

Document of
The World Bank

FOR OFFICIAL USE ONLY

LN. 2688-B7A

Report No. P-4280-BAR

REPORT AND RECOMMENDATION
OF THE
PRESIDENT OF THE
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
TO THE
EXECUTIVE DIRECTORS
ON A
PROPOSED LOAN
TO
BARBADOS
FOR A
SECOND EDUCATION AND TRAINING PROJECT

April 17, 1986

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

CURRENCY EQUIVALENTS

Currency Unit:

Until November 1973 : Eastern Caribbean Dollar (EC\$)
Since December 1973 : Barbados Dollar (BDS\$)

December 1971

US\$1.00 = EC\$1.975
EC\$1.95 = US\$0.506

Since July 1975

US\$1.00 = BDS\$2.00
BDS\$1.00 = US\$0.50

ABBREVIATIONS

BCC - Barbados Community College
BDS\$ - Barbados Dollar
BIMAP - Barbados Institute of Management and Productivity
CXC - Caribbean Examination Council
ETTC - Erdiston Teacher Training College
FTE - Full Time Equivalent
ICB - International Competitive Bidding
IOB - Inter-American Development Bank
LCB - Local Competitive Bidding
MOE - Ministry of Education and Culture
MOL - Ministry of Labor
MRSU - Manpower Research and Statistics Unit
NTB - National Training Board
PIU - Project Implementation Unit
SJPP - Samuel Jackman Prescod Polytechnic
SOE - Statement of Expenditure
TA - Technical Assistance
UNESCO/CP - United Nations Educational, Scientific and Cultural Organization/Cooperative Program
USAID - United States Agency for International Development
UWI - University of the West Indies

Government of Barbados

Fiscal Year

April 1 to March 31

SECOND EDUCATION AND TRAINING PROJECTLOAN AND PROJECT SUMMARY

Borrower : Government of Barbados

Beneficiaries: Ministry of Education and Culture
National Training Board/Ministry of Labor
Training Administration

Loan Amount : US\$10.0 million equivalent

Terms : 15 years, including 3 years of grace at the standard
variable interest rate.

Project Description : The proposed Project would cover 90 percent of the Government's five-year investment plan in the education and training sector and would be financed, on a parallel basis, by the Bank and the IDB. The objectives of the proposed Project are to:

(1) Improve the quality and cost effectiveness of primary and secondary education by: (a) amalgamating 21 small, uneconomic primary schools into 10 larger schools to obtain higher student-teacher ratios; (b) upgrading two existing secondary schools, equipping of a third existing secondary school and establishing one new secondary school with 1,200 student places; (c) providing technical assistance (44 staff months of fellowships and 36 staff months of specialist services) and training of about 1,500 teachers to improve (i) teaching of reading and writing in primary schools, (ii) textbook procurement and distribution systems, and (iii) testing and measurement practices; and (d) supporting a study to rationalize the teaching of special subjects in secondary schools;

(2) Improve the efficiency, quality, and industrial relevance of technical and vocational training by: (a) expanding the operations of the National Training Board through the construction, equipping and furnishing of three new skills training centers and upgrading one existing center; (b) upgrading and expanding of training facilities at the Samuel Jackman Prescod Polytechnic and the Barbados Community College and improving efficiency in the use of existing facilities; (c) improving the data processing capability of the Manpower Research and Statistics Unit; (d) upgrading the training programs of the Training Administration; and (e) providing technical assistance (39 staff months of specialist services and 188 staff months of fellowships) for the upgrading of course syllabi, improvements in administrative and financial management procedures, strengthening of the industrial advisory committees, industrial job analysis and follow up of on-the-job performance of graduates.

(3) Strengthen the institutional capacity to manage and plan the education and training system by financing: (a) technical assistance (26 staff months of specialist services and 26 staff months of fellowships) and training of 150 managers and 500 school teachers for improvement in (i) education planning and educational management, (ii) budgeting processes, (iii) school supervision practices, (iv) curriculum implementation strategies, and (v) educational materials production; (b) a study on the formulation of measures to achieve cost savings and greater efficiency in the utilization of education facilities and resources, as well as to address the issue of the additional recurrent costs that are expected to be generated under the proposed Project; and (c) the provision of adequate pedagogical and administrative facilities for the Ministry of Education and Culture.

Risks:

No significant risks are associated with the technical implementation of the proposed Project. There are, however, potential risks: (a) economies in primary and secondary education may not be achieved unless the Government maintains a freeze on the hiring of new teachers in the light of the decreasing population growth rate; and (b) difficulties may be encountered in meeting the incremental recurrent costs of the proposed Project. The latter risk would be minimized by the introduction of cost reduction measures recommended by the study to be financed under the proposed Project, the sharing of expensive facilities among schools and the adoption of measures to rationalize the selection of optional subjects taught in secondary schools.

Estimated Cost a/

<u>Project Component</u>	<u>Local</u>	<u>US\$ Million</u>	
		<u>Foreign</u>	<u>Total</u>
Primary Schools	4.29	3.57	7.86
Secondary Schools	3.51	3.31	6.82
S. J. P. Polytechnic	0.03	0.23	0.26
Barbados Community College	2.14	2.79	4.93
Institutional Strengthening of MOE	1.84	1.82	3.66
NTB Skills Training Centers	1.52	1.76	3.28
Manpower Research Unit	0.03	0.09	0.12
Training Administration	0.05	0.18	0.23
Project Implementation Unit	<u>1.82</u>	<u>0.12</u>	<u>1.94</u>
<u>Base Cost (March 1986 Prices)</u>	15.23	13.87	29.10
Physical Contingencies	0.84	0.71	1.55
Price Contingencies	<u>4.38</u>	<u>2.67</u>	<u>7.05</u>
<u>Total Project Cost</u>	<u>20.45</u>	<u>17.25</u>	<u>37.70</u>

a/ Net of Taxes and Duties estimated at US\$3.4 million.

Financing Plan

	US\$ Million		<u>Total</u>	<u>% of Total</u>
	<u>Local</u>	<u>Foreign</u>		
Government	10.70	0.00	10.70	28.4%
IDB	8.25	8.75	17.00	45.1%
IBRD	<u>1.50</u>	<u>8.50</u>	<u>10.00</u>	<u>26.5%</u>
Total	20.45	17.25	37.70	100.0%
% of Total	54.2%	45.8%	100.0%	

Disbursements:

	Bank Fiscal Year (US\$ Million)							
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Annual	0.15	0.81	2.06	2.79	2.24	1.21	0.53	0.21
Cummulative	0.15	0.96	3.02	5.81	8.05	9.26	9.79	10.00
% of Total	1.5%	9.6%	30.2%	58.1%	80.5%	92.6%	97.9%	100.0%

Rate of Return: Not applicable

Map: IBRD 19396

BARBADOS

SECOND EDUCATION AND TRAINING PROJECT

BASIC DATA

Land Area:	431 sq. km.
Population: <u>1/</u>	
Total Population (mid-1984)	252,000
Density	580 per sq. km.
Average Annual Growth (1974-84)	0.3%
Literacy	99%
GNP Per Capita (1984)	US\$4,340.00
Academic Year:	September to June
Enrollment (1984/85):	
Total Primary Enrollment	30,780
of which	
Male:	50.4%
Female:	49.6%
As Percentage of Age Group 5-11:	98%
Total Secondary Enrollment	28,162
of which	
Male:	50.4%
Female:	49.6%
As Percentage of Age Group 12-16:	95.0%
Government Recurrent Expenditures on Education:	
as Percentage of Government Expenditures	
(1984)	20%
as Percentage of GDP	8%

1/ Source: Barbados Statistical Service.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

REPORT AND RECOMMENDATION OF THE PRESIDENT
TO THE EXECUTIVE DIRECTORS ON A PROPOSED LOAN TO BARBADOS
FOR A SECOND EDUCATION AND TRAINING PROJECT

1. I submit the following report and recommendation on a proposed loan of US\$10 million equivalent to Barbados for a period of 15 years, including 3 years of grace, at the bank's standard variable interest rate, to help finance a Second Education and Training Project. In addition to the proposed Bank loan, the proposed Project would be cofinanced, on a parallel basis, by the Inter-American Development Bank (IDB) with a loan of US\$17.0 million. The proposed terms and conditions of the IDB loan have yet to be determined. If Ordinary Capital funds are used the IDB loan would be for a period of 25 years, including 4.5 years of grace, with a 9.5% variable interest rate applicable at the date of disbursement. However, the proposed Project could qualify for financing under the IDB's Intermediate Financing Facility, in which case a 5% interest subsidy would apply.

PART I - THE ECONOMY

2. An economic report (Barbados - Development Challenges, Report No. 5604-BAR, dated April 26, 1985) has been distributed to the Executive Directors. Annex I contains the basic country data.

Background and Recent Economic Performance

3. Barbados, a small island in the Caribbean with limited natural resources and a high population density (584 per km²), has made impressive gains in recent decades. During the 1960s and 1970s, growth averaged 5% in real terms per year, with an average of 7% in the 1960s and 3% in the 1970s, and low population growth permitted per capita income to advance to US\$4,340 in 1984. In the meantime, the economic base developed from a monoculture producing and exporting (mainly sugar) to a more diversified structure featuring strong tourism and manufacturing sectors. By the beginning of the 1980s, agriculture, tourism and manufacturing together directly contributed some one-third of the national product in roughly equal shares.

4. As a small open economy, Barbados is subject to fluctuations generated abroad and it suffered its most severe external shock in recent times during the 1981-83 world recession. Activity in the sensitive tourism sector, the largest export earner, dropped a cumulative 21% over the two years 1981 and 1982. The economic impact was compounded by poor sugar harvests and weakening commodity prices in the same years, with the result that the balance of payments and public finances deteriorated sharply. The authorities adopted a program of fiscal and monetary austerity that gained the support of the IMF, and in 1982 the Government entered into its first stand-by arrangement with the Fund. By the end of 1983, with the successful implementation of that stabilization program, the deterioration in the public finances and balance of payments was contained.

5. The economy emerged from the 1981-83 period with its economic structure severely weakened. Both the tourism and sugar sectors encountered severe financial difficulties in those years that continued into 1984. A number of hotel operations failed, debt service delinquencies multiplied and the sugar industry suffered substantial losses because of both output and price declines. The manufacturing sector meanwhile was sustained by strong growth in the enclave electronics subsector whose performance more than outweighed the declines in the rest of manufacturing. The low economic activity in those years pushed unemployment from 11% in 1981 to about 16% by the end of 1983. Inflation, however, moderated along with the slower rise in import prices.

6. Economic activity revived in 1984, and the economy registered positive growth for the first time in four years. GDP rose 2.4%, mainly because of a 10% increase in tourist arrivals, a 17% jump in sugar output (the first increase in four years) and continued strong growth in the enclave electronics components industry. However, a major new sectoral setback created additional problems for the economy. The introduction in Trinidad and Tobago of restrictive import licencing measures impaired access of Barbados' domestic manufacturing exports to that important CARICOM market. The persistence of this access problem, along with payments difficulties experienced by Jamaican importers, has crippled an important subsector of Barbados' manufacturing. The positive GDP growth in 1984 was accompanied by a further increase in unemployment, as several CARICOM-oriented manufacturers went out of business or cut back operations, and as cost-cutting strategies in the hotel sector made labor redundant.

7. The difficult economic conditions were reflected in the fiscal and balance of payments outturns for the year. Following improvement during the adjustment program in 1982/83 and 1983/84, the Central Government finances deteriorated in 1984/85. The main problem was slow growth in revenues from the corporate profits tax and from import duties. Thus, while current expenditures grew 10%, current revenues grew only 6% (its poorest performance in seven years) and the budget surplus fell by one-half in relation to GDP, from 2.3% of GDP in 1983/84 to 1% of GDP in 1984/85. On the balance of payments, an improvement in the current account was almost offset by a worsening in the capital account, and the net reserve position remained weak at only one month's imports in liquid reserves. (Although total reserves were equivalent to two months of imports, one half represented illiquid assets of the suspended CARICOM Multilateral Clearing Facility; this was a credit facility created to increase intra-CARICOM trade and which was suspended in 1983 after its US\$100 million credit ceiling was reached; Barbados was the largest net creditor to the facility.)

8. Preliminary data on economic performance in 1985 indicate that the economy contracted slightly during the year. Sugar output remained at about last year's level, 100,000 tons, tourist arrivals declined mainly because of a very poor summer season, and the electronics industry, which had been the mainstay of the manufacturing sector over the preceding four years, itself lost momentum in the face of lower demand in the computer industry in 1985.

Development Strategy and Development Issues

9. Barbados' development has proceeded within a framework of general reliance on the market mechanism and private enterprise, both foreign and domestic, with the role of the Government largely reserved to the provision of supporting infrastructure and appropriate production incentives. The development strategy is outward-looking as is appropriate for a country with such a small domestic market (252,000 people). Given the openness of the economy, the development strategy aims at diversifying the economic base so as to strengthen the resilience to external shocks. The traditional sugar industry, which has dominated Barbados' agriculture over many years but is now facing difficulties, has to be rationalized, while exploring for options for agricultural diversification to increase the country's domestic earnings and export income. Tourism has grown rapidly in the past and the country will continue to have a comparative advantage in that field. In addition, the country has significant assets in its readily trainable labor force, proximity to the North American market, and good communications. To capitalize on these assets, enhancement of the quality and industrial relevance of the labor force through continued improvement in the education and training system has to be a central element of the Government's development strategy.

10. Barbados continues to face a critical issue concerning the competitiveness of its production in international markets. While the recent decline of the US\$, to which the B\$ is pegged, has brought about some improvement, many of Barbados' competitors, including Jamaica and Trinidad within CARICOM, have had sharp devaluations over the past year leaving Barbados as a relatively costly destination for tourism and source of manufactures. In the sugar industry, although the decline of sterling against the dollar over the past year has brought about increased local currency earnings, costs remain high on an international basis. These developments highlight critical imbalances in the cost/price structures of the sugar and tourism industries, which experienced rapid wage increases in the years preceding the recession and falling prices during the recession years. Another urgent issue stems from the trade problems of CARICOM that have effectively curbed intra-regional trade, pointing to the need to reorient manufactured exports to extra-regional markets. Yet existing manufacturers have little experience or knowledge of those markets and would require strong incentives and support to make the shift. Inadequate capitalization of business firms in tourism and manufacturing, and weak management, particularly weak financial management, across all sectors are other sectoral problems exposed by the recent economic difficulties.

11. The task ahead for the Government is to formulate and implement corrective measures for restoring the viability of these major producing and foreign-exchange-earning sectors. The problems in the sugar industry underscore the need to rationalize operations and to increase production efficiency, in addition to pursuing programs for agricultural diversification. The Government intends to conduct an in-depth review of the sugar industry, as a basis for informed policy-making about its future. Further mechanization appears to be a part of the medium- to long-term plan for the industry. The tourism industry needs to improve its operating efficiency and to expand its revenue-earning capacity by better targeting its promotion at the up-scale market. The hotel sector has already begun to

rationalize its cost structure by adopting a more flexible employment policy and the Government has provided assistance to the tourism sector as a whole in the form of relief from some taxation and fees on tourists, reduction in water rates for hotels and an increase in the promotion budget. Manufacturing, meanwhile, is facing a most difficult transition. A strategy is required to diversify markets and products, attract new activities such as linkage industries that would help maximize local value-added, and to examine incentives needed for extra-regional exports. In all sectors, the approaches imply strong marketing efforts, and enhanced management and vocational training. Finally, appropriate macroeconomic policies are of the utmost importance for the country's international competitiveness. There is the need for the authorities to monitor and control wage increases, which in the recent past have exceeded domestic inflation by significant margins (4 to 8 percentage points). Even though the local currency has depreciated along with the US dollar against European currencies over the last year, the issue remains important and needs to be addressed. The Government, in its last budget statement, has strongly advocated wage restraint and the need for a proper balance between wage increases and productivity gains. The Government will need to set an example for wage restraint in its next (two-yearly) public sector wage negotiations.

12. The Government's public sector investment program for the medium term focuses on development and reconstruction of the economic infrastructure--highways and highway maintenance, runway rehabilitation--and support of social infrastructure--sewerage development and improvements in vocational education and training. Its successful implementation will enhance the country's appeal to visitors and potential investors. The program is being implemented with support of significant amount of external assistance and is expected to have a substantial employment impact.

Development Prospects and Creditworthiness

13. Leaving aside Barbados' susceptibility to exogenous factors such as external price fluctuations and unpredictable weather, the economic outlook hinges strongly on the country's ability to address the fundamental development issues that have emerged in recent years. The failure of the economy to sustain the recovery begun in 1984 underscores the urgency for appropriate adjustment measures. The authorities have in the past displayed prudence in managing the economy and in maintaining fiscal responsibility. It is essential that they continue this performance. It is a favorable sign that policy-makers and industry operators in the major productive sectors have begun to gather necessary information and to take measures to promote structural adjustment. Not least among the latter is the Government's promotion of wage restraint and productivity increases to enable Barbados to maintain its competitiveness in international markets.

14. Barbados' government and government-guaranteed external debt in 1984 stood at US\$283 million equivalent. The accumulation of debt slowed in 1984, following a 27% buildup in 1983, and average annual increases in the two preceding years of 60%. These increases were related to borrowings for large development projects in the public and private sectors. In the first half of 1985, the Government arranged foreign commercial bank loans totaling US\$44 million to bolster its liquid external reserve position.

Despite this increase, external debt in relation to export earnings remained low, at a ratio of 50%, in 1985. The debt service ratio, which was 5.7% in 1984, is expected to remain within manageable bounds over the medium-term. Balance of payments projections indicate that the debt service ratio would peak at about 9% of exports in 1987, then decline to about 7.5% by 1990. Considering all of the above, Barbados continues to be creditworthy for Bank lending on conventional terms.

15. In 1984, the Bank's share in Barbados' outstanding public and publicly guaranteed external debt was 8.2%; its share in Barbados' external debt service was 12.3%. It is estimated that, by 1990, the Bank's share in Barbados' outstanding public and publicly guaranteed external debt would be about 9.6%. The Bank's share in external public debt service would then be about 10.9%.

PART II - THE BANK GROUP OPERATIONS

16. Barbados became a member of the Bank in 1974. Since then, the country has received, net of cancellations, US\$60.0 million in loans from the Bank, covering nine projects, including one loan in supplemental financing (Annex II). These included assistance in the education, tourism, industrial, power and highway sectors as well as the financing of technical assistance to support the Ministries of Finance and Planning, and Agriculture. In addition, Barbados has benefitted from the Bank's lending to the Caribbean Development Bank (CDB). The CDB lending to Barbados includes a US\$2.6 million loan for an industrial development project in 1978; a US\$3.0 million loan for the rehabilitation of two sugar factories in 1981; and a US\$1.1 million loan for the manufacture of clay tiles in 1983.

17. Despite some delays and associated cost overruns, project implementation and loan disbursements have, in general, been satisfactory. With the exception of the Road Maintenance and Rehabilitation Project (Loan 2432-BAR), which was recently approved, the funds provided under all Bank-assisted projects have been substantially committed.

18. The Bank has also maintained a close dialogue with the Government through its economic and sector work and has, since the inception of the Caribbean Group for Cooperation in Economic Development (CGCED) in 1978, successfully assisted in helping to coordinate external donor assistance to Barbados.

19. In early 1984, the Bank approved a graduation program for Barbados (R84-33, dated February 13, 1984) which provides for, inter alia, a seven-year phase-out period (FY85/91), with a Bank lending program of around US\$9 million annually in commitments over the period. We will, of course, carefully review Barbados' capacity to borrow from the markets to meet its capital requirements over the next several years.

20. In the meantime, the Bank lending program will seek to strengthen the economy and its long-term credit worthiness. The proposed Project fits into this strategy by focussing on one of the sectors in which institutional capacity needs to be further strengthened. Similarly, Bank lending over the remainder of the current five-year period has been

formulated to support the Bank's graduation strategy and is expected to include: an agricultural development project; a sites and services project; a second industrial credit project; a second highway maintenance and rehabilitation project; and a possible rural roads project.

PART III - THE EDUCATION AND TRAINING SECTOR

Overview of Education and Training

21. Among Latin American and Caribbean countries Barbados has one of the most highly developed educational systems which is competently staffed and managed. A literacy rate of about 99% is the result of easy access to schooling. Over 90% of the labor force has had at least six years of formal education, about 75% has had nine years of schooling. Primary, secondary and higher education institutions were established early in the 1700s, and during the colonial period coverage was gradually increased. After independence in 1966, the school leaving age was raised from 14 to 16 and at present all children between the ages of 5 and 16 are enrolled in school. Vocational and technical training is still at an early development stage and is being established at the post-secondary level. Efforts are being made to provide adequate training opportunities to all youngsters who do not enroll in the university.

Primary and Secondary Education

22. Reaching universal coverage in primary and secondary education has been a major achievement, indicating the great importance the Barbados society accords to education. In 1984-85 about 31,000 children were enrolled in some 130 primary schools; and some 24,000 children were enrolled in 21 government secondary schools. In addition, about 4,400 children were enrolled in 15 private secondary schools. The net enrollment rates of 98% at the primary level and 95% at the secondary level are comparable to those of the highly developed countries. A policy of automatic promotion is exercised, and consequently repetition rates are almost negligible.

23. In terms of quality, efforts are being made to adapt the original British curriculum to the Caribbean context. New syllabi for primary and secondary schools are being developed and are gradually being introduced in schools. The English school leaving examinations at secondary level have been replaced by those of the Caribbean Examination Council (CXC), which is now in charge of certifying knowledge and skills of secondary graduates both for university entrance and direct employment purposes. These curriculum and examination reforms started after 1966 and have been financed through USAID loans.

24. Teachers are well trained. The Erdiston Teacher Training College (ETTC) trains primary and secondary school teachers and the University of the West Indies provides graduate level courses for school managers, offering certificates to university graduates who want to become secondary school teachers. In addition, the Barbados Community College (BCC) collaborates with the ETTC to provide training of industrial arts teachers. In 1983/84 there were about 2,500 government school teachers. All primary school teachers and 70% of secondary school teachers were

classified as "trained" (i.e., they had attended the ETTC courses or they had a University Certificate). The "untrained" 30% (about 200) of secondary school teachers are mostly those approaching retirement age, thus, the MOE does not see a great need to train them given the high training costs involved.

Vocational and Technical Training

25. Formal vocational and technical training is still in an early development stage in Barbados, with two institutions under the MOE having clearly defined responsibilities for such training. The Samuel Jackman Prescod Polytechnic (SJPP) provides skills level training for both lower and upper secondary school graduates. The BCC provides post-secondary (grades 12-13) technician level education and training in industrial technology, tourism, health, commerce and applied arts. It also conducts the non-pedagogical training for secondary teacher trainees in cooperation with the ETTC. The teachers in both the BCC and the SJPP are well qualified and generally have industrial experience.

26. Non-formal vocational and technical training is provided mainly by the National Training Board (NTB), which was founded in 1979 under the Ministry of Labor (MOL). The NTB is responsible for planning and implementing short and intensive training schemes for unemployed youths and adults, upgrading programs for employed workers, the formal apprenticeship training system, and on-the-job training programs. The recurrent costs of NTB are financed largely (60% in 1984) from a national payroll levy (0.5%) on private sector wages; the remainder is provided by annual budget appropriations. The SJPP cooperates with the NTB in providing formal skills and technical theory training. In 1983, the skills training program for young people (16-25 years of age), was transferred from the MOL to the NTB. This modular curricula program, with courses ranging from 3-9 months duration, is conducted mostly in temporary and poorly equipped facilities.

Issues in Primary and Secondary Education

27. Low student-teacher ratios, high costs, low achievement, unequal access to adequate school facilities and managerial deficiencies are recognized by the Government as problems which should be overcome in the next five years.

28. Due to the decline in population growth, school enrollments have been decreasing and are projected to continue to do so in the coming years. By 1990 there would be about 25,600 primary school age children (excluding reception age, that is, children below the school starting age of 5 years), down from 31,000 at present; and 23,600 secondary school age children, as opposed to 25,000 at present. Student-teacher ratios have gone down from 24:1 in 1973 to 21:1 in 1983 as a result of the declining population growth rate coinciding with the appointment of new teachers in the late 1970s when new vocational courses were introduced in secondary schools. Although there is now a de facto freeze on the hiring of new teachers, student-teacher ratios are not expected to rise immediately, as the young age of the teaching force and the lack of alternate employment opportunities would not increase the attrition rate (about 12 per year) of teachers.

29. As public education is free, the high coverage of the formal education system places a high recurrent cost burden on the government budget. The Government subsidizes school meals, textbooks, school uniforms and transportation to primary schools, and provides bursaries to students in private secondary schools. In 1984, public education expenditures accounted for about 8% of GDP and about 20% of public sector expenditures. Public education's share of public sector expenditures is expected to remain at the 18% to 20% level during the coming years. The high level of these expenditures, however, underlines the need to reduce costs and improve the efficiency of the system.

30. About 30% of primary school children perform poorly in the secondary school entrance examinations, and about 50% of students fail the secondary school leaving examinations. Failure at the end of primary school is attributable to automatic promotion of students, even when they cannot satisfactorily perform at grade level. No remedial instruction programs are now available for slow learners, particularly in basic reading and writing skills. This issue is especially severe when children who have not learned to read and write adequately are promoted to higher levels, for they cannot then benefit from further attendance either in secondary schools or in vocational training programs.

31. Causes of failure in secondary schools need to be further researched. The CXC is beginning to correlate school achievement scores with other variables, but results are not conclusive. It is believed that one of the main causes of failure is that students are not provided the time and the instructional materials needed to learn. There are great differences between the instruction times recommended in the syllabi and the instruction times that students actually experience in classrooms. Moreover, secondary school students are unable to benefit from the recently revised curriculum because of delays in implementation.

32. Another problem is that access to secondary education is inequitably distributed: (a) due to lack of public secondary school places, some 2,200 children (8% of the secondary school age group) are taught in primary school facilities (primary tops), where they receive an inadequate education; (b) some 1,800 others (6%) are taught in small, inadequately staffed and poorly housed private secondary schools, which are closing down because they are not economically viable 1/; and (c) some

1/ There are 15 private "assisted" secondary schools in Barbados. These receive bursaries amounting to about US\$470 per year per student (of US\$696 recurrent costs in the newer public secondary schools). About half these schools are small (less than 400 students), have no room for expansion, lack good teachers and are of a much poorer standard than public schools. Some of these poor quality schools are already in the process of closing down due to lack of students, as the increase in fees to enable the schools to raise teachers' pay, improve facilities and expand in order to be economically viable are not commensurate with the improvement in quality; hence they become unaffordable and therefore, unattractive to parents in spite of the bursaries. As the school owners have no resources to replace these schools, the cost to the Government of providing the necessary resources would equal or exceed those of building a new public school. In addition, the Government would have to continue providing the bursaries.

1,500 others (5%) attend public secondary schools built more than one hundred years ago, which are currently in unsatisfactory condition. It is estimated that, in addition to upgrading the old, dilapidated facilities, about 1,200 new secondary school places would be needed to enroll all school age children in adequate conditions.

33. Although there are good syllabi for secondary schools, the Curriculum Development Council has not set policies for defining which courses are to be offered in each school. Subjects are selected by independent School Boards, apparently without sufficiently analyzing the appropriate balance between curriculum requirements and instruction time in key subject areas. Moreover, due to the lack of clear guidelines on the teaching of vocational subjects, there are attempts by each school to acquire expensive, sophisticated equipment for the various vocational subjects offered. The need for a rational use of facilities is recognized in the Development Plan for 1983-88, but a formal plan to introduce the sharing of workshops among schools in order to promote effective use of scarce qualified staff in technical subjects and eliminate the unnecessary duplication of plant and equipment has not yet been defined and little sharing has actually taken place.

34. Education management problems are compounded by the inappropriate and congested premises occupied by the Ministry of Education and Culture (MOE). These premises were originally designed as an outpatient clinic, are owned and also partly occupied by the Ministry of Health, and do not permit room for expansion to accommodate both Ministries. Adequate rentable spaces are unavailable. Records and files are spread about on desktops and in boxes due to lack of storage space, and there are no rooms for meetings among staff from different departments. Under these circumstances, routine administrative procedures become cumbersome and inefficient, staff motivation is low, and productivity is greatly impaired from different departments. Under these circumstances, routine administrative procedures become cumbersome and inefficient, staff motivation is low, and productivity is greatly impaired.

35. Issues in Vocational and Technical Education. Vocational and technical training is still in an early development stage in Barbados, and must overcome major constraints if it is to effectively contribute to the attainment of the country's development objectives. There is a lack of reliable labor market information. Training programs in the formal sector for semi-skilled and skilled workers and technicians, and in the informal sector for production and services entrepreneurs are of low quality and of little relevance to sectoral needs; hence, they offer little motivation to trainees. In addition, the existing training resources are not fully utilized because they are located in inappropriate, incompletely equipped facilities, randomly dispersed around Barbados.

36. Although the Manpower Research and Statistics Unit (MRSU) of the MGL undertakes periodic household surveys to determine employment levels, and some information on available manpower and job placement opportunities is available from official sources such as the Barbados Institute of Management and Productivity (BIMAP) and the Statistical Service of the Ministry of Finance and Planning, there is a lack of labor market information in a form which can be used to systematically plan the

country's training efforts to meet market demand. There is likewise a lack of information feedback from tracer studies on graduates of the system to determine the appropriateness of the training programs being offered. These inadequacies contribute to imbalances in available skills and result in missed opportunities when foreign investors interested in setting up operations in the country do not encounter the trained manpower they need.

37. The low quality of vocational and technical training is due primarily to inappropriate and/or obsolete equipment, lack of appropriate course syllabi and methodology (which are partly due to poor equipment) and the limited relevance of training programs to labor market needs. Although the qualifications of trainers are generally good, curricula need to be improved and defined in accordance with standards derived from occupational analyses. In addition, trainers have to be given the opportunity to keep up to date with constantly changing technological developments and their corresponding pedagogical techniques. Student motivation could be increased by improving the quality of instruction and making available the training options that would enable them to more easily obtain employment.

38. Training resources (teachers and those adequate facilities which are available) are inefficiently utilized. The existing small NTB skills training units are scattered around Barbados, and except for the facility in St. Lucy, are generally housed in makeshift workshops offering training in one or two skills with inadequate equipment. Consequently, programs are difficult to tailor to market needs, the number and quality of outputs are low, and administration of such a system cannot avoid being inefficient. Therefore, the consolidation of these efforts into a few strategically located facilities would increase performance levels and result in a more economic use of available resources. A similar situation exists with respect to the BCC: its training programs are also scattered in a number of inadequate locations outside the main campus, which has room for expansion. This penalizes students in the outside locations who have no (or more difficult) access to campus facilities (i.e., library, demonstration rooms, etc.), leads to duplication of personnel services, and contributes to a lower utilization of campus facilities. The SJPP on the other hand has workshops in eight areas of training, which are either unused or underutilized, due primarily to the lack of or incomplete equipment. These workshops could accommodate up to 700 secondary school students for vocational courses, and their more efficient use would avoid the duplication of facilities and resources.

Government Strategy in the Sector

39. The Government's policy objectives include the equalization of educational opportunity, the modernization of educational content in order to make education a meaningful tool for development through greater emphasis on vocational and technical training, and the realization of these objectives without increasing the relatively high cost of the system. The Government has put into action strategies designed to address the deficiencies of the system. In pursuit of these objectives, the Government has obtained bilateral and multilateral assistance as follows: (a) the Bank's First Education Project (Loan 1642-BAR) improved student-teacher ratios in project schools, increased access and achieved economies of scale

in amalgamating primary schools and upgrading secondary schools. Teacher quality was improved through support for the ETTC; BIMAP's capacity to improve productivity through in-plant training for workers and supervisors was strengthened; and key MOE officials were trained in school administration; (b) the Inter-American Development Bank (IDB) has supported training programs at the technician and skilled worker levels and financed the construction of facilities for the BCC and the SJPP; and (c) other agencies (i.e. USAID, OAS, CIDA, and the British Government) have provided assistance in curriculum development, project execution aid to small enterprises and higher education. The Government has taken steps on its own to address the deficiencies of the system: (a) it has effected a de facto freeze on the hiring of new teachers to prevent the decrease of student-teacher ratios which would otherwise occur due to the falling population growth rate; (b) it has converted teacher training institutions to provide only inservice training of public school teachers and stopped financing and training of new teachers; (c) it is taking steps to reduce Government subsidies for school meals and student transportation; (d) it continues to support the amalgamation of primary schools to increase cost-effectiveness; and (e) it has introduced measures to reduce subject options offered to secondary school students to increase class sizes and reduce the need for specialized facilities. The Government, however, faces the task of consolidating the initial successes in attaining its goals, and must overcome the adverse effects of the world recession on its economic performance. Accordingly the Government's plans for improvements in efficiency, increase in vocational skills and opening new areas of training in modern technologies in order to provide the requisite manpower for its output diversification objectives, are deserving of external support.

Bank Strategy in the Sector

40. Previous Bank Experience. The Bank agrees with the Government's strategy and the proposed Project would be the second Bank operation in the sector in Barbados. The First Education Project (Loan 1642-BAR of US\$9.0 million equivalent) assisted the Government strategy of combining measures to assure equity and relevant general education and skills training with measures to enhance the cost effectiveness of the system. The project also assisted the improvement of private sector management training by financing the BIMAP component. Specifically, the project comprised: (a) construction, furnishing and equipping of ten primary schools to replace obsolescent schools; (b) expansion of six existing secondary schools; (c) expansion of the ETTC; (d) expansion of the facilities of BIMAP; and (e) provision of architectural and engineering services to the project unit and 30 staff/months of fellowships to BIMAP. Early implementation delays caused by site acquisition problems contributed to a 35% increase in project costs. The Government's difficulty in filling the increased funding gap with counterpart resources exacerbated the delay as well as the cost increases. A supplemental loan of US\$3.0 million was approved by the Bank on November 8, 1983, under a Special Action Program, to finance the foreign exchange component of the project cost increase, and has brought implementation up to the planned pace with reasonable efficiency. The project has satisfactorily attained its objectives, all facilities are operational and the loan has already been substantially disbursed.

41. To enable Barbados to overcome the adverse effects of the world recession (and its particular repercussions within the Caribbean regional market) on its economic performance, the Bank supports its plans to diversify its markets, improve efficiency and increase vocational skills. In the specific area of hotel management, one of the development priorities, BLMAP is currently planning the training programs for managers and entrepreneurs of small and medium sized hotels, in consultation with the Barbados Hotel Association and the Barbados Development Bank. BLMAP has the qualified staff and facilities to carry out this training program effectively. The training needs in the agricultural sector, another priority area for development, are being addressed in a proposed agricultural development project which would be a follow-up to earlier Bank-financed Technical Assistance Project (Loan 2115-BAR). The Bank also supports the efforts being made by the Government to increase the skills and competitiveness of its labor force, and to streamline and increase efficiency in the education sector. To this end, the Bank would continue its collaboration with other bilateral and multilateral development institutions. The Bank's involvement in the proposed Project is necessary because beyond consolidating the benefits realized under Loan 1642-BAR, it would (a) provide the requisite incentives to implement quality and cost effectiveness measures such as the improvement of student-teacher ratios, the rationalization of vocational subjects in secondary schools and the formulation of measures to achieve cost savings and greater efficiency in the utilization of educational facilities and resources; and (b) it would contribute significantly to institutional strengthening so as to enable Barbados to acquire the necessary foundation for human resources development for a competitive modern economy.

PART IV - THE PROJECT

Project Origin

42. The proposed Project was first presented to the Bank in September 1984 and reviewed by a Bank mission in October 1984. It was identified by a Bank mission that visited Barbados in February 1985. The proposed Project was prepared by the MUE, assisted by consultants under the UNESCO/CP and Bank staff and was appraised in June 1985. Negotiations were held in Washington, D.C. in March 1986. The Barbados delegation was led by Mr. Branston Collymore, Permanent Secretary, Ministry of Education and Culture. Supplementary data are contained in Annex III.

Project Objectives and Content

43. The proposed Project would be a follow up on Loan 1642-BAR and would cover 90% ^{2/} of the five-year investment plan for the whole sector in order to address a broad range of critical issues. The proposed Project therefore comprises the following items: (a) the institutional strengthening of the MUE; (b) the BCC component; (c) the NTB component; (d) the MKSU component; (e) the Training Administration component; (f) the primary school component; (g) the secondary school component; and (h) the

^{2/} The areas not covered under this Project include: (a) agricultural training (para. 41); (b) private sector management training (para. 41); (c) the student revolving Loan Fund (US\$3.0 million) financed by IDB Loan 722/ST-BA; and (d) repair and remodelling of other existing secondary schools financed entirely by the Government.

SJPP component. The Bank would finance items (a) to (e), and IDB would finance items (f) to (h). The Bank would finance the administrative costs of implementing items (a) to (e).

44. The proposed Project aims to further develop Barbados' educational and training system and improve the capacity to manage it through a combination of policies and actions that would enhance the internal efficiency of education while improving the quality and relevance of instruction. These efficiency and quality improvements would enable the MOE to optimize previous investments and manage the system without further substantial financial assistance. Because of its small size, there are no significant differences between the urban and rural populations of Barbados, thus the proposed Project would equally benefit all population sectors. The NTB component particularly addresses the improvement of the skills of the unemployed and thus the relatively poorer segment of society.

45. First, the proposed Project would support improvements in the quality and cost-effectiveness of primary and secondary education through:

(a) The financing by IDB of the amalgamation of 21 small, uneconomic primary schools into ten larger schools by providing construction, equipment and furniture. The actual condition of the 22 schools only permit two out of the five amalgamation options: (i) full replacement with new facilities, or (ii) remodelling and expansion of one school. Option (i) is necessary in nine out of the ten amalgamations. By amalgamating these schools, operational costs would be reduced by about 20%, representing a 5% reduction in the operational costs of primary schools in the country. Expected savings in recurrent costs would recover the investment costs within a five-year period after project completion provided that the current freeze on the hiring of new teachers is maintained. The Government has provided assurances that the current student-teacher ratios would not be allowed to decrease from the levels prevailing during school year 1983 of 23:1 in primary schools and 19:1 in secondary schools. These ratios would not be increased beyond 35:1 at the primary level and 30:1 at the secondary level.

(b) The financing by the Bank for improvements in the teaching of reading and writing in primary schools. The curriculum unit of the MOE would establish a system for diagnosing problems in reading and writing, and, once the system is in place, train one remedial education teacher in each school. Technical assistance (10 staff months (s/m) of fellowships and 12 s/m of specialist services) would be provided to the curriculum unit and about 1,500 teachers would be trained in diagnostic techniques.

(c) The re-establishment of the National Curriculum Committee and financing by the Bank of the following tasks to be carried out by the Committee: (i) conduct a study to provide the basis for a policy on the teaching of vocational subjects in secondary schools and the reduction of recurrent expenditure at this level; and (ii) analyze results of CXC examinations to determine the revisions needed to make the existing syllabi more responsive to the country's development needs. The study on vocational subjects in secondary schools would consider, among other things, the cost of offering each optional subject, the minimum number of students required to offer a specific course, the minimum number of hours

required per subject and the maximum number of subjects that a student should take in a year. Technical assistance (34 s/m of fellowships and 18 s/m of specialist services) and training (300 teachers and 22 administrators) would be provided to the MOE to support the above activities as well as to improve the teaching of special subjects in secondary schools. A draft plan prepared by the Government for the sharing of workshop facilities among secondary schools and the SJPP was reviewed during negotiations. The plan would be finalized during the first year of implementation and put into effect by September 1988.

(d) The financing by the Bank of improvements in the textbook procurement and distribution system. The proposed Project would finance six s/m of specialist services to assist the Supply Management Section of the MOE. A draft revised policy for textbook procurement and distribution would be prepared by July 1987, and would be reviewed by the Bank. Procurement of books for schools under the proposed Project would proceed only after the policy is agreed upon with the Bank and the IDB.

(e) The financing by the IDB of the upgrading as well as acquisition of supplementary and replacement equipment and furniture for two existing secondary schools, the furnishing and equipping of a third existing secondary school and the building, equipping and furnishing of new 1,200 place school. The additional number of places provided to the secondary school system would accommodate the existing "primary tops". The MOE is expected to eliminate these "primary tops" by the start of operations of the new Wotton/Kingsland secondary school in December 1990.

46. Secondly, the proposed Project would foster improvements in the efficiency, quality and industrial relevance of technical and vocational training, through:

(a) The financing by the IDB of supplementary equipment in the Samuel J. Prescod Polytechnic to replace obsolete equipment; peripheral equipment to maximize the existing training capacity in the skilled worker level programs of radio-stereo-TV repair, electrical installations and welding, the print shop and the food preparation laboratory. The provision of supplementary equipment would increase the utilization of four existing shops by about 25%, by accomodating up to 700 students in the secondary school day-release program and help formalize better coordination of training programs among the cooperating schools. It would also increase enrollment capacity by up to 70 full-time students. About 30% of enrollments would be women.

(b) The financing by the Bank of the construction, furnishing and equipping of "purpose designed" technician level training facilities in the Barbados Community College. This would include the relocation of the Division of Applied Arts from its inadequate and desintegrating premises and the re-equipping and relocation of the health sciences training facilities from the Ministry of Health to the BCC main campus thus making the library and other teaching/learning services more easily available to students in these disciplines and increase their use factor. Additionally, laboratory facilities would be provided for the new computer science division, the new industrial electronics program and two additional shops for the mechanical and civil construction programs. These facilities would

altogether annually accommodate about 400 full-time and 420 part-time trainees (an increase of about 200) of which about 60% would be women.

(c) The financing by the Bank of the construction, furnishing and equipping of three new skills training centers and equipping and furnishing of one existing center in the National Training Board. A total of 288 trainee places would be equipped to provide modular training to about 1,000 trainees annually in 24 skills programs of 3-9 months duration. The centers would cater to entry level skills training for unemployed youth and adults (ages 16 to 30), apprenticeship training on a day-release basis in cooperation with local industry, and skills upgrading training for about 500 unemployed workers annually. About 20% of basic training enrollments would be women.

(d) The financing by the Bank of supplementary equipment to improve the data processing capability of the Manpower Research and Statistics Unit; and books and supplementary equipment to upgrade the facilities of the Training Administration.

(e) The financing by the Bank of technical assistance (108 s/m of fellowships and 39 s/m of specialist services) for the vocational and technical training system for: (i) improving instructor capabilities in planning and upgrading course syllabi and laboratory/shop activities; (ii) improving administrative, financial management, accounting procedures and information gathering and processing; (iii) improving and expanding the existing industrial advisory committee systems of the SJPP and the BCC; (iv) formalizing on-the-job follow-up of graduates; (v) improving and institutionalizing the industrial job analysis efforts of the NTB and the MKSU; and (vi) assessing the needs in public sector management training and upgrading the training programs and materials of the Training Administration.

47. Thirdly, the proposed Project would seek to strengthen the institutional capacity to plan and manage the education and training system, through:

(a) The financing by the Bank of technical assistance (26 s/m of fellowships, 26 s/m of specialist services and local training of 150 managers and 500 school teachers) to improve education planning, educational management, curriculum implementation practices in primary and secondary schools and school supervision, with emphasis being given to improve the budgeting process of MOE. In addition, the proposed Project would assist the MOE in improving the production of printed materials.

(b) The financing by the Bank of a study on the formulation of measures to achieve cost savings and greater efficiency in the utilization of facilities and resources, as well as to address the issue of the additional recurrent costs that are expected to be generated under the proposed Project. The study would include inter alia: (i) the selection procedures for public examinations; (ii) the marketing output of the technical/vocational system; (iii) maintenance costs; and (iv) areas of post-secondary education where savings may be realized. MOE would prepare Terms of Reference in consultation with the Ministry of Finance and present these to the Bank by December 1986.

(c) The financing by the Bank of the construction, equipping and furnishing of appropriate facilities to house the MOE Pedagogical and Administration Building.

Project Costs and Financing

48. Project Cost. The total cost of the proposed Project is estimated at about US\$37.7 million equivalent, net of taxes and duties. ^{3/} The foreign exchange cost is estimated at US\$17.3 million or 46% of total project cost, and the local cost at US\$20.4 million or 54% of total cost.

49. Basis of Cost Estimates. The baseline cost (in March 1986 prices) is about US\$29.1 million. Aggregate physical contingencies (5.3% over baseline costs) comprise 10% for site development and 5% for all other categories of expenditure (building designs are adapted from standard plans developed under Loan 1642-BAR, equipment and furniture lists are complete, and the technical assistance package contract has been awarded). Aggregate price contingencies (23% over baseline costs including physical contingencies) are based on the following price escalation rates: (a) foreign: (i) 7.2% in 1986, 6.8% in 1987-88, 7% in 1989, 7.1% in 1990, and 4% in 1991-92 for civil works, furniture, equipment and educational materials; and (ii) 5% in 1986-92 for technical assistance (T.A.), professional services, project administration, studies and training; (b) local: (i) 10% in 1986, 11% in 1987-88, 12% in 1989-90, and 10% in 1991-92 for civil works and furniture; (ii) 8.5% in 1986, 9% in 1987-90, and 8% in 1991-92 for equipment and educational materials; and (iii) 6% in 1986-90, and 5% in 1991-92 for T.A., professional services, project administration, training and studies. The total foreign exchange cost including contingencies is estimated at US\$17.3 million equivalent or about 46% of total project cost net of taxes, based on foreign exchange components of 46% for civil works (building and site development), 60% for furniture, 90% for equipment, 75% for expatriate technical assistance and fellowships, 5% for local training, project administration and studies and 20% for professional services.

50. Financing Plan. The total project cost of about US\$37.7 million would be financed by the Bank, the IDB and the Government. The proposed Bank loan of US\$10.0 million equivalent would finance 27% of the total project cost and would cover 49% of the foreign cost and 7% of the local cost. In addition to the Bank loan, 45% of the total project cost would be financed, on a parallel basis, by the IDB with a loan of US\$17.0 million which would cover 51% of the foreign cost and 40% of the local cost. The Government would provide US\$10.7 million to finance the remaining 28% of total cost and cover 60% of the local cost. The total cost of the Bank financed items would be US\$17.8 million, and the IDB financed items US\$19.9 million.

51. Assurances were obtained during negotiations that the Government would provide its share of counterpart funds under the proposed Project in a timely fashion. To facilitate the early execution of the Bank financed components, retroactive financing up to an amount of US\$250,000 is proposed

^{3/} Taxes and duties are estimated at US\$3.4 million.

to cover expenditures incurred (for construction, procurement, technical assistance and project administration) after October 1, 1985.

Incremental Recurrent Costs

52. When in full operation by 1992, the proposed Project is expected to generate additional annual operating costs (in March 1986 prices) of about US\$0.66 million for the MOE and US\$0.63 million for the MOL/NTB. These amounts represent an increase of 1.1% above the MOE's approved 1984/85 recurrent budget, and 26% above that of NTB's 1984/85 budget. About 82% (US\$0.54) of the MOE's additional recurrent budget is attributed to the BCC component. The increase on the MOE budget is not expected to pose an undue burden as 60% of the BCC incremental recurrent cost would continue to be funded out of the payroll levy. The substantial increase on the NTB recurrent expenditures is taken in comparison with its 1985 budget which is low as it is based on NTB's currently limited operations. This budgetary increase is expected to be met without undue difficulty through the payroll levy. The proposed Project would finance a study on (paragraph 47(b)) measures to achieve further reductions in recurrent costs.

Status of Project Preparation

53. The Government has demonstrated its commitment to the proposed Project by providing, in its 1985/86 budget, the initial outlays and manpower resources needed to proceed with early implementation. Preparation for project implementation which commenced in early 1986 is well advanced, with the use of funds allocated for such purposes under Loan 1642-BAR. Consultants have been contracted for the site surveys and design of the facilities to be built. Sites for all of the 18 project components which require new or additional civil works are already owned by the Government. Bidding documents for the construction, furnishing and equipping of six institutions (3 primary, 2 secondary and 1 NTB skills center) are being prepared for the calling of bids by June 1986. The final architectural design for the BCC and sketch designs for the MOE building were reviewed during negotiations. The Government has awarded the contract for the management of the proposed Project's technical assistance package to an institution selected in accordance with Bank guidelines. The Government was advised of the Bank's concurrence with the proposed contract award in February 1986.

Project Execution

54. Implementation Agency. The existing Project Implementation Unit (PIU) of the MOE, which has demonstrated a satisfactory performance in implementing Loan 1642-BAR, has been officially designated by the Government to manage the implementation of the proposed Project. In view of the increased responsibilities under the proposed Project, the current PIU comprising a project manager, accountant, procurement officer, architect, quantity surveyor, engineer and support staff, has been expanded to provide it with the capability of monitoring the educational aspects of the proposed Project. The additional staff (a project educator, an administrative officer, and a training officer of the NTB to coordinate the

execution of the NTB component) have been appointed. Costs of these additional staff are included in the total project cost. Key officers of the BCC, the SJPP, the MKSU and the Training Administration have been designated with the responsibility of maintaining liaison with the PIU to ensure the efficient execution of their respective components. The PIU also has in-house, under renewable fixed term contracts, expatriate consultants (an architect, two engineers and a quantity surveyor) who render professional services for the design of standard school plans as well as construction supervision. This in-house arrangement permits the PIU flexibility in its design work and also, enables it to realize a 20-30% savings in professional fees. The PIU professional staff are MOE regular personnel who are expected to be reintegrated into the Ministry after completion of the proposed Project. Before completion of the proposed Project, the MOE would review its needs for school construction and maintenance and would consult with the Bank on the deployment of PIU staff.

55. Implementation Schedule. The proposed Project is expected to be implemented over a period of seven years from January 1986 to December 1992, one year shorter than the relevant regional profile based on experience with Loan 1642-BAR. However, it is possible that if the proposed Project is implemented more efficiently and with fewer delays, the implementation period could be reduced to five years. This would result in project costs being reduced from US\$37.7 million to US\$36.4 million. While the Government would need to provide higher annual counterpart funds (by US\$1.6 million in 1987 and US\$0.9 million in 1988), the proposed Project benefits would begin to be realized earlier.

56. Disbursements. The proceeds of the Bank loan would be disbursed over a period of 7.5 years (1986-93) to pay 44% of civil works expenditures; 100% of foreign expenditures for directly imported items and 85% of total expenditures for locally procured items covering furniture, equipment and educational materials; 100% of expenditures for technical assistance, training and studies; and 50% of professional fees for architectural, engineering services and other services. For contracts valued at equivalent US\$10,000 or less, disbursement would be made on the basis of Statements of Expenditures (SOEs) for which documentation would be correlated with the relevant withdrawal application and retained by the PIU for periodic review upon request by the Bank in addition to being audited by auditors acceptable to the Bank. All other withdrawal applications would be fully documented.

57. Special Account. In order to reduce the interval during which the Government would finance with its own resources the Bank's share of goods and services, a Special Account would be opened in U.S. dollars and US\$500,000 would be initially deposited into it from the Loan Account. The Special Account would be replenished monthly on receipt and approval of the Government's applications for replenishment of the Bank's share of eligible expenditures, totalling not less than US\$100,000. The Bank would require a monthly statement of the Special Account to reflect transactions during the previous month.

58. Bank Procurement Procedures. Civil works contracts for the BCC and the MOE Pedagogical and Administration Buildings would be awarded on the basis of international competitive bidding (ICB) procedures. Because

of the small size of the contracts (US\$0.9 million base cost each) and the phasing of construction which does not permit a larger package, civil works contracts for the NTB skills centers would be awarded on the basis of local competitive bidding (LCB) procedures which have been reviewed and found to be acceptable to the Bank. Interested foreign bidders would not be precluded from participating in such bids. Contracts for equipment, furniture and educational materials would be grouped, to the extent possible, to form attractive packages and would be awarded on the basis of ICB procedures in accordance with Bank guidelines when these packages total US\$50,000 or more. Contracts below US\$50,000 would be awarded on the basis of competitive bidding advertised locally in accordance with Government procurement practices which are acceptable to the Bank. In addition, miscellaneous items that cannot be grouped into packages exceeding US\$20,000 would be procured through the Government's Central Purchasing Department on the basis of three price quotations. All consulting contracts would be procured in accordance with Bank Guidelines. With the thresholds established for ICB, contracts awarded through ICB would account for about 61% of the cost of the Bank financed items. The limits for prior review of bidding documentation by the Bank would result in a coverage of about 69% of the total estimated value of civil works contracts and 79% of goods contracts.

59. IDB Procurement Procedures. Procurement for the IDB financed items is expected to follow IDB's general procurement procedures and the clauses on tender procedures agreed with the Government, as well as the Government's local procurement procedures where applicable.

60. Monitoring and Evaluation. Indicators to monitor progress in the implementation of hardware as well as educational and other software components of the proposed Project have been developed and agreed with the Government. The PIU director would be responsible for preparing semiannual progress reports (due May 15 and November 15) which would provide information on the quantitative as well as qualitative aspects of the proposed Project, and measure implementation progress against the monitoring indicators. These progress reports would be provided to the Bank and the IDB. Assurances were obtained during negotiations that the Government would keep the Bank informed of progress being made in the attainment of its educational objectives, and furnish the Bank annually, until after six months from the Closing Date, for the Bank's review, a statement on any major education policies or plans formulated by the Government. A completion report on the proposed Project would be prepared by the PIU and submitted to the Bank no later than six months after the Closing Date of the Bank loan. The Evaluation Unit of the MOE would be responsible for assessing the impact of the efficiency and quality improvement measures developed under the proposed Project on the education system, and in coordination with the NTB and the MOL, on that of the training system. The NTB, also in coordination with the MOL would be responsible for assessing the impact of the NTB training programs. Guidelines and criteria for evaluation were discussed and agreed with the Government during appraisal. Information and insights gathered from the evaluation process would be fed back into the system for the periodic upgrading of curricula and course syllabi.

61. Accounting and Auditing. The auditing and accounting procedures employed under Loan 1642-BAR are satisfactory and the reports are well prepared. This practice is expected to be carried on during the implementation of the proposed Project. The Government would maintain separate accounts for the Bank and IDB financed items in accordance with acceptable accounting practices. Assurances were obtained during negotiations that the Government would take steps to ensure that all accounts, financial statements, certified SOEs and the Special Account related to Bank financed items would be audited annually by independent auditors, satisfactory to the Bank. The auditor's report would be sent to the Bank no later than four months after the close of each Fiscal Year (March 31).

Benefits

62. The proposed Project would help to consolidate improvements in the education system initiated under the Loan 1642-BAR. By establishing cost effectiveness measures, the proposed Project would enable the Government to reallocate the freed resources towards more substantial quality improvements in the sector. By strengthening the institutional framework to manage and plan the education and training system and providing the appropriate infrastructure for the education central management and staff, the proposed Project would also establish a sound basis for the continued pursuit of further efficiency gains.

63. In addition to providing more appropriate facilities for about 8,000 students, the major quantifiable benefits of the proposed Project would be an additional annual capacity to train/upgrade about 1,000 semi-skilled and skilled workers and train about 200 technicians, of which about 28% and 60%, respectively would be women. The improvements in the quality and quantity of trained manpower would increase the competitiveness of local labor, attract investors to set up operations in the country due to the availability of skills and ultimately facilitate the entry of Barbados into extraregional markets for its products. The strengthening of industrial advisory committee systems, industrial job analysis and follow-up of on-the-job performance of graduates, which would ensure that training programs are more relevant to industrial development efforts defined in the Development Plan, would contribute to this effort significantly.

Assessment of Risks

64. There are no significant risks associated with the technical implementation of the proposed Project, as it would be managed by an experienced PIU. The risk of not attaining the objectives of the vocational training component is real only to the extent that the economic strategy set out for Barbados does not meet its objectives. However, the expected economies in operational costs resulting from the amalgamation of primary schools may not be realized if the current freeze on the hiring of new teachers is relaxed and new teachers are appointed in spite of the decline in enrollments and therefore, the benefits expected from reinvesting the savings for quality improvements in primary and secondary education, would be lost. There could also be some difficulty meeting the incremental recurrent budgets of the BCC and the NTB centers when these

become operational by 1992, if the allocations from the payroll levy prove inadequate. However, as the proposed Project would provide the capability to train the technicians badly needed for the success of the development strategy for Barbados, it is not expected that problems would arise in obtaining additional recurrent costs financing in the relatively moderate amounts (US\$0.54 million) envisaged. These risks would be minimized, if not totally eliminated by the Government: (a) taking measures not to decrease student-teacher ratios by maintaining the freeze on the hiring of new teachers; (b) putting into early operation the facilities sharing program between secondary schools and the SJPP, as well as a rational policy for subject options in the secondary schools curriculum; and (c) being able to devise and implement cost reduction measures recommended by the study to be financed under the proposed Project.

PART V - RECOMMENDATION

62. I am satisfied that the proposed Loan would comply with the Articles of Agreement of the Bank and recommend that the Executive Directors approve the proposed Loan.

A.W. Clausen
President

Attachments

April 17, 1986

BARRADOS BARRADOS	- SOCIAL INDICATORS DATA SHEET				
			REFERENCE GROUPS (WEIGHTED AVERAGES) /a		
	1960/b	1970/b	MUST RECENT ESTIMATE /b	(MOST RECENT ESTIMATE) /b MIDDLE INCOME LAT. AMERICA & CAR	MIDDLE INCOME EUROPE
AREA (THOUSAND SQ. KM)					
TOTAL	0.4	0.4	0.4	.	.
AGRICULTURAL	0.3	0.4	0.4	.	.
GDP PER CAPITA (US\$)	..	..	4050.0	1875.9	2144.3
ENERGY CONSUMPTION PER CAPITA (KILOGRAMS OF OIL EQUIVALENT)	263.0	1206.0	1402.0	993.6	1119.8
POPULATION AND VITAL STATISTICS					
POPULATION, MID-YEAR (THOUSANDS)	231.0	239.2	252.6	.	.
URBAN POPULATION (% OF TOTAL)	35.5	37.2	41.4	67.7	47.5
POPULATION PROJECTIONS					
POPULATION IN YEAR 2000 (MILL)			0.3	.	.
STATIONARY POPULATION (MILL)			0.4	.	.
POPULATION MOMENTUM			1.4	.	.
POPULATION DENSITY					
PER SQ. KM.	537.2	556.3	587.4	48.0	84.7
PER SQ. KM. AGRI. LAND	770.0	646.5	626.8	91.1	166.9
POPULATION AGE STRUCTURE (%)					
0-14 YRS	38.0	37.4	28.2	38.5	31.2
15-64 YRS	55.1	54.4	62.0	57.1	61.5
65 AND ABOVE	6.7	8.1	9.7	4.2	7.2
POPULATION GROWTH RATE (%)					
TOTAL	0.9 /c	0.3 /c	0.4 /c	2.4	1.6
URBAN	1.4	0.8	1.1	3.6	3.7
CRUDE BIRTH RATE (PER THOUS)	33.6	20.6	.8	30.9	23.4
CRUDE DEATH RATE (PER THOUS)	9.1	8.7	8.9	8.0	8.9
GROSS REPRODUCTION RATE	2.0	1.5	1.1	2.0	1.5
FAMILY PLANNING					
ACCEPTORS, ANNUAL (THOUS)	..	..	..	.	.
USERS (% OF MARRIED WOMEN)	..	..	46.0	43.3	..
FOOD AND NUTRITION					
INDEX OF FOOD PROD. PER CAPITA (1969-71=100)	103.0	108.0	72.0	109.6	109.1
PER CAPITA SUPPLY OF CALORIES (% OF REQUIREMENTS)	106.0	119.0	138.0	113.2	131.5
PROTEINS (GRAMS PER DAY)	67.0	79.0	96.0	69.4	92.4
OF WHICH ANIMAL AND PULSE	36.0	48.0	56.0 /d	34.2	34.5
CHILD (AGES 1-4) DEATH RATE	6.8	1.9	1.3	4.8	4.7
HEALTH					
LIFE EXPECT. AT BIRTH (YEARS)	64.3	68.5	71.6	64.8	67.2
INFANT MORT. RATE (PER THOUS)	74.0	40.1	22.9	59.7	53.3
ACCESS TO SAFE WATER (XPOP)					
TOTAL	..	98.0	..	65.3	70.2
URBAN	..	95.0	..	76.5	89.4
RURAL	..	100.0	..	44.2	57.0
ACCESS TO EXCRETA DISPOSAL (% OF POPULATION)					
TOTAL	..	100.0	..	56.3	59.6
URBAN	..	100.0	..	73.4	65.9
RURAL	..	100.0	..	25.5	47.6
POPULATION PER PHYSICIAN	3040.0	1910.0	1240.0 /e	1909.7	1070.6
POP. PER NURSING PERSON	510.0	270.0	320.0 /e	808.2	769.5
POP. PER HOSPITAL BED					
TOTAL	170.0	100.0	110.0 /f	362.0	328.3
URBAN	160.0 /f	120.0	140.0 /g	422.0	201.9
RURAL	..	160.0 /h	190.0 /g,h	2716.7	4519.7
ADMISSIONS PER HOSPITAL BED	..	9.2	10.2 /g	27.5	20.0
HOUSING					
AVERAGE SIZE OF HOUSEHOLD					
TOTAL	4.0	4.0	..	..	..
URBAN	..	..	..	..	..
RURAL	..	..	..	..	..
AVERAGE NO. OF PERSONS/ROOM					
TOTAL	1.2	1.0	..	..	..
URBAN	..	..	..	..	..
RURAL	..	..	..	..	..
PERCENTAGE OF DWELLINGS WITH ELECT.					
TOTAL	..	59.1	..	..	..
URBAN	..	..	..	..	..
RURAL	..	..	..	..	..

TABLE 3A

BARRADOS	- SOCIAL INDICATORS DATA SHEET				
	1960/ ^b	1970/ ^b	MOST RECENT ESTIMATE/ ^b	REFERENCE GROUPS (WEIGHTED AVERAGES) / ^a (MOST RECENT ESTIMATE) / ^b MIDDLE INCOME LAT. AMERICA & CAR	MIDDLE INCOME EUROPE
EDUCATION					
ADJUSTED ENROLLMENT RATION					
PRIMARY: TOTAL	106.0	108.0	110.0	106.7	101.9
MALE	116.0	111.0	112.0	108.5	106.2
FEMALE	102.0	103.0	108.0	104.6	97.3
SECONDARY: TOTAL	39.0	71.0	89.0	44.2	57.3
MALE	46.0	70.0	86.0	42.7	64.9
FEMALE	33.0	72.0	91.0	44.9	30.0
VOCATIONAL (% OF SECONDARY)	5.2	4.1	..	13.3	21.0
PUPIL-TEACHER RATIO					
PRIMARY	40.0	33.0	20.0	29.9	23.1
SECONDARY	29.0	27.0	23.0	16.7	19.1
CONSUMPTION					
PASSENGER CARS/THOUSAND POP	34.6	80.7	102.8 / ^d	46.0	54.2
RADIO RECEIVERS/THOUSAND POP	151.5	372.1	757.9	328.3	170.7
TV RECEIVERS/THOUSAND POP	..	66.9	215.4	112.4	149.3
NEWSPAPER ("DAILY GENERAL INTEREST") CIRCULATION PER THOUSAND POPULATION	86.2	96.2	155.6	81.1	97.0
CINEMA ANNUAL ATTENDANCE/CAPITA	7.0 / ⁱ	5.4	..	2.4	2.7
LABOR FORCE					
TOTAL LABOR FORCE (THOUS)	91.0	90.0	112.0	..	..
FEMALE (PERCENT)	42.0	39.9	45.0	23.6	36.3
AGRICULTURE (PERCENT)	26.4	21.0	8.1 / ^j	31.4	40.8
INDUSTRY (PERCENT)	27.0	22.0	25.0 / ^j	24.3	23.3
PARTICIPATION RATE (PERCENT)					
TOTAL	39.6	37.8	44.4	33.5	43.1
MALE	51.2	48.3	53.9	51.3	55.1
FEMALE	30.2	28.4	36.7	15.9	31.4
ECONOMIC DEPENDENCY RATIO	1.1	1.2	0.9	1.3	0.9
INCOME DISTRIBUTION					
PERCENT OF PRIVATE INCOME RECEIVED BY					
HIGHEST 5% OF HOUSEHOLDS	..	19.8 / ^k	..	..	..
HIGHEST 20% OF HOUSEHOLDS	..	44.0 / ^k	..	..	..
LOWEST 20% OF HOUSEHOLDS	..	6.8 / ^k	..	..	..
LOWEST 40% OF HOUSEHOLDS	..	18.6 / ^k	..	..	..
POVERTY TARGET GROUPS					
ESTIMATED ABSOLUTE POVERTY INCOME LEVEL (US\$ PER CAPITA)					
URBAN	..	..	484.0 / ^d	288.3	..
RURAL	..	..	484.0 / ^d	185.3	..
ESTIMATED RELATIVE POVERTY INCOME LEVEL (US\$ PER CAPITA)					
URBAN	..	..	518.0 / ^d	519.8	..
RURAL	..	..	518.0 / ^d	359.7	..
ESTIMATED POP. BELOW ABSOLUTE POVERTY INCOME LEVEL (%)					
URBAN	..	..	23.0 / ^d	..	..
RURAL	..	..	23.0 / ^d	..	..

.. NOT AVAILABLE
. NOT APPLICABLE

NOTES

- ^{/a} The group averages for each indicator are population-weighted arithmetic means. Coverage of countries among the indicators depends on availability of data and is not uniform.
- ^{/b} Unless otherwise noted, "Data for 1960" refer to any year between 1959 and 1961; "Data for 1970" between 1969 and 1971; and data for "Most Recent Estimate" between 1981 and 1983.
- ^{/c} Due to migration population growth rate is lower than rate of natural increase; /^d 1977; /^e 1979; /^f 1962; /^g 1976; /^h Government hospital establishments; /ⁱ 1963; /^j 1980; /^k income recipient; /^l 1978.

DEFINITIONS OF SOCIAL INDICATORS

Notes: Although the data are drawn from sources generally judged the most authoritative and reliable, it should also be noted that they may not be internationally comparable because of the lack of standardized definitions and concepts used by different countries in collecting the data. The data are, nonetheless, useful to describe orders of magnitude, indicate trends, and characterize certain major differences between countries.

The reference groups are (1) the same country group of the subject country and (2) a country group with somewhat higher average income than the country group of the subject country (except for "High Income Oil Exporters" group where "Middle Income North Africa and Middle East" is chosen because of stronger socio-cultural affinities). In the reference group data the averages are population weighted arithmetic means for each indicator and shown only when majority of the countries in a group has data for that indicator. Since the coverage of countries among the indicators depends on the availability of data and is not uniform, caution must be exercised in relating averages of one indicator to another. These averages are only useful in comparing the value of one indicator at a time among the country and reference groups.

AREA (thousand sq.km.)

Total—Total surface area comprising land area and inland waters; 1960, 1970 and 1983 data.

Agricultural—Estimate of agricultural area used temporarily or permanently for crops, pastures, market and kitchen gardens or to lie fallow, 1960, 1970 and 1982 data.

GNP PER CAPITA (US\$)—GNP per capita estimates at current market prices, calculated by same conversion method as *World Bank Atlas* (1981-83 basis); 1983 data.

ENERGY CONSUMPTION PER CAPITA—Annual apparent consumption of commercial primary energy (coal and lignite, petroleum, natural gas and hydro-, nuclear and geothermal electricity) in kilograms of oil equivalent per capita; 1960, 1970, and 1982 data.

POPULATION AND VITAL STATISTICS

Total Population, Mid-Year (thousands)—As of July 1; 1960, 1970, and 1983 data.

Urban Population (percent of total)—Ratio of urban to total population; different definitions of urban areas may affect comparability of data among countries; 1960, 1970, and 1983 data.

Population Projections

Population in year 2000—The projection of population for 2000, made for each economy separately. Starting with information on total population by age and sex, fertility rates, mortality rates, and international migration in the base year 1980, these parameters were projected at five-year intervals on the basis of generalized assumptions until the population became stationary.

Stationary population—Is one in which age- and sex-specific mortality rates have not changed over a long period, while age-specific fertility rates have simultaneously remained at replacement level (net reproduction rate = 1). In such a population, the birth rate is constant and equal to the death rate, the age structure is also constant, and the growth rate is zero. The stationary population size was estimated on the basis of the projected characteristics of the population in the year 2000, and the rate of decline of fertility rate to replacement level.

Population Momentum—Is the tendency for population growth to continue beyond the time that replacement-level fertility has been achieved; that is, even after the net reproduction rate has reached unity. The momentum of a population in the year t is measured as a ratio of the ultimate stationary population to the population in the year t , given the assumption that fertility remains at replacement level from year t onward, 1985 data.

Population Density

Per sq.km.—Mid-year population per square kilometer (100 hectares) of total area; 1960, 1970, and 1983 data.

Per sq.km. agricultural land—Computed as above for agricultural land only, 1960, 1970, and 1982 data.

Population Age Structure (percent)—Children (0-14 years), working age (15-64 years), and retired (65 years and over) as percentage of mid-year population; 1960, 1970, and 1983 data.

Population Growth Rate (percent)—total—Annual growth rates of total mid-year population for 1950-60, 1960-70, and 1970-83.

Population Growth Rate (percent)—urban—Annual growth rates of urban population for 1950-60, 1960-70, and 1970-83 data.

Crude Birth Rate (per thousand)—Number of live births in the year per thousand of mid-year population; 1960, 1970, and 1983 data.

Crude Death Rate (per thousand)—Number of deaths in the year per thousand of mid-year population; 1960, 1970, and 1983 data.

Gross Reproduction Rate—Average number of daughters a woman will bear in her normal reproductive period if she experiences present age-specific fertility rates; usually five-year averages ending in 1960, 1970, and 1983.

Family Planning—Acceptors, Annual (thousands)—Annual number of acceptors of birth-control devices under auspices of national family planning program.

Family Planning—Users (percent of married women)—The percentage of married women of child-bearing age who are practicing or whose husbands are practicing any form of contraception. Women of child-bearing age are generally women aged 15-49, although for some countries contraceptive usage is measured for other age groups.

FOOD AND NUTRITION

Index of Food Production Per Capita (1969-71 = 100)—Index of per capita annual production of all food commodities. Production excludes animal feed and seed for agriculture. Food commodities include primary commodities (e.g. sugarcane instead of sugar) which are edible and contain nutrients (e.g. coffee and tea are excluded); they comprise cereals, root crops, pulses, oil seeds, vegetables, fruits, nuts, sugarcane and sugar beets, livestock, and livestock products. Aggregate production of each country is based on national average producer price weights; 1961-65, 1970, and 1982 data.

Per Capita Supply of Calories (percent of requirements)—Computed from calorie equivalent of net food supplies available in country per capita per day. Available supplies comprise domestic production, imports less exports, and changes in stock. Net supplies exclude animal feed, seeds for use in agriculture, quantities used in food processing, and losses in distribution. Requirements were estimated by FAO based on physiological needs for normal activity and health considering environmental temperature, body weights, age and sex distribution of population, and allowing 10 percent for waste at household level; 1961, 1970 and 1982 data.

Per Capita Supply of Protein (grams per day)—Protein content of per capita net supply of food per day. Net supply of food is defined as above. Requirements for all countries established by USDA provide for minimum allowances of 60 grams of total protein per day and 20 grams of animal and pulse protein, of which 10 grams should be animal protein. These standards are lower than those of 75 grams of total protein and 23 grams of animal protein as an average for the world, proposed by FAO in the Third World Food Supply; 1961, 1970 and 1982 data.

Per Capita Protein Supply From Animal and Pulse—Protein supply of food derived from animals and pulses in grams per day; 1961-65, 1970 and 1977 data.

Child (ages 1-4) Death Rate (per thousand)—Number of deaths of children aged 1-4 years per thousand children in the same age group in a given year. For most developing countries data derived from life tables; 1960, 1970 and 1983 data.

HEALTH

Life Expectancy at Birth (years)—Number of years a newborn infant would live if prevailing patterns of mortality for all people

at the time of its birth were to stay the same throughout its life; 1960, 1970 and 1983 data.

Infant Mortality Rate (per thousand)—Number of infants who die before reaching one year of age per thousand live births in a given year; 1960, 1970 and 1983 data.

Access to Safe Water (percent of population)—total, urban, and rural—Number of people (total, urban, and rural) with reasonable access to safe water supply (includes treated surface waters or untreated but uncontaminated water such as that from protected boreholes, springs and sanitary wells) as percentages of their respective populations. In an urban area a public fountain or standpost located not more than 200 meters from a house may be considered as being within reasonable access of that house. In rural areas reasonable access would imply that the housewife or members of the household do not have to spend a disproportionate part of the day in fetching the family's water needs.

Access to Excreta Disposal (percent of population)—total, urban, and rural—Number of people (total, urban, and rural) served by excreta disposal as percentages of their respective populations. Excreta disposal may include the collection and disposal, with or without treatment, of human excreta and waste-water by water-borne systems or the use of pit privies and similar installations.

Population per Physician—Population divided by number of practising physicians qualified from a medical school at university level.

Population per Nursing Person—Population divided by number of practising male and female graduate nurses, assistant nurses, practical nurses and nursing auxiliaries.

Population per Hospital Bed—total, urban, and rural—Population (total, urban, and rural) divided by their respective number of hospital beds available in public and private, general and specialized hospitals and rehabilitation centers. Hospitals are establishments permanently staffed by at least one physician. Establishments providing principally custodial care are not included. Rural hospitals, however, include health and medical centers not permanently staffed by a physician (but by a medical assistant, nurse, midwife etc.) which offer in-patient accommodation and provide a limited range of medical facilities.

Admissions per Hospital Bed—Total number of admissions to or discharges from hospitals divided by the number of beds.

HOUSING

Average Size of Household (persons per household)—total, urban, and rural—A household consists of a group of individuals who share living quarters and their main meals. A boarder or lodger may or may not be included in the household for statistical purposes.

Average Number of Persons per Room—total, urban, and rural—Average number of persons per room in all urban, and rural occupied conventional dwellings, respectively. Dwellings exclude non-permanent structures and unoccupied parts.

Percentage of Dwellings with Electricity—total, urban, and rural—Conventional dwellings with electricity in living quarters as percentage of total, urban, and rural dwellings respectively.

EDUCATION

Adjusted Enrollment Ratios

Primary school - total, male and female—Gross total, male and female enrollment of all ages at the primary level as percentages of respective primary school-age populations. While many countries consider primary school age to be 6-11 years, others do not. The differences in country practices in the ages and duration of school are reflected in the ratios given. For some countries with universal education, gross enrollment may exceed 100 percent since some pupils are below or above the country's standard primary-school age.

Secondary school - total, male and female—Computed as above: secondary education requires at least four years of approved primary instruction; provides general, vocational, or teacher training instructions for pupils usually of 12 to 17 years of age; correspondence courses are generally excluded.

Vocational Enrollment (percent of secondary)—Vocational institutions include technical, industrial, or other programs which operate independently or as departments of secondary institutions.

Pupil-teacher Ratio - primary, and secondary—Total students enrolled in primary and secondary levels divided by numbers of teachers in the corresponding levels.

CONSUMPTION

Passenger Cars (per thousand population)—Passenger cars comprise motor cars seating less than eight persons; excludes ambulances, hearses and military vehicles.

Radio Receivers (per thousand population)—All types of receivers for radio broadcasts to general public per thousand of population; excludes un-licensed receivers in countries and in years when registration of radio sets was in effect; data for recent years may not be comparable since most countries abolished licensing.

TV Receivers (per thousand population)—TV receivers for broadcast to general public per thousand population; excludes unlicensed TV receivers in countries and in years when registration of TV sets was in effect.

Newspaper Circulation (per thousand population)—Shows the average circulation of "daily general interest newspaper," defined as a periodical publication devoted primarily to recording general news. It is considered to be "daily" if it appears at least four times a week.

Cinema Annual Attendance per Capita per Year—Based on the number of tickets sold during the year, including admissions to drive-in cinemas and mobile units.

LABOR FORCE

Total Labor Force (thousands)—Economically active persons, including armed forces and unemployed but excluding housewives, students, etc., covering population of all ages. Definitions in various countries are not comparable; 1960, 1970 and 1983 data.

Female (percent)—Female labor force as percentage of total labor force.

Agriculture (percent)—Labor force in farming, forestry, hunting and fishing as percentage of total labor force; 1960, 1970 and 1980 data.

Industry (percent)—Labor force in mining, construction, manufacturing and electricity, water and gas as percentage of total labor force; 1960, 1970 and 1980 data.

Participation Rate (percent)—total, male, and female—Participation or activity rates are computed as total, male, and female labor force as percentages of total, male and female population of all ages respectively; 1960, 1970, and 1983 data. These are based on ILO's participation rates reflecting age-sex structure of the population, and long time trend. A few estimates are from national sources.

Economic Dependency Ratio—Ratio of population under 15, and 65 and over, to the working age population (those aged 15-64).

INCOME DISTRIBUTION

Percentage of Total Disposable Income (both in cash and kind)—Accruing to percentile groups of households ranked by total household income.

POVERTY TARGET GROUPS

The following estimates are very approximate measures of poverty levels, and should be interpreted with considerable caution.

Estimated Absolute Poverty Income Level (US\$ per capita)—urban and rural—Absolute poverty income level is that income level below which a minimal nutritionally adequate diet plus essential non-food requirements is not affordable.

Estimated Relative Poverty Income Level (US\$ per capita)—urban and rural—Rural relative poverty income level is one-third of average per capita personal income of the country. Urban level is derived from the rural level with adjustment for higher cost of living in urban areas.

Estimated Population Below Absolute Poverty Income Level (percent)—urban and rural—Percent of population (urban and rural) who are "absolute poor."

BARBADOS - ECONOMIC INDICATORS

Indicator	Amount US\$ million at current prices) 1984	Annual Growth Rate (%)											
		Actual							Est. 1984	Projected			
		1978	1979	1980	1981	1982	1983	1985		1986	1988	1990	
NATIONAL ACCOUNTS													
Gross Domestic Product	1151.6	6.0	7.7	5.2	-3.9	-4.4	-0.2	2.2		2.0	2.0	2.5	3.5
Agriculture	70.7	0.0	8.1	5.5	-18.0	-2.4	4.5	10.9		...	...	...	...
Mining & Industry	132.1	3.0	13.7	6.4	-8.7	0.4	2.2	-1.2		...	...	...	...
Services	834.7	5.7	7.0	4.5	0.4	-5.2	-0.8	2.0		...	...	...	...
Consumption	994.0	-4.9	5.9	10.8	2.3	-5.1	7.9	8.4		3.3	1.0	-2.6	1.5
Gross Investment	206.4	17.4	8.4	17.4	18.0	-14.4	-5.7	-5.7		2.6	4.9	5.1	5.3
Exports of GNFS	740.5	12.6	19.9	-1.2	-7.7	9.8	4.3	7.4		12.5	17.3	9.1	4.3
Imports of GNFS	783.3	0.4	17.7	9.2	7.5	2.0	10.3	10.5		14.0	15.6	3.7	3.8
Gross National Savings	164.2	77.8	-10.4	-10.0	-27.5	-6.0	-56.0	-80.6		.	.	.	.
PRICES													
GDP deflator (1976 = 100)		115.0	129.5	153.2	180.9	197.7	210.3	224.5		235.7	253.3	273.6	295.5
Exchange rate		2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0
Share of GDP at Market Prices (%) (at current prices)													
		1987	1982	1987	Average Annual Increase (%) (at constant 1976 prices)								
					1977-82	1982-87	1987-90	1983-90					
Gross Domestic Product ^{a/}		100.0	100.0	100.0	2.5	0.6	2.8	2.2					
Agriculture		8.2	6.1	...	-0.8	...	...	...		
Mining & Industry		10.7	11.1	...	2.1	...	...	...		
Services		89.6	72.4	...	2.9	...	...	...		
Indirect Taxes less Subsidies		11.5	10.3	...	2.9	...	...	...		
Consumption		82.4	83.3	82.5	2.3	2.2	1.0	3.1					
Gross Investment		22.9	22.6	18.5	3.7	-2.2	5.6	2.3					
Exports GNFS		60.7	61.4	74.7	9.4	10.1	5.4	7.9					
Imports GNFS		65.9	67.3	75.7	7.2	9.4	3.9	8.3					
Gross National Savings		20.8	18.5	.	7.1	.	.	.					
PUBLIC FINANCE													
		As % of GDP											
		1977	1979	1981	1983								
Current Revenue (CG)		23.9	26.7	24.5	24.7								
Current Expenditures (CG)		23.4	23.0	23.5	23.4								
Surplus/Deficit (CG)		0.5	3.7	1.0	1.3								
Surplus/Deficit (PS)		3.0	6.5	4.2	4.5								
Capital Expenditures (PS)		9.8	6.6	7.7	6.3								
Foreign Financing (PS)		2.8	2.7	2.9	1.4								

... Not available.

^{a/} At market prices: components are expressed at factor cost and will not add to total due to exclusion of net indirect taxes and subsidies.

Population: 0.252 (mid-1984)
 GNP per capita: US\$3,930 (1983)

ANNEX I
 Page 6 of 7

BARBADOS - EXTERNAL TRADE

Indicator	Amount (US\$ million at current prices) 1984	Annual Growth Rate (%) (at constant 1976 prices)								
		Actual						Est.	Projected	
		1978	1979	1980	1981	1982	1983	1984	1985	1986
EXTERNAL TRADE										
Merchandise Exports (domestic)	289.2	14.6	10.2	17.9	17.0	18.1	2.5	4.9	17.1	19.2
Sugar and Molasses	30.6	...	23.1	8.7	-51.4	32.8	-16.3	11.1	-2.7	-1.5
Other	258.6	n.a.	...	30.4	2.3	12.2	8.8	3.3	19.5	21.2
Merchandise Imports (retained)	583.4	4.8	9.0	0.8	3.8	-8.5	-4.4	-2.3	12.5	13.7
Food	83.5	...	...	...	...	...	...	...	...	...
Petroleum	103.8	...	...	...	...	...	...	...	...	...
Machinery	218.2	...	...	...	...	...	...	...	...	...
Others	177.9	...	...	...	...	...	...	...	...	...
PRICES										
Export Price Index		114.7	129.8	159.7	175.9	173.1	179.2	187.4	194.5	205.9
Import Price Index		123.1	142.2	161.8	164.8	159.4	154.2	153.0	160.4	172.1
Terms of Trade Index		93.2	91.3	98.7	106.7	108.6	116.2	122.5	121.3	119.6

**Composition of Merchandise Trade (%)
(at current prices)**

	1978	1984	1986
Exports (domestic)	100.0	100.0	100.0
Sugar and Molasses	28.8	10.6	8.3
Manufactures	61.0	78.7	81.7
Others	10.2	10.7	10.0
Imports (retained)	100.0	100.0	100.0
Food	19.9	12.1	...
Petroleum	11.6	15.1	...
Machinery	17.0	31.7	...
Others	51.5	41.1	...

**Share of Trade with
Industrial Countries (%)**

**Share of Trade with
Developing Countries (%)**

DIRECTION OF TRADE	Share of Trade with Industrial Countries (%)			Share of Trade with Developing Countries (%)		
	1973	1978	1984	1973	1978	1984
Exports	56.8	50.4	37.3	43.2	49.6	62.7
Imports	67.0	48.7	63.7	33.0	51.3	36.3

... = Not Available.

Population: 0.252 (mid-1984)
GDP per capita: US\$3,930 (1983)

ANNEX I
Page 7 of 7

BARBADOS - BALANCE OF PAYMENTS, EXTERNAL CAPITAL AND DEBT

	Actual						Est.	Projected			
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1988	1990
BALANCE OF PAYMENTS (US\$ million)											
Exports of GNFS	305.4	422.0	497.2	518.4	538.2	591.4	635.8	742.4	922.2	1217.8	1594.5
of which Merchandise f.o.b.	94.2	120.3	169.8	146.0	185.8	253.6	287.6	353.4	453.3	576.8	737.5
Imports of GNFS	334.9	463.3	560.8	631.5	597.4	646.6	678.6	810.7	1005.8	1264.1	1599.9
of which Merchandise c.i.f.	277.0	389.8	465.6	528.5	481.3	556.6	583.4	698.3	868.4	1091.9	1382.7
Net Factor Services	1.6	-1.6	2.3	0.0	-2.6	-15.6	-13.4	-14.8	-18.5	-33.0	-42.9
Net Transfers	16.4	18.9	23.8	27.1	20.4	20.8	20.0	22.6	25.3	30.1	34.1
Current Account Balance	-11.4	-24.0	-37.4	-86.0	-41.3	-50.0	-36.2	-60.5	-76.8	-49.2	-14.2
Private Direct Investment	-	-	7.0	6.5	15.0	...	10.0	15.0	15.0	15.0	15.0
MLT (net)	16.1	6.6	14.1	80.8	51.2	59.6	27.4	61.3	94.4	58.8	29.4
Other Capital n.e.i.	17.6	27.0	36.2	-26.1	-30.6	-5.6	-0.1	-	-	-	-
Change in reserves (increase = -)	-22.3	-9.6	-19.9	24.8	5.7	-4.0	-1.1	-15.8	-32.6	-24.6	-30.2
EXTERNAL CAPITAL AND DEBT											
Gross Disbursement	19.7	12.9	21.8	87.1	57.0	69.3	38.0	85.6	124.9	104.8	84.6
Multilateral	9.5	12.1	12.4	22.7	21.3	18.2	15.3	62.1	58.1	56.5	60.2
IBRD	-	-	0.8	3.6	8.9	7.2	7.6	8.5	9.7	15.2	22.8
CDB	...	0.8	2.7	7.6	4.8	3.3	0.1	3.6	8.2	1.0	-
IDB	4.4	5.0	6.8	9.2	4.9	5.2	4.0	8.0	19.3	29.9	36.7
Other	...	6.3	2.1	2.3	2.7	2.5	3.6	42.0	20.9	10.4	0.7
Other (off. & priv. sources) ^{a/}	...	0.8	9.4	64.4	35.7	51.1	22.7	23.5	66.8	48.3	24.4
Official Grants	0.8	0.6	1.0	1.1	1.4	1.3	1.8	...	...	...	...
External Debt											
Debt Outstanding & Disbursed ^{b/}	64.2	70.5	81.3	159.1	206.1	262.4	282.9	342.3	436.7	566.0	641.6
Debt Service											
Total Service Payments	8.2	12.5	14.5	14.8	21.5	26.6	31.9	45.1	55.3	85.7	104.6
Interest	3.8	5.7	5.8	7.4	14.3	15.6	19.5	20.8	24.5	39.0	48.9
Amortization	4.4	6.8	8.7	7.4	7.2	11.0	12.4	24.3	30.8	46.7	55.7
Debt Services as % Exports ^{c/}	3.5	3.8	3.4	3.6	4.9	5.2	5.7	6.9	7.1	8.0	7.4
Average Interest Rate on New Loans (%)	-	-	-	-	-	6.4	8.9	10.0	10.0	10.0	10.0
Average Maturity of New Loans (years) -	-	-	-	-	-	-	13.0	24.8	20.4	17.5	12.2

... = Not Available.

^{a/} Includes other public and publicly guaranteed financing from bilateral and private sources.

^{b/} Historical years reflect cancellations and other adjustments.

^{c/} Domestic exports and gross travel receipts.

STATUS OF BANK GROUP OPERATIONS IN BARBADOS

A. Statement of Bank Loans as of April 7, 1986 1/

<u>Loan</u>	<u>Year</u>	<u>Borrower</u>	<u>Purpose</u>	US\$ million		
				<u>(Amount less Cancellation)</u>		
				<u>Bank</u>	<u>IDA</u>	<u>Undisbursed</u>
1642-BAR	1979	Barbados	Education	9.0	-	0.0
1685-BAR	1979	Barbados	Tourism	7.3	-	0.0
1813-BAR	1980	Barbados	Industry	10.0	-	1.2
1940-BAR	1981	BLPC	Power	6.0	-	2.9
2115-BAR	1982	Barbados	Technical Assistance	2.7	-	0.8
2260-BAR	1983	Barbados	Ind. Credit	10.5	-	5.3
1642/1-BAR	1984	Barbados	Education Suppl.	3.0	-	0.4
2432-BAR	1984	Barbados	Highway Maint.	11.0	-	10.3
		TOTAL		59.5	-	20.9
		of which has been repaid		8.2	-	-
		TOTAL Outstanding		51.3	-	20.9

B. Statement of IFC Investments as of April 7, 1986

717-BAR	1984	Caribbean Financial Services Corp.	Finance for productive ventures in the Caribbean.	0.3 (equity)
---------	------	------------------------------------	---	-----------------

1/ The status of the projects listed in Part A is described in a separate report on all Bank/IDA-financed projects in execution, which is updated twice yearly and circulated to the Executive Directors on April 30 and October 31.

BARBADOS

SECOND EDUCATION AND TRAINING PROJECT

SUPPLEMENTARY PROJECT DATA SHEET

SECTION I: TIME TABLE OF KEY EVENTS

- (a) Time taken to prepare project: six months.
- (b) Agency which prepared project: Ministry of Education and Labor, assisted by Bank.
- (c) Project first presented to Bank: September 1984.
- (d) First Bank Mission to review project: October 1984.
- (e) Departure of Appraisal Mission: June 1985.
- (f) Completion of Negotiations: March 1986.
- (g) Planned date of effectiveness: July 1986.

SECTION II: SPECIAL BANK IMPLEMENTATION ACTIONS

Financing of project preparation under first education project (Loan 1642-BAR).

SECTION III: SPECIAL CONDITIONS

- (a) The Government of Barbados would ensure that the student-teacher ratios are not permitted to decrease below the levels prevailing during the 1983 school year, namely: 23:1 in primary schools, and 19:1 in secondary schools nor to increase beyond 35:1 at the primary level and 30:1 at the secondary level; (paragraph 45(a)).
- (b) The Government of Barbados would ensure that a draft revised policy for textbook procurement and distribution is prepared by July 1987 and that the procurement of books for the proposed project proceed only after the policy as agreed with the Bank and the IDB (paragraph 45(d)).
- (c) The Government of Barbados would ensure that the Bank is kept informed of progress being made in the attainment of its educational objectives and that the Bank is furnished annually, until a date six months after the Closing Date of the proposed project for the Bank's review, a statement on any major educational policies or plans formulated by the Government (paragraph 60).



