8

Policy Recommendations for a Competitiveness Strategy

8.1 Introduction

Mauritius is at a crucial stage in the evolution of its export competitiveness. Export growth, driven in the past by a combination of good economic management, favourable external circumstances and a cheap, literate workforce, is running out of steam. The competitive base has to be transformed, with existing exports raised to a higher 'plane' of quality and new exportable products and services added. This requires improving further the enabling conditions for private sector activity and investment,[69] and helping it to develop new competitive advantages in line with high and rising wage levels. Such a transformation poses major challenges for a small economy located on the edge of a large and potentially rich but economically under-performing region. At the same time, there are several advantages that Mauritius can exploit: its human capital, its experience of exporting, the flexibility and openness of government structures, and the range of supporting services that are taking root. Even its location can be a source of strength.

8.2 Goals, Activities and Institutional Setting

8.2.1 Goals

The goals of export strategy are straightforward: to maintain the growth and market shares of products that *already have* a competitive advantage in world markets and to develop new competitive advantages in manufacturing and services. Both require expanding existing markets and seeking new ones. Geographical considerations require that considerable attention be paid to the neighbouring region, where Mauritius has several competitive advantages and where export prospects are steadily improving as economic liberalisation continues and economic growth is resuming, albeit at a modest pace. The moves for regional co-operation and the likelihood of South Africa becoming an engine of development add to the attractions.

8.2.2 Activities

Which export activities are likely to thrive in the future? As far as existing exports are concerned, the predominant activity – *textiles* and *clothing* – will continue to be central to the export effort and will retain a significant market niche. Many leading firms have already upgraded their quality and technology considerably, though much remains to be done to raise competitiveness elsewhere, especially in SMEs. Considerable effort will be needed to further improve the skill, design and technology base in the industry, promote flexibility and specialisation and strengthen supporting institutions. High wages need not a barrier to export competitiveness if quality is upgraded, and Mauritius has an edge over most developing countries in achieving such upgrading. What is needed is to maintain this edge.

The potential for new export products and services has been analysed on several occasions. The Minister of Finance mentions the following[70]:

- In the *agro-based sector*, activities such as fishing, fruits and horticulture offer scope for direct export and for further processing.
- *Tourism* offers the potential for further expansion in a number of areas such as eco-tourism, leisure parks, pleasure boating, island cruising and handicrafts.
- In the manufacturing industry, possibilities include *pharmaceuticals*, *printing* and *publishing*, *jewellery* and *light engineering*.

- In services, IT offers scope, particularly in the area of 'back-office work' for major firms in the industrialised countries. The start made in the Informatics Park will be aided by liberalisation of the telecommunications industry.
- There are opportunities for the sale of *consultancy services* through the region.
- The *free port* sector can be encouraged by investment in the development of regional shipping and airline services.

In addition, much discussion in Mauritius has revolved around prospects for the *electronics industry* in[71] and *offshore banking* in services.

This report has focused on some manufacturing, though some attention has been paid to IT: this is not intended to suggest that the other activities noted are less promising. On the contrary, several are thriving and offer excellent prospects for the future. The choice reflects only the capabilities of the team.

In the manufacturing sector, the mission believes that the best prospects for future expansion lie, apart from textiles and garments, in **printing and publishing** and **electronics**.

Mauritius has already established a base of good printing technology, and firms have been upgrading their facilities in recent years. The technology in place is fairly sophisticated and skills have developed to an impressive extent. The idea of attracting firms from East Asia in complex support services like colour separation, typesetting and advertising media is a good one, and the experience of Singapore and Hong Kong suggest that even with very high wages there is a good chance of attracting significant business to Mauritius.

In *electronics*, the past record in Mauritius has not been very impressive. Some failures have had "a traumatic effect on attitudes to the electronics industry" (Kelly and Kelly, 1993, p. 22). One large firm, Litronics, which employed 2000 people at its peak, went out of business in 1981 because of the decline of its main product (light emitting diodes) and its failure to develop new products. Two other electronics firms failed, one because it failed to realise economies of scale and the other because it had old, used equipment. At present, export-oriented companies consist of electronic watch movement assembly, a pH meter assembly plant, a quality crystal preparation plant, a coil winding plant, assemblers of professional audio equipment and an assembler of photo-voltaic units. Of these, the four watch assemblers are the largest component and have led to the development of a base of skills in micro-assembly.

While the small base of skills in electronics is an advantage, there is no support base of component manufacturers or even a well-stocked distributor in Mauritius. This raises the costs of breakdown, compounded by the lack of service and maintenance facilities and capabilities. However, the potential of the industry is immense, and in Asia there continue to be significant new investments in search of low cost skills and facilities. An appendix to this chapter provides some recent information on the industry in Asia. The study by Kelly and Kelly (1993) notes the following products that may be profitably made in Mauritius, based on its location, capital and skill availability, enterprise size and the possibility of attracting foreign investors: components for emergency lighting systems; delay lines; security panels; a 'flagship' project such as printed circuit boards. It may be useful, in view of the rapid technological changes in the industry and the dynamism of FDI, to take another look at the possible activities that Mauritius can get into. The Kelly and Kelly report downplays the potential of the African market, though it does say that the possibilities should not be neglected: in view of recent events, it is also necessary to explore the new opportunities that may have arisen in the region.

As far as ***services*** are concerned, the export of ***IT services*** is often mentioned in Mauritius as a potential area for growth, though it is difficult to see any competitive advantage that it offers, apart from a linguistic one, in comparison with coun-

tries like India (Vietnam is now being mentioned as a potential new entrant). While a start has been made in the Informatics Park, the team is not convinced that it will amount to much more than a small fringe activity unless a particular niche activity (e.g. desktop publishing) can be firmly established as an area of excellence.

It is worth noting the efforts by *Singapore* and *Malaysia* to develop their IT capabilities: Singapore by its strategy of developing an 'intelligent island' and Malaysia by its strategy of building a 'multimedia super-corridor'. Both governments are investing heavily in the infrastructure needed. According to a recent report in the *Financial Times*, Singapore is "integrating the entire island into a high capacity multimedia cable network capable of carrying television, cable TV and Internet signals to a wall socket in every home... Last year, Singapore announced it was doubling the value of research and development grants to companies, foreign or local, on the island to S$4bn (£1.7bn) over the next five years. Senior executives in foreign corporations said the generous grants, as well as the island's reliable infrastructure, computer-literate people and highly efficient work force were the city state's strongest

Box 8.1 The Prospects for Offshore Financial Services in Mauritius

Since the late 1980s the Government of Mauritius has promoted the export of financial services, especially through an off-shore financial centre (OFC). The financial and business services sector has grown impressively over the past five years at an average rate of 10% per year (but from a low base), and contributed 5% of GDP in 1994. It has attracted some 3300 establishments engaged in a variety of activities, ranging from offshore funds and investment holding to international trading, offshore trusts and offshore banking. The offshore banking sector consists of 7 banks with a total base of US$ 790 million (mid 1995). About 80% of all offshore companies incorporated on the island were set up to invest in India, with 45 mutual funds incorporated in Mauritius investing $3.5 billion. An additional $1 billion has been channelled into India by multinational and non-resident Indians. Mauritius has thus emerged as the fourth largest foreign investor in India. The OFC is viewed, after garments, tourism and sugar, as the fourth pillar of the Mauritian economy.

The government took several policy actions to create the OFC including:

- The amending of the Companies Act in 1990 to allow the operation of non-financial offshore companies.
- The Mauritius Offshore Business Activities Act, under which the Mauritius Offshore Business Activities Authority (MOBAA) was created to promote and oversee all non-bank offshore companies, and Offshore Trust Act provided the legal framework for Trusts.
- The Double Tax Agreement (DTA) with India, under which only a 5% withholding tax is imposed compared to 20% under Indian law.
- Providing OFC enterprises complete exemption from capital gains taxes and withholding taxes on interest payments to Mauritian creditors.
- The Banking Act, 1988, laid the framework for offshore banks and assigned supervisory authority to the Bank of Mauritius. The offshore banks have few regulations; are exempt from reserve and prudential requirements; only face a 15% tax on their profits; are exempt from stamp duty and withholding taxes on interest payments to non-residents; and permitted to lend to residents and non-residents in foreign currencies.

While the country's growth as an OFC has been helped by its stable political climate, a relaxed and open regulatory framework (with a supervisory regime capable of preventing illegal activities like money laundering) and a well-developed telecommunications system, its attraction to funds wishing to invest in India derives more from its traditional ethnic links with India and the tax advantages offered by the DTA.

However, these advantages may prove evanescent. With the globalisation of the world economy and the larger role played by private capital flows, Mauritius will face intense competition from established and new OFCs. There are presently 25 major OFCs, the most prominent being Bahamas, Bahrain, the Cayman Islands, Hong Kong, the Netherlands Antilles, Panama, Singapore, and Cyprus (a significant newcomer).

There are, in this context, several aspects of its location and policy and institutional framework that may hinder Mauritius' growth as an OFC:

First, its remoteness from major markets. OFCs tend to locate in clusters around the major and richer markets of Europe, the Americas and Asia. Mauritius' natural potential markets are Eastern and Southern Africa and the Indian Sub-continent. However, the volume of business transacted here is relatively small, and the establishment of a freeport to complement the financial operations is unlikely to significantly improve its attraction as an OFC.

Second, the regulatory framework. There are considerable variations in the extent of regulation internationally. Some centres, like Hong Kong, are lightly regulated, and take a laissez-faire approach; others, such as Singapore, have tighter regulations. Mauritius has chosen a regime closer to that of Singapore, in order to build up an image and reputation as a safe haven. It has taken account of the loss in confidence that follows in the wake of allegations of money laundering, as has been the case in some Caribbean centres. This choice, while rightly cautious, may be regarded as too strict in comparison with that of some other centres and may prove a competitive handicap.

Third, regulation and promotion. MOBAA is responsible for both regulation and overseas promotion of the OFC. International experience suggests that such arrangements tend to result in a conflict of interests and reduce the effectiveness of both functions. MOBAA, with only 11 professional staff, may also have insufficient resources for effective overseas promotion and collection of market intelligence.

Fourth, human capital. Mauritius has a modest base of skills and experience in finance, law and accounting. Current rates for auditing services are high in relation to other off-shore centres, while expatriate work permits are relatively difficult to get. There is also a shortage of information technology specialists, impeding the growth of support services for offshore operations. Other successful OFCs such as Hong Kong and Singapore have benefited from electronics-related FDI which has contributed to the upgrading of information technology skills – Mauritius lacks this source of skill creation.

There are a number of possible policy initiatives for Mauritius: relaxing the regulatory framework for OFCs while maintaining soundness; devising a more aggressive approach to tapping new OFC business and gathering market intelligence; separating the regulatory and promotion functions of MOBAA, placing the former in the Bank of Mauritius; dealing with skill shortages by investing in relevant education and liberalising work permits; and continuing to upgrade the telecommunications system. The Government should consider launching a special study of the OFC in order to develop an appropriate competitive strategy.

points."[72] Malaysia "aims to create Asia's leading silicon valley in a 750 sq km zone near Kuala Lumpur ... The rivalry between Malaysia and Singapore has meant not only that potential investors are being offered some unprecedented incentives, but also that each country is coming under increasing pressure to soften foreign media controls". The incentives offered by Malaysia include a 10 year tax holiday, freedom to employ unlimited numbers of foreign staff and to own 100 per cent of the facilities. Foreign companies will be allowed to bid for projects in the corridor on preferential terms. Malaysia is planning to build a new "multimedia university" in a planned futuristic city, Cyberjaya; the first foreign company to be approved for investing in the corridor is Nippon Telephone and Telegraph of Japan.

While Mauritius may find it difficult to mount such ambitious initiatives, it would be important to launch a clear initiative, with ample publicity, that will catch the attention of potential investors. For Mauritius, what may be very important is the regional card: MEDIA notes the possibility of Mauritius becoming a 'hub' for IT operations in the COMESA region. This would require the government to target the specific skills and infrastructure needed and to develop these before other countries in the region. The Asian example suggests that the investments required may be quite substantial, but a start has already been made to build up IT capabilities and can be strengthened.

The other promising area of service exports is *consultancy* in the African region. Many of these service exports can be based on Mauritius' own experience of export led growth, in which it has a lead over all neighbouring countries: liberalising the export sector, setting up EPZs, managing the development of buyer-seller relations, hosting international trade fairs in textiles and garments, streamlining bureaucratic procedures and operating incentive schemes and developing productivity improvement services. Since most other African countries are liberalising their economies and seeking to promote export-oriented manufacturing and service operations, they will seek expertise from other countries that have successfully managed the process. Not only will the advice be more appropriate, Mauritius has a significant advantage in its bilingual capabilities. It may also be able to exploit its membership of the Southern African Development Community (SADC) to develop marketing opportunities for consultancy services.

The experience of privatisation and restructuring of public utilities and infrastructure can provide a valuable base for the export of services. In many Asian and Latin American countries, utility companies have become important investors and earners overseas on the basis of the lead they have established in their home countries. Chilean firms are investing in many neighbouring countries in power generation and telecommunications. Malaysian firms are involved in similar activities in Asia. Singaporean firms are aggressive in setting up and managing EPZs. Where capital and skill needs are very large, Mauritian companies can act jointly with firms from other countries.

A final area of service exports is *off-shore financial services*, particularly offshore banking which the government has attempted to develop in recent times (see Box 8.1).

8.2.3 Institutional Setting

The design and implementation of an export development strategy may require institutional changes. The present structure of policy analysis and formulation is dispersed over several ministries and institutions, and lacks a central co-ordinating mechanism.[73] It would be desirable to set up mechanisms to continuously monitor current competitiveness, analyse emerging trends and problems, devise appropriate solutions and implement them.

The steps involved are as follows:

An agency like the proposed *Mauritian Competitiveness Council* is necessary to act as the focal point to manage, monitor, devise and implement policies that at this time are being

- Set up a *Mauritius Competitiveness Council* to take charge of all issues pertaining to the maintenance and creation of export capability. This council should include representatives of all the ministries and departments concerned with trade, industry, skills, productivity, finance, market intelligence, FDI and infrastructure, and have the authority to design and implement strategies that cut across all the relevant ministries.
- Under this Council, establish a *competitiveness monitoring* unit to analyse the trade climate and assess options for Mauritian exports, existing and potential.
- Set up a *technology assessment unit* that relates emerging technologies to the ability of Mauritian industry to keep up and utilise them to best advantage.
- Develop a *manufacturing efficiency monitoring and response* capability that studies the productivity, efficiency, flexibility and innovativeness of industry in relation to international benchmarks, identifies problems and develops solutions. This would allow problems to be identified as they arise and they could be addressed immediately.
- *Involve the industrial sector* deeply in the analysis of competitiveness problems and solutions, and in the implementation of those solutions.
- Link the *technology infrastructure* institutions (MSB, UoM, EPZDA, SMIDO and others that may be set up) to the efficiency programme, ensuring that the private sector is willing to use their services and that they are able to respond effectively.
- *Evaluate* the results of these efforts on a continuous basis to ensure that they are efficiently carried out, are cost-effective, and meet the needs of private firms.

performed by several different agencies in an unco-ordinated fashion and without full analysis. The emphasis should be on securing full private sector participation from the start, with a commitment by the government that their needs will receive precedence. One of the major functions of the Competitiveness Council should be to develop a *monitoring unit* that keeps track of Mauritian export performance in all major markets, tracks its market shares, watches emerging competition and feeds back market information to the government and exporters.

Technology assessment is concerned with the more immediate technological needs and problems of industry. Such an assessment should take place at the *cluster*, *industry* and *firm* level, and would form the core of competitiveness strategy. At the more operational level, there is the need for a manufacturing efficiency and response unit which collects information on day-to-day problems and feeds the information to the relevant ministries so that solutions can be devised. The model for this may be the Korean 'Export Situation Room' where a team kept constant track of export performance (data were updated every day) by all major industries at the detailed (product and firm) level, and monitored problems that prevented export targets from being met. The minister would visit the room regularly and intervene as necessary. Such constant high level intervention was useful in keeping the pressure on both the firms and the bureaucrats concerned with the export effort. This suggests that the Mauritian Competitiveness Council should work closely with the Prime Minister's Policy Unit to ensure that its work has maximum effectiveness.

Needless to say, any sustained export strategy can work only if the private sector is fully informed and involved, and participates in the decision-making process. An institutional mechanism such as the monthly meeting of key ministers and heads of enterprises, chaired by the Prime Minister has to be evolved to enable such participation to occur on a continuous basis.

8.3 Trade and Industrial Policies

The trade regime in Mauritius, which previously emphasised both import substitution and incentives for exports, is now fairly liberal and probably one of the more open in Africa. Though effective protection is still quite high and variable, its level has fallen since the 1980s. The incidence of protection as far as the development of export-oriented activities is concerned is not very large, though clearly sustained efforts should be made to minimise this incidence and eliminate any remaining distortions in resource allocation. There is a reasonable range of export promotion policies by developing country standards, which are quite well administered, but the overall export push and MEDIA need to be considerably strengthened. Our work suggests that MEDIA undertakes too many functions; its effectiveness is held back by a lack of funds; it offers only a limited range of export marketing and information services with little attention to cost recovery; it does not formulate an overall export development plan for the country and a set of export targets; and, in spite of its work, the export marketing efforts of SMEs are very weak relative to large and giant firms.

With regard to exchange rate management, the country has been less aggressive in devaluing than its main competitors. This is likely to affect cost-sensitive industries such as garments, characterised by small margins and mobile international investors. As far as bureaucratic procedures and regulations are concerned, there have been significant improvements, with the abolition of import licensing, the freeing of foreign exchange transactions and streamlining of customs clearance at the port and air port. Nevertheless, enterprises complain about delays in the foreign investment approval process, in obtaining refunds on import duties and in getting work permits for technical staff.

The team was able to gather some impressions on the nature of the policy and incentive regime and supply-side factors from enterprises. On the policy and incentive side, the most pressing constraints to export growth and upgrading appeared to be high interest rates and cumbersome bureaucratic procedures (particularly in relation to approvals for DBM loans and obtaining refunds on imported inputs). The appreciating exchange rate, policy uncertainty and lack of access to finance were remarked on by some firms. Infrequent sailing and high sea freight costs were mentioned as the leading constraint to export growth and upgrading on the supply-side, followed closely by shortages of skilled labour and technical manpower; the lack of reliable suppliers of raw materials, parts and components; and inadequate technology institutions.

The main recommendations on trade and industrial policies are as follows:

- Persist with a credible, transparent strategy of import liberalisation to achieve a low and uniform level of effective protection. Set specific advance targets for phased reductions in import tariffs. This will give firms strong signals to restructure. Phase out protection for highly protected activities without any clear economic rationale and support those that can develop into future exports within a relatively short period with supply-side measures to promote rapid restructuring and upgrading.
- Entrust the task of import liberalisation to a single government institution (such as the newly established Ministry of Industry and Commerce) which should draw up a simple, clear programme of future tariff reform. This institution should also maintain an up-to-date information system on import tariffs and other forms of non-tariff protection and develop strong in-house capabilities to carry out inter-temporal effective protection studies at regular intervals. These measures will provide the government with the relevant information to assess progress made in reductions in protection.
- Pay more attention to monitoring cross-country behaviour in exchange rate

management and emulate the more aggressive real exchange rate posture witnessed in neighbouring African and Asian competitors. The Bank of Mauritius could take the lead role in this area and, if required, the collaboration of the IMF could be sought.

- Continue to strengthen the export drive through a significant enhancement in the role of MEDIA. An assessment should be undertaken, under the aegis of the Prime Minister's Policy Unit or the Ministry of Finance, to identify strategic institutional restructuring alternatives and carefully evaluate the costs and benefits of each approach. The assessment should explore the possibility of developing an institutional focus on export promotion alone; expanding its financial resources; formulating a mechanism for cost-sharing by recipients and developing commercial services for information and marketing; establishing a dedicated unit to help link SMEs with foreign buyers and large local firms and providing extension services to develop independent marketing capabilities in SMEs.

- Develop an overall export development plan and a system of export targeting as well as a monthly meeting between key ministers and the heads of firms (chaired by the Prime Minister) to review progress made towards export targets, deal with pressing policy problems and solicit views on economic policy management. The export planning mechanism could be located in the re-structured MEDIA and MEDIA's corporate plan should be developed in line with the overall national export development plan.

- Give due consideration to enhancing the overseas marketing capabilities of private business associations and attracting MNC service firms (to establish regional operations in Mauritius). The important goal underlying these initiatives is that the effectiveness of MEDIA should be not only be enhanced, but also to make sure that it does not inadvertently crowd out potential private sector providers of export promotion services.

- Streamline residual bureaucratic procedures and regulations, especially concerning foreign investment approvals and processing of refunds on duty drawbacks. Where possible, a single short form should replace multiple documentation requirements and unnecessary bureaucratic stages should be dispensed with. In this vein, a liberalisation of work permits for technical personnel would facilitate more rapid technology transfer. An appeals procedure should be established to deal with instances where foreign investment approvals are rejected or subject to delays in excess of four weeks (this should include the processing of work permit applications). These steps would significantly contribute to Mauritius moving towards a environment with a low-level of bureaucratic procedures.

- Undertake a regular annual survey of enterprise perceptions of the policy and incentive regime and constraints, along the lines undertaken in this study, and feed the results into the export policy making process. This survey should cover enterprises from different industries, ownership forms, and size classes. The results of this survey would be an important input into the work of the proposed Competitiveness Council mentioned above and the high-level meeting between ministers and the heads of enterprises, chaired by the Prime Minister.

8.4 Human Resources

While Mauritius has made impressive strides in improving its human resource base, and the 1996-97 budget of 31 May 1996 extended free

primary education to everyone in the country (this gave universal free education from pre-primary up to tertiary level for all those in full-time studies)[74] shortages of both general and specific skills will be among the most critical constraints to its long-term export development. The base of literate and trainable manpower that drove its early export expansion is not adequate to cope with the needs of technologically sophisticated, flexible and design-intensive export activities in the future. There are lags in both the quantity and quality of education at the secondary and particularly at the tertiary levels, and these are most severe for technical subjects; the output of high level technical graduates, in particular, is abysmal for the size of the population. Teacher quality, materials and equipment are often poor, with a mismatch between the skills produced at schools and training institutes and those needed by industry. The reliance on rote learning holds back the development of the skills and aptitudes needed for modern production. Many of the modern information skills needed are not provided by the training system.

Enterprise training is also inadequate. While some large firms have full-time training departments, most firms provide only the minimal training needed to achieve production standards. Because of the cost involved and high turnover rates for employees, firms tend not to invest in upgrading the capabilities of their workforce. SMEs spend the least on human capital. The training levy does not provide sufficient incentive to firms to develop the training programmes needed for Mauritian firms to move up to a higher level of technology.

Problems of skill development are exacerbated by a poor work ethic: productivity is low because of low motivation and weak discipline in EPZ firms, high rates of absenteeism and turnover, poor working conditions and antiquated methods of human resource management. This is a broader problem of improving labour management and relations systems, but is perhaps as important to long-term success as the narrower ones of education and training.

All these deficiencies can deter any sustained effort to upgrade exports, and it is critical for the government to address them at all levels. This study concurs with the *National Long-Term Perspectives* Study (Volume II) in its conclusion:

> *"To equip people for the future opportunities with jobs which need new technology skills it will be necessary to provide for a major expansion of high quality, job-related training, both by employers and by specialist training institutes for key industrial sectors, through the IVTB... High level training will only work if based on a high level of general education and, in particular, an adequate level of mathematics, informatics and natural sciences. It will be important to press ahead with the implementation of the Education Master Plan and to give priority to improving on the present 30 per cent of students in secondary schools who take science up to 'O' level and the 15 per cent of university students who choose science or engineering as a career."*[75]

The recommendations on human resource development are as follows:

- It is essential that skill needs and provision be *monitored and prioritised on a continuous basis*, with effective interaction between employers and training institutions. Skill needs should be assessed by continuous monitoring of international competitors. The setting up of a Manpower Co-ordination and Development Unit in the government in 1992 is a step in the right direction, and it is recommended that its achievements should be by examined to date and its role strengthened.
- The IVTB's administration of the levy grant scheme and the relevance of its curricula need to be looked at closely.
- There may be a need to launch new types of training institutions more *directly linked with, and managed by, industry*.[76]

- There is a need to focus education and training efforts on particular skills, such as IT, textile design and consultancy services (as discussed earlier), that will provide competitive advantages in the near future.

Firm-level training must be encouraged by information and persuasion and, where desirable, by the setting up of institutions and programmes. These programmes should cover in-house training by firms for their own employees, by large firms for the employees of smaller firms (suppliers and subcontractors), and by industry associations for their members.

There must be better *information* on and *monitoring* of private sector training. At present there is little information available on this and no systematic measures to promote or improve it.

SMEs have to be targeted by special information and incentive programmes to recruit better trained labour and to invest in formal training. Their method of skill transmission tends to be confined to apprenticeship systems, where craftsmen teach young workers, largely with little formal education, traditional methods that have been used over time without much change. The government should assist by providing substantial subsidies to SMEs to invest in training and by setting up activity specific training centres.

8.5 Technology Support

The Mauritian system of technology support has several strengths, with several institutions involved in MSTQ, productivity improvement, training, SME support and diffusion. It has been improved in recent years, particularly the MSB and the diffusion system (TDS), as part of a World Bank competitiveness upgrading project. The productivity improvement agency for export firms (EPZDA) is a relatively recent creation, and is doing an excellent job. However, the institutional framework needs to be further improved and expanded if it is to play a full role in the upgrading industrial competitiveness. The following are the main needs:

- The MSB should establish its accreditation function as soon as possible.
- Some financial support for smaller enterprises to obtain ISO 9000 certification should be considered. One possibility would be to extend the TDS provision to meet half the costs of the consultancy services needed after the programme ends.
- The TDS scheme seems to be very effective, and its extension (or making a similar set-up permanent) should be considered. The extent of subsidy involved can be lowered over time as SMEs become more aware of the benefits of using the emerging market for technological services and consultants.
- Industrial R&D, which is practically nil, needs to be stimulated, and a stronger research culture created among the larger firms by a campaign to raise the consciousness of the benefits of in-house design and development activity. Linkages between large firms and technology support institutions should be strengthened.
- SMIDO is currently unable to meet the technological needs of SMEs in Mauritius, and the feasibility of setting up Technology Transfer Centres (along the lines proposed by Beatty and Sims, 1996, based on the experience of Northern Ireland) should be considered seriously. This would help SMEs in defining their technological needs and problems (by technology audits), providing them with relevant information on sources of technology, helping them with training, testing, CAD/CAM, equipment repair and maintenance and generally raising their awareness of technological activity. This would draw upon resources at the university and elsewhere in Mauritius, and could soon become self-financing. Such centres could take over several of the functions of SMIDO or be combined with it. The government should strengthen the provision of technological *information* to

help firms learn about sources and prices of technologies along the lines pursued by Korea, Taiwan and Japan, where there are computerised on-line facilities to help enterprises to find and negotiate for new technologies.

- An institution needs to be set up to conduct R&D on behalf of manufacturing firms. While the University does some applied research, and EPZDA has the function of conducing industrial R&D, neither is geared to assessing the technology needs of industry and meeting it. A mechanism also has to be set up to stimulate firms, especially SMEs, to contract technological activity to research institutes and the university.[77] The Taiwanese example of research institutions importing new technologies, adapting them and then diffusing them to the smaller enterprises, with a package of finance, training, market and management assistance, is a model that the Mauritian government may follow.

- There is a need for a Productivity Centre which would conduct, on a larger and more comprehensive scale, the present functions of the EPZDA. Such a Productivity Centre would incorporate many of the functions of the Technology Transfer Centres noted above – the need for having one, rather than several, bodies should to be examined. In this context the Minister of Finance has recently announced the intention of setting up a National Productivity[78]; this team does not have the information to assess what this Council is to do.

- Textile and garment design skills need to be developed locally. The design content of export production has to be enhanced over the medium to long term if Mauritian firms are to maintain their upgrading, and a strong local training facility, such as a Textile Design Institute, would greatly help in achieving this. EPZDA has a long-standing proposal for a Textile Institute which needs to be evaluated and, if found appropriate, acted upon.

- The government should consider establishing a textile and garment restructuring fund to help smaller enterprises to invest in new technologies and skills.

- Technology diffusion to smaller enterprises would be greatly helped if the *industry associations* concerned were strengthened, both to offer common services to their members and to act as a focal point for identifying and articulating their needs and for organising assistance from official agencies. In Korea, for instance, the small scale industries associations, initially promoted by the government, served such functions extremely effectively and helped policy formulation in the interests of their members.

- The promotion of *subcontracting* is an important element of the policy to promote SME competitiveness and develop industrial districts (see 8.6). The best policy would be to concentrate on raising the skill and technological level of local firms, and to provide a pro-active programme of skills, technology and finance as noted above. The subcontracting exchange being set up by SMIDO with UNIDO assistance should be promoted strongly. Foreign investors should also be encouraged more strongly to invest in diffusing technology locally by promoting subcontractors and suppliers. This may be done by providing special incentives to the MNCs related to local content and to programs for helping SMEs, and by investing directly in the upgrading of subcontractor capabilities, along the lines of the Local Industry Upgrading Programme in Singapore.[79]

- Local public and private research institutes should be encouraged to link up with

similar institutions in other countries (in particular in India) to exchange research results, materials, methodologies and personnel. The government should encourage the exchange of research personnel between laboratories and enterprises in different countries.

8.6 Promoting Industrial Districts

The promotion of industrial 'clusters' or districts is proposed as one important way for Mauritius to improve the flexibility and quality of its export industries. In terms of policy support, the experience of developed and some developing countries suggests that strong support from the *local government* and *banks* has been very important.[80] Joint public/private initiatives are also needed to provide technical support services and training (both of entrepreneurs and of workers). Local governments generally play a very important role in creating support institutions, such as the provision of common technical facilities, training institutions or infrastructure; they are generally better informed about local conditions and also better able to mobilise local support and participation. It is fundamental that entrepreneurs and workers are also actively involved in the design, financing and implementation of the schemes supporting industrial clusters. In fact, the cases in which attempts to foster clusters have not worked have been where there was little or no private sector participation.

Some suggestions for promoting industrial districts in Mauritius are as follows:

- **Provision of credit:** Access to credit is of key importance, especially for the SMEs and for the firms which try to expand and innovate. Many SMEs do not have access to credit because of the high commercial risk associated with their projects. In Europe, local banks, consortia and co-operative banks have been the main source of credit to industrial districts. A local bank is "an organism, born and bred in the district, that is very closely linked with local entrepreneurs (..) and deeply involved in local life, which it knows in detail, and to which it gives direction to a considerable extent.[81] Because local banks know the environment well, they are in a position to assess better the personal qualities of the applicant and the prospects of the project. Other local credit initiatives are Consortia and Co-operative banks, in which the owners of firms are all indebted to each other, which creates an atmosphere of trust and reciprocity that affects the provision of loans and their repayment. Mauritius needs to foster localised intermediaries; commercial banks often do not have the branch network to reach local industry, and wherever the network exists there might be little attention to the need of the local small firms.
- **Training of entrepreneurs and workers:** Firms in European industrial districts play a big role in designing the content of training and in carrying out and monitoring programmes.
- **Provision of information services:** In the Italian garment industrial districts, the provision of information regarding other countries helped to move producers towards more sophisticated segments of the market. Such services were rarely provided by the public sector alone; there was generally strong support from private institutions, because of the sector specific expertise required and for financial reasons. In Ludhiana (Indian Punjab), the regional government established quality control, research and technology centres, vocational and industrial training centres, and encouraged the formation of sectoral and trade associations, through which local industries represent their interests to the State. This plus a tradition of reverse engineering fostered the dynamism of the local metalworking and textiles industries

(organised in clusters). This suggests that in Mauritius, information services should be sector specific and should specialise in the weak areas of the industry to be helped (e.g. testing facilities, design, legal stipulations, import and export regulations, technology transfers, etc.).

- **Labour organisation:** The success of industrial districts in Europe was not based on low wages, but on strong but *responsible* labour unions that contributed to competitive behaviour and innovations: the pressure of high wages on enterprises forced them to raise productivity. It need hardly be stressed that a flexible labour market, and a healthy and technologically forward-looking labour movement, will be vital for the development of export-oriented industrial districts in Mauritius.

8.7 Foreign Investment Attraction and Promotion

Average annual foreign direct investment inflows (FDI) in Mauritius in the 1990s are high by African standards, but low compared to Asian countries. Mauritian FDI is highly concentrated in the textiles and garments industry, which is experiencing a downturn in inward investments and there has been little spillover of FDI into other activities. The decline in foreign investment is taking place at a time when FDI to developing countries is surging. Many of the locational advantages which attracted FDI to Mauritius – including cheap, literate and bilingual labour; reasonable labour productivity and industrial discipline; preferential access to EC and US markets; political and macroeconomic stability; a low level of bureaucracy and a market-friendly business environment– have significantly eroded. Moreover, the country is facing increased competition from lower cost producers including Madagascar, China, Vietnam, Bangladesh, India and Sri Lanka. Foreign investors from Hong Kong and France, who largely drove Mauritian success in textile and garment exports in the 1970s and 1980s, have begun to search for low cost locations elsewhere in the developing world. About half the foreign-owned firms in our firm-level survey indicated that they had begun or were considering relocating to other more attractive manufacturing locations in the developing world and Eastern Europe.

Several structural factors may indicate why Mauritius has been unsuccessful in diversifying and upgrading FDI as compared with East Asian economies including: an inadequate supply of industrial skills; a lack of suppliers of raw materials, parts and components; limited technology infrastructure; and inadequate local demand for high technology products. At the same time, there are also gaps in the foreign investment policy regime and the inward investment promotion strategy. Our preliminary analysis suggests that investment incentives are not pro-actively geared up to target industrial sectors or major international investors; the eligibility requirements for investors to qualify for incentives are not clearly specified for some schemes; there are inadequate incentives to promote technological upgrading, increase value-added, promote linkages with local industries and facilitate research and development. Similarly, there are several negative attributes in the current foreign investment promotion system and strategy: there are relatively long delays in getting foreign investment approvals in Mauritius by international standards; there are serious design flaws in the new targeted investment promotion strategy which reduce its effectiveness; there seems to be insufficient attention paid to encouraging the expansion of existing MNC affiliates; and there is the absence of a programme to induce MNCs to establish regional headquarters for Africa. There is an urgent need to stimulate greater FDI inflows particularly to diversify and upgrade the technology and skill content of exports. Bold actions are required for success in the current context.

Some suggestions for attracting and promoting FDI in Mauritius are as follows:

- Undertake a comprehensive appraisal of the investment incentive regime in a comparative perspective with a view to streamlining and modernisation. This appraisal should focus on the following strategic issues: providing a limited number of extra financial incentives (e.g. cash grants or equity participation schemes) for particularly attractive potential investments in the target industrial sectors; clarifying the eligibility requirements for the investment incentive schemes (particularly the PSE Scheme); developing strong incentives to promote technological upgrading, increased value added, and local linkages; and creating an up-to date information system on investment incentives for competitor countries.
- Establish a new specialised agency for foreign investment promotion, as indicated by the Finance Minister. This new agency should be staffed by people with the appropriate private sector experience and offer competitive pay, benefits and comprehensive training.
- The new agency should place considerable emphasis on targeting selected activities and investors, revamping the current investment promotion strategy by carrying out an investor perception study and developing a pro-active approach to investment promotion.
- One key element of the pro-active approach to investment promotion should be a regional head quarters (RHQ) programme to attract leading MNCs to set up bases for the African region. In this vein, Singapore's RHQ programme offers valuable insights on detailed incentive packages and institutional support.
- The current One Stop Shop should be incorporated into the new agency and provide high quality post-approval investor services, such as obtaining work permits and various infrastructure facilities.
- MEDIA, which currently undertakes investment as well as trade promotion and industrial estate management, should be transformed into a specialised trade promotion organisation, with its management and development of industrial estates hived off to the private sector.
- The approval process must be greatly simplified and streamlined immediately, reducing the number of stages in the approval process to a single stage, centring on one Foreign Investment Approval Committee. This committee should consist of high-level representatives from a maximum of six ministries, chaired by a senior Cabinet minister, and should meet twice a month. A target 2 to 4 weeks should be set for the completion of the foreign investment approval process under normal circumstances. Difficult cases could be referred to a sub-group of the Foreign Investment Approval Committee which would draw on expertise in all areas of government. An swift appeals procedure should also be established for cases of investors which have been rejected. This should be followed by the abolition of all foreign investment approval processes and a concentration on investment promotion.

8.8 EPZ Infrastructure

Mauritius has an efficient and well developed EPZ infrastructure by African standards. It was probably the first African country to have launched an EPZ programme and, historically, both the public and private sectors have participated in industrial estate provision. In recent years, there have been improvements in EPZ infrastructure, particularly in the port and telecommunications areas. The country has a large number of telephone mainlines in operation and international call charges are low by international standards. However, investments in the EPZ infrastructure have lagged behind demand

and there are some problems with utilities, industrial estates and other facilities. These include: relatively high costs by international standards of raw industrial land and rental charges for factory space in EPZs; fluctuations in electricity supply and high electricity charges; high water charges and high rates for telephone installation in EPZs compared to some Asian competitors; and infrequent sailings/ high sea and air freight costs. Several suggestions can be made to improve the country's infrastructure:

- Undertake a feasibility study for establishing a small, national shipping line. In addition, liberalise the entry of low cost air cargo operators to compete with Air Mauritius and expand the cargo capability of Air Mauritius.
- Undertake an assessment of rents in public and private industrial estates and link increases in rents to changes in the retail price index.
- Liberalise the entry of overseas telephone providers.
- Develop a low interest loan scheme for enterprises to purchase voltage stabilisers and power factor correctors. Establish a consultancy unit within CEB to install such equipment and help consultancy firms to undertake energy audits at competitive rates.