goods and Services	777	951	1196	1582	1832	2275	2491
Selective Excises	283	329	386	602	633	832	850
Taxes on Services	143	192	258	307	364	471	542
Taxes on Use of Goods	77	81	89	101	125	149	159
Sales Tax on Goods	274	349	463	572	710	823	940
Taxes on International Trade	2200	2627	3279	3697	4118	4743	5174
Import Duties	1721	2055	2639	3055	3703	4269	4730
Customs Duties	1086	1325	1735	2083	2436	2811	3160
Stamp Duties	635	730	904	972	1267	1458	1570
Export Duties	459	550	611	610	375	430	400
Travel Tax	20	22	29	32	40	44	44
Other Tax Revenue	12	19	24	24	34	35	12
Total Tax Revenue	3504	4316	5516	6656	7685	9049	9921
Total Non-Tax Revenue	395	625	625	558	688	511	959
Property Income	270	473	437	340	440	220	714
Bank of Mauritius	100	100	40	..	100	..	100
Interest and Royalties	100	80	83	75	..	..	..
Dividends 1/	29	277	293	255	294	..	..
Operating Surpluses	29	..	1	..	..	..	..
Rent and Other	12	16	20	10	46	..	..
Administration Fees	84	102	113	137	156	202	169
Fines and Forfeits	11	14	18	19	21	29	25
Government Pension Fund	24	25	32	41	44	44	50
Other Non-Tax Revenue	6	11	25	21	27	16	1
Total Revenue	3899	4941	6141	7214	8373	9560	10880
Foreign Grants	233	188	214	68	116	61	73
Total Revenue and Grants	4132	5129	6355	7282	8489	9621	10953

1/ Includes substantial profit transfer from State Trading Corporation on petroleum products.

Source: Ministry of Finance.

ECONOMIC CLASSIFICATION OF EXPENDITURES, 1985/86–1991/92

In millions of Mau Rs

	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	Budget 1991/92
Total Current Expenditure	3938	4273	5298	6519	7566	8505	9347
Wages and Salaries	1387	1484	2019	2587	2858	2946	3486
Other Goods and Services	366	421	546	715	764	869	1078
Interest Payments	1069	1081	1049	1119	1629	1902	1532
Domestic	736	777	709	764	1277	1562	1243
Foreign	333	304	340	355	352	340	289
Current Transfers and Subsidies	1116	1287	1684	2098	2315	2788	3251
Local Governments	160	171	224	298	315	359	402
Education	196	213	267	373	416	548	582
Pension and Pension Fund	531	581	708	894	953	1208	1477
Other Domestic	228	323	485	533	631	673	790
Capital Expenditures	567	935	1183	1110	1410	1658	2310
Fixed Capital Assets	276	411	587	778	1060	1306	1943
Land and Intangible Assets	15	22	29	7	36	55	50
Capital Transfers	276	502	567	325	314	297	317
Local Government	10	4	3	7	1	3	5
Other Domestic	247	488	562	300	304	276	290
Abroad	19	11	3	18	9	18	22
Net Lending	266	216	163	603	279	236	114
Total Expenditures & Net Lending	4771	5424	6644	8232	9255	10399	11771

Source: Ministry of Finance.

FUNCTIONAL CLASSIFICATION OF EXPENDITURES, 1984/85–1989/9

In millions of Mau Rs

	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
Public Administration & Defence	773	796	862	1228	1504	1965
General Public Services	737	760	822	1175	1427	1848
Defense	36	37	40	53	77	117
Social Services	1565	1690	1818	2296	2937	3524
Education	590	605	623	796	1003	1199
Health & Sanitation	323	348	384	476	637	758
Social Security & Welfare	548	624	679	813	930	1099
Housing & Community Amenities	59	64	94	132	270	234
Other Community & Social	44	51	37	78	98	234
Economic Services	547	567	1038	1199	1028	1050
Agriculture, Forestry & Fishing	301	255	436	520	585	645
Mining, Manuf & Construction	66	55	59	65	74	23
Transportation & Communication	125	196	480	532	241	207
Other	56	61	64	82	128	175
Other Purposes	1391	1451	1490	1705	1803	2443
Public Debt Interest	989	1069	1081	1049	1182	1629
Transfers to Local Government	156	170	174	227	267	316
Subsidy on Rice and Flour	114	72	75	226	120	265
Development Works	132	138	147	194	195	229
Other	..	2	13	9	39	4
Total Expenditure	4276	4505	5208	6481	7272	8982

Source: Ministry of Finance.

CENTRAL GOVERNMENT SUBSIDIES AND TRANSFERS, 1985/86–1991/92

In millions of Mau Rs

	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	Budget 1991/92
Current Subsidies and Transfers	1116	1287	1684	2097	2315	2788	3251
Local Governments	160	171	224	298	315	359	402
Education	196	213	267	373	416	548	582
Secondary Schools	141	150	179	257	284	342	353
University	17	19	26	38	43	55	60
Education Institute	14	16	22	27	28	32	34
Gandhi Institute	15	16	23	29	34	37	41
College of the Air	2	4	6	8	10	12	14
Examination Syndicate	7	8	11	14	17	20	22
RCEA Block Grant	..	..	..	..	..	50	58
Rice and Wheat Flour	72	75	226	145	265	195	250
Domestic Crops	24	33	47	32	34	46	60
Public Service Pensions	231	249	311	420	418	478	542
National Pension Fund	301	332	396	474	535	730	935
Unemployment Fund	19	18	17	11	6	3	2
Outdoor Relief	25	23	25	29	31	39	48
Other Current Transfers	88	174	171	315	296	390	430
Capital Transfers	276	502	567	326	314	297	317
Local Governments	10	4	3	7	1	3	5
Public Financial Institutions	38	40	41	32	0	0	5
Equity Financing Fund	0	0	0	..	..	..	..
Small Industries 1/	38	40	41	..	..	..	..
Other	0	0	0	..	..	..	..
Non-Financial Public Enterprises 2/	209	448	521	269	304	276	285
Development Works Corporation	93	102	134	140	128	137	128
Civil Aviation, PTT and Sewage	105	310	285	77	45	79	60
Other	12	36	103	52	131	60	97
International Organizations	19	11	3	18	9	18	22
Total Subsidies and Transfers	1392	1789	2251	2423	2629	3085	3568

1/ Contributions for the promotion of small-scale industries.
2/ Principally wages and salaries of government employees transferred to corporations.

Source: Ministry of Finance.

MONETARY SURVEY, 1985–1991

In millions of Mau Rs

	1985 June	1986 June	1987 June	1988 June	1989 June	1990 June	1991 June	1991 Dec
Net Foreign Assets	-1620	-837	1780	4602	6661	10111	13453	15174
Bank of Mauritius	-2013	-1362	1087	3639	5557	8558	11667	13259
Commercial Banks	393	525	693	963	1104	1553	1786	1915
Net Domestic Assets	9044	10199	10782	12222	13674	16201	19172	22003
Claims on Government	4760	5074	4619	3938	3906	4311	5045	6675
Claims on Private Sector	4284	5125	6163	8284	9768	11890	14127	15328
Total Assets	7424	9362	12562	16824	20335	26312	32625	37177
Total Liabilities	7424	9362	12562	16824	20335	26312	32625	37177
Money and Quasi-Money (M2)	7180	8932	11774	15500	18460	22016	26767	29956
Money (M1)	1717	1993	2544	3199	3820	4529	5446	6678
Quasi-Money	5463	6939	9230	12301	14640	17487	21321	23278
Other Items, Net	244	430	788	1324	1875	4296	5858	7221
Memorandum Items:								
Nominal GDPMP (Mau Rs)	15489	18159	21638	25690	29974	34923	22965	42160
Nominal Growth of GDPMP	7.9	17.2	19.2	18.7	16.7	16.5	-34.2	11.8
Real Growth of GDPMP	7.0	10.0	10.0	7.6	5.6	5.8	5.7	4.3
Nominal Growth of M1	-1.2	16.1	27.6	25.7	19.4	18.6	20.2	22.6
Nominal Growth of M2	6.2	24.4	31.8	31.6	19.1	19.3	21.6	11.9
Nominal Growth of Quasi-Money	8.8	27.0	33.0	33.3	19.0	19.4	21.9	9.2
M1 as % of GDPMP	11.1	11.0	11.8	12.5	12.7	13.0	23.7	15.8
M2 as % of GDPMP	46.4	49.2	54.4	60.3	61.6	63.0	116.6	71.1
Velocity	2.2	2.0	1.8	1.7	1.6	1.6	0.9	1.4
Rate of Inflation (CPI)	8.3	4.3	0.7	1.5	16.0	10.7	12.9	7.0
Nominal Interest Rate (Deposits)	8.5	8.5	8.0	8.0	10.0	12.0	12.0	12.0
Real Interest Rate (Deposits)	0.2	4.2	7.3	6.5	-6.0	1.3	-0.9	5.0

Source: Bank of Mauritius, Annual Report, and Staff Estimates.

INTEREST RATE STRUCTURE, 1985–1991

In percent

	1985 Dec	1986 Dec	1987 Dec	1988 Dec	1989 Dec	1990 Dec	1991 Mar
Lending Rates							
Bank of Mauritius							
Bank Rate	11.0	11.0	10.0	10.0	12.0	12.0	12.0
Rediscount Facilities	11.3	11.3	10.3	10.3	12.3	12.3	12.3
Commerical Banks							
Prime Rate	12.0	12.0	11.0	11.0	13.0	13.0	13.0
Export Finance	11.5–12	11.5–12	10.3–11	11–15	12.5–17.5	13.5–17.5	12.8–17.5
Commercial Rate 1/	16.5–17	16.5–17	15–16.5	15.5–20	17–20	19.3–21	19.3–21.5
Parastatal Bodies	13–17	13–17	12.5–16	13–17	17–19.5	14–21	12.5–21
Personal & Professional	15.5–17	15.5–17	16.5	15.5–20	17–20	19–21	19–21.5
Mauritius Cooperative Bank							
Crop Loan–Short Term	12.0	12.0	10.0	..	..	..	..
Credit Union/Co-operatives	15.5	15.5	15.5–16.5	..	..	..	..
Medium-Term Loans	14.5	14.5	11–14	..	..	..	..
Housing Societies	14.5	14.5	8.5–12.5	..	..	..	..
Deposit Rates							
Savings	8.5–9	8.5–9	8.0	8.0	12.0	12.0	12.0
Fixed Deposits							
Up to 3 Months	9.3–9.5	9.3–9.5	8.3–10	8.3–10	12.1–12.8	10.5–12.1	10.3–12.5
3 to 6 Months	9.3–10	9.3–10	8.5–10	8.8–10	10.5–13	10.5–13.6	10.5–14
6 to 12 Months	10–10.5	10–10.5	9–11	9–11	11.3–13.5	9–14	9–14
12 to 18 Months	10.3–10.8	10.3–10.8	9.8–11.3	10–11.3	11.5–14	11.5–14	11.3–14
18 to 24 Months	10.5–11.3	10.5–11.3	10.3–11.5	10–11.3	11.8–14	11.8–14	11.8–14
24 to 36 Months	11–12	11–12	10.5–10.8	10.3–11	11.8–13.8	11.8–14	11.8–14
36 to 48 Months	11.5–12	11.5–12	11.8–11	10.3–11	11.8–14	11.8–14	11.8–14
Over 48 Months	12.0	12.0	11–11.3	10.3–11	13–14	13–14.3	13–14.3

1/ Applicable to traders and small commercial businesses.

Source: Bank of Mauritius, Annual Reports and Quarterly Reviews.

FOOD CROP PRODUCTION, 1983–1991

In metric tons

	1983	1984	1985	1986	1987	1988	1989	1990	1991
Banana	7075	4750	7450	7830	7920	7920	4640	6135	6470
Beans and Peas	905	1310	1240	970	780	1155	1140	1280	980
Beet	220	200	175	135	165	175	210	165	..
Brinjal	995	750	870	685	580	735	835	1230	1270
Cabbage	2455	2990	2955	3270	2675	2915	2945	3680	3490
Carrot	465	575	595	765	815	740	1025	1100	..
Cauliflower	535	725	530	610	340	955	920	1280	780
Chillies	415	385	435	385	365	515	475	595	595
Cucumber	1475	1560	2000	1525	1280	1285	2450	2720	..
Garlic	120	175	240	325	245	165	160	170	135
Ginger	415	530	455	360	240	220	380	625	465
Groundnut	1910	2420	2165	2250	1645	1685	1505	1755	1340
Leek	40	35	40	30	25	25	35	30	..
Lettuce	265	255	280	250	175	425	545	610	..
Maize	1195	3265	4890	7970	3865	3790	2395	2265	2115
Onion	1685	3635	2595	2955	2145	3090	3225	2635	2850
Pineapple	425	535	790	980	1015	1465	1540	1355	1480
Potato	14910	20680	23305	16265	15535	12770	19690	17820	16000
Pumpkin	1040	1180	2150	1285	1275	1210	1660	1670	..
Rice	145	275	135	175	40	20	20	..	10
Squash	135	165	135	170	175	305	385	290	..
Tomato	11550	10500	8985	10600	6825	7315	9195	11570	9390
Miscellaneous	3260	4060	4780	5910	5005	5520	6905	6860	15980
Total	51635	60955	67195	65700	53130	54400	62280	65840	63350
Total Area Under Production (Hectares)	4345	5308	5345	6296	5017	5200	5303	5699	5413

Source: Central Statistical Office, Digest of Agricultural Statistics.

MAIN AGGREGATES OF THE INDUSTRIAL SECTOR, 1984-1990 1/

Units as stated below

	1984	1985	1986	1987	1988	Rev. 1989	Prelim. 1990
Numbers							
Number of Establishments	592	658	802	907	1,018	1,061	1,068
Mining and Quarrying	4	4	4	4	5	5	5
Manufacturing	544	618	752	860	963	1,004	1,000
Electricity, Gas and Water	2	2	2	2	2	2	2
Construction	42	34	44	41	48	50	61
Numbers							
Employment (September)	63,628	78,300	100,670	118,825	126,096	128,263	129,255
Mining and Quarrying	166	165	179	168	224	216	220
Manufacturing	55,422	69,351	90,370	106,355	112,930	114,633	114,505
Electricity, Gas and Water	3,899	3,772	3,704	3,599	3,545	3,483	3,430
Construction	4,141	5,012	6,417	8,703	9,397	9,931	11,100
Mau Rs millions							
Value Added at Current Factor Cost	3,188	4,056	5,194	6,401	7,541	8,692	10,210
Mining and Quarrying	19	20	22	25	27	30	35
Manufacturing	2,183	2,864	3,830	4,841	5,627	6,365	7,450
Electricity, Gas and Water	296	397	462	490	517	577	540
Construction	690	775	880	1,045	1,370	1,720	2,185
Mau Rs millions							
Investment at Current Factor Cost	848	1,105	1,435	1,885	2,495	2,985	3,030
Mining and Quarrying	..	..	..	..	..	..	..
Manufacturing	503	740	1,070	1,460	1,875	2,130	2,140
Electricity, Gas and Water	316	285	230	310	455	605	420
Construction	29	80	135	115	165	250	470

1/ Large establishments employing 10 or more persons.

Source: Central Statistical Office, Digest of Industrial Statistics.

LOCAL PRODUCTION OF SELECTED COMMODITIES, 1984–1990

Units as stated below

		1984	1985	1986	1987	1988	Rev. 1989	Prelim. 1990
Sugar	M/Tons	575,617	645,797	706,839	691,134	634,224	568,301	624,302
Molasses	M/Tons	141,652	154,149	173,398	191,946	179,622	177,000	179,000
Tea	M/Tons	8,021	8,115	7,876	7,147	6,854	5,500	5,751
Poultry	M/Tons	6,200	6,000	6,800	8,100	9,000	10,500	12,500
Animal Feed	M/Tons	31,000	30,000	35,400	43,600	50,200	54,000	53,295
Iron Bars	M/Tons	11,500	13,700	16,000	20,000	21,690	24,580	26,340
Alcohol (93.5 GL)	H/Litres	21,020	20,667	19,792	22,292	28,537	26,187	..
Power Alcohol	H/Litres	2,727	2,846	2,752	4,713	4,478	4,860	4,754
Alcohol for Heat/Light	H/Litres	2,643	3,097	4,303	3,630	4,145	5,059	4,054
Beer and Stout	H/Litres	166,225	171,944	187,620	238,090	261,127	254,080	281,243
Wine	H/Litres	50,756	42,938	42,100	40,723	31,624	28,486	26,736
Perfumed Spirits	H/Litres	890	1,463	1,313	1,178	1,614	1,571	1,505
Vinegar	H/Litres	1,187	1,156	1,156	1,088	1,020	1,088	1,156
Matches	Gross Boxes	192,187	196,019	220,295	236,472	227,989	227,150	227,342
Lime	M/Tons	5,000	5,400	5,500	5,700	5,800	6,080	5,300
Canned Tuna	M/Tons	2,605	3,234	2,944	2,936	..	..	..
Outer Garments	'000	16,798	24,536	40,117	44,405	..	..	..
Under Garments	'000	7,710	11,518	21,914	36,301	..	..	..
Electricity Generated	Mn Kwh	379	398	438	487	545	584	667

Source: Central Statistical Office, Digest of Industrial Statistics.

MAIN ECONOMIC AGGREGATES FOR EPZ ENTERPRISES, 1984–1990

Units as stated below

	1984	1985	1986	1987	1988	Rev. 1989	Prelim. 1990
Numbers							
Number of Establishments (September) 1/	179	244	365	469	559	571	528
Employment (September) 1/	33,751	47,842	67,938	82,554	87,392	87,085	84,110
Mau Rs millions							
Compensation of Employees	406	661	975	1,275	1,580	1,765	2,075
Value Added (Current Prices)	865	1,333	1,860	2,585	3,125	3,450	4,070
Value Added (Constant 1982 Prices)	650	845	1,140	1,391	1,556	1,650	1,798
Exports	2,151	3,283	4,951	6,567	8,176	9,057	11,474
Imports	1,650	2,530	3,863	4,801	5,890	7,502	7,348
Investment (Current Prices)	210	340	560	655	870	900	750
Percent							
Growth Rate of Value Added	32.9	30.0	34.9	22.0	12.0	6.0	9.0
Growth Rate of Exports	33.3	33.6	40.0	22.0	12.0	1.0	9.8
Share of EPZ in GDP	7.2	9.6	11.6	13.1	13.5	12.8	13.1
EPZ Exports as % of Total Exports	39.2	46.8	52.6	55.1	59.0	58.4	63.6
EPZ Imports as % of Total Imports	25.4	31.2	42.0	36.8	33.7	37.1	30.7

1/ Large establishments employing 10 or more persons.

Source: Central Statistical Office, Digest of Industrial Statistics.

EPZ ENTERPRISES AND EMPLOYMENT, 1984–1991

Product Group	1984	1985	1986	1987	1988	1989	1990	1991
	Number of Enterprises							
Flowers	16	19	21	28	28	33	43	49
Food	..	..	12	11	11	13	13	15
Textiles	11	13	18	23	27	30	32	36
Wearing Apparel	102	174	276	364	408	359	339	332
o/w Pullovers	(37)	(44)	(53)	(61)	(64)	(59)	(56)	(51)
Gloves & Other Garments	(65)	(130)	(223)	(303)	(344)	(300)	(283)	(281)
Leather Products/Footwear	6	7	9	12	12	11	13	11
Wood, Furniture & Paper	7	9	10	13	15	14	15	20
Optical Goods	2	3	3	4	4	4	6	6
Watches & Clocks	6	6	5	6	6	6	6	8
Jewellery	11	13	9	12	14	17	19	19
Fishing Tackles and Flies	4	4	4	3	3	3	..	..
Toys & Carnival Articles	6	7	6	7	7	7	8	8
Other	24	35	35	48	56	66	74	82
Total	195	290	408	531	591	563	568	586

Product Group	1984	1985	1986	1987	1988	1989	1990	1991
	Employment							
Flowers	172	217	243	327	358	421	544	615
Food	..	..	527	703	749	921	1,161	1,276
Textiles	1,509	1,771	2,354	3,341	3,810	4,251	4,789	5,056
Wearing Apparel	31,065	46,580	65,367	77,375	77,233	75,201	75,709	76,409
o/w Pullovers	(19,022)	(25,186)	(31,524)	(34,603)	(31,632)	(29,626)	(28,802)	(27,393)
Gloves & Other Garments	(12,043)	(21,394)	(33,843)	(42,772)	(45,601)	(45,575)	(46,907)	(49,016)
Leather Products/Footwear	402	454	720	865	1,105	1,242	1,336	1,250
Wood, Furniture & Paper	974	969	684	481	520	540	517	622
Optical Goods	219	280	392	612	577	587	570	518
Watches & Clocks	454	631	588	747	872	903	850	684
Jewellery	778	888	973	1,192	1,504	1,722	1,380	1,418
Fishing Tackles and Flies	485	461	560	163	169	176	165	..
Toys & Carnival Articles	635	695	670	705	774	896	978	1,037
Other	839	1,005	937	1,394	1,409	1,790	1,907	1,976
Total	37,532	53,951	74,015	87,905	89,080	88,650	89,906	90,861

Source: Central Statistical Office.

REPRESENTATIVE 1990 PRICES OF LONG-HAUL BEACH RESORT INCLUSIVE TOURS FROM THE UNITED KINGDOM

In pounds sterling

	One Week		Two Weeks	
	Peak Season	Mid-Season	Peak Season	Mid-Season
Mauritius	1,650	1,250	2,450	1,725
Carribean				
Antigua	1,500	1,150	2,250	1,825
Barbados	1,925	1,275	2,850	1,875
St. Lucia	1,300	975	1,950	1,475
Indian Ocean				
Kenya-Mombasa	975	625	1,025	825
Maldives	800	750	1,000	900
Seychelles-Mahe	1,275	1,100	1,825	1,525
Sri Lanka	700	650	800	725
South East Asia				
Indonesia-Bali 1/	1,025	975	1,325	1,250
Malaysia-Penang1/	975	925	1,250	1,200
Thailand-Phuket 1/	1,250	1,000	1,500	1,250

1/ Includes estimate of expenditure on meals (quoted prices exclude these).

Note I: Inclusive tour prices are for half board in comparable grade accommodation in each destination (typically the average charged in five different hotels, of three and four star grade) using scheduled flights. Peak season prices are the highest charged in each destination (over the Christmas/New Year period). Mid-season prices are typically those charged in July and August, but timing varies.

Note II: Price comparisons for other European origin countries show similar differentials except where there are special factors (eg. cheap fares from France to Mauritius via Reunion).

Source: Speedbird Holidays.

TRENDS IN TRAVEL TO MAURITIUS BY MAIN COUNTRY OF RESIDENCE

	1985	1986	1987	1988	1989	1990	1991
Arrivals '000							
France	27.5	32.4	44.2	50.2	53.7	53.2	54.6
Germany	8.9	9.1	13.8	15.1	18.2	19.7	22.5
United Kingdom	7.1	8.5	11.8	13.8	16.6	21.9	21.9
Italy	6.8	9.1	12.2	15.0	14.5	14.2	14.2
Switzerland	6.5	7.4	8.2	9.1	10.7	10.7	10.0
Total for Europe	56.8	66.5	90.2	103.2	113.7	119.7	123.2
Reunion	35.6	40.8	48.0	56.9	65.6	73.3	77.4
South Africa	27.4	26.7	31.0	35.9	36.9	41.9	44.1
All Others	29.1	31.3	38.4	43.3	46.6	56.7	53.8
World Total	148.9	165.3	207.6	239.3	262.8	291.6	298.5
Nights '000							
France	349	378	529	628	717	721	..
Germany	147	144	210	227	277	280	..
United Kingdom	124	144	204	231	313	371	..
Italy	76	100	134	163	170	156	..
Switzerland	95	119	123	133	167	163	..
Total for Europe	791	885	1,200	1,382	1,644	1,691	..
Reunion	337	343	394	527	567	629	..
South Africa	259	266	315	399	371	434	..
All Others	349	384	463	606	615	811	..
World Total	1,736	1,878	2,372	2,914	3,197	3,565	3,580

Source: Central Statistical Office.

SEASONAL PEAKING OF ARRIVALS FROM MAIN ORIGIN COUNTRIES, 1988

	Percent of Average Monthly Arrivals			
	August 1/	December 1/	Other Highs	
France	96	115	October 142	November 145
Germany	72	110	October 129	November 126
Italy	144	121	September 130	October 128
Switzerland	54	130	October 144	November 164
United Kingdom	106	121	October 152	November 122
Reunion	238	125	January 188	May 113
South Africa	56	135	September 137	October 119
All Other	102	126	April 113	November 108
All Origin Countries	125	123	October 117	January 116

1/ The two peak months for all travel to Mauritius.

Source: Central Statistical Office.

TRAVEL TO MAURITIUS IN 1988 COMPARED WITH SOME COMPETITIVE DESTINATIONS

	Total '000	Arrivals from Europe '000	Annual Total Tourist Arrivals as % of Local Population
Mauritius	239	105 1/	23
Bahamas	1,475	85	601
Barbados	451	198	175
Fiji	208	29	28
Indonesia	1,301	333	1
Jamaica	649	70	27
Malaysia	3,374	191 2/	20
Seychelles	77	64	115
Sri Lanka	183	115	1
Tahiti	135	40 2/	78
Thailand	4,226	902	8

1/ Six main origin countries only.
2/ Estimate.

Source: World Tourism Office, Pacific Asia Travel Association and CSO.

COMPARISON OF BUDGETS OF NATIONAL TOURIST OFFICES FOR BEACH RESORT DESTINATIONS

	Total Budget US$ mn	Spending per Foreign Visitor US$	Spending as % of Gross Tourist Receipts
Mauritius 1989/90	2.3	8.7	1.2
Antigua 1986	1.6	9.3	1.0
Bahamas 1987	29.7	20.1	2.5
Grenada 1986	1.4	24.9	3.6
Jamaica 1987	15.5	23.4	2.6
Malaysia 1989	30.7	22.4	3.9
Puerto Rico 1987	19.1	12.1	2.2
St. Lucia 1986	1.2	9.6	0.6
Sri Lanka 1988	1.9	10.5	2.5
Tahiti 1988	12.0	79.4	8.0

Sources: Various.

COMPARISONS OF LONG-HAUL AIR FARES FROM LONDON
(April 1990)

	Return Fares Pounds Sterling			US Cents per Kilometer		
Destination	Normal Economy	Cheapest Official Rate	Discount Fare	Normal Economy	Cheapest Official Rate	Discount Fare
Mauritius	1,848	695	613	16.0	6.0	5.3
Bangkok	1,920	598	389	18.0	5.6	3.6
Barbados	1,346	540	416	16.8	6.8	5.2
Hong Kong	2,064	580	520	18.2	5.1	4.7
Los Angeles	1,708	770	319	16.5	7.4	3.1
Mombasa	1,106	1,106	375	13.0	13.0	4.4
Montego Bay	1,332	462	371	14.9	5.2	4.1
New York	954	386	209	14.5	5.9	3.2
Singapore	1,865	650	435	15.2	5.3	3.5

Note: For other European origin countries a broadly similar picture emerges, with the important exception of a substantially lower discount fare to Mauritius from France, via Reunion. The fare component of inclusive tours is typically roughly similar to the discount fare.

Sources: ABC World Airways Guide and Trailfinders.

CONSUMER PRICE INDEX, 1982–1991

January–June 1982=100

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
January	98.1	104.6	109.9	119.1	124.0	123.7	127.8	145.8	164.6	189.7
February	99.8	106.1	110.6	120.7	124.2	125.0	126.9	148.0	166.5	188.5
March	100.0	106.4	112.4	121.7	124.7	127.3	126.6	147.9	168.8	186.0
April	100.3	106.7	113.2	121.0	124.6	124.7	128.7	151.9	168.4	185.1
May	100.9	106.2	113.5	121.1	124.5	125.8	129.6	152.7	169.4	182.5
June	100.9	105.8	113.2	121.2	124.6	126.1	133.8	153.0	169.0	183.5
Fiscal Year Ending June 30 (Average)	96.7	103.9	109.7	118.8	123.9	124.8	126.7	146.9	162.6	183.5
July	101.4	106.4	114.0	121.9	124.8	124.6	138.2	154.8	174.6	189.6
August	101.6	106.5	115.6	122.7	125.5	123.7	142.1	154.7	174.6	187.4
September	101.1	107.0	117.4	124.2	124.3	123.8	145.2	157.3	182.3	187.0
October	101.5	108.1	118.0	124.2	124.0	124.6	146.7	157.8	183.0	187.2
November	102.2	107.6	117.4	124.0	123.1	125.1	146.5	159.9	186.2	187.5
December	103.4	107.5	118.2	123.6	123.6	125.2	144.8	160.6	185.6	185.7
Calendar Year (Average)	100.9	106.6	114.5	122.1	124.3	125.0	136.4	153.7	174.4	186.6
Annual Rates of Inflation:										
January	13.6	6.6	5.1	8.4	4.1	-0.2	3.3	14.1	12.9	15.2
February	14.7	6.3	4.2	9.1	2.9	0.6	1.6	16.6	12.5	13.2
March	14.3	6.4	5.6	8.3	2.5	2.1	-0.6	16.9	14.1	10.2
April	14.4	6.4	6.1	6.9	3.0	0.1	3.2	18.0	10.8	9.9
May	13.7	5.3	6.9	6.7	2.8	1.0	3.0	17.8	11.0	7.7
June	12.9	4.9	7.0	7.1	2.8	1.2	6.1	14.4	10.4	8.6
Fiscal Year Ending June 30 (Average)	13.4	7.5	5.6	8.3	4.3	0.7	1.5	16.0	10.7	12.9
July	11.4	4.9	7.1	6.9	2.4	-0.2	10.9	12.0	12.8	8.6
August	10.5	4.8	8.5	6.1	2.3	-1.4	14.8	8.9	12.9	7.3
September	9.9	5.8	9.7	5.8	0.1	-0.4	17.2	8.3	15.9	2.6
October	8.3	6.5	9.2	5.3	-0.2	0.5	17.7	7.6	16.0	2.3
November	7.4	5.3	9.1	5.6	-0.7	1.6	17.2	9.1	16.4	0.7
December	6.8	4.0	10.0	4.6	0.0	1.3	15.7	10.9	15.6	0.1
Calendar Year (Average)	11.5	5.6	7.3	6.7	1.8	0.6	9.2	12.6	13.5	7.0

Note: Beginning in July 1987, the base period for the CPI was changed to July 1986–June 1987=100, to reflect changing weights. For continuity, data for 1987 and onwards have been adjusted to the 1982 base.

Source: Central Statistical Office, Annual Digest of Statistics.