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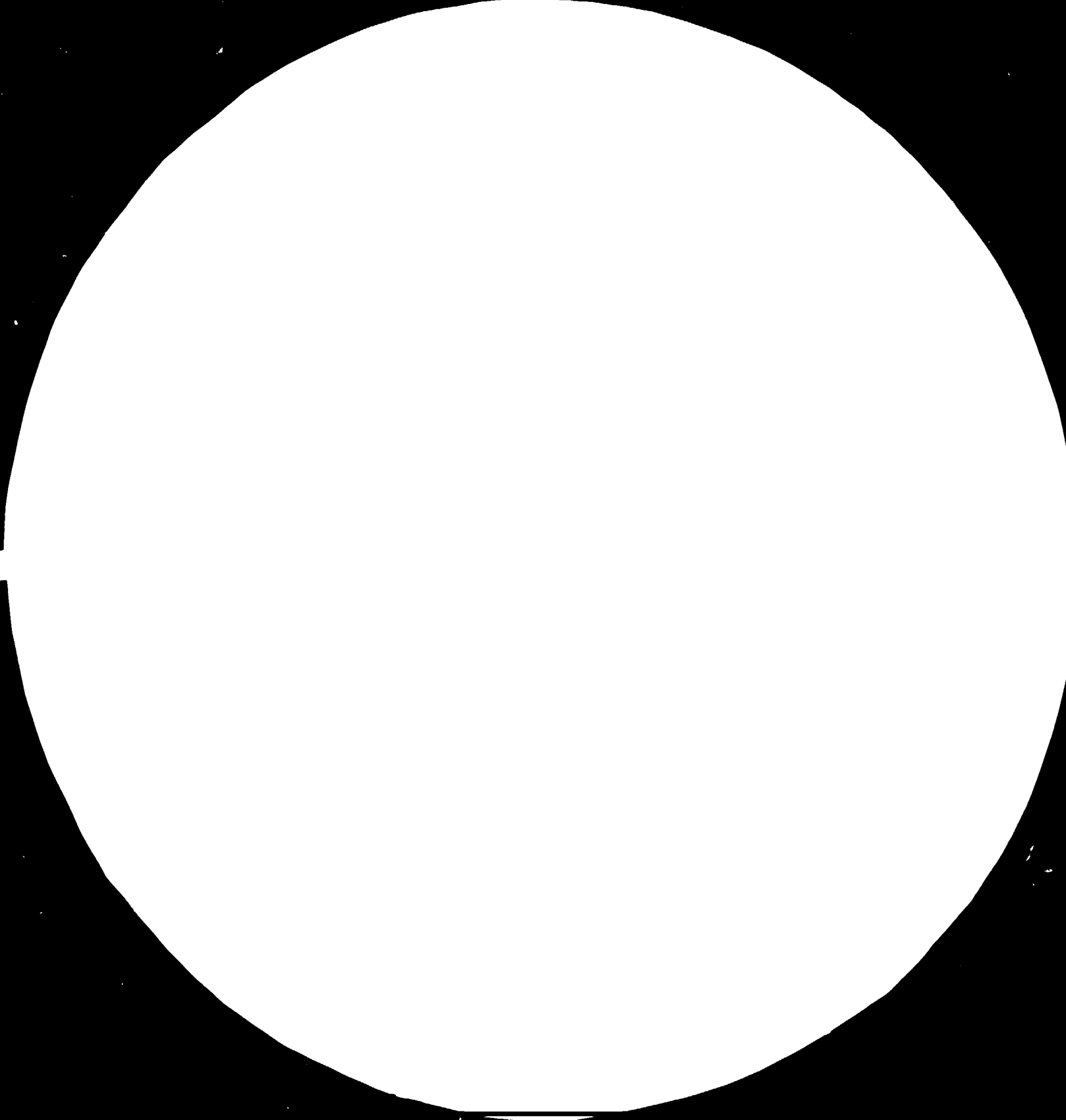
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PROVINCIAL TITLE PAGE:

TERMINAL REPORT

UNIDO's PROJECT: DP/MAH/79/008

Mauritius. "INDUSTRIAL MANAGEMENT"

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in Port Louis, April 5, 1983

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Annexe 1, "Technical Report"

CHAPTER 1

OBJECTIVES AND LOGIC OF THE PROJECT

MISSION

1. The project was considered as one of the principal national objectives of the Government of Mauritius which was to build up the industrial sector - specially the export based - as the most promising provider of jobs for the increasing numbers of young people who are completing their education and entering the job market.

LEGAL TERMS OF REFERENCE

2. The project designated as DP/MAR79/008, was prepared by the Government of Mauritius and signed by the concerned parties on December 31, 1979. The Ministry of Commerce and Industry was designated as the Implementing Agency and UNIDO's Factory Establishment and Management Section as the Executing Agency.

PROJECT'S ENVIRONMENT

3. The authors of the project document emphasized that the environment in which the project proposed to operate was very complex. They had cognizance of the multitude of contradictory points of views concerning the nature of the industrial problems afflicting Mauritius and were aware that no basic research had been done on the subject.

ALLOCATION OF RESOURCES

4. The budget consisted of UNDP contributions of US\$ 196,000. The Government of Mauritius contributions were defined as "in kind". Within this envelope, 24 man-months were provided for an Advisor on Industrial Management, the author of this Terminal Report. This assignment was extended by additional 10 months. 6 man-months were provided for an Advisor on Management of Spinning and Weaving. A Counterpart was to be provided by the Ministry of Commerce and Industry for the duration of the project.

SUMMARY OF OBJECTIVES

5. The project document called for extensive, in-depth investigations of various allegations concerning the industrial shortcomings and the development of a rapid, pragmatic action program involving essentially management training and in-plant consultancy.

CHAPTER 2

SUMMARY OF IMPLEMENTATION

STARTING AND CLOSING DATES OF FIELD WORK

6. This Advisor arrived in Mauritius on July 31, 1980, and will terminate his assignment on April 6, 1983. Due to his accrued leave entitlements, he was absent between June 1, 1982 and September 10, 1982. Mr. Mohamed I. Shabayek, Advisor on Management of Spinning and Weaving, arrived in Mauritius on August 8, 1980, and departed on January 3, 1981.

COUNTERPART

7. Mr. J. Pochun, Economist from the Ministry of Commerce and Industry was appointed as the Counterpart. He departed from Mauritius on August 3, 1980 and returned during the last week of October. Since this departure coincided with the arrival of both Advisors, the Ministry nominated a temporary Counterpart, Mr. V. Lutchmeenaraidoo. This Counterpart was available for one month only and was not familiar with the project.

8. Mr. Pochun was never fully released from his other duties at the Ministry and was out of the country on three other official missions not related to the project. His participation in project activities was sporadic up to February 1982; from then on, he was unavailable. The Counterpart professional knowledge proved to be rather weak and he had only a very limited exposure to industrial problems.

9. Mr. Shabayek released himself from the responsibility of training this Counterpart. This Advisor was regretfully forced to take the same position.

CONFUSION OVER PROJECT'S TERMS OF REFERENCE

10. A meeting with the representatives from the industrial sector was held for this Advisor's benefit on August 1, 1980. This meeting confirmed the differences of opinions, signaled by the project document among the various management factions present which rejected the Advisor's proposal for a few concerting sessions before the start-up of the field work.

11. During the first three weeks both Advisors visited several factories, chaperoned by a representative from the Mauritius Export Processing Zone Association (the MEPZA). The visited industrialists had no idea what the project was supposed to be all about and in the prevailing opinion, both Advisors were Experts on Supervisory Training attached by the United Nations to the Mauritius Export Processing Zone Association.

12. This Advisor requested the Ministry to set up another meeting which, held on September 2, 1980, failed to convince the protagonists, of what were the terms of reference of the project. The Advisor announced that he was preparing an Interim Report to clear up the situation. In the meantime, the Ministry agreed that further liaison with the industrialists would have to be provided by the Mauritius Employer Federation - Mauritius Institute of Management.

INTERIM REPORT

13. The Interim Report highlighted the following situation: the industrial problems were ill-defined and self-inflicted by inexperienced top management. The "middle management issue" was non-existent in the majority of the companies due to the very modest size of the establishments. The availability of suitable Mauritians for intermediate-level factory jobs was very much exaggerated. The allegedly deplorable behavior of the local labor force stemmed from mismanagement of human resources. The institutional support was bureaucratized and uncoordinated. The Report presented a series of recommendations. No comments were received.

FIRST TRIPARTITE REVIEW

14. The project's Progress Report was reviewed on February 13, 1981. The Report emphasized that the logic of the project was based on hearsay and the undetected problems were replaced by a few non significant peripheral issues. The Report made clear that the project's time-span and allocated resources were insufficient to cope with the expectations. The participants of the Review agreed that in order to create the biggest impact from this one-man assignment, the project should concentrate on pragmatic activities such as training workshops, in-plant consultancy and operational audits.

SECOND TRIPARTITE REVIEW

15. The second project's Progress Report was reviewed on November 3, 1981. The report emphasized once more the genesis and the nature of industrial shortfalls, this time quantifying the findings: 31 per cent of the visited companies were afflicted by inept top management. The UNIDO's Senior Industrial Field Advisor, seconded by the UNDP's Resident Representative, proposed to extend the project by another year and to allocate to it at least one "Associate Expert". The representatives from the Ministry of Commerce and Industry and the Ministry for Economic Planning thought this to be an excellent idea.

PROJECT EXTENSION

16. Having no further news about the proposed extension of the project, the Advisor started winding-up his activities in April and May of 1982. On May 21, he submitted to UNIDO a proposal for the Terminal Report and was ready to leave the country on July 17, 1982.

17. On July 15, 1982, the local UNDP Office received formal request from the new Government to extend the project by another ten months.

MINISTER'S VISIT TO UNIDO'S HEADQUARTERS

18. In August of 1982, the new Minister of Commerce and Industry received an invitation to visit UNIDO's Headquarters. This visit took place on November 29, 1982. According to the minutes of the meeting, it was agreed that the present project should not only be continued but expanded into other related areas, namely into the field of industrial engineering. Special mention was made of time and motion study, industrial hygiene and safety programs, and particularly those functions which constitute industrial engineering and factory operations management. These were recognized as the core around which the whole industrial development is built.

19. A wish by the Minister was expressed that a group of well qualified industrial engineers and industrial economists and possibly other specialists should be formed. This group should be charged with the responsibility to render advice to various industrial enterprises and Government offices in regard to installation of new management systems.

20. It has been agreed that the composition of this group should be established by experienced professionals during a special diagnostic mission to Mauritius.

CHAPTER 3

ACHIEVEMENT OF OBJECTIVES - MANAGEMENT OF SPINNING AND WEAVING

21. Immediate objective called for upgrading of the middle management effectiveness within the weaving and spinning enterprises of the EPZ.

22. This assignment was under a perpetual question mark and the reasons why were sufficiently clear in the project document and subsequent events. In 1979, while the project was taking shape, a separate ad-hoc committee concluded that the University of Mauritius should start a faculty in Textile Technology. Parallel, while the project went into the implementation phase, the European Economic Community, answering a separate Government request, was proposing experts for in-plant consultancy in the EPZ textile sector.

23. Mr. Shabayek had to spend a lot of time conducting a basic industrial census of the target sector before going into the remedial phase. What resulted was a sharp dichotomy between the objective as defined and the realities as found in the field. Based on his findings, Mr. Shabayek had to concentrate on the problem of quality control which went undetected during the project's formulation phase.

24. To begin with, the whole textile sector consisted then of one closed-down company, two companies on the brink of bankruptcy, one still installing its equipment and four fully operational firms. The basic equipment park in these enterprises consisted of 182 looms and 25,320 cotton, synthetic and woollen spindles, hardly enough to make one economic size factory. These enterprises were employing then 2,112 workers, 42 local management trainees and 82 expatriate technicians and managers: one expatriate per 25 workers. In other words, the entire line-and-staff management in those enterprises was in foreign hands. Literal interpretation of the mission objective would have resulted in an unusual situation of one United Nations expert showing 82 other foreign experts how to manage their companies.

25. On November 3, 1980, Mr. Shabayek informed in writing the Chairman of MEPZA that consulting services were available to the spinning and weaving companies of the Export Processing Zone. As no reply was received and no Counterpart available, Mr. Shabayek started door-to-door canvassing and, ultimately, four companies responded favorably to his offers of free assistance.

26. Early in December 1980, it became obvious that the workload required a minimum six months extension of this assignment. The requirement was approved by the UNDP's Resident Representative and UNIDO's Senior Industrial Field Advisor. At this point, Mr. Shabayek was informed by several confused industrialists that his competence was investigated behind his back and there were rumors that other experts might arrive shortly. Mr. Shabayek, M.Sc. Tech. (Textiles) University of Manchester, refused to continue under these conditions.

27. Mr. Shabayek documented his findings and efforts in a separate Terminal Report. This Report could be summed-up as follows:

(i) All problems afflicting this sector were concentrated on the very top and resulted, more than anything else, from a peculiar concept of enterprise based on unproductive equipment and particularly inept expatriate management.

(ii) The expatriates, the de facto management and target of the assignment, were resenting outside intervention, considering it as a potential danger to their sinecures.

(iii) With two notable exceptions, the plant equipment consisted of run-down machinery over-invoiced at several times the value of new one then available on the market.

(iv) All visited companies were above all deficient in quality control and lacked either the necessary equipment, or the competence, or both, to carry the in-process tests required to insure a constant quality of the finished product.

(v) The Mauritius Standard Bureau was unable to test the imported raw materials, subject to many invoicing abuses, since it lacked the basic laboratory which would have costed about US\$ 150,000 at 1980 prices.

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CHAPTER 4

ACHIEVEMENT OF OBJECTIVES - INDUSTRIAL MANAGEMENT

ASSISTANCE TO MANAGEMENT

28. The immediate objective called for initiation of a program for diagnosing and solving operational management problems at enterprise and plant level.

29. At the last count, this Advisor had to his credit 60 assignments.

(i) 19 general surveys served as an important facts finding activity consisting in each case of visits to the factories, management interviews and analysis of relevant records about the company concerned.

(ii) 18 operational audits were used as a vehicle to assess the performance of concerned enterprises. Each case required an in-depth analysis of financial records, management practices and operational procedures. The audits were commissioned by either the Ministry of Commerce and Industry or the local banks. On the very few occasions when the Banks or the Ministry assigned observers to the audits, the observers were discouraged after a few days of "digging" and were quitting the assignments.

(iii) 23 assistance projects covered the whole gamut of industrial issues. The requesting companies were applying for assistance through the Mauritius Institute of Management. Two conditions stipulated invariably by the requesting enterprises must be highlighted: they were refusing that the Advisor be accompanied by "observers" from the Ministry and were adamant about deontological confidentiality. Most of all, they did not want to be considered as "case study guinea pigs" for public discussions, as it was expected by the authors of the project document.

30. This was the first time that any mission actually went in the field to solve some of the problems at the plant level. The most important contribution of this activity may reside in the fact that some industrialists became aware of the state of art of the local industry and a few had first-hand opportunity to judge, by results obtained, the importance of professional factory management.

MANAGEMENT TRAINING

31. The immediate objective called for identification of possibilities to improve the availability and effectiveness of management skills for existing and prospecting future enterprises, with the emphasis on the middle management in the EPZ. The management training activities were conducted with the logistical support of the Mauritius Institute of Management, an organization created for this purpose by an ILO mission in 1974.

32. At the last count this Advisor had to his credit five seminars and nine workshops. The seminars attended by 254 managers covered the whole range of industrial issues and were over-subscribed. The workshops attended so far by 236 participants required 647 instructions hours. Both activities received more-than-adequate newspaper and television coverage and at the end of each workshop, the successful graduates were presented with Certificates.

33. The Advisor was following the on-the-job performance of his workshop graduates and noted that most of them achieved some measurable improvements in their companies. Examples:

34. In one company, the savings generated through improvements in productivity exceed Rs1,150,000. In another one, the savings resulting from cost reduction programs amount to Rs578,000. etc... In some notable instances, the workshop graduates started conducting their own courses inside their establishments. For instance: Mr. D. Bandhoo from Rogers & Co. Ltd, runs appreciation courses on cost reductions for over 150 managers, with compulsory attendance. Mr. S. Valayden from Lonrho Co. Ltd, gives courses on supervisory role to representatives from sugar estates, etc...

UNREALISTIC COMMITMENTS

35. The project document proposed, inter alia, the creation of a panel of qualified consultants. Since the project did not provide the necessary financial and manpower resources to recruit, pay, direct, train and administer potential candidates, the scheme was deleted by the second Tirpartite Review as unpractical.

36. Notwithstanding the suggestions offered by the project document, the Advisor found unpractical any commitment to the Industrial Trade Training Center and the University of Mauritius. The curriculum of the former was of no interest to the project's terms of reference and the University of Mauritius discontinued the relevant business Management Courses by the time the Advisor arrived in Mauritius.

37. The idea of an exclusive training program for the Mauritius Export Processing Zone Association was also unrealistic since this organization failed to organize a single workshop and its members preferred, whatever the reason, the anonymity of seminars and workshops conducted under the auspices of the Mauritius Employers Federation - Mauritius Institute of Management.

38. The project document proposed to define the requirements for managerial skills and training time-tables in a three to six years perspective. The Advisor regrets that in the absence of reliable data and forecasting there can be no question of extrapolating such requirements. Two examples:

(i) there are five contradictory employment figures for the manufacturing sector for the calendar year 1980, depending on the source of information and ranging from a low of 31,102 jobs to a high of 52,702 jobs.

(ii) the two consecutive Five Year Plans for Social and Economic Development projected 48,000 jobs for the EPZ sector for 1980. An estimate of the World Bank situated the most likely target at 35,500 jobs for the same year. The actual employment figures were 21,344.

ASSESSMENT OF MANAGEMENT SHORTCOMINGS

39. The Government appears to have been very much preoccupied about various allegations and theories concerning the slow-down of the Export Processing Zone growth. An in-depth analysis of the problems is contained in the Technical Report.

PROVISIONAL TITLE PAGE:

TERMINAL REPORT

UNIDO's PROJECT: DP/MAR79/008

"INDUSTRIAL MANAGEMENT"

ANNEXE 1 TECHNICAL REPORT

CHAPTER 1

HISTORICAL BACKGROUND

GENESIS OF LOCAL MANAGEMENT

1. The earliest Mauritian enterprise was the latifundium-type sugar plantation where management was just as much a function of social status as that economic necessity. In such environment the terms "owner" and "manager" were forcibly synonymous giving birth to the concept of "charismatic authority" that is, an undisputed right over one's property, including the slave labor. Even though the plantations had some token rules and routines of administration, the concept of management, per se, was immature since it did not recognize the need for an organization based on the indispensable delegation of authority. The plantation overseer was the only link between the charismatic source of power and the labor whose only rights were those emanating from paternalistic obligations assumed by the owner.

2. This "immature management" could not develop into "management for growth" since it lacked the two important trigger mechanisms of modern economy that could have stimulated its evolution. To begin with, the owners-managers were never in direct competition with each other and had no reasons to improve their operations for the sake of a direct, competitive advantage. Moreover, even though they mastered the technique of investing capital in fixed assets for upstream sugar treatment processes, in their eyes there was no essential difference between growing the sugar cane in a field and, say, distilling it into rum in a plant.

GENESIS OF LOCAL INDUSTRY

3. The great distances in the days of the sailing ship forced them also to establish small shipyards, iron foundries and keg and sack making in direct support of sugar cane processing and transport of finished goods. The distances favored also the development of a "cottage industry" producing the basic necessities of life. The nineteenth century introduced a secondary industry and the twentieth century added a few more sophisticated product lines. All these were small-scale operations catering to the local market and keeping up a leisurely pace with the growth of local economy.

PROFESSOR JAMES MEADE MISSION

4. In the decade between 1950 and 1960, this leisurely growth was perturbed by a population explosion which increased by 180 thousands from 465,000 in 1950 to 645,000 in 1960 thus creating an instant specter of huge, future unemployment. In that year, an economic mission lead by Professor James Meade conducted the very first survey of the economic and social structure of Mauritius. The mission documented its findings in a pessimistic report and listed the major handicaps to the future industrial development: shortages of investment capital, absence of managerial skills, absence of raw materials, smallness of the local market and the isolation of the Island both from the sources of raw materials and potential foreign markets.

THE DEVELOPMENT CERTIFICATE SCHEME

4. Following the "Meade Report", the Government declared a policy of encouragement to new industries. In 1964, the Development Bank of Mauritius was established to provide long-term institutional financing and the Development Certificate Scheme was officially introduced. The scheme provided for several incentives, among them:

- (i) Corporate Income Tax holiday for periods commensurate with depreciation scheduling.
- (ii) Exemption from payment of income taxes on dividends for a period of five years.
- (iii) Free repatriation of profits for foreign investors.
- (iv) Long-term loans at favorable interest from the Development Bank of Mauritius.
- (v) Exemption from import duties on equipment and materials not available locally.
- (vi) Import quota protections of up to 80 per cent of the total market demand.

5. The scheme, based exclusively on the so-called "supply-side factor", produced mediocre results. With inflation outpacing the manufacturing value added, the sectorial output went into stagnation and a new incentive dimension was needed urgently.

THE EXPORT PROCESSING ZONE SCHEME

6. In the 1960', the Government took a step in the right direction and commissioned an industrial opportunity study. Based on recommendations of the study, the Government created the Export Processing Zone Scheme which expanded the incentives offered previously while adding the all-important "demand-side factor".

7. The demand-side factor did not result from any particular promotional effort but from the ratification of the Yaounde Convention granting the 'made in Mauritius' products an instant duty-free access to the European Community markets. Mauritius, in a much more economically advanced state than the remaining African, Carribean and Pacific signatories of the Convention, attracted immediately the Asian garment makers with already established commercial contacts in the West European markets. These first foreign promoters were reaching the limits of the EEC quotas assigned to their own countries at a time when the EEC economy was particularly buoyant and expanding. To these promoters, Mauritius represented a new launching platform from which it was legally possible to expand their exports to this growing market.

8. The supply-side factor of the Scheme elaborated and expanded some of the privileges already granted to the Domestic Certificate Holders:

- (i) Corporate Income Tax holiday for up to 20 years.
- (ii) Full exemption from payment of import duties on all capital goods, raw materials and semi-finished goods.
- (iii) Favorable labor legislation to assist the enterprises to meet their export objectives.
- (iv) Priority in the allocation of investment capital, leases at preferential rates and capital investment loans of up to 60 per cent of total capital investments.
- (v) Guarantee against nationalization.
- (vi) Government assistance in trade missions, trade fairs, collective advertising and negotiations for favorable freight rates.

CHAPTER 2

ASSESSMENT OF THE DOMESTIC SCHEME

COST-BENEFIT AND SECTORIAL EVALUATION

9. Despite the passage of 19 years since the first introduction of the scheme, there has been no evaluation of its costs and benefits to Mauritian economy. Furthermore, since there is no timely, reliable and coherent information structure, even a sectorial evaluation of the scheme must be reduced to "impression surveys".

ANALYSIS OF THE LOCAL MARKET

10. The local market with less than one million consumers lacks both the necessary affluence and homogeneity to permit economic-scale industrial operations. The main characteristics of this market are the following:

- (i) low purchasing power potential,
- (ii) proliferation of organized behavioral systems,
- (iii) tradition of subsistence economy and archaic channel operations.

11. The purchasing power of the consumer is a fundamental element of demand and unless a person has money or the ability to acquire it, he cannot be considered a potential customer. This lack of essential affluence of the local market already restricted in size is evident from the following data:

- (i) according to the most recent Household Expenditure survey, an average income per household is approximately Rs2,212. per month, with half of these households having an income of less than Rs1,518.
- (ii) according to the World Bank estimates, 24 per cent of the total population subsists below the absolute poverty level,
- (iii) according to the Central Statistical Office, Mauritius has less than 40 thousand assessed taxpayers, about 7 per cent of active age population.

12. The absence of an 'inverted' income distribution pyramid is further aggravated by the existence of important ethnic and religious population segments, each one with its own social, cultural, dietary and apparel habits. The consumers in these segments form specific organized behavioral systems which cut vertically the income strata and create a multitude of target markets.

13. Mauritius has a deeply ingrained tradition of 'backyard producers' supplying the predominant but less affluent customer with low-cost commodities. At this level, the price advantage, the only locally significant component of the product mix results from a combination of low overheads and the absence of distribution costs since the backyard producers sell directly to the customer. This type of marketing corresponds perfectly to the basic needs of the majority of the population and does not have to depend on modern marketing techniques, sophisticated physical distribution systems and efficient channel operations which would, ultimately and needlessly, add to the cost of the product.

14. On the other hand, the commodities that cannot be supplied by the backyard producers, are imported and marketed through myriads of non-specialized small retail shops carrying unbelievable assortments of inventories. This intensive distribution which dispenses with the necessity of channel functions and channel captains, reflects again the buying habits of the local consumer.

15. Such market responds poorly to tests of income elasticity of demand, being essentially a market of low-quality, low-priced basic consumer goods. For other goods, the demand is very low up to a fairly high income level in which the population in the strata is not large enough to provoke a significant reaction to price elasticity. The experiments conducted by this Advisor within the framework of his workshops, were indicating that even though the demand curves within specific income groups were fairly elastic, the increments of demand were reaching too fast the market segment saturation point. This is why the profit models based on price-demand factor were giving values situated invariably outside the acceptable ranges of the model, i.e.: the cost of production exceeding the selling price.

ANALYSIS OF OWNERSHIP

16. The enterprises operating with the Domestic Certificate almost entirely Mauritian-owned and concentrated in the hands of powerful groups and families with parallel interests in the sugar, real estate and trading businesses. The definition of specific ownership in these enterprises is complicated by hidden interlinkages of interests leading to informal holding companies, mini-conglomerates and tiny, privately-owned 'industrial estates'.

17. Because of their predominantly agricultural and trading background, the local entrepreneurs lack the necessary sophistication, exposure and expertise required in industrial investments. They are used to investing in do-it-yourself projects and gambling in ventures that cannot pass the acid test of even the most superficial scrutiny:

According to the recent Ministry of Commerce and Industry Statistical Section figures, those entrepreneurs submitted 416 applications for Domestic Certificates since 1976. Out of this total, only 111 were approved by the Ministry: a 73 per cent rejection rate.

ANALYSIS OF PERFORMANCE

18. According to the same source of information, the progress measured in numbers of industries created with Development Certificates was constant and reached the figure of 136 enterprises by the end of 1982. But, at the same time, the total employment peaked-off at 6,587 jobs in 1980, and declined to 5,949 jobs in 1982. This is why the average employment per enterprise dropped during the same period from 60 to 44 jobs:

Table 1: EMPLOYMENT IN THE DC ENTERPRISES

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Total employment	6,176	6,587	6,436	5,949
Number of enterprises	105	110	129	136
Employment per enterprise	59	60	50	44

Source: Ministry of Commerce and Industry

It is interesting to note that the World Bank's Impression Survey of February 1978, situated the average number of jobs per enterprise in this sector at 108 persons.

19. As a matter of fact, the stratification of these enterprises by number of jobs, conducted by this Advisor for the year of 1981, indicated that a full 53 per cent of them employed less than the prescribed minimum of 25 people:

Table 2: STRATIFICATION OF DC ENTERPRISES BY EMPLOYMENT

<u>employment range</u>	<u>number of companies</u>	<u>cumulative percentage</u>
2-10	31	24%
11-25	37	53%
26-50	25	73%
51-100	18	86%
101-200	9	93%
201-300	6	96%
301-328	3	100%

Source: Ministry of Commerce and Industry

20. In spite of almost two decades of incentives, the Scheme remained only a marginal creator of employments, dragging behind all other sectors in creative dynamism and accounting for little more than 3 per cent of total employment:

Table 3: EMPLOYMENT IN LARGER ESTABLISHMENTS

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Total employment	199,629	196,971	193,454	192,537
Employment in DC	6,176	6,587	6,426	5,949
DC as per cent of total	3.1%	3.3%	3.4%	3.0%

Sources: Ministry of Commerce and Industry,
Central Statistical Office

21. This modest contribution is out of step with the sectorial distribution of commercial banks' credits to the private sector. Here, the DC enterprises benefit from approximately 12 per cent of all short-term credit disbursements. The disparity between the capacity to create jobs and the dependence on short-term credit is particularly evident through comparison of the DC sector with the EPZ sector:

Table 4: DEPENDENCE ON SHORT-TERM CREDITS

	<u>DC SECTOR</u>	<u>EPZ SECTOR</u>
Credit disbursements	Rs233,700,000	Rs456,700,000
Number of companies	136	112
Number of jobs	5,949	23,476
Disbursement per company	Rs 1,718,000	Rs 3,870,000
Disbursement per job	39,283	19,454

Source: Bank of Mauritius

This short-term credit is translated in financial statements as a current liability. Related to the number of employees, it becomes equivalent to about three years salary of an average worker. In the absence of other reliable indicators it can serve as an idea about a chronic lack of liquidity in an average DC enterprise which, by definition and by necessity, is invariably labor intensive.

CONCLUSIONS

22. The local market with all its endemic constraints is not a market for 'industrial megalomania'. The viable local industries, primarily in the agro, food and construction materials areas, have already been created and some of them are even doing well. If annual revenues can be an indication of success, 48 enterprises created with Development Certificates have annual sales exceeding one million Rupees. In this segment representing only 35 per cent of the sectorial total, averaged annual sales per company are the following:

Table 5: ANNUAL SALES OF TOP DC PERFORMERS

<u>Number of companies</u>	<u>Total annual sales in group</u>	<u>Average sales per company</u>
2	Rs239,651,000	Rs119,825,000
15	Rs299,784,000	Rs 19,985,000
31	Rs 94,918,000	Rs 3,062,000

Source: Ministry of Commerce and Industry

23. In the remaining 88 companies representing 65 per cent of the sectorial total, averaged annual sales drop sharply to less than Rs500,000 per enterprise. There are two reasons for this phenomenon:

- (i) the market for these low performers never existed in the first place, and
- (ii) conforming to the laws of diminishing returns, the Development Certificate Scheme ran out after two decades of viable investment opportunities.

24. What was left, was far more suitable for small-scale industrial operations. This is why the majority of the local promoters who blundered into this fringe investment area with hopes that the supply-side factor incentives could somehow 'make the difference', created unsound industrial ventures with the following common denominators:

1. absence of sufficient demand.
2. overtraded financial structures.
3. excessive investments in fixed assets.
4. diversion of funds into miscellaneous assets.
5. sluggish or questionable inventories.
6. slow or uncollectable receivables.

These enterprises are managing their survival because the local commercial banks are willing to finance the operating losses through the expedience of 'rolling-over' short-term credits.

25. The Advisor estimates that the employment in this sector will oscillate from now on between five and six thousand jobs, depending on the condition of local economy.

26. The Advisor stated emphatically on several occasions that the Domestic Certificate Scheme was basically unsound since it did not take under due consideration the all-important demand factor. His Summary Report prepared in May 1982, put forward a suggestion to the new Government for shelving of the Scheme and for concentrating instead on the Small-Scale Industrial Sector much less investment-prone and better adapted to the needs of the local economy.

27. The new Government took a serie of steps in this direction. The two most important consisted in creating within the Ministry itself a Small-Scale Industrial Development Unit and in instructing the Development Bank of Mauritius to open credit lines for this Sector. The advisory assistance is provided by experts from the Government of India.

CHAPTER 5

ASSESSMENT OF THE EXPORT SCHEME

ANALYSIS OF THE SCHEME

28. Analysis of the EPZ Sector is restricted by the same lacuna of information as that of the DC Sector. Furthermore, the available data vary greatly from one institution to another.

MARKETING TENDENCY

29. The local EPZ Sector has developed a potentially dangerous tendency of concentrating its exports on one target market, the EEC, where they benefit from preferential, duty-free access under the 1979 Lome II Convention, the successor of the earlier Yaounde and Lome I conventions. This access facility has been so far the only attraction to foreign investors with apparel background to set up their operational bases in Mauritius. This tendency is reflected in the table below:

Table 6: DIRECTION OF THE EPZ EXPORTS

<u>Direction</u>	<u>(Rs million)</u>				
	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
EEC countries	247.4	369.8	422.7	540.3	757.7
per cent of total	80%	85%	87%	87%	85%
Non EEC countries	61.2	63.6	61.8	79.8	136.7
per cent of total	20%	15%	13%	13%	15%
Total EPZ Export Value	308.6	433.4	484.5	620.1	894.4

Source: Bank of Mauritius

30. This tendency is further aggravated by the predominance of knitwear and garments as the main export commodity:

Table 7: VALUE OF EXPORTS BY COMMODITIES

<u>Commodity</u>	<u>(Rs million)</u>					
	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Garments and knitwear	204.8	273.2	312.7	396.1	566.4	802.1
Other products	19.7	28.4	36.9	69.1	113.0	120.9
Textile yarn and Fabrics	17.2	55.9	38.7	48.4	57.9	73.4
Processed diamonds	8.5	21.2	49.1	36.8	48.0	28.7
Electronic components	61.7	59.1	54.3	70.2	84.9	14.0
Totals	311.9	437.8	491.7	620.6	863.2	1039.1

Source: Central Statistical Office

EXPLANATION OF THE TENDENCY

31. In the North American markets, the Asian-made garments have an important competitive edge over the Mauritian-made garments because of a much higher productivity and much lower aggregated transportation costs. In the EEC markets, this lack of competitiveness of Mauritian products has been over-compensated by exemption from custom duties and by important import quota concessions.

32. This is why the Asian investors' marketing strategy is based on vectoring their Asian-made products toward the North American markets and their Mauritian-made products toward the EEC.

33. On the other hand, the Western European investors operating out of Mauritius supply their own distribution networks in their home countries and, having no other marketing experience, have no intentions to take risks in other geographical areas with which they are not familiar. The Mauritians with controlling interests in industrial ventures are more at ease in Europe, their traditional commercial partner.

34. The unwillingness of companies operating out of Mauritius to venture into non-EEC markets has been amply demonstrated by the embarrassing absence of follow-up of the results obtained by the Mauritius Employers Federation mission to the United States to 'sell Mauritius', in 1982.

ANALYSIS OF OWNERSHIP PATTERNS

35. According to the available information, the cumulated investment in the EPZ Sector up to June 1981, amounted to a total of 260.3 million Rupees. Out of this total, 92.9 millions (35.7 per cent) came from disbursements sanctioned by the Development Bank of Mauritius and 167.3 millions (64.3 per cent) from investors' own sources. Out of this subtotal, 71.6 million Rupees was put-up by the local promoters:

Table 8: INVESTMENTS IN THE EPZ SECTOR

<u>Origin of Capital</u>	<u>Total outlay in Rsl,000,000</u>	<u>Number of Investments</u>	<u>Average per investment in Rsl,000,000</u>
DBM sanctions	92.9	N/A	N/A
Local investors	71.6	114	0.63
Asian investors	58.3	21	2.73
European investors	33.4	46	0.72
Other investors	4.1	17	0.24

Sources: Advisor's Research

36. As far as the controlling interests are concerned, the distribution pattern is the following:

Mauritian controlled	61 companies
European controlled	27 companies
Asian controlled	21 companies
Other	8 companies

It should be noted however, that in spite of the predominance of the locally-controlled companies, the majority of export sales are generated by the Asian-controlled manufacturing centers. Unfortunately, there are no statistics available on the subject even though everybody is aware of it.

ANALYSIS OF THE DEVELOPMENT TRENDS

37. The sector considered officially as the most promising provider of jobs for the increasing number of unemployed, lost its initial dynamism. In 1978, there was a brutal drop of capital investment sanctions and in 1982, the employment in the sector went actually down for the first time:

Table 9: EVOLUTION OF THE EPZ SECTOR

<u>Year</u>	<u>Loan sanctions in Rsl,000,000</u>	<u>EPZ employment on December 31</u>	<u>EPZ employment as per cent of total</u>
1971	1.7	644	less than 1%
1972	3.2	2,588	1.7
1973	3.3	5,800	3.7
1974	18.6	8,969	5.5
1975	16.4	10,267	6.1
1976	18.5	17,412	9.6
1977	19.0	17,474	9.0
1978	2.2	18,323	9.3
1979	1.7	20,742	10.4
1980	9.1	21,344	10.8
1981	0.3	23,601	12.1
1982	N/A	23,476	12.1

Sources of information: Advisor's Research

There are two principal reasons for this phenomenon: the high rate of bankruptcies in the sector and the passivity of industrial promotion.

BANKRUPTCIES IN THE EPZ SECTOR

38. The sectorial statistics concerning the number of operating companies prior to 1977 are somewhat confused due to slipshot interpretations of the terms 'operating company' and 'bankruptcy'. The more reliable data compiled recently by the Statistical Section of the Ministry of Commerce and Industry indicate that starting with 85 operating companies in January 1977, the sector expanded to 118 operating companies by December 1982: a net increase of 33 enterprises in 6 years.

39. Actually, during that period, while 81 new companies were created, 48 other went bankrupt, hence an increase of 33 companies in net terms:

Table 10: NEW VENTURES AND BANKRUPCIES IN THE EPZ SECTOR

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>Total</u>
park on January 1	85	88	95	94	100	107	-
add new operations	7	12	16	10	18	18	31
subtract bankruptcies	4	15	7	4	11	7	48
park on December 31	88	85	94	100	107	118	-

Source of information: Ministry of Commerce and Industry.

40. In purely statistical terms, any new EPZ enterprise has no more than 41 per cent chance to survive.

THE COST OF BANKRUPCIES

41. There is a remarkable reluctance of the local banking community to reveal their losses resulting from bankruptcies in the EPZ Sector. Nevertheless, the Mauritius Employers Federation managed an informal inquiry into this matter on July 20, 1981, and came up with figures covering the period between January 1979 and June 1981. According to this inquiry, the only one of this kind available, it would appear that the EPZ losses for the period resulted in the following tallies:

Table 11: EPZ BANKRUPCIES IN FIGURES

<u>Year</u>	<u>Number of Bankruptcies</u>	<u>Jobs lost</u>	<u>Losses in Banking</u>	<u>Rsl000 Owners</u>	<u>Total</u>
1979	6	221	16,963	18,050	35,013
1980	4	161	33,991	22,650	56,641
*1981	9	1,794	36,358	13,237	49,595
	<u>19</u>	<u>2,226</u>	<u>87,312</u>	<u>53,937</u>	<u>141,249</u>

Source: Mauritius Employers Federation inquiry
*losses for the first semester of FY 1981

42. The banking losses of 87 million Rupees resulting from the bankruptcies of 19 companies represent, most probably, the 'uncovered' residual value of these enterprises, that is, the excess of their liabilities at 'book value' over their assets at 'book value'. In other words, Mauritian economy loses irrevocably about 4.6 million Rupees with each bankruptcy. Putting full trust in the reliability of the available data, one could assume that the EPZ Sector costs the local economy at least 35 million Rupees each year in bankruptcies.

43. The actual figures might be much higher since the bankruptcies in this sector result exclusively from the failures of overtrading. By definition, the overtrader feeds his company on ever greater lines of credit and when some development upsets the delicate financial structure of the enterprise and drives it to bankruptcy, the liabilities are invariably exceedingly high. These liabilities continue to expand by administrative costs and legal fees while the assets start shrinking in the court or under the auctioneer's hammer. As a rule, bankruptcy cases involving overtraders terminate as a total loss for all creditors and the owners.

INDUSTRIAL PROMOTION

44. The need for an aggressive promotion of the country as an industrial base for investors has been, paradoxically, the least understood and the most neglected aspect of the local industrialization effort. Little has been realized that Mauritius faces intensive competition from over 70 other developing countries vying with each other for investors' attention. After three years in the country, the Advisor is left with three impressions that might explain the origins of this neglect.

45. First, there is very little local appreciation of modern marketing techniques that any product, and why not Mauritius, could be defined, 'packaged' and successfully promoted with the right and sufficient input of know-how and 'seed money'. Second, the promotion of the locally-made products has been wrongly equated with promotion of the country as a place to make them. Last but not least, the initial unsolicited rush of the Asian garment makers for the Mauritian EEC quotas left the country with the impression that the investors will somehow keep on coming.

46. After twelve years of waiting, four basic questions remain unanswered:

- (i) What are the most likely industries to be attracted by Mauritius and most likely to prosper in the local environment?
- (ii) Where are those industries located and how would the mechanism of relocation work in practice?
- (iii) How to promote the choice of Mauritius, how to design and present a package of attractive incentives and how to stimulate the demand?
- (iv) How to persuade the potential investor to choose Mauritius as his new industrial base in preference to any other developing country?

SECTORIAL PERFORMANCE

47. The existing information structure does not permit any analytical investigation of sectorial performance. An example: in December 1982, the Advisor informed the Minister of Commerce and Industry that according to certain indications, the local garment sector, excluding knitwear, was in a very bad shape and that several companies in this sector may very well go into bankruptcy. The Minister requested a preliminary investigation which did not go very far: the Director of the Central Statistical Office refused to cooperate evoking the secrecy clause governing the access to his information and the Registrar General found that only two companies out of the sectorial total of 23 were filing annual Financial Statements. Incidentally, the Balance Sheets of both companies were indicating some unusual accounting practices such as, for instance, failure to carry forward cumulated losses, payments of dividends while failing to provide for depreciation, etc...

48. Subsequent investigation of Industrial Census returns at the Ministry of Commerce and Industry, permitted to 'match' only seven companies that filed their returns for two consecutive years. The sectorial performance of the garment industry must therefore be restricted to this sample and limited further to the analysis of operating costs and sales revenues. The analysis of the data shows that, in the sample, the consolidated sales increased by 11 per cent while the consolidated operating costs rose by 22 per cent, resulting in a cash loss of 3.7 million Rupees. The year before, the same companies generated a cash gain of 6.2 million Rupees:

Table 12: ANALYSIS OF CASH INFLOW AND OUTFLOW

	<u>1980</u>	<u>1981</u>	<u>Increase</u>
Inflow in Rsl,000	101,734	113,032	11%
Outflow in Rsl,000	<u>95,426</u>	<u>116,788</u>	22%
Balance in Rsl,000	6,208	(3,756)	

Source of information: Ministry of Commerce and Industry

PROSPECTS FOR IMMEDIATE FUTURE

49. The analysis of the project pipeline indicates that there are very limited prospects for the EPZ Sector to attain more than 25,000 jobs by the end of 1985. The problem is in the pipeline itself which is fed by the results of the promotional effort and this effort is inadequate. Furthermore, there are very strong indications that unless the present rate of bankruptcies is checked, the pipeline might have problems of compensating the resulting loss of employment.

50. The applications in the pipeline continue to turn over about every year and a half on the average. This corresponds in a way to the start-up lead time of an average project. In concrete terms, an application received in 1982, will only have a marginal impact on employment by 1984. However, the impact of individual applications will be substantially reduced by the fact that the average number of jobs per enterprise created went down in the past six years from more than 300 to less than 200.

51. The table below shows the basic characteristics of the growth indicators of the EPZ Sector for the period 1977 - 1982:

Table 13: EPZ GROWTH INDICATORS

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Applications received	26	24	27	34	43	55
Applications approved	21	12	22	28	28	37
Certificates issued	12	14	12	21	21	31
Actual Start-ups	7	12	16	10	18	18
Actual Net Growth (start-ups less wind-ups)	3	(3)	9	6	7	11

Source of information: Ministry of Commerce and Industry

52. During this six year period 1977 - 1982, there were 209 applications received by the Ministry. During the same period, there were:

148 Applications approved
111 Development Certificates issued
81 Actual start-ups, and
48 Bankrupcies.

REMARKS AND CONCLUSIONS

53. The reasons for the growth slow-down of the EPZ Sector could be boiled down to two, and two only, basic problems:

- (i) absence of a well-defined and effectively implemented marketing program that could locate the investors and 'sell' them the country as an attractive place for the commitment of their capital.
- (ii) absence of an appropriate institutional framework and the availability of sufficiently skilled staff to man this framework.

54. The official industrialization doctrine has been based on the encouragement of free enterprise, on providing the necessary climate to attract foreign investors and on insuring that the benefits resulting from industrial growth are shared equitably with the local consumer and the wage earner. However, this doctrine remained nothing but a policy statement because it lacked the means to become an operational reality.

55. In this Advisor's opinion, there have been several interlocking reasons for this divergence between desires and reality:

- (i) An investment promotion center has not been created because the initial gush of Asian garment-makers after Mauritian quotas was interpreted as the evidence of a permanent trend and the proof that industrialization can continue without a marketing effort.
- (ii) When in less than five years, the initial investment gush reduced itself to a mere trickle, no attempts were made to find and to correct the reasons why. Instead, the problem was side-tracked by various allegations without substance which were reflected in the project document.
- (iii) There has been a running controversy within the Government itself about the need for direct assistance to the industrialists to help them create technically, financially and economically healthy enterprises. The prevailing opinion has been that the investors benefiting from Government concessions should fend off for themselves. The appropriations for consulting and advisory activities have come exclusively from the UNDP funds and amounted so far to a mere sum of US\$344,000 to cover the services of three experts for insignificant six man-years. (One ILO mission and one UNIDO mission).

- (iv) There has been little awareness that a Government organization is the least efficient instrument of industrialization because the academic economists who staff the civil service are not performance-oriented, are not trained in industrial operations and are not equipped to speak authoritatively on business practices. This basic incomprehension of what the business world is all about, and the resulting failure to create an agency that operates independently of the regular government departments, was further aggravated by the fact that the Ministry of Commerce and Industry, the executing agency, has no formal organization, no terms of reference, no manning tables and no permanent staff.
- (v) There was no awareness either that a foreign businessman judges the host country by a series of criteria that are beyond the comprehension of an average civil servant. A businessman expects not only accurate and frank answers to his questions but, above all, a prompt service. He will not stand idle watching his venture and his investment bogged down in paper shuffling, byzantine communication channels and slipshot service. In this respect, Mauritius failed to realize the intensiveness of competition for foreign investment and the fact that in this tight 'buyer's market' it could not afford any negative judgement of its business performance.

56. This Advisor presented this situation and recommended specific action on four separate, documented instances.

On September 1980, in an Interim Report,
On March 1981, in a Report on the Organization of the Ministry,
On May 1982, in a Summary Report,
On October 1982, in a Memorandum on Industrialization.

57. It would appear now that the new Government has the intention of implementing the following recommendations:

- (i) Commission an Organizational Study of the Ministry of Commerce and Industry.
- (ii) Create manning tables and permanent staff functions at the Ministry.
- (iii) Create an autonomous Mauritius Industrial and Export Development Authority.
- (iv) Create a permanent group of qualified Industrial Engineers and Industrial Economists charged with the responsibility of rendering advice and assistance to the industry.
- (v) Design and install a computerized Management Information System responsible to monitor industrial activities.

58. The success of this ambitious, but long over-due, plan will depend of course on the availability of funds and on the determination of the Government to carry it out in spite of the anticipated strong resistance to changes.

CHAPTER 4

ASSESSMENT OF LOCAL MANAGEMENT

PROBLEM AS PERCEIVED

59. One of the project's outputs was, quote - to assess requirements for middle management skills, the degree to which incumbent Mauritians are capable of fulfilling the requirements and the effects of any shortcomings. Assess allegations that a shortage in this field has discouraged some firms from locating in Mauritius. Assess the effect of top management style on the job environment of the middle-management level - unquote.

PROBLEM OF PERCEPTION

60. From this Advisor's own experience, the industrial problems in the developing countries are badly perceived, misunderstood and underrated. They originate from the misconceptions about the effectiveness of the supply-side economic stimulus and the nature of industrial management. Mauritius is no exception to the rule.

61. The philosophy of the supply-side economy is based on the presumption that if business is given the tools, it will do the job. What is not understood is that this important presumption is valid only if the business itself reaches a certain degree of managerial know-how and the socio-economic environment in which the business operates attains a considerable degree of sophistication. If these conditions are not fulfilled, the 'formula' does not work.

62. Industrial management is, at the same time, the management of technology, the management of financial resources and the management of human resources, differing profoundly from all other forms of organized human endeavor.

63. The first difference lies in the manufacturing process itself which, however simple it may appear to the layman's eye, requires the ultimate in coordination of interacting machines, manpower and materials to produce, at a profit and on time, a usable and sellable end product. The mastery of this intricate process is what the industrial management is all about. The second difference lies in the fact that, unlike all other human activities, the industry trains its own managers. This training, peculiar in form and essence, is based above all on a unique heuristic acquisition of know-how through long years of practice in an efficient industrial environment.

ACQUISITION OF INDUSTRIAL MANAGERIAL KNOW-HOW

64. In the industrial nations, university graduates with the right type of scholastic background start their industrial careers as management trainees. After two or three years of intensive training,

those who 'survive' get their first positions of authority at the bottom of the hierarchy. After about fifteen to twenty years, a mere handful of them becomes factory managers through a lengthy process of selective elimination.

65. In addition, each industrial sector and each manufacturing corporation have their own specific styles and requirements in the management of their technologies. This is why, any relocation process of manufacturing facilities even within the industrial nations is invariably accompanied by the relocation of at least the key line-and-staff management to the new location. To put it bluntly, no corporation would be reckless enough to confide initially the management of its new plant to outsiders unfamiliar with the unique management style developed by the corporation. Again, the familiarization process of the 'locals' with specific management routines is counted in years. This is why the claim that the shortages in this field have discouraged some firms from locating in Mauritius is completely unfounded.

PROBLEM WITH UNEMPLOYED GRADUATES

66. Mauritius, like any other developing country is very reluctant to depend on foreign know-how and very impatient to develop its own managerial class. It would appear that the presence of some 200-odd expatriates in the EPZ Sector - about one expatriate for each 100 jobs created - continues to be a major local irritant and the reason for a peculiar policy based on an outright administrative harassment of the expatriate community and a requirement that each company hiring expatriates must also hire local counterparts as management trainees. This policy, while adding to the operating costs proved to be completely ineffective and the counterparts are rarely employed in their 'official' capacities.

67. In this Advisor's opinion, the main problem resides in the embarrassing presence of some thousand-odd unemployed university graduates with their own union, creating an illusion that while this number of Mauritians with higher education is out of work, the EPZ Sector continues employing foreign skills. The issue here concerns not so much the field of studies since less than four per cent of these graduates went for degrees in engineering, but in the quality of education received. According to the Graduate and Diplomat Register published by the Ministry for Employment, a full 83 per cent of these graduates went to foreign 'diploma mills' without finishing first their High Schools. Furthermore, the Register, points out that this tendency not only persists but has become more acute. The Register states also that most of these graduates are disqualified from the majority of Civil Service jobs. It is difficult to see how the local industrial establishment could absorb and rehabilitate these unqualified job seekers.

MANAGEMENT OF TECHNOLOGY

68. The lack of competence in the management of technology stems from a vicious circle typical to all developing countries: since Mauritius does not have an efficient industry, it cannot develop competent managers who, in turn, cannot develop an efficient industry, and so on. The problem is accentuated, like in all other similar cases, by the cost of outside competence.

69. The annual cost of a qualified expatriate manager could be estimated at a minimum Rs500,000. A sample survey of 52 local enterprises revealed that, at the most, no more than six of them with an average payroll of 4.5 million Rupees could afford such solution. In the remaining 46 companies with an average payroll of about 545 thousand Rupees, such solution would be completely out of question since no company could survive an almost 100 per cent increase of its payroll.

70. The fees of consulting services are also prohibitive. The cost of an average consulting project could be estimated at a minimum Rs300,000. Relating such costs to overheads, only 18 companies in the sample with average overheads of 9.5 million Rupees could afford such services. In the remaining 34 companies with overheads averaging 639 thousand Rupees, such services would be again out of the question.

71. The scarcity of investment capital in the predominantly labor-intensive enterprises renders impractical another management-oriented approach consisting of "turn-key installations" and "management contracts". The local solution of staffing the organizations with relatives, friends or expatriates hired at discount from other developing countries does not solve the issue beyond creating an illusion of management.

MANAGEMENT OF FINANCIAL RESOURCES

72. The management without apparent profits is probably one of the most striking and the least understood features of the local environment. Its prevalence is harmful to a healthy industrial growth since it makes redundant the requirement for efficient operations. It also renders delusive the favorite local theory according to which the managerial capacity of the environment could be enhanced, were professional assistance available. The heart of the matter is that such assistance is frequently avoided for fear of exposure.

73. The problem starts with the local predisposition toward overtrading on an extremely intensive scale. Overtrading could be defined as conducting excessive sales on limited invested capital. A common characteristic of overtrading situations is the apparent reluctance of owners to assume the full share of risk normally associated with ownership. That is, they are unwilling to put their personal resources into the venture as capital-stock investment but, instead, capitalize at a nominal amount and advance their money to the company

in the form of directors' loans, generally of a demand nature. The investors act thus in a dual capacity of both owners and creditors but with the emphasis on the credit side. This reluctance to assume outright financial responsibility means that the owners of undercapitalized firms have no confidence in their companies' ability to meet the demand of competitive existence while insisting that the lending institution bears the risks.

74. The financial structures of those companies are based on unsecured open line of credit negotiated with the local Commercial Banks. The Advisor had the impression that the credit facilities were negotiated not so much on the face value of the ventures and their potential return-on-investment, as on investors general standing with the local banking community. In the audited companies the unsecured lines of credit were subject to gross abuses and the credit ceilings were never respected. The amount of overdrafts with cumulated unpaid interests was exceeding in all cases the annual sales revenues up to eight times their value.

75. The recourse to long-term secured loans for a source of investment capital was on the contrary surprisingly less frequent than one would have expected. The Development Bank of Mauritius estimated that no more than 30 per cent of ventures were created with the advantages offered by that institution. In the audited cases, the structuring was based on over-valued fixed assets already in promoters' possession. Frequently, these assets were used as prima facie evidence of capital "in kind" in negotiating loans which, once obtained, were used for reimbursements of promoters for acquisition cost of their assets.

76. In each audited case, the management without apparent profits has been made possible by advantages cumulated in simultaneous operations of several ventures by one person acting on his own behalf as promoter-investor-owner-manager and creditor of his own company, accountable only to himself, living on 'perks' and taking at his own discretion 'pre-operational profits' in cash or in kind.

The responsibility for this situation lies with the archaic company laws dating back to 1913.

CONCEPTS OF MANAGEMENT

77. In their overwhelming majority, the local companies are controlled either by Mauritian or Asian interests, both having a somewhat stilted and anachronistic management concepts which are at the root of the 'authoritarian' and 'paternalistic' styles mentioned in the project document and signalled by other missions. The friction of these styles with the modern society-at-large is particularly evident in the conflict of concepts.

78. The first conflict concerns the basic issue of ownership and management. In a modern society, the ownership and the management became separated. Furthermore, with the introduction of stock companies, the ownership became diffused and the owners of capital can exercise only at second-hand the rights of ownership over the business, or rather the part of business that their capital has bought. In companies in which this indispensable separation and diffusion never took place, a modern management cannot take roots since the rights of property are confused with the competence to manage and the authority is not delegated.

79. The second conflict of a much more profound significance is that of authority. Modern society, through the Government it elected, is the ultimate source from which the authority flows to the ownership. But, even though the society releases the authority to the owners, it never relinquishes its ultimate right of control over it. Hence, the ownership is subjected to two simultaneous aspects of the same authority: that which is delegated to the owners through the rights of private property and that which is retained by society and exercised by its Government through regulations and limitations of power. This concept is not compatible with the charismatic perception of power which tends to view all social legislations not as a part of progress but as a legislative encroachment upon the hereditary privileges.

MANAGEMENT OF HUMAN RESOURCES

80. The absence of motivating organizations created, to use Herzberg expression, a non-hygienic job environment lacking the five determiners of job satisfaction within the enterprise: work content, achievement, recognition, responsibility and advancement. What already takes place is inevitable: as the new literate and socially conscious individual within the enterprise increases in industrial maturity, he tolerates less and less the dependance, subordination and passivity expected of him. This in turn increases his frustration level and the sense of personal failure leading to the inevitable conflicts within the enterprise. This already serious problem is further accentuated by the existence of over twenty insulated ethno-religious groups differing widely in their perceptions and acceptance of the modern industrial world. Many problems on the shop floor result simply from a basic inability of the two diametrically opposite worlds to meet each other halfway.

81. The opinions formed about the local human resources are controversial and based on subjective impressions polarized on two extremes of judgement: shiftless and lazy on the one pole, educated and motivated on the other. The truth, as always, is somewhere in between and generally speaking, the local human resources are qualitatively better than in many other developing nations. The criticism of the local labor concentrates mainly on four basic issues: absenteeism, high turn-over, low productivity and apathetic attitudes; all four issues universally recognized as a reflection on the top management competence to manage.

82. The local absenteeism is ill-defined, lacking the most rudimentary monitoring and the ignored causes are attributed to the worker alone. No thought is given that the absenteeism within the worker's control might be but his reaction to a management style. In companies with professional management, the absenteeism is indeed extremely low. On the other hand, whenever the management is particularly inept, the absenteeism gets completely out of hand and becomes a show of hostility toward the bad employer.

83. A survey of absenteeism patterns conducted by the Mauritius Employers Federation in 1981 revealed that in the EPZ, the average absence was at a low of 7.1 per cent for the male workers and 8.2 per cent for the female workers: the majority of absences (72.4 per cent) consisting of one day spells.

84. The turn-over, or the job mobility, is on the decline due to economic recession. The causes of this social phenomenon are different from those of the absenteeism. A Socio-Economic Survey conducted by the University of Mauritius in 1979, sheds some interesting light on the subject. Two conclusions could be drawn from the examination of this study:

(i) Up to 45 per cent of the interviewed workers would not have left their previous employment, were the intrinsic causes of the management style and poor remuneration resolved in the first place. What is more surprising that up to 56 per cent of the interviewed workers would leave their present job for the same reasons.

(ii) High on the list of extraneous causes were the physical fatigue resulting from malnutrition and the transportation problem also hiding the hours of work.

85. The undisputably apathetic behavior of the labor force is caused not only by un-hygienic job environment and inept management style, but also by an alarmingly wide-spread malnutrition. A Survey of the dietary intake of the EPZ workers conducted by Dr. G.H. Peerbaye for the Mauritius Institute of Management in 1979, was explicit. It is impossible to quote the survey in extenso. However, its two salient points are the following:

(i) 50.5 per cent of the workers are outright malnutrition cases with a calory intake not sufficient to sustain even their basic metabolic functions in an idle state.

(ii) a full 73 per cent of the workers have a protein intake below the minimum daily requirement.

86. It would seem difficult to expect from such workers an energetic behavior throughout the day and, still less, an adequate productivity. The survey has not been followed-up by any corrective action, i.e. in-plant workers feeding programs.

87. Local industry could easily double its capacity by going on shift work. However, the reasons for not doing so involve complex social, infrastructural and economic constraints:

- (i) Mauritians are traditionally "day time people" and after sunset all life moves indoors leaving the villages deserted.
- (ii) Even though "street crimes" are completely unknown, the predominantly female labor force is ill-at-ease staying outside their homes after sunset.
- (iii) Since the transport facilities are very much inadequate, starting of shift work would call automatically for a door-to-door workers' transport services.
- (iv) The solution of an all-male second shift could not work without highlighting the severe female wage discrimination within the enterprise.

88. Based on a study conducted by this Advisor on the remuneration patterns in a sample of 4176 workers in the EPZ companies, 84 per cent of the labor force of the Zone is composed of females and their average earning represents no more than 36 per cent of the average earnings of the male worker. The remuneration of the EPZ female workers compares very unfavorably with salary policies practiced by all other sectors:

Table 14: STATUTORY MINIMUM DAILY WAGE RATES

<u>Occupation</u>	(in Rupees) <u>1980 Rate</u>
Female EPZ worker	12.29
Unskilled Civil Service Laborer	26.10
Unskilled Field Laborer	28.63
Bus conductor	38.36

Source: Bi-Annual Digest of Statistics

89. Mauritian industrialists are aware that the local productivity is on decline. However, they have difficulties in pinpointing the causes and in the opinion of the majority, this phenomenon is due to the workers' attitude.

90. Like its predecessor, the absenteeism, local productivity is neither quantified nor monitored in scientific terms but perceived through subjective impressions. The problem once again, starts with the absence of definitions and ends with the absence of parameters. Basically, productivity expresses a ratio between output and input. Since the "standard" is a universally accepted industrial measure of output, the productivity could be expressed as the ratio between units of output at standard time to the units actually produced.

91. The concept of standard starts with proper understanding of the concept of the total time taken to manufacture a specific product in specific conditions. This total time is made up of a basic work content and an excess work content. The former is the irreducible minimum time required to manufacture a product with a selected process. The latter is the sum total of about 20 "inefficiency factors" added to the basic work content for different reasons.

92. Productivity in Mauritius is afflicted by all 20 factors and the problem is compounded by general absence of industrial engineering know-how: this Advisor met only two industrial engineers for over 250 manufacturing enterprises during his two years stay in Mauritius; both were foreign expatriates. High on the list of specific productivity constraints is the local predisposition toward the system of production quotas that actually "freeze" the productivity level at the inception phase of the system.

93. The quota system is based on a very simple reasoning: in the absence of industrial management know-how and in the presence of untrained and non-motivated workers, the only "logical" panacea to make things work is to impose an obligation to produce a quantity 'x' in time 'y'. The trouble is that, this expedient once introduced, becomes the permanent rule of the game and the slightest tampering with it produces labor's cries of foul play. This is the root of the misguided local theory pretending that an increase of productivity can be accomplished only by speeding up the work. This "theory" has a sort of Pavlovian effect on the labor: the management complain presses the panic button and the trade union reacts. This is why "goofing off" on the job remains prudently unchallenged and credited instead to the "tropical Island syndroms".

CHAPTER 5

CONCLUSIONS AND FUTURE PROSPECTS

PROBLEM WITH THE DATA

94. Most of the data concerning industrial activities was not readily available and this Advisor encountered many difficulties and embarrassing situations while collecting even the most common information. This is why he would like to state once more that due to this situation, his conclusions are based on the concertation of corroborative evidence, his own impression surveys and the preponderance of certain opinions expressed in consultations, documentations and interviews.

PROBLEM WITH INDUSTRIAL PROMOTION

95. The industrial promotion has been completely neglected unless one could equate an occasional participation in trade fairs and the presence of Mauritian Trade Attaches abroad with promotional effort. If this situation is not corrected rapidly and with vigor, the project pipeline might reduce itself to a trickle of applications.

PROBLEM WITH NEW VENTURES

96. The examination of Application files revealed the general absence of properly conducted feasibility studies. In all examined cases, what should have been a study, was reduced to financial guesses of investment and anticipated profits. This condition could be attributed to the promoters' desire to hide their intentions to overtrade. In general, the following shortcomings are in evidence:

- (i) The investments are misdirected, the market shares overestimated and the standard costs underestimated. No provisions are made for start-ups, the preoperational expenses and the cost of installation.
- (ii) The manufacturing processes are not properly segmented into manufacturing sequences nor related to downstream and upstream activities for value added.
- (iii) The choice of equipment is not properly analyzed for nor related to the length of production runs, line balancing and physical plant layout.
- (iv) No thought is given to ancillary requirements and materials flow through the process. Various stocks have the tendency to clutter any available space adding unnecessarily to the cost of material handling.

(v) Many manufacturing processes are transplanted, modeled on, or copied from installations existing somewhere else. These models were in turn designed decades ago to the concept of low technology and cheap labor with hardly any thought given to operational efficiency and productivity. Transferring such technology uncritically is like courting an inevitable disaster.

(vi) The over-riding factor taken under consideration by the Government in appraising the applications is the theoretical number of jobs that the venture might create.

PROBLEM WITH INDUSTRIAL OPERATIONS

97. The local plant capacity is under-utilized. A typical annual plant capacity is based on a maximum of 220 working days on one shift. Two shifts operations are rare and work around the clock is exceptional. If this condition is not corrected rapidly, the industries, especially the capital intensive ones, will shun the country since the capital investments must be depreciated in the shortest possible time. This Advisor estimates that the average straight-line industrial depreciation based on 20,000 operating hours takes about 11.4 years in Mauritius as compared with approximately 2.8 years in the Far East.

98. The productivity is very low, the most commonly encountered causes being:

(i) Important machine down-time resulting from poor maintenance.

(ii) Poor equipment choice, absence of line balancing, uneconomical production runs and intermittent flow of materials through the process.

(iii) Absence of experienced factory management with resulting lack of production and stock control systems, proper work scheduling techniques, time and motion studies and industrial labor relations.

(iv) Absence of the basic concept of a 'fair day's work for a fair day's pay'. The workers are apathetic, unmotivated and untrained. Left to their own devices, they develop their own methodology and pace of work.

PROBLEM WITH THE DEMAND-SIDE INCENTIVES

99. The country failed to integrate the availability of an advisory and consulting team in the list of supply-side incentives offered to the industry. The absence of such team hampers the development of the local managerial know-how. In addition, not enough thought has been given to the importance of industrial scholarships in reputable institutions abroad to further this aim.

PROBLEM WITH THE INSTITUTIONAL FRAMEWORK

100. The institutional framework is under-developed and compares unfavorably with other developing countries. The country lacks an autonomous Industrial Promotion Authority and an efficient Processing Center capable of responding rapidly to the problems of existing industries. The Company Laws are archaic and permit many financial abuses to the detriment of the local economy.

PROSPECTS FOR THE FUTURE

101. The new Government appears to be fully aware of all these shortcomings signaled by this Advisor on numerous occasions. It would also appear that some important projects are now under consideration. Among them:

- (i) Creation of a computerized Management Information System for monitoring of industrial performance and indicators.
- (ii) Creation of an autonomous authority for an aggressive industrial and export promotion.
- (iii) Creation of a team of qualified experts capable of assisting in the development of the industrial sector.
- (iv) Revision of the 1913 Companies' Act and accounting procedures.
- (v) Creation of a Small-Scale Industrial Development Unit.
- (vi) Reorganization of the Ministry with appropriate manning tables and staffing.

102. If these projects become approved, if there is no implementation gap, if the new functions get a competent staff, the industrialization of the country will get a new start - if not, the industrialization will continue to hibernate. This Advisor would recommend therefore that the Government develops a realistic time-cost schedule for these projects.



