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Ethiopia - EELPA

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Ethiopia - Ethiopian Electric Light and Power Authority [EELPA] - Reports

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

ECONOMIC GROWTH AND PROSPECTS

IN

ETHIOPIA

(in five volumes)

VOLUME I

MAIN REPORT

September 22, 1970

EQUIVALENTS

CURRENCY

| | | |
|------------|---|---------------------------|
| Unit | = | Ethiopian dollar (Eth.\$) |
| U.S.\$1.00 | = | Eth.\$2.50 |
| ETH.\$1.00 | = | U.S.\$0.40 |

WEIGHTS

Unless otherwise stated, tons in this report refers to long tons.

| | | |
|------------|---|------------------|
| 1 metric | = | 2,205 lb. |
| | = | 1,000 kg. |
| | = | 0.9844 long tons |
| 1 long ton | = | 2,240 lb. |
| | = | 1,016 kg. |

MEASURES

| | | |
|--------------------|---|--------------------|
| 1 meter (m) | = | 39.37 inches |
| 1 kilometer (km) | = | 0.62 miles |
| 1 hectare (ha) | = | 2.471 acres |
| 1 square kilometer | = | 0.386 square miles |

TIME

The Ethiopian calendar year (EC) runs from September 11 to September 10. There is a difference of about 7-3/4 years between the Gregorian and the Ethiopian era. For example 1963 EC runs from September 11, 1970 to September 10, 1971. Most of the Ethiopian statistics are converted to the Gregorian calendar. Throughout the report the Gregorian calendar is used.

The Ethiopian budget year runs from July 8 to July 7. For example, Ethiopian budget year 1963 runs from July 8, 1970 to July 7, 1971. In the report this year is referred to as budget year 1970/71.

THE MISSION

This report is based on the findings of a mission in January - February, 1970 to Ethiopia composed of :

| | |
|------------------|------------------------|
| Lyle M. Hansen | Chief of Mission |
| R. H. Khandker | Chief Economist |
| C. P. Cacho | General Economist |
| S. Please | Fiscal Economist |
| L. Hewes * | Agricultural Economist |
| I. Abu Sharr * | Agronomist (FAO) |
| B. Decaux * | Industrial Economist |
| D. H. F. Bickers | Transport Economist |
| J. Bonnett) | Tourism Specialists |
|) | |
| A. El Maaroufi) | |

* Consultants

The Mission received assistance from the UNDP Resident Representative in Ethiopia (M. R. Gachot) on pre-investment studies, Mr. George Mahoney on Transport and Mr. O. J. Markgren and Mr. G. Pennisi on Education.

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Investment Projection
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Annex 2 - Manufacturing Industry
Annex 3 - Mining

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- A - Illustrative Growth and Investment Projections
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ETHIOPIA

Basic Data

Area: 470,000 square miles

Population (1970): 25 million

Rate of Growth: 2.1% per annum

Population density: 53 per square mile

Political Status: Imperial Sovereignty

Gross Domestic Product at Current Factor Cost (1969): Eth \$3.8 billion

Monetary: Eth \$2.1 billion

Non-monetary: Eth \$1.7 billion

GDP Per Capita (1969): Eth \$158

US \$63

| <u>Rate of Growth of GDP</u> | <u>1965-69</u> | <u>1961-65</u> |
|------------------------------|----------------|----------------|
| Total | 4.5% | 4.4% |
| Monetary | 7.0% | 7.5% |
| Non-monetary | 1.9% | 1.7% |

Percent of GDP (Current prices, 1969):

| | |
|--|------|
| Agricultural activities | 58.5 |
| Mining, Manufacturing, Construction and Power | 13.5 |
| Trade, Communication, Banking, and Insurance | 12.3 |
| General Government, Education, and Health | 7.9 |
| Other services | 7.8 |

| <u>Investment and Savings</u> | <u>1969</u> | <u>1965-69</u> |
|--|-------------|----------------|
| Gross Fixed Investment (% of GDP) | 13.6 | 13.4 |
| Gross Fixed Monetary Investment (% of Monetary GDP) | 19.3 | 18.5 |
| Gross Domestic Savings (% of GDP) | 12.9 | 11.1 |
| Gross Monetary Domestic Saving (% of Monetary GDP) | 18.0 | 15.3 |
| Net Imports of Goods and Non-factor Services (% of GDP) | 0.7 | 2.3 |
| Net Factor Payments Abroad (% of GDP) | 0.5 | 0.3 |

Central Government Operations

| | <u>1968/69</u> | <u>1963/64</u> |
|----------------------|-----------------|----------------|
| | (Million Eth\$) | |
| Current Revenues | 392.2 | 272.5 |
| Current Expenditures | 361.8 | 235.3 |
| Current Surplus | 30.4 | 37.2 |
| Capital Expenditures | 64.7 | 61.4 |
| Budget Deficit | 34.3 | 24.2 |
| Foreign Aid (gross) | 23.6 | 26.4 |
| Repayment of Loans | 24.0 | 7.6 |
| Net Foreign Aid | -0.4 | 18.8 |
| Cash Deficit | 34.7 | 5.4 |

External Public Debt

| | <u>December 1968</u> |
|--|----------------------|
| | (Million US\$) |
| Total Outstanding | 231.6 |
| Net of Undisbursed | 135.3 |
| Total Debt Service (1968) | 16.2 |
| Debt Service as % of Foreign Exchange Earning (1968) | 9.3 |

Money and Credit

| | <u>End 1969</u> | <u>End 1965</u> |
|----------------------------|-----------------|-----------------|
| | (Million Eth\$) | |
| Money | 431.7 | 350.1 |
| Time and Savings Deposit | 150.0 | 71.4 |
| Money and Quasi-money | 581.7 | 421.5 |
| Foreign Assets (net) | 180.8 | 214.3 |
| Claims on Government (net) | 119.5 | 47.0 |
| Claims on Private Sector | 324.8 | 193.5 |
| Other Assets | 33.3 | 43.5 |

Balance of Payments

| | <u>1969</u> | <u>1965</u> |
|----------------------------|-----------------|-------------|
| | (Million Eth\$) | |
| Merchandise Exports f.o.b. | 301 | 292 |
| Merchandise Imports c.i.f. | 388 | 376 |
| Net Invisible | 37 | 9 |
| of which Investment income | -20 | - 9 |
| Current Account Balance | | |
| (before transfers) | -50 | -75 |

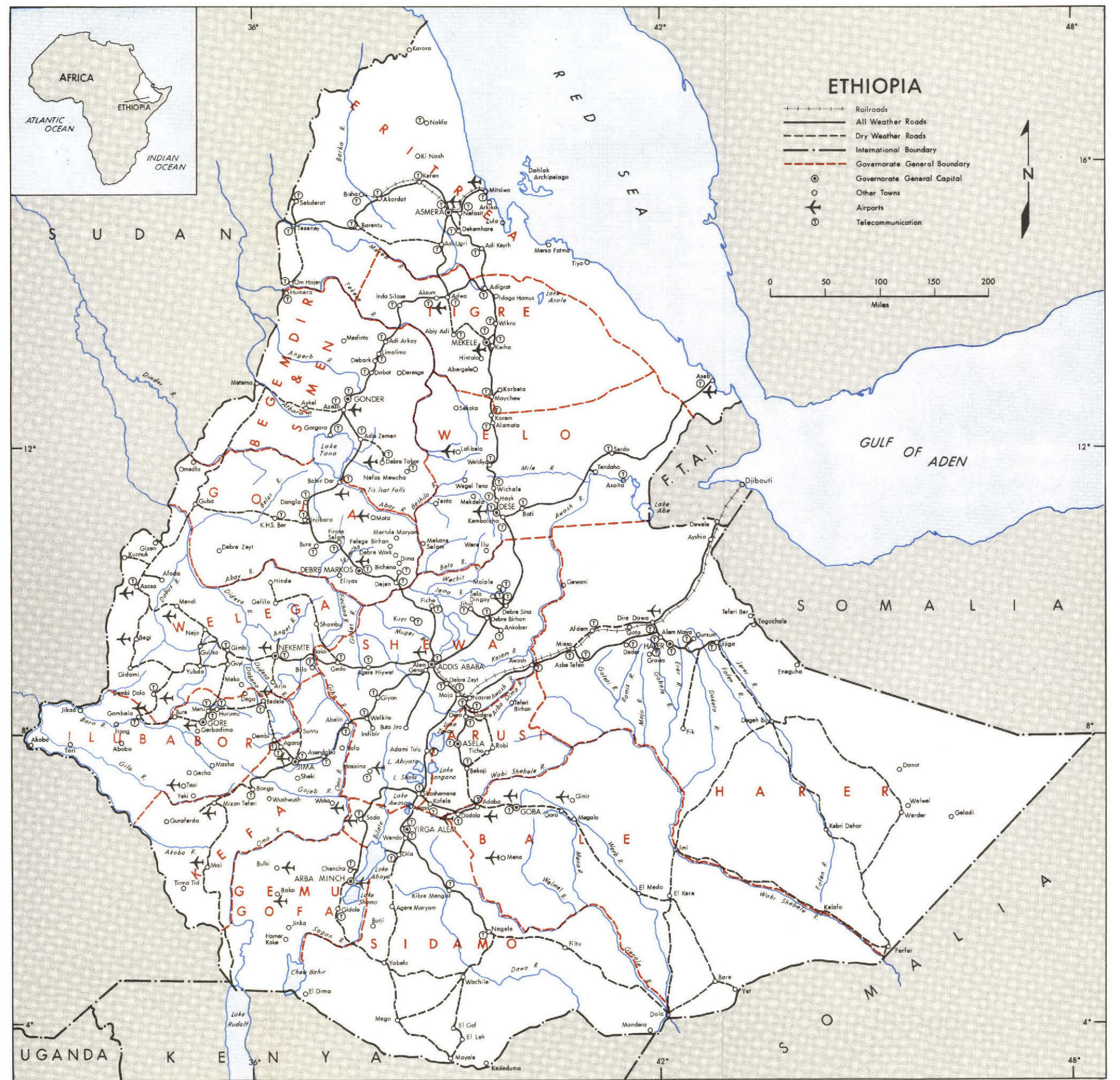
Commodity Concentration of Exports

| | <u>1969</u> | <u>1965-69</u> |
|--------|-------------|----------------|
| Coffee | 58% | 58% |

Foreign Exchange Reserves (December 1969): US \$72.4 million = 5½ months' imports

IMF Position

| | |
|----------|-----------------|
| Quota | US \$19 million |
| Drawings | None |



SUMMARY AND CONCLUSIONS

1. The income of 90 percent of the population of Ethiopia, 60 percent of its GDP and virtually all of its exports derive from agriculture. Coffee is the dominant cash crop and averages 60 percent of exports. In the 1960's the economy went through a period of high growth up to 1965 and lower growth thereafter. The decline in growth was primarily due to a decline in export earnings resulting from a decline in coffee prices, but it was aggravated by the closure of the Suez canal. In constant prices, GDP grew by about 4.5 percent per year throughout the decade, but in current prices it grew by 8.3 percent per year between 1961-65 compared to 4.5 percent between 1966-69. Coffee prices increased 20 percent in the early period and declined 9 percent in the later period; the terms of trade similarly improved 15.5 percent in the early period but deteriorated 15.5 percent in 1966-69.
2. The decline in exports and declining growth of GDP in 1966-69 had serious repercussions upon income and investment, particularly Government revenues and public investment. Whereas Government savings had increased in 1961-1966/67 with revenue growth exceeding the growth of current expenditures, Government savings stagnated after 1966/67, as current expenditures increased faster than the slower-growing revenues. Current expenditures grew at a faster rate because of increases in administrative and defense services while revenues declined because of slackening exports and imports, as well as the effect of import substitution upon import tax revenues. Government investment stagnated, and current expenditures for economic and social services were squeezed below levels required to sustain development programs. While Government borrowing from the banking system increased during the economic decline, it was not adequate to sustain expenditures or offset fluctuations in the economy. Despite the decline in exports in recent years, external reserves increased in all but two of the ten years because of the income effects of export fluctuations, as well as the conservative balance of payments policy of the Central Bank.
3. The Government took a number of measures to cope with the financial squeeze of 1966-69. A special committee investigated the Government's financial difficulties and suggested remedial measures. The banking legislation was revised to make prudent deficit financing possible. Treasury bills were introduced to meet seasonal needs. Customs duties and income tax on higher income brackets have been raised. A new agricultural income tax to replace the age-old "tithe" system has proven fairly successful after initial difficulties. Finally, the 1970/71 budget has been prepared on a more realistic basis, including significant increases in investment and current expenditures for economic and social services.
4. The attempt to carry out the Third Five-Year Plan introduced in 1968 has been influenced by these difficult economic circumstances. Government investment has been only about half the level projected for the first two years of the Plan; similarly, growth of GDP and exports has lagged behind targets. The financial targets of the Plan thus need revision. On the other hand, a start has been made to improve the development machinery, for example project preparation has improved significantly; but

much remains to be done to overcome the shortage of skilled manpower and to improve the Government organization in order to expand Ethiopia's absorptive capacity and enhance the prospects of future economic development.

5. Coffee prices increased in late 1969 and are expected to remain high for several years. This more favorable turn in the coffee market, and hence in Ethiopia's balance of payments and budget, provides an opportunity for a more vigorous development effort in the next few years. This report analyzes the implications of an expanded development effort. As a plausible target, monetary GDP would increase from 7.5 to 8.0 percent per year between 1970-74 and overall GDP from 5.2 to 5.5 percent. The major determinant of growth is the growth rate of monetized agriculture; this target assumes the implementation of the expanded agriculture program. Taking recent investment ratios as a plausible target, monetary investment is estimated at about Eth\$ 2,950 million over the period 1970 to 1974. Taking into account the likely volume of private investment as well as the savings capacity of Government, Central Government investment might be Eth\$ 825 million or an average of about Eth\$ 165 million per year. If finance were no constraint, Central Government investment could be even higher since there is, at the moment, an adequate number of available projects; moreover, it would be easier to achieve a balanced program at a higher investment level. Ethiopia could elect for this higher level if tax, expenditure and borrowing policies are adapted to this goal.

6. If external capital finances half of the Central Government investment target of Eth\$ 825 million, domestic resources have to be found for about Eth\$ 410 million. If the increase in current expenditures on defense and administration is limited to 4 percent per year while expenditures on economic and social services increase 10-12 percent a year, then existing taxation could generate Eth\$ 170 million, leaving a budget gap of Eth\$ 240 million. New taxes, comprising taxes on corporation income, excises and land could, if enacted immediately, prudently raise Eth\$ 30 million per year or Eth\$ 135 million. If the new tax revenues are realized, the amount required from domestic borrowing would not exceed Eth\$ 105 million.

7. Most domestic borrowing will have to come from the banking system. Government borrowing of this magnitude appears to be prudent, but it should be adjusted to allow for fluctuations in the economy. As export growth and economic expansion is expected to decline in the later years of 1970-74, Government borrowing should be small in the early years and larger in the later years of this period. This corresponds to what Government borrowing requirements are likely to be, as revenues should be buoyant in the early years compared to later years. Alternatively, higher Government borrowing in later years can be used to support even higher levels of Government investment.

8. A Government investment program of this magnitude raises overall financial and organizational, as well as development sector issues. Public savings involve both expenditure and revenue issues. Clearly, current

expenditures on administration and defense have to be controlled, while adequate amounts have to be provided for economic and social services. On the whole, Ethiopia's tax burden is fairly low and there are prospects for increasing taxation, especially from excise and land taxes. There is scope for increased user charges, as with roads, schools and ports, and Government should expect Government enterprises to pay reasonable dividends; this assumes improvement in public enterprise profitability.

9. A flexible policy to protect investment from fluctuations in export earnings is required. This can be dealt with by internal borrowing policies. A more favorable balance of payments situation can permit building up of foreign exchange reserves which can be run down during less favorable years. Internally, this means that neither monetary nor fiscal policy should be expansionary during the boom period. If there are sufficient reserves, then during periods of balance of payments difficulties, budget and monetary policy can be used to offset the impact on the internal economy. Interest rates should be adjusted to pursue the desired monetary policy objectives. The Ethiopian authorities are well placed to pursue such a policy given the level of external reserves and a history of monetary discipline.
10. Investment and savings decisions of public enterprises need to be coordinated with overall objectives of fiscal policy. At present, public enterprises take such decisions too much in the light only of their own needs. The preparation of a consolidated public sector budget would go a long way to meet this coordination goal. This also implies that any surpluses of public enterprises above their own needs be made available to Government by way of dividends or loans.
11. Annual budgeting needs to be improved. Recently, budgets have not been based upon realistic estimates of resources, with the result that budgeted expenditures have had to be reduced on an ad hoc basis. This has been costly in development terms as facilities have been made idle or delayed. Procedures are needed to coordinate the budget work by the Ministry of Finance, Planning Commission and the Central Bank.
12. In the development sectors, 14 agricultural projects have been prepared involving Eth\$250 million, and annual expenditures could rise to Eth\$60 to \$70 million. The program will have to be re-phrased because of manpower limitations, but still represents a substantial increase in Government investment in agriculture. The Plan emphasizes both commercial agriculture and the concentration on package programs. The Plan also emphasizes production inputs. Consideration might be given to benefiting more farmers at lower cost by means of a greater number of lower-cost package programs; by starting a rigorous program to influence demand through improved marketing and by a special effort in agricultural credit.
13. Manufacturing output is expected to increase less than planned although investment in industry might be close to Plan targets. The amalgamation of the two existing development finance institutions into a new Ethiopian Development Corporation should materially improve the prospects

for industrial finance. Too many Ethiopian industries have a low share of value added and high prices relative to international prices. The major reason is the tariff structure. Tariff policy should be based upon one of three alternatives: a uniform nominal tariff; a uniform effective tariff; or a simplified two-group tariff structure, with one tariff for products manufactured in Ethiopia and one for those which are not. Since the growth of import substitution industries is expected to slow down, export incentives should be given to domestic resource based industries in the effort to sustain industrial expansion.

14. In transportation, more emphasis should be placed on feeder roads, and on efficiency in the construction and maintenance of roads. Proposals to restrict road haulers have little economic merit. The comparative economic merits of Assab and Djibouti ports and their respective road and railway need study, as the railway is making losses and is likely to encounter greater losses as the Addis to Assab road improves. Similarly, the Port of Massawa and its road and railway need study; the railway may be uneconomic. Domestic airports need improvement, but the type of improvements cannot be determined until a decision is made on which aircraft is to replace the DC-3. Both questions need study together. An education sector study based on a comprehensive manpower survey is needed to determine the outlines of an education investment program; both studies are to be organized with the assistance of the Bank. The health program is behind the Plan targets in respect of malaria eradication and rural health centers. Completion of the costly Duke of Harrar Hospital will probably require reductions in other health programs. Tourism facilities, with a few exceptions, seem adequate for the anticipated traffic over the next few years. However, detailed studies should be made of the hotel and infrastructure needs for later in the decade.

15. In order to finance the investment target for 1970-74, it is estimated that external capital inflow would have to be about Eth.\$ 550 million. This capital inflow comprises Eth.\$ 415 million which would cover half the Central Government investment, Eth.\$ 81 million to assist the investment of parastatal agencies and private investment, and Eth.\$ 54 million for increase in external reserves. External reserves should increase during this period in order that they can be drawn down in a later period when it is expected that the balance of payments will come under pressure. On this basis, external reserves would be the equivalent of 4-1/2 months imports by the end of 1975 compared to 5-1/2 months at the end of 1969.

16. The needed capital inflow will exceed the import content of the Central Government investment program, e.g., import content of Eth.\$ 330 million and capital inflow of Eth.\$ 415 million. Moreover, not all of the Government capital program will be able to obtain foreign assistance so that if foreign aid is to make a reasonable contribution to the program some financing of local expenditures will be necessary. As foreign aid is expected to finance 50 percent of the total program, this will mean that on the average significantly more than 50 percent of the costs of foreign aid eligible projects should come from external aid.

17. At the end of 1969, external debt service was 11.3 percent of exports in that year (the debt service ratio). External lending terms received by Ethiopia averaged 24.7 years maturity, 5.4 years grace and 4.4 percent interest rate. More significantly, the blend of external lending averages 35 percent on conventional terms and 65 percent on concessional terms. The future external debt service burden will depend upon the export growth rate, and the volume and terms of external borrowing. Assuming that external aid finances half the Government investment program and investment were to increase by 50 percent in each five-year period, then Ethiopia would require an inflow of aid which would increase 8.5 percent each year. If exports could increase over the long run at 6.3 percent a year Ethiopia would be unlikely to encounter any debt problems for the next decade. On the other hand if exports rise at only 5 percent per year the debt service ratio would be as high as 15 percent by 1985. Aid on more concessionary terms would help to keep down the debt service ratio and at the same time would mean a higher inflow of net aid. The balance of payments and debt outlook emphasizes the importance of the terms on which aid is given, and the importance of a successful export promotion program. Ethiopia should seek external aid on more concessionary terms and at the same time should give high priority to export growth.

CHAPTER I

BACKGROUND

The Country

1. Ethiopia forms part of the Horn of Africa. It is situated just north of the Equator between Sudan on the north and west, Kenya on the South, Somalia and the French Territory of Afars and Issas on the south and lower east coast, and the Red Sea along the upper east coast.
2. The country consists of 1.2 million sq. kilometers (470,000 sq. miles), roughly twice the size of Kenya. Its main physical characteristics are the central highland complex of mountains and plateaus which dominate the country, dissected by the Rift Valley from northeast to Southwest; and the lowlands along the periphery. Most of the country is well watered by rivers which originate in the highlands and flow mainly through deep gorges.
3. The climate is largely determined by the altitude. The lower the altitude the lower the rainfall, with extremes of high rainfall at high altitudes and areas of very limited precipitation at some low altitudes. The country may be divided into three climatic zones based on different altitudes: the tropical zone of areas up to 1,800 m with an average annual temperature of 26° C, the sub-tropical zone of areas between 1,800 and 2,400 m with an average annual temperature of 22° C, and the temperate zone of areas exceeding 2,400 m and a 16° C average annual temperature. There are two rainy seasons - the 'big' rains from July to September and the 'small' rains in late February, March into April.

Population

4. Ethiopia has never had a census. Based on sample surveys carried out by the Central Statistical Office, the population is estimated at 25 million and is thought to be growing at about 2.1% a year. It is also estimated that only 8% of the population live in urban areas. Almost all of the rural population is engaged in subsistence agriculture. The most populated areas are the fertile highlands where rainfall is adequate and the incidence of malaria is low. The highlands are now becoming overcrowded and measures are being taken to eradicate malaria in the lowlands. These two factors are encouraging a shift of population to the lowlands.
5. Ethiopia's population comprises many ethnic groups, the most important numerically being the Amhara descendants of the early Hamitic inhabitants and later Semitic immigrants, the Gallas, the Tegreans, Somalis, and Danakil nomads who are also of hamitic stock.
6. Ethiopia has no official policy of population control. The attitude of the dominant religions, the Ethiopian Orthodox Church and Islam, has not favored a positive policy of population control, although there is a growing recognition of the need for family planning. The Government encourages the Family Guidance Association, which runs a small family

planning clinic. Some high ranking Government officials are members of its Board of Directors.

7. There has been some small migration of population from the over-populated highland toward the middle elevation lands as malaria control becomes effective and tribal affiliations give way to the urge for economic improvement. The Government also encourages such migration through irrigation and settlement projects. Although settlement schemes will bring some relief to the population pressure in the highlands, the scope is not very great.

8. The availability of unused cultivable land together with measures such as land reform can provide some time before the population problem becomes acute. However, the land can produce only if additional capital is available. Population growth consumes resources for housing, health and education, which could otherwise be used for productive purpose. This means that the apparently favorable land-labor ratio is of little advantage if population growth limits availability of resources to be used for improving the standard of living of the population.

Political and Constitutional Development

9. The origins of the Ethiopian state may be traced back about 2,000 years to the Kingdom of Aksum which flourished and then decayed during the first seven centuries of Christendom. The fortunes of the Empire varied over the centuries and it was seriously divided in the middle of the 19th century. Since then, beginning with the efforts of Emperor Tewodros, followed by Emperor Yohanes IV, and more importantly by Emperor Meneleke II and the present Emperor Haile Selassie I, the country has become increasingly unified. The latest act of unification was the integration of Eritrea in 1962. Two abiding influences in the country's history have been the office of the Emperor and the Ethiopian Orthodox Church. In the past, succession to the throne was a source of rivalry and a cause of division. The present Constitution provides for succession "perpetually attached to the line of Haile Selassie I".

10. There have been marked constitutional developments during the reign of the present Emperor. The 1931 Constitution provided for a Parliament comprised of a Chamber of Deputies and a Senate both appointed by the Emperor. The constitution was revised in 1955 and provided for a Chamber of Deputies to be elected by universal adult suffrage every four years. Further governmental advance was made in 1966 when the Emperor empowered the Prime Minister to recommend members of the Cabinet (The Council of Ministers) for appointment. Previously the Emperor had sole authority to name all ministers. Ministers are not members of Parliament - but are invited to appear before both houses from time to time in connection with matters relating to their portfolios. Legislation may be initiated by the Emperor, the Ministers, or Parliament and must be approved by both Houses and the Emperor before becoming law. Although the Emperor has delegated much of his traditional authority in the day to day matters of government to the Council of Ministers, there is still a high degree of executive

centralization. The more modern political institutions are having to work within a tradition based environment. A modern civil service is just beginning to emerge.

11. Alone among the states of Africa south of Sahara, Ethiopia developed as an African Empire rather than as a European colony. The topography was an important factor in this achievement, as was the ability of the Ethiopians to repel European intruders, except for the brief period of Italian occupation from 1936 to 1941.

CHAPTER II

OVERALL ECONOMIC PERFORMANCE AND PLANNING

Overall Economic Performance

12. Ethiopia's economic history for the 1960's shows that the movements in income, exports, investments, public revenues, etc. - the usual indicators of a country's economic performance - are largely beyond Ethiopia's control. Therefore, it would be incorrect, or even unjust, to judge her economic performance solely by such movements. Ethiopia's response to external factors affecting her economy should be a more appropriate test of economic performance.

13. Ethiopia's experience in the last few years was mixed. Agricultural production was badly affected by a drought in 1965-66. Food prices soared high despite substantial imports. Production recovered later, but the fall in the prices of exports, particularly coffee, had a serious effect on income, investment and government's financial position. The outbreak of the Arab-Israel war in 1967 resulting in the closure of the Suez Canal aggravated the situation.

14. Ethiopia's administration was not ready to respond adequately to these events. However, the Government did take a number of measures to cope with the situation. A special committee investigated the causes for the Government's financial difficulties and suggested remedial measures. The banking legislation was revised to make prudent deficit financing possible. Treasury bills were introduced to meet seasonal financial needs. The 1970/71 budget has been prepared on a realistic forecast of revenues and recurrent expenditures for economic and social services have been budgeted at a desirable higher level. Rates of some custom duties and income tax on higher income brackets have been raised. A wholly new agricultural income tax to replace the age-old "tithe" system has proved fairly successful after initial difficulties. Further tax measures are expected in 1970/71.

15. The attempt to carry out the Third Five-Year Plan in difficult economic circumstances has brought some new problems which the Government is now trying to solve. Although there is much to be done to make the developmental machinery more efficient, a start has been made. The two development financial intermediaries have been amalgamated and proposals have been made to reorganize important Ministries and strengthen their Planning Units. Project preparation has improved greatly in the last few years. With the assistance of bilateral and multilateral agencies the Government has prepared a number of agricultural projects. With improved organization and the assistance of foreign capital, these projects should make a significant contribution to Ethiopia's future economic development.

16. Ethiopia has just emerged from a period when, for the first time in many years, the Governments' finances were subjected to unaccustomed strain owing to a continued rise in current expenditure at a time when revenues were adversely affected by lagging exports and a consequent internal recession. The Government has taken a number of steps to make itself better able to cope with this kind of problem in the future and, at the same time, a more favorable turn in the coffee market and hence in Ethiopia's balance of payments and budget provide an opportunity for a more vigorous development effort in the next few years.

The Gross Domestic Product

17. Economic development in Ethiopia during the 1960's can be divided into two periods: (a) the earlier period up to 1965 when coffee exports were growing high, and (b) the latter period from 1966 to 1969 when coffee exports levelled off.

18. Ethiopia's Gross Domestic Product (GDP) at current (factor) prices in 1969 is estimated at Eth \$3.8 billion, (Table 3 of Statistical Appendix). Over the decade from 1961 to 1969, GDP at current prices increased at 6.4% per annum, raising the per capita income from about Eth \$115 (US\$45) to Eth \$158 (US\$63). Monetary GDP increased at an annual rate of about 8%. However, these 6.4% or 8% average annual increases conceal the variations that took place within the decade. Between 1961 and 1965 GDP at current prices increased at 8.3% which was almost double of the 4.5% rate of increase between 1966 and 1969. The relative increases of the monetary GDP in the two periods are 11.3% and 6.7% respectively. 1/

19. However, in constant (1961) prices the growth rates in the two periods, 1961-1965 and 1966-1969, have been almost the same- around 4.5% (Table 4 of Statistical Appendix). Per capita real income increased at an annual rate of about 2%. However, the rates of growth for the sectors in the two periods show some marked differences. Agriculture grew at 1.8% in the 1961-65 period compared to 2.2% in the 1966-69 period. Agricultural production in 1965/66 was badly affected by a drought which is the cause for the low annual average growth between 1961 and 1965. In the years after 1966, weather conditions were favorable and harvests were much better. For this reason, and because 1965 is a low base-year agriculture's growth rate between 1965 and 1969 is higher. The manufacturing sector maintained a 16.5% annual growth rate for the entire period. This is indeed an impressive record built upon successful import substitution. However, the growth rates of construction and trade declined from 11.4% and 10.0% during 1961-65 to 8.5% and 5.1% during 1966-69. Public administration and defense grew at only 4.8% in the later period compared to 12.3% in the earlier period. But educational and health services, mostly provided by the Government, maintained high growth rates in both periods.

1/ All economic statistics in Ethiopia are subject to a wide margin of error since the collection of basic data is still at an early stage.

20. The difference between the two periods in the growth of the monetary GDP in current prices - 11.3% during 1961-65 compared to 6.7% during 1966-69 - is to be explained not only by the changes in prices of domestically consumed part of GDP, but also by the changes in the prices of exports, particularly of coffee. Between 1961 and 1965 the export price of coffee rose by 20%, but it fell by 8% between 1965 and 1969. The 11.3% annual growth rate in the monetary GDP in current prices during 1961-65 can be broken down to 7.5% due to increase in physical production, 0.9% due to increase in export prices, and 2.9% due to increase in the price level of the domestically consumed part of GDP. For the 1966-69 period, the 6.7% annual growth rate in monetary GDP in current prices can be broken down to 7.0% due to increase in physical production and -0.3% due to fall in export prices; there was no change in the overall price level of the domestically consumed part of GDP. While the changes in the price of domestically consumed part of GDP make no difference to real income, changes in export prices do affect real income through the changes in terms of trade. Import prices rose by 3% during 1961-65 compared to a 19% rise in export prices, while during 1966-69 imports prices rose by 9% compared to a 8% fall in export prices. The terms of trade improved by 15.5% during 1961-65, but deteriorated by 15.5% during 1966-69. The growth rate in real income of the monetary sector - combining the change in the terms of trade with the increase in physical production - comes to 8.3% per year during 1961/65 and 6.4% per year during 1966-69.

Investment and Savings

21. The estimate of total investment is derived from separate estimates of machinery and construction. The machinery component estimate is fairly well based, although the assumptions used for adjustments are subject to considerable error. The estimates of construction are very rough. There are no estimates for investments in stocks, except for livestock; the figures are, in any case, very small. Thus, the estimates of gross capital formation represent investments in fixed assets.

22. Data on Ethiopia's investment and savings are given in Table 5 of the Statistical Appendix. ^{1/} The fixed investment ratio remained around 12% for most of the early 1960's, before it rose to nearly 14% in 1967. Investment was high in 1967 mainly owing to increased investment in industries, housing and hospital construction. The increased investments in industries and hospitals reflect the large public investments in the Assab Refinery and the Duke of Harrar Hospital. This investment ratio was maintained in 1968 and 1969, mainly by investments in the paper and pulp and sugar industries.

23. Estimates of total fixed investment includes investment in kind, most of which is in construction of traditional huts ("tukuls"); the rest is land reclamation and increase in livestock in subsistence agriculture.

^{1/} In interpreting the figures in Table 5, the weakness of source data should be borne in mind.

Estimates of monetary fixed investment, which are more meaningful for economic analysis, average nearly 18% of monetary GDP for 1961 to 1969; the ratios for the last four years are higher than those of the earlier years.

24. Investment in infrastructure has by far the largest share, 54% of the total, shared almost equally by the transport and communication sector (28%) and the housing sector (26%). Table 6 in the Statistical Appendix shows that the large share of transportation reflects heavy investment in road building (and in some years airline and shipping). Investment in housing reflects the high demand for houses in Addis Ababa which, apart from being the nation's capital, is also the headquarters of the Economic Commission for Africa and the Organization for African Unity. However, the share of housing in the total monetary investment gradually declined from 35% in 1961 to 21% in 1967. The share of the directly productive sectors has averaged 28%. Agriculture's share has been very small, less than 6%, equal to that of mining; the manufacturing sector accounts for 16% of total investment. The share of the power sector is about 7%. The remaining 11% of the total fixed monetary investment is in the service sectors.

25. A breakdown of investment into public and private sectors is not possible, because the Central Government's budget does not cover most of the statutory public agencies. The budgetary capital expenditures, as shown in Table 14 in the Statistical Appendix, include direct investments by the Government as well as contributions to the financial intermediaries. On the average, such public capital expenditures constitute about 20% of the total monetary fixed investment. The remaining 80% is mostly private but includes some investment by public statutory agencies.

Financing of Investment

26. For Ethiopia, as for many other developing countries, direct estimates of savings are not available. The mission has estimated gross domestic savings by subtracting the net import of goods and non-factor services (the resource gap) from gross domestic investment. The share of domestic savings to GDP remained around 10% during 1961-66; it rose to nearly 12% in 1967 and 1968 and in 1969 reached 13%. This estimate of domestic saving includes saving in kind. The share of monetary saving in the monetary GDP fluctuated between 13% and 18% and shows no visible trend. On the whole, the gross domestic monetary saving financed 83% of the gross monetary fixed investment and the remaining 17% was financed by foreign aid.

27. The Central Government's savings (current revenues - current expenditures) has financed, on the average, 52% of its capital expenditure, and roughly 10% of the total monetary fixed investment. Private savings and the savings of the public statutory agencies have financed roughly 73% of the total monetary fixed investment and average about 13% of the monetary GDP.

Development Planning

28. Ethiopia has so far produced three five-year development plans. The First Five-Year Plan covered the period 1956/57 to 1960/61, but was extended to include 1961/62. The Second Five-Year Plan (SFYP) covered the period 1962/63 to 1966/67. There was then a gap of one year before the Third Five-Year Plan (TFYP) started in 1968/69 to continue up to 1972/73.

29. The First Plan gave high priority to the development of infrastructure and education. Agriculture was also a priority sector but less so than infrastructure and education. The Second Plan put greater emphasis on investment in directly productive sectors and less on infrastructure. The total investment target was fulfilled and the growth rate was 4.6%, close to the 4.7% target. However, the distribution of investment between the public and the private sectors as well as its distribution between economic activities differed greatly from the Plan targets. While investment by the private sector was over-fulfilled, capital outlays by the public sector fell short of the targets. Investment in agriculture and social services were less than half of the Plan targets, whereas the investments in housing, industry, power and transportation exceeded them.

The Third Five-Year Plan

30. The over-all objective of the Third Five-Year Plan is to achieve a 6% growth rate for the economy, and an average annual increase in per capita income of over 3%. It gives highest priority to agriculture giving equal weight to the modernization of subsistence agriculture and the development of commercial agriculture. Emphasis has been given to enlarging and strengthening the educational base. Manufacturing is to maintain a growth rate of 15%. Although infrastructure has been given a lower priority, the Plan recognizes the need for building such infrastructure as feeder roads and power to support agriculture and industry.

31. The investment target for the Third Five-Year Plan has been set at Eth. \$3,665 million, or Eth. \$3,115 million excluding investment in kind. Domestic savings are expected to finance Eth. \$2,400 million. The required gross capital inflow from abroad has been estimated at Eth. \$1,050 million to cover investment as well as debt servicing and repatriation of capital during the period. The allocations between the public and the private sectors are almost equal. The Public sector includes statutory agencies not included in the Central Government's budget. The Central Government is to spend Eth. \$983 million of which as much as Eth. \$675 million is to come from budgetary sources and domestic borrowing. The total budgetary surplus for the five years has been estimated at Eth. \$396 million.

32. One important feature of the Third Plan is its emphasis on the need for strengthening the administrative capability of the Government and introducing important policy changes. Two separate chapters have been

devoted to spelling out the proposed organizational changes and the policy requirements which are considered imperative for the realization of the Plan targets.

33. Two of five years of the Plan period have passed and programs have been prepared for the third year. It is now clear that the financial targets of the Plan were not realistic. The actual capital expenditure of the Central Government in the first two years is about half of the Plan target. Similarly, export earnings and capital inflows lagged far behind the Plan projections. The Plan was prepared at the time when a period of high growth of the economy was coming to an end. Although the slow-down had already started, the Plan assumed a continuation of the rising trends of public revenues, export earnings, capital inflows, etc. characteristic of the first half of the 1960's. It is now recognized that the growth and the investment targets of the Plan cannot be achieved and the Plan needs revision.

CHAPTER III

EXTERNAL AND INTERNAL FINANCE

Foreign Trade

34. Coffee is Ethiopia's most important export; it constituted 56% of total exports during 1960-69 and its share ranged from 50-65% generally following price movements. Next to coffee are three groups of about equal importance: oilseeds and cakes (10% of 1968 exports), pulses and cereals (9%) and hides and skins (9%). Of the rest, animals and meat, and fruits and vegetables each contributed about 3% to the 1968 exports (Table 7 of Statistical Appendix).

35. The magnitude and the direction of Ethiopia's foreign trade is set by coffee. In the first half of the 1960's, total export revenue increased rapidly as a result of increasing coffee exports. But because of the fall in coffee prices in 1966, total exports declined and the decline continued in 1967. There was some recovery in 1968 but exports were still much lower than the peak level of 1965. However, coffee prices rose sharply in the later part of 1969 as a result of the unprecedented frost in Brazil, and total exports in 1969 surpassed the 1965 level.

36. Between 1960 and 1965 exports increased at an average annual rate of 9.7%. Such a high growth rate was made possible by the very high growth rate in coffee exports of 14.8%. This was mainly due to a rise in price from Eth.\$ 1,676 per ton f.o.b. in 1961 to over Eth.\$ 2,200 in 1964-65. Although the price was the dominant cause of the high coffee export earnings in 1964 and 1965, there was also an increase in the volume of exports, even when prices were relatively stable in the earlier years. Table 1 in the text describes the movements in coffee exports.

Table 1: EXPORTS OF COFFEE

| | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Volume | | | | | | | | | | |
| ('000 tons) | 51.3 | 56.0 | 62.6 | 66.1 | 70.2 | 87.6 | 73.6 | 73.6 | 80.3 | 88.4 |
| Price per ton | | | | | | | | | | |
| (Eth.\$) | 1,840 | 1,676 | 1,712 | 1,677 | 2,263 | 2,146 | 2,110 | 1,891 | 1,905 | 1,968 |
| Value (million | | | | | | | | | | |
| Eth.\$) | 94.4 | 93.8 | 107.2 | 110.9 | 158.8 | 188.2 | 155.3 | 139.2 | 153.0 | 173.9 |
| Total Exports | | | | | | | | | | |
| (Eth.\$) | 180.2 | 188.6 | 200.0 | 223.4 | 262.5 | 289.8 | 277.5 | 252.7 | 266.0 | 298.4 |
| Share of | | | | | | | | | | |
| Coffee (%) | 58 | 50 | 54 | 50 | 60 | 65 | 56 | 55 | 58 | 58 |

37. Most Ethiopian coffee grows wild in the forest and pruning would bring higher yields and better communication would result in more picking. Ethiopia could increase coffee supply if the international market could absorb it. However, the International Coffee Agreement limits exports from participating countries. Ethiopia is a member of this Agreement and must regulate exports according to her quota. However, Ethiopia also exports coffee to some non-quota countries; in the past such exports ranged between 4,000 tons to 9,000 tons.

38. The non-coffee exports show no visible trend, although there were yearly fluctuations. Total exports were high in 1965 due to better performance of hides and skins and to some extent pulses. The highest amount was reached in 1969 through increased receipts from pulses, oilseeds and miscellaneous exports. From 1963 to 1968 receipts from oilseeds exports fell by 23% although the average price of oilseed exports rose by 30%. Higher domestic consumption appears to be the main explanation.

39. The export of pulses and hides and skins increased until 1966 after which it leveled off, apparently as a result of the Suez Canal closure in 1967. The worst affected are cattle hides, the quality of which is not adequate to stand the longer journey to Europe around the Cape. Chat (a stimulant leaf) used to be an important export in the earlier years, but purchases have been drastically curtailed by the importing countries -- Aden and Somalia.

40. In the first half of the 1960's, the growth of imports was faster than that of exports. Between 1960 and 1965 the annual growth rate of imports was 11.7%, but after 1965 it was only 2% reflecting the slower rise in exports and in overall economic growth. Table 2 below gives the end-use classification of Ethiopia's imports for 1962-69.

Table 2: END-USE CLASSIFICATION OF IMPORTS, 1962-1969
(Eth.\$ million)

| | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Capital goods | 95.9 | 104.1 | 119.7 | 163.1 | 172.3 | 143.3 | 204.5 | 159.9 |
| aircrafts or ships | 25.0 | - | - | 15.0 | 27.5 | - | 40.0 | - |
| Balance capital goods | 70.9 | 104.1 | 119.7 | 148.1 | 144.8 | 143.3 | 164.5 | 159.9 |
| Fuel | 23.1 | 19.3 | 23.9 | 23.9 | 27.6 | 31.6 | 27.0 | 24.8 |
| Intermediate goods | 35.5 | 38.6 | 43.9 | 48.1 | 55.6 | 61.1 | 73.4 | 69.9 |
| Raw materials | 8.4 | 14.1 | 17.1 | 18.2 | 20.3 | 15.8 | 22.8 | 20.4 |
| Consumer goods | 90.2 | 96.2 | 98.9 | 118.7 | 123.7 | 103.3 | 97.9 | 103.9 |
| Durable goods | 17.0 | 21.3 | 19.4 | | 26.3 | 24.7 | 26.6 | 28.5 |
| food, beverage and tobacco | 16.3 | 14.8 | 18.1 | | 36.1 | 28.2 | 23.3) | |
| textiles, clothing & footwear | | 49.1 | 47.5 | | 35.1 | 27.8 | 21.8) | 75.4 |
| other non-durable goods | 56.9) | 11.0 | 13.9 | | 26.2 | 22.6 | 26.2) | |
| Miscellaneous | 3.9 | 3.8 | 4.2 | 3.7 | 5.2 | 2.2 | 6.8 | 9.3 |
| TOTAL | 257.0 | 276.1 | 307.7 | 375.7 | 404.2 | 357.4 | 432.4 | 388.4 |

41. Ethiopia maintains an open economy. Restriction on imports other than tariff protection are minimal. Only after the relatively heavy loss of reserves in 1967, did the authorities impose any significant import restrictions. At the same time the basic foreign exchange quota for travel was reduced and the National Bank of Ethiopia introduced an advance deposit requirement for the import of many consumer goods. However, this scheme was recently abolished.

The Balance of Payments

42. Ethiopia's balance of payments for 1960 to 1969 is summarized in Table 3 below. It will be seen that except 1966 and 1967 there have been overall surpluses in the balance of payments in all other years, adding Eth.\$ 66 million to the foreign reserves. This reflects the generally

Table 3: SUMMARY OF BALANCE OF PAYMENTS
(Eth\$ million)

| | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 |
|--|--------------|--------------|--------------|--------------|--------------|-------------|---------------|--------------|---------------|--------------|
| Exports f.o.b. <u>/1</u> (non-monetary gold) | 190 | 196 | 205 | 223 | 263 (1) | 292 (2) | 281 (3) | 257 (5) | 275 (9) | 301 (3) |
| Imports c.i.f. Trade Balance | 208 - 18 | 224 - 28 | 249 - 44 | 274 - 51 | 308 - 45 | 376 - 84 | 404 - 123 | 358 - 101 | 432 - 157 | 388 - 87 |
| Non-Factor Services (Net) | -2 | 11 | -9 | -1 | 15 | 18 | 25 | 24 | 73 | 57 |
| Investment Income (Net) Balance on Goods and Services | - 12 - 32 | - 18 - 35 | - 10 - 63 | - 14 - 66 | - 15 - 45 | - 9 - 75 | - 13 - 111 | - 17 - 94 | - 23 - 107 | - 20 - 50 |
| Private Transfer Balance on Current Account before Public Transfer | -8 - 40 | -7 - 42 | -8 - 71 | -5 - 71 | -3 - 48 | 2 - 73 | - - 111 | - 10 | -6 - 113 | -7 - 57 |
| Private Capital (Net) | 5 | 19 | 9 | 25 | 41 | 26 | 16 | 7 | 16 | 6 |
| Public Grants (Net) | 20 | 23 | 34 | 17 | 19 | 31 | 29 | 24 | 35 | 35 |
| Public Long-term Capital (Gross) | 19 | 23 | 68 | 51 | 23 | 58 | 78 | 53 | 87 | 69 |
| Repayment of public debt | 3 | 5 | 6 | 13 | 14 | 16 | 22 | 26 | 28 | 32 |
| Public Long-term Capital (Net) | 16 | 18 | 62 | 38 | 9 | 42 | 56 | 27 | 59 | 37 |
| Monetary Movements (increase -) | -9 | -4 | - 22 | -3 | - 27 | - 34 | 8 | 44 | -8 | - 11 |
| Errors and Omissions (Net) <u>/2</u> | 8 | - 14 | -8 | -6 | 6 | 8 | 11 | 2 | 11 | 10 |

/1 Includes non-monetary gold

/2 Includes capital subscription by the Government

/3 Provisional

Source: National Bank of Ethiopia and International Monetary Fund

conservative policy followed by the Central Bank with regard to foreign reserves. Imports have been allowed to the extent they could be financed by export earnings and capital inflows. This implies the absence of any deliberate policy to increase imports for sustaining some desired rates of growth and investment. The low level of Central Government's capital budget and the absence of any increase in capital goods imports since 1965 reflect Ethiopia's conservative external economic policy.

43. Capital inflows remained moderate. Net private capital inflows continued to increase until 1964 and then started declining. Official grants, which were for the greater part in the form of technical assistance, show no particular trend. The receipts of public loans being related to projects showed fluctuations, although they increased in recent years. The receipts of capital inflows were greater than the deficits on current account in most years. The heavy loss of reserves in 1967 was due to the coincidence of the lowest coffee export earning and the lowest net receipt of official capital since 1964.

Foreign Aid

44. Ethiopia has received a substantial amount of foreign aid. Most of it has been in the form of loans, although there were significant amounts of grants mostly in technical assistance. Almost all capital assistance has been for specific projects; there were only small amounts of program assistance from the United States.

45. Disbursements of official capital aid from 1962 to 1969 are given in Tables 10-12 in the Statistical Appendix. These are from loans contracted by the Government directly or guaranteed by it. During the eight years between 1962 to 1969, Ethiopia received Eth.\$ 490 million as capital aid, or on the average Eth.\$ 61 million per year. The Bank and IDA together were the largest donor for five of eight years. However, for the whole period of eight years Bank/IDA ranks second after the United States which in the earlier years gave large loans for civil aviation through the Export-Import Bank and Irving Trust. The U.S. share for the total eight years is 41%, and Bank/IDA share is 31%. However, in recent years the Bank/IDA share increased considerably; in 1969 this was 41% compared to U.S. share at 29%. Soviet Russia, Yugoslavia and Czechoslovakia have also provided substantial capital aid. The combined contribution of these three countries in the 1962-69 period was 12% of the total. In recent years, disbursements from these countries declined; in 1969 their share was only 4%. Other less important donors are the Federal Republic of Germany, Italy, Netherlands and Sweden. Ethiopia has also received small amounts of capital aid from Belgium, France, Israel and the United Kingdom.

46. The largest amount of foreign aid has gone for road building and has been provided by the Bank/IDA, U.S.A., Germany and Sweden. The Bank has also financed power, telecommunications and the Development Bank and IDA has financed education. The USAID has made loans for airport construction, power, malaria eradication and has provided some program assistance. The Ex-Im Bank has financed civil aviation, a hotel and a paper

and pulp plant. Soviet aid has been used mainly to construct the port and the refinery at Assab. Yugoslavia has made loans for the Assab port, a hospital, a cement plant and a mining project. Czechoslovakia has financed hospital equipment and rubber and shoe and tyre factories. German loans have been made for roads, a cement factory and the Development Bank. Italy made some loans for a cement plant and woolen mills and has recently financed the water supply system in Addis Ababa. Sweden has made loans for roads and telecommunications, and has given substantial grants for agriculture, health and other sectors.

47. At the end of 1969 Ethiopia had Eth.\$ 490 million in the aid pipeline. This amount is equal to the total disbursements of the past eight years. However, of this amount, as much as Eth.\$ 228 million has not yet been allocated to specific projects. Most of the unallocated aid is from the Soviet Union, but there were also small amounts from the United Kingdom, Yugoslavia and Czechoslovakia. Excluding unallocated aid, the current aid in the pipeline at the end of 1969 was Eth.\$ 262 million. Of this the Bank/IDA share was 47% and the U.S. share 22%.

Technical Assistance

48. Information on foreign technical assistance to Ethiopia is incomplete. The mission has collected some information from the Government for the fiscal years 1963/64 to 1967/68 (Table 12 of Statistical Appendix). According to this, the total flow in the five years has been Eth.\$ 308 million, or Eth.\$ 62.0 million annually. In 1963/64 technical assistance was only Eth.\$ 24 million, while it averaged to about Eth.\$ 75 million during 1965/66-1967/68.

49. On average, about 90% of Ethiopia's technical assistance comes from bilateral sources and 10% from multilateral sources. The United States is by far the most important donor. Other important donors are France, West Germany, Sweden and the United Kingdom.

50. The education sector has attracted the largest amount of technical assistance. The largest single item of technical assistance is a mapping project financed by the U.S. The health sector has also reviewed a substantial amount of technical assistance. Agriculture's share is relatively minor.

51. There are at present nearly 500 foreign experts working in Ethiopia under the various bilateral and multilateral technical assistance program. In addition, there are more than 500 volunteers in various fields, most of them in education (365).

Public Finance

52. The financial position of Ethiopia's Central Government for the period 1963/65 to 1968/69 is summarized in the Table 4 below:

Table 4: FINANCING OF BUDGETARY EXPENDITURES

(million Eth.\$)

| | 1963/64 | 1964/65 | 1965/66 | 1966/67 | 1967/68 | 1968/69 |
|----------------------|---------|---------|---------|---------|---------|---------|
| Current Revenues | 272.5 | 295.7 | 327.0 | 357.2 | 359.6 | 392.2 |
| Current Expenditures | 235.3 | 266.6 | 285.7 | 315.0 | 343.6 | 361.8 |
| Current Surplus | 37.2 | 29.1 | 41.3 | 42.2 | 16.0 | 30.4 |
| Capital Expenditures | 61.4 | 40.0 | 76.0 | 71.4 | 71.0 | 64.7 |
| Deficit | 24.2 | 10.9 | 34.7 | 29.2 | 55.0 | 34.3 |
| <u>Financing</u> | | | | | | |
| Net Foreign Loans | 18.8 | 3.0 | 27.9 | 14.2 | 9.6 | -0.4 |
| Cash Deficit | 5.4 | 7.9 | 6.8 | 15.0 | 45.4 | 34.7 |
| Unpaid Bills | - | - | - | 2.1 | 7.4 | |

Table 15 of Statistical Appendix.

53. Until 1965/66, Government revenues tended to rise faster than current expenditures, and the current budgets produced surpluses which financed more than half of the capital budget. Between 1960/61 and 1965/66 tax revenues increased by 13% per annum and total ordinary revenues increased at an annual rate of 11%. Thus, the tax revenues grew faster than GDP or even the monetary GDP in current prices. Over the same period the Government's current expenditures increased at an annual rate of 8%.

54. The rapid increase in the tax revenues in the first half of the decade was accompanied by an improvement in the tax structure. Taxes on income and domestic transactions gained importance while taxes on foreign trade, remained a constant proportion of tax revenues. There was a general buoyancy in all taxes except the land tax.

55. The picture changed in 1966/67 when, with the slower growth of exports and imports, taxes on foreign trade declined. Although income tax maintained its rate of increase, the Government found it difficult to meet the 10% increase in the current expenditure in that year, and changed the point of sugar excise tax from sales to production, thus bringing the entire stock under assessment. Even with this windfall, total tax revenues increased by only 8%, less than the 10% increase in current expenditures.

56. The real effect of the changed situation was felt in the following year. In 1967/68 taxes on foreign trade did not recover and the Government therefore made some changes in the income tax. Rates for the higher income brackets were increased and an agricultural income tax was introduced to replace the age-old "tithe" system. But the increased revenue from the higher income tax rates did not come up to expectations, and the yield of

the new agricultural income tax was very low, owing to administrative difficulties in the first year of its execution, and it only partly offset the loss of the "tithe". Current expenditures continued to increase almost at the same rate as the previous year owing to a sharp increase in expenditure on defense and education although expenditure for the economic services did not increase at all. For the first time in 1967/68, the increase in expenditure was not matched by any increase in revenue; consequently, public savings dwindled and the over-all budget ended with a large deficit and substantial unpaid bills.

57. Despite the experience of 1967/68, a substantial volume of expenditure was budgeted for 1968/69 partly in order to make a good start on the Third Five-Year Plan for which this was the first year. The budget was based on the assumption that a number of new tax measures would be introduced, but these measures were not taken. Although some customs duties were raised, receipts from taxes on foreign trade were less than the previous year because the import of high duty items, such as textiles, shoes and sugar declined rapidly. However, income tax collections improved, including the agricultural income tax, as did the collection of transaction taxes on domestic goods.

58. Total revenue in 1968/69 increased by 9.1% over the level for the previous two years, but Government was unable to meet the budgeted volume of expenditure. Since the legal limit for direct borrowing from the Central Bank had already been reached, the Government was compelled to cut expenditures. The payment of salaries was given the highest priority and hence the main cuts were for the purchase of goods for current operation and capital items. Although the Government managed to keep total current expenditures under control, several development projects were temporarily held up.

59. Although the main reason for the recent difficult budgetary situation is the lower exports and imports and the changed structure of imports resulting in decrease in customs revenues, a part of the Government's cash difficulties arose because the regulations governing the Central Bank limiting the Government's ability to borrow from it when its reserve position was fairly comfortable. To bring more flexibility into the regulations, some changes in the banking legislation were made in 1969 in accordance with the recommendations of an IMF mission. The Government also started issuing 93-day Treasury Bills at the rate of approximately Eth.\$ 5 million each month. A special committee was appointed to investigate the cause of the budgetary difficulties and to suggest remedies. At the same time, there was a Cabinet reshuffle and a new Finance Minister was appointed. The special committee concluded its report toward the end of 1969 and its conclusions have guided the preparation of the 1970/71 budget.

60. The experience of the current 1969/70 budget has been similar to that of the previous year: budgeted expenditures were high in relation to likely revenues, and consequently some emergency cuts had to be made, at least in the first half of the year. However, as a result of the recent rise in coffee prices, foreign trade has revived and the revenue situation has improved.

61. The result of the budgetary difficulties of the last few years has been that the Central Government's capital budget has remained low. Capital expenditures declined after 1965/66 and reached a low level in 1968/69; the scarcity of local savings also affected the release of foreign aid. Moreover, current expenditures for economic and social services could not be increased at desirable rates.

62. However, the Government recognizes that such a situation is undesirable and has increased the capital budget for 1970/71 substantially. To achieve this the new 1970/71 budget has been prepared on a realistic basis. Recurrent expenditure for economic and social services has been budgeted at a higher level, while expenditure on defence and security has been kept under control. Some new taxes and fees have been introduced and additional tax measures are expected. With these changes and with the improvement in the external trade, Ethiopia should be able to improve its public savings in the next few years.

Money and Credit

63. Monetary statistics for Ethiopia are available only since 1963 when the central and commercial banking functions of the former State Bank of Ethiopia were separated and the National Bank of Ethiopia (NBE) was established as a Central Bank. At the same time, the Commercial Bank of Ethiopia (CBE) was created to take over the State Bank's commercial banking function; it is now the most important bank in Ethiopia. Other commercial banks are the Addis Ababa Bank, Banco di Roma and Banco di Napoli. The Addis Ababa Bank is active in most parts of the country, but the foreign banks do most of their business in Addis Ababa and Asmara.

64. The money circulation in Ethiopia has followed the general movement of the GDP at current prices and of external trade. One striking feature of the monetary situation is the rapid increase in saving deposits, which has persisted for several years. The expansion of bank branches has been mentioned as a reason for this, but it is reported that a greater part of the increased savings deposits in recent years was in the older branches in the big cities, which implies that the slack business activity contributed to the rise in savings deposit in the later years. In early 1967, the maximum interest rate payable on such deposits was raised from 4.5% to 5%, which has also contributed to the increase.

Table 5: CHANGES IN MONEY SUPPLY AND ITS USES

(Eth.\$ millions)

| Changes in the year | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 |
|-----------------------|--------|--------|--------|--------|--------|--------|
| Money | 43.8 | 46.8 | 13.7 | -7.7 | 27.7 | 47.9 |
| Quasi-money | 21.6 | 2.8 | 14.3 | 14.6 | 24.8 | 24.9 |
| Money and quasi-money | 65.4 | 49.6 | 28.0 | 6.9 | 52.5 | 72.8 |
| Domestic Credit | 51.8 | 28.2 | 29.8 | 49.7 | 64.1 | 60.3 |
| Government (net) | (23.4) | (-7.0) | (-6.3) | (37.4) | (18.4) | (23.0) |
| Private Sector | (28.4) | (35.2) | (36.1) | (12.3) | (45.7) | (37.2) |
| Foreign Assets | 26.8 | 33.7 | -7.7 | -43.8 | 7.9 | 10.1 |
| Other Items | 13.2 | 12.3 | -5.9 | -1.0 | 19.5 | -2.4 |
| Total Uses | 65.4 | 49.6 | 28.0 | 6.9 | 52.5 | 72.8 |

65. The main factor affecting changes in the money supply is the movement in foreign assets. The absolute decline in foreign assets in 1966 and 1967 and the moderate increases in 1968 and 1969 slowed the rates of increase in money circulation in these years. On the other hand, the volume of domestic credit maintained a steady increase in all years; in fact, the higher rate in the later years to some extent compensated the downward movement in foreign assets.

66. The distribution of domestic credit between the government and the private sector is worth noting. The Government's net borrowings in 1965 and 1966 were negative reflecting its relatively comfortable financial position. But in later years there were substantial increases in the Government's net borrowing, which reached a peak in 1967. However, the lower figure for 1968 is not an indication of reduced need; the Government could not borrow more because it had already reached the legal limit. With the change in the banking legislation, government net borrowing increased in 1969, although the amount of the increase was reduced by the credit to the Government's account of its share of the Central Bank's profit.

67. The need for credit to the private sector arises mainly for financing foreign trade. The small increase in 1967 is attributable to the decline in exports and the lower level of economic activity. The large increase in private credit in 1968 took place mainly towards the end of the year when banks were financing coffee stocks which were building up

owing to the longshoremen's strike in the United States; the banks also financed private contractors who could not get timely payment from the Government.

68. The Ethiopian monetary authorities have not followed an active monetary policy. Monetary movements have been allowed to follow the general movements in the economy, with the Central Bank pursuing a fairly restrictive policy. For example, towards the end of 1966, when the economy was depressed, the National Bank's discount rate was increased by a half to one percentage point, leading the commercial banks to raise their lending rates. The National Bank followed a generally conservative policy with regard to foreign reserves. Although foreign reserves were equivalent to 5-1/2 months' imports at the end of 1967, the National Bank reacted to the relatively large outflow of reserves in 1967 by requiring 100-150% predeposit for many import items. This had contractionary effect on the economy which was already going through a recession.

69. Monetary policy could be more adequately directed toward mobilizing private savings. Interest rates allowed on time deposits are relatively low, and there is a ceiling for individual saving deposits. There is a case for raising interest rates to attract savings and to discourage the demand for private bank credit.

CHAPTER IV

THE MAJOR SECTORS

Agriculture

70. It is self-evident that agriculture is the touchstone of development in Ethiopia: over 90% of the population is engaged in agriculture, about 60% of the GDP and virtually all of the exports are derived from agriculture. The prospects for agriculture are shaped by a complex pattern of constraints (see Annex 1 for details). The first is the extreme diversity of agricultural sub-regions resulting from variations in terrain, temperature and rainfall. The country is generally divided into mountainous highlands, generally over 1500 meters in elevation, and hot, semi-arid lowland. Development approaches, therefore, must be tailored to a diversity of growing conditions. A second feature is the physical remoteness of most farmers from roads and markets. A third is the complex land tenure systems, varying from the communal system in the north, the paramount landlord system in the central Highlands, the tribal systems of the lowlands to the not always clearly defined occupancy rights on Government land. These occupancy patterns are a disincentive to investment in farming and to efforts at rational use and conservation of the land. This complicates the problem of capitalizing agriculture: most farming is done in the highlands by small farmers (averaging 3 ha or less per family) who lack income, skills and literacy. It is estimated that 80% or more of farmers do not produce a surplus to generate capital for farming.

71. Agricultural infrastructure is generally inadequate to permit rapid modernization of the rural sector. Agricultural research began only recently and has therefore achieved only a modest knowledge of the technological possibilities for farm development. The Extension Service numbers just over 100, and is obviously too small to make a significant contribution to modernizing agriculture. Moreover, in the past it has been dispersed geographically, which diluted what impact it could make. There is virtually no organized production and distribution of improved seeds and fertilizers as well as tractors are used almost exclusively by the larger commercial farmers. There is no national credit system, and hence credit goes to the larger preferred risk farmer who can offer the type of security often required. Markets are poorly organized, lack adequate storage, and the Government has no instruments to influence prices within or between seasons. Even Government marketing mechanisms for coffee, the dominant cash export crop (60% of exports), is confined to assuring quality rather than influencing prices. More recent, possibly short-term, constraints have been a deterioration in the terms of trade for agriculture, and a shortage of budgetary funds which has plagued implementation of development projects. This has resulted in the paradox of inadequate staff and equipment being underutilized.

72. Confronting this array of constraints, the TFYP strategy is one to concentrate resources on areas of high potential. In contrast to the past policy of dispersing resources widely, they will instead be used for integrated regional package programs for a few selected areas in the populated highlands and a similar sub-regional approach to livestock. At the same time, commercial agriculture will be encouraged, especially in the lowlands, where it is hoped that quick returns might be captured to finance the longer-run task of modernizing peasant agriculture. It is a strategy that concentrates on increasing production by provision of production inputs rather than by improving marketing or using prices to influence agriculture from the demand side. It also accepts the fact that the bulk of peasant farmers cannot be influenced by Government programs. Rather, the regional package programs concentrate sufficient resources in a limited area to maximize the chances of a successful impact. Implicitly, the strategy recognizes that efforts to improve peasant agriculture are governed by the speed in which agricultural services can be developed.

73. When the TFYP began there was only one regional package program ready for implementation. Now there are fourteen projects available aggregating Eth.\$ 250 million of Government capital expenditures in agriculture, of which four are being implemented. Four are regional package programs (Chilalo, Welamo, Ada and Awasa); two support mechanized commercial agriculture (Humera and Shashamane); two are large-scale irrigation projects (Melka Sadi-Ambara and Tendaho); two support livestock (National Range Development and Addis Ababa Dairy); and one is in processing (Coffee Processing).

74. Ethiopia has never before attempted a program of these dimensions, and its implementation raises questions regarding the provision of money and manpower. The question of financial resources is discussed elsewhere, but its dimensions can be seen in that annual capital expenditures could rise to Eth.\$ 65-70 million in 1971-72 and 1972-73, compared to the 1970-71 budget of Eth.\$ 27 million and actual capital expenditures of Eth.\$ 12.7 million in 1968-69 and estimated Eth.\$ 7.0 million in 1969-70. Possibly the most serious constraint is the availability of Ethiopian staff; the program also requires a large expatriate staff. Judging from the number of projects which seem ready to be carried out, it looks as if there would be a shortfall in Ethiopian staff of some 600 to 800 trained men by 1971-72. It is therefore likely that the program will have to be reduced to something between Eth.\$ 40 and 50 million in 1971-72 and Eth.\$ 65-70 million in 1972-73. Even then, there is urgent need for a manpower plan in agriculture to optimize the selection, training and use of Ethiopian staff. As it can be anticipated that additional projects will mature in future years, this implies a very high priority for agricultural training and education.

75. Over the short-run, the Government might wish to consider ways to reach additional peasant farmers and to balance the concentration on the production side of agriculture. While the regional package programs are soundly conceived, they are heavy users of resources and reach only

limited numbers of farmers. It is possible that a program that concentrates only on provision of essential services based on known techniques and focusing for example, on cereals might reach more farmers at lower unit costs. This would be a "minimum package" program. It would feature a similar concentration of effort, but would consist of only the essentials for a cereals program in the densely populated highlands.

76. While concentration on production is necessary, it is not sufficient for a well-founded program. Prices can play an important role in allocating resources in agriculture. What is required is to develop the physical plant for markets as well as the ability to influence prices. A limited start was made with a wheat price stabilization scheme with the help of grain supplies from the UN/FAO World Food Program (W.F.P.) but management and other problems have affected the project's progress. A consultant has reported that a Grain Stabilization Scheme designed to smooth out price movements could bring annual benefits to consumers and farmers of at least Eth.\$ 20 million. The essence of the scheme would be for the Grain Marketing Board to intervene to purchase at seasonal surplus periods and sell at seasonal deficit times; the cost of the schemes is estimated at Eth.\$ 20 million over five years. Such a scheme would provide the Government with some ability to influence prices of basic agricultural commodities. This is crucial, as no matter how well founded are production development programs, farmers will not participate effectively unless prices are remunerative.

77. A third program that might be considered is a special effort in agricultural credit. At present, it is estimated that about Eth.\$ 40 million of credit is extended annually to agriculture, but the bulk goes only to the large commercial farmers who can meet the present high security requirements. The proposal to create a new Ethiopian Development Corporation with an agriculture credit division provides an opportunity to mount a supervised credit program geared to peasant agriculture. Initially, such a program could focus on the regional package programs and the proposed minimum package programs. It is estimated that initially the program might require Eth.\$ 7 to 10 million.

78. Over the longer term, one crucial policy requirement is to improve land tenure. As noted above, insecure occupancy is a major obstacle to increasing investment in agriculture and could frustrate the objectives of development programs as with the package programs. While land tenure reform is a complex subject, sufficient studies and organization are in hand to begin a phased program. Indeed, land reform proposals have been before Government for several years. Carrying out these proposals would be one of the best ways to improve the basic incentives for agricultural modernization.

79. A major, and largely neglected, resource is livestock. Present rates of cattle slaughter are too high to maintain the present cattle population, yet the six meat processing plants are underutilized, probably because highland farmers keep livestock primarily for milk and draught purposes, and the plants are too far from the southern ranges. Loss by

death and disease is very high; nutrition, fertility and growth are low. Government services have been inadequate. Given more support from the Government, cattle production could increase by 1974. Improvements could include the National Range Development Project, better veterinary services, a highland pilot livestock project, a hides and skins improvement program, the reorganization of the Livestock and Meat Board and expanded research.

80. Other neglected resources are timber and fisheries. A study is required to determine the fisheries potential. Forest conservation practices must be improved if the forests are not to be depleted very quickly. A major increase in afforestation is required if a balance between supply and demand is to be achieved within a reasonable period.

81. Another task is to diversify exports and reduce the predominance of coffee. The major prospects for development are oilseeds, pulses, fruits and vegetables, and livestock products. Pyrethrum may have possibilities.

82. First priority should be given to expanding the agricultural services. The modest research program needs expansion and continued coordination with other services. The emphasis should be given to farm management and the economic aspects of farming, as well as livestock, grain legumes and oilseeds. The extension service needs a major expansion and should be concentrated initially in the regional and minimum package programs. A start must be made in producing and distributing improved seeds; at present, only about 1,000 of an estimated 500,000 tons of seeds used annually are improved. Initially, the regional package programs could undertake this, but private farmers should also be encouraged. Veterinary services have well trained personnel but are too small. They should be expanded to support the mass immunization program. Finally, agricultural administration requires improvement as it is presently dispersed and fractionalized. What is needed is stronger coordinating bodies and simplified, improved line administration. The Government is looking to the Rockefeller Foundation, which is reviewing the organization and administration of agriculture, for suggestions on how administration can be improved.

83. Despite the problems, the future prospects in agriculture are encouraging. Underlying improvements are underway, even though they are sometimes obscured by events such as drought in 1965, the decline of coffee prices, or the closure of the Suez Canal. Improvements are attested by the expansion of commercial farming in Humera and Awash and by the success of the FAO fertilizer trials. The pipeline of Government projects and programs augurs well for the future. What is required is systematic effort and budget support during the inevitably slow evolution of programs.

Industry

84. Modern manufacturing industry is at an early stage in Ethiopia, comprising about 5% of GDP and less than 500 enterprises. Small-scale and handicraft industries contribute as much to GDP as modern manufacturing industries. Output has fluctuated widely but the average growth rate

was 16% between 1961 and 1969. Investment in industry was about Eth.\$ 276 million between 1963 and 1967 - an average of Eth.\$ 55 per annum. Investment appears to have increased recently and was of the order of Eth.\$ 100 million annually in 1968 and 1969.

85. Most industrial plants in Ethiopia produce for the limited domestic market (see Annex 2 for details). They are mostly owned or managed by expatriates and there is a shortage of skills at all levels. There is a significant amount of underutilization, and considerable dependence on imported inputs. Profitability appears to range between 10 and 15% which compares favorably with commercial agriculture, but it is believed to be too low to attract potential investors. Low utilization and poor efficiency kept profits down, despite the high tariff protection. Domestic product prices are generally high relative to import prices for the same product; over half of the major domestic products sell at 60% above import prices.

86. The benefits of industry to a country can be roughly approximated by the value added share of cost of production, and industrial efficiency can be judged by comparing domestic and imported cif prices. Based on these criteria, only a small number of industries in Ethiopia fall into the preferred group of high value added share and relatively low prices. Most industries, regardless of value added share, fall into high price groups (see Table 14 of Annex 2). Ethiopia is thus developing a high cost industry, without necessarily gaining commensurate benefits to the economy. These high costs result from a combination of factors: high protective duties, small size, underutilization, plant level inefficiencies, and inadequate raw material supply.

87. If Ethiopia is to avoid extending a high-cost non-competitive industrial structure, industrial policies will have to be properly shaped. Central to industrial policy is the tariff. The evaluation of a tariff system is complicated, but the crucial fact is that the nominal tariff rates obscure the effective tariff rates. The effective rate of protection takes into account the taxes on the products as well as on the raw materials, and is expressed as the percentage excess of the realized domestic value added over the value added computed by using international prices for the output and the inputs (see Chapter II of Annex 2). Evaluated on this basis, effective protection in Ethiopia is irregular and it tends to be high, so high in some cases that the value of the product at import prices is less than the value of materials used - also at import prices. So that the real contribution to GDP is negative. Moreover, there is no correlation between higher effective tariffs and higher benefits in value added, employment or foreign exchange savings.

88. If Ethiopia is to have industries where she has comparative advantage and to maximize benefits to the economy, then the tariff policy must be geared to this objective. The simplest, but by no means the easiest to achieve, is to have a uniform nominal tariff for all inputs and products so that all industries are on an equal competitive footing. A second method is to make detailed studies of effective protection, and

then seek to achieve a uniform effective tariff. While adhering to the objective of tariff uniformity, allowance should be made for employment benefits, infant industry considerations and the effect on revenue. There is no minimizing the complexity of effective tariff calculations, but, on the other hand, less than 30 products comprise about 90% of the value of gross industrial output in Ethiopia, so the studies will be more manageable for the 30 important products.

89. A third approach is to simplify the tariff into at most two or three groups, with a reasonable uniformity of nominal tariff rates for each group. As an illustration, one could have two groups with a narrow band of nominal tariffs for each (say, no more than a 10% spread in ad valorem rates): one group would have lower tariffs on those capital and intermediate goods for which Ethiopia does not have prospects for economic production in the near future, and moderate tariffs on those goods for which there are prospects for economic production in Ethiopia. Certainly increases in nominal protective tariffs under the existing system should be avoided, but it is not clear when revenue considerations would permit nominal tariffs to be lowered.

90. Ethiopia has been reviewing its tariff policy in anticipation of introducing the Brussels Tariff Nomenclature (BTN), and the introduction of the BTN would be an appropriate time to revise and rationalize the tariff policy. At that time, consideration might be given to improving other tax policies affecting industry. The customs tariff has anomalies (e.g., higher tariffs on raw materials used in producing a product than on the product itself). Moreover, indirect taxes should be reconciled with the tariff if consistent policies are to be pursued. A major alleged problem in revising tariff policy is that of the threat of "dumping". The new draft Investment Code appears to provide for reasonable protection in clear cases of dumping. Finally since the recent rapid industrial growth was based on import substitution industries the further development of which is likely to be much slower, there is a case to be made for more export incentives for industry based on processing indigenous raw materials, if Ethiopia is to sustain industrial expansion. As a start, Ethiopia could eliminate the 2% export tax, the transactions tax on exports, implement the tax rebate provisions of the new Draft Investment Code in respect of company income tax resulting from exports; and more effectively implement the exemption from import duties on goods destined for export.

91. Other aspects of Ethiopia's industrial incentive policies include tax relief under the investment code. There are fairly liberal investment incentives compared to other countries - income and import tax reliefs plus availability of foreign exchange for repatriation. At present, a minimum investment of Eth.\$ 200,000 is required to qualify for investment benefits, and tax relief is for a fixed period. If Ethiopia wants to tailor its incentives to the probable character of industrial investment, then the minimum investment limit should be dropped and the time period of tax relief adjusted according to the benefits to

be achieved. Both features are remedied in the proposed new draft Investment Code now under consideration. If implemented effectively, the new code would provide even more liberal incentives than existing ones.

92. In the area of industrial finance, the most notable development is the decision to merge the Development Bank of Ethiopia (DBE) and the Ethiopian Investment Corporation (EIC) into a new Ethiopian Development Corporation (EDC). DBE loaned Eth.\$ 25.4 million to industries since its inception in 1951, and EIC loaned or made equity investments in industries of Eth.\$ 39 million since starting in 1963 - both channeled an average of about Eth.\$ 7.0 million per annum into industry in recent years. The proposed merger is designed to clarify the roles of the Government and agencies involved in industrial and agricultural finance, improve efficiency and concentrate finance and staff. Under the proposals, the Government, heretofore a major direct investor holding equities valued at Eth.\$ 281 million, would channel its industrial investment funds through the EDC, and the EDC would take over the supervision of the Government's direct holdings in commercial ventures. It is also proposed to have the National Resources Development Corporation concentrate on land and real estate ventures, and a new Ethiopia Tourist and Hotels Investment Corporation concentrate in those fields, while EDC concentrates on agriculture and industry. It is estimated that EDC might do up to Eth.\$ 22 million of business per annum in the next few years, assuming a Government investment of Eth.\$ 6.1 million per year. In that case, the financial intermediaries would finance about Eth.\$ 60 million in industry in the TFYP or about 10% of estimated industrial investment in the TFYP.

93. While the TFYP projected the growth of industrial output at 15.2% per annum, actual growth in 1968 and 1969 was less. The outlook for the balance of the TFYP is for a growth rate closer to 10%, depending upon the business cycle. The prospect for investment in industry in the TFYP is for slightly less than the Eth.\$ 530 million projected in the TFYP; about Eth.\$ 90 to 100 million per year or a total of Eth.\$ 470 million. To provide this Eth.\$ 470 million, Eth.\$ 32 million will be direct Government investment, Eth.\$ 62 million will come from the financial intermediaries EIC/DBE and EDC, and Eth.\$ 376 million from private sources. It is likely that new physical capacity will not grow proportionately as costs have increased. Moreover, with significant underutilization and high capital costs, the capital output ratio will probably deteriorate more than envisaged in the TFYP.

94. While many Ministries and agencies participate in the administration of industrial policy, the Ministry of Industries has the central role in planning and supervising Government's industrial policies. The Ministry does not have the staff to fulfill this role properly, for example, there are only four senior industry officers to supervise all functions. There are three central functions requiring improvement: policy formulation and regulation, planning, and promotion. It is possible that the new EDC would be best placed to develop an industrial promotion program which is now lacking.

Mining

95. The mining sector is small, contributing only 0.3% of GDP. Gold and salt are the most important minerals now mined. Investment in mining rose from Eth.\$ 9.6 million in 1964 to Eth.\$ 15.9 million in 1969. One-third of investment was for existing mines, and two-thirds for prospecting for oil and potash. Government capital expenditure reached Eth.\$ 5.1 million in 1969, mostly for geological surveys (see Annex 3 for details).

96. Recently there was a proposal to establish a Government-owned commercial corporation to take over, rationalize and operate The Adola Gold Mine, now operated by the Ministry of Mines. The mine does not produce a profit and its output has been erratic because of worn out equipment, shortage of spares and inadequate development prospecting. Unless modernized, gold output is likely to decline. However, the proposal has not been accepted. Three companies recently took separate concessions to prospect for copper and sulphur. Six companies have been or are prospecting for oil. Oil prospecting is the single largest source of investment, but no positive results have as yet been found.

97. Potash is possibly the most important potential mineral for exploitation. Although the first attempt by a concessionaire has been abandoned, a new concessionaire is now completing exploration. The next phase would be pilot mining and feasibility studies due by 1972. If these phases are successful, the last phase of financing and construction is forecast to take up to three years thereafter. The crucial considerations are mining cost and markets. Mining costs turn on finding mineable ore close to the coast to minimize transport costs, and finding an economic mining method. The world market outlook is for depressed prices until the mid-1970's. All in all, if potash mining proves viable and does materialize, potash exports might be about Eth.\$ 70 million per year, or roughly 20% of total 1969 exports. However, recent events indicate that production may not start before about 1979.

98. Geological surveys have expanded rapidly since 1968 through the efforts of the Geological Survey of Ethiopia and with the assistance of Israel, Canada, USA and the UNDP. A new draft Mining Code is now under consideration by Parliament. TFYP targets for mining output and investment are unlikely to be realized, largely because of the delay in potash mining. Government capital expenditures, largely for the Geological Survey, are estimated in the order of Eth.\$ 2.9 million per annum in the last three years of the TFYP.

Transportation

99. For a country of its size and population Ethiopia's transport facilities are poorly developed, with most of the country still remote from modern means of communication and still relying predominantly on animal transport. Transport development has properly concentrated on improving the road network, though there has been some imbalance in the road investment program itself. Extensions to the trunk road system

have tended to outpace construction of subsidiary feeder and access roads which are essential if the trunk system itself is to be properly utilized. Although Government accepts the special priority on minor roads, progress has been hampered by the shortage of local funds, a situation made worse by the need to earmark substantial funds for trunk road projects, financed with external assistance (see Annex 4 for detailed discussion).

100. The Imperial Highway Authority (IHA) is responsible for the 6,800 km of all-weather roads in the total road system of 23,400 km, while local Governments operate the dry-weather roads. IHA is being reorganized and, while the administrative structure has been established, more work is required on new work methods and procedures.

101. IHA has recently received a UNDP-financed General Roads Study. This Study recommends greater priority for feeder roads. However, there will be a problem of financing feeder roads in the next few years because of the large commitments for externally aided trunk roads. Thus, the Roads Study recommends a roads program for the last three years of the TFYP costing Eth.\$ 177 million, but Eth.\$ 139 million of this is for trunk roads for which foreign aid has already been obtained, Eth.\$ 38 million for feeder roads. Even then, the overall financial outlook (described in Chapter V of this report) is such that it will be difficult enough to finance the externally aided trunk road program alone and still maintain a balanced overall capital program. In these circumstances, IHA's force account construction of feeder roads for the remainder of the TFYP will be quite nominal and will underutilize IHA's present capacity. This means that construction should concentrate on the higher priority feeder roads, and the force account construction units should be consolidated and any surplus capacity allocated to road maintenance.

102. The Roads Study indicates that better preconstruction investigation and design and more judicious use of design standards would result in more efficient use of staff and equipment and a reduction in overall force account construction costs. The Road Study makes recommendations on design standards. Construction costs could also be reduced further if partial funding of many projects, resulting from intermittent release and reductions of budgeted funds, was replaced by full financing of priority roads. It is more efficient to do a few roads well than to attempt partial construction of many.

103. Future roads need to be carefully selected and their construction should be coordinated with other modes of transport and other sectors. Given the important role of external assistance in determining road priorities, future external assistance should concentrate on secondary and feeder roads. In addition, to the extent that external assistance policies permit, these feeder roads should be constructed by IHA's underutilized force account capacity.

104. The Government has established a Road Transport Authority to introduce licensing and to determine maximum and minimum tariffs for the road transport industry. These objectives are predicated on the belief

that there is excess truck capacity. However, the Roads Study came to the opposite conclusion. Moreover, implementation of the scheme will face a number of practical difficulties. Any necessary control over vehicle numbers would be better executed by varying the level of vehicle taxation, which would still leave the ultimate decision to operate vehicles to the operators themselves. The Road Study recommends that "variable" taxes such as those on fuel be reduced, and for commensurate "fixed" taxes such as on vehicle import duties be increased, in order to achieve an economic fleet and maximize its utilization.

105. The port at Djibouti, along with the Franco-Ethiopian Railway (FER) which links it to Addis Ababa, has been increasingly challenged by the port at Assab, and as a result, both the port and the railway are now operating at a financial loss. The competition from Assab will become stronger when the Awash-Tendaho road is completed in 1972, as it provides a better route between Assab and Addis Ababa. On the other hand, port charges are unduly low at Assab, and should be raised if the port is to recoup the heavy investment outlays on its construction.

106. The Government, which has a 50% interest in the FER, is now investigating the railway to see whether its financial viability could still be restored, in spite of competition from Assab. It would be useful if this were followed by a wider study to compare the overall economic merits of the two ports. The study, which would have to include a comparison of the road route to Assab with the rail route to Djibouti, would also prepare a master plan for the future development of Assab.

107. Massawa, the only port serving the northernmost area of Ethiopia, also needs a plan for its rehabilitation and development, and here again, there is need for a preliminary study of the inland transport facilities serving the port. Massawa relies principally on the Northern Ethiopia Railway, but unlike Djibouti, some of its traffic also is carried by road. There seems to be a strong economic case for abandoning the railways. Its equipment and track are in poor shape, the mountainous terrain and short hauls make the route inherently unsuitable for railway operations, and the railway is incurring financial deficits despite its ability to control road competition. The future of the railway must be settled before a plan for the port is produced because the choice between road and rail affects the layout of the port. The study should provide an objective view of the railway's operations, as well as suggest any improvements needed to the road to Massawa, particularly if the conclusion is that the railway should be closed.

108. Ethiopia's two main airports at Addis Ababa and Asmara are being improved to permit night landing. Although scheduled air services are provided to no less than 43 domestic airports, facilities at most of these are minimal, and many are only open during the dry season. Any substantial improvements to them have to be considered in the light of the type of aircraft that Ethiopian Airlines (EAL) choose to replace its aging DC-3's on the domestic routes. It would be useful to have an expert consider both the questions of a suitable aircraft and the airport facilities it will require.

109. EAL accounts show the airline breaking even financially because the international flights make profits. There are heavy losses on domestic flights, despite the fact that EAL pays no landing fees at any airport in the country. the international services, which achieved a load factor of only 35% in 1969, would probably fare better if EAL could attract some of the heavier traffic going further south in East Africa, if Addis Ababa was no longer the terminus for its European flights.

110. Ethiopian Shipping Lines (ESL), after facing severe competition, has had more traffic than it can cope with since Suez was closed. Its fleet of cargo ships has increased from two to four. Once the Canal re-opens, the situation will again be reversed, and ESL is likely to find it is difficult to meet the renewed competition. Nevertheless, Ethiopia has to have enough shipping capacity to accommodate her overseas trade in the meantime and has no better alternative than having ESL expand its fleet, whatever problems ESL might be faced with in the future.

111. The Government recognizes the need for more effective coordination between the individual agencies in the transport sector, and to this end has recently approved a number of administrative reforms. A Central Planning and Coordinating Committee representing all the agencies is to be set up under the chairmanship of the Minister of Communications. The principle of semi-autonomy will be extended to the ports and airports. At the same time, it is intended that those agencies already enjoying a considerable degree of autonomy should be brought under more effective control, especially as regards financing and planning.

112. Investment expenditures for transportation in the TFYP, comprising estimated actuals for the first two years and provisions already made for the last three years, are as follows:

(Eth.\$ million)

| | |
|---------|------|
| 1968/69 | 47.0 |
| 1969/70 | 53.1 |
| 1970/71 | 74.3 |
| 1971/72 | 99.7 |
| 1972/73 | 84.5 |

Investment expenditures under the Central Government budget will be only part of this, as much investment is by autonomous agencies or the private sector. For the last three years of the TFYP, Central Government capital expenditures on transport already committed or judged indispensable are of the order of Eth.\$ 51.2 million; Eth.\$ 69.0 million and

Eth.\$ 54.5 million. These sums do not include any provision for secondary and feeder roads, or for domestic airports. Indeed, these "commitments" result from already externally aided trunk road projects and the improvement of the two major airports. However, if a balanced capital program is to be achieved it is difficult to see how the "committed" level for the capital budget could be increased and, indeed, there may be difficulty in financing the committed levels.

Electric Power

113. The consumption of electric power is low even by comparison to other underdeveloped countries. However, consumption grew at an annual rate of 15.8% during the SFYP and the corresponding target for the TFYP was set at 21.5%. Both the planned investment program of Eth.\$ 120 million and the expansion in generating capacity to 325.3 KW, which were designed to cope with the projected consumption increase, could be substantially realized during the plan period; but consumption is now expected to grow at about only 15% per annum, roughly comparable to the SFYP performance but below the TFYP target of 21.5%. The expected shortfall is due to a number of factors - overoptimism in setting targets, a few prospective large-consuming concerns are commencing operations later than was expected, and the depressed economic conditions of the past two years. This will result in more unused capacity in the short run than was planned.

114. Basically, the objectives of the TFYP for electric power are sound. In particular, an attempt should be made to eliminate the large differences in the rates charged in the Government-owned EELPA and the privately-owned SEDAO service areas in Eritrea.

115. The proposal that Government-owned monopoly-type public enterprises should pay dividends may require a raise in the tariff, but this is expected to be small and to have negligible effects on demand.

Telecommunications

116. The telecommunications services have expanded rapidly and have become well established since IBTE took them over in 1952. For example, the domestic services more than doubled between 1963 and 1968. Previously, the urban services predominated and the inter-urban and international services tended to be of poor quality and were unable to meet demand. For these reasons the main objectives of the TFYP are to increase the capacity of inter-urban telephone stations, extend the facilities to the developing and populated provincial areas which were neglected in the past, and improve and expand the international system, while satisfying the expected slightly lower growth rate of the urban system.

117. The growth of demand in 1968 was slightly below the target possibly due to the general decline of economic activity in that year. Demand recovered in 1969 and there is every hope that the plan targets for the TFYP will

be achieved. Supply is keeping pace with demand but if supply is not to fall behind, the services must continue to be expanded without any break after the TFYP ends.

Education

118. The government has made appreciable efforts to expand public education and training since 1945. Even so, in 1959/60 only about 6% of the relevant school age population was in primary schools. Since then both public and private education have grown rapidly - primary and secondary enrollment grew from 219,000 to 602,900 and higher education enrollment from 927 to 5,200 between 1959/60 and 1968/69. But these numbers represented a mere 14.1% for primary, 2.9% for secondary schools, of the relevant population age group.

119. Education policy began to be defined with the SFYP. (see Annex 7 for details). The stated objective was to increase the output at secondary and university levels according to the country's manpower requirements which were to be ascertained, and to gear the curricula more closely to Ethiopian needs.

120. The expansion targets were exceeded, but at the cost of lower standards, owing to the shortage of trained teachers and of school plant and supplies. At the primary level, except for the introduction of Amharic as the medium of instruction, little change in the quality and reorientation of the content of education was achieved. A diversified curriculum including pre-vocational streams in agriculture, industrial art, commerce, and home economics, was introduced at the secondary level with the help of the first IDA credit. At the University, systematic planning started only in 1969.

121. The objective of the TFYP is to provide educational opportunity for more, particularly rural people, and an educational system with a more modern scientific approach and compatible with the country's ancient culture, the wider use of Amharic, the development of positive attitudes towards manual work and practical skills, and appreciation and fulfilment of the task of nation building. These objectives are hampered by a shortage of primary school teachers, social pressures which cause an over-large increase in secondary enrollments, and financial constraints.

122. Public education at all but the university level is administered by the Ministry of Education, but a number of vocational schools are run by other Ministries. Also private education is significant; for example, some 25% of primary school enrollments in 1968/69 were in private schools. Education planning was begun some five years ago but coordination between the Ministry of Education and the other bodies responsible for education needs to be improved.

123. Ethiopian education also faces a number of other problems. The "drop out" rate from the primary and junior secondary schools is high. By contrast the situation at the senior secondary school level is better but even there the rate is about 50%. ^{1/} This is due to a number of causes, including the absence in some rural areas of schools which provide courses beyond certain grades. There continues to be a shortage of trained teachers at all levels which results in a high dependence on foreign teachers. School places are short and the financial provision for school supplies and maintenance is very limited. The primary school curriculum is oriented towards transfer to general secondary education, so that only 7 periods a week or 20% of the school time is devoted to practical subjects and a mere 1-2 periods to agriculture. This situation reflects a similar weakness in the primary teacher training curriculum.

124. The Ministry of Education operates two technical institutes at Addis Ababa and Asmara for students who have completed Grade 8, a polytechnic at Bahar Dar for those completing Grade 12, and two commercial schools in Addis Ababa with intake from Grade 8 onwards. Also the Ministry of Agriculture runs two intermediate agricultural institutes at Jimma and Ambo and an animal health institute at Debre Zeit. But the expenditure of the Ministry of Education reflects the emphasis given to primary and secondary education and to the university and the slower progress of technical and vocational education. Consequently there has been a rapid development in work-oriented industrial and commercial courses by government departments and private concerns. This indicates the continuing need to diversify school curricula and to ensure that the technical institutes under the Ministry of Education are raised to a high standard of efficiency.

125. There are two universities: the Haile Selassie I University a chartered body mainly financed by government grant and foreign assistance and with a student enrollment of 4,700; and the private Catholic University of Asmara, which is run by a private religious order and is assisted by the Italian Government; it had an enrollment of 958 students in 1965.

126. From 1965/66-1967/68, recurrent expenditures by the Ministry of Education and Haile Selassie I University have been absorbing growing shares of monetary GDP and government revenues. In addition, there has been substantial financial assistance for primary education from Swedish International Development Authority (SIDA), for secondary education from IDA, and for the University from the German Aid Agency, USA, Sweden, the U.K. and the Ford Foundation.

127. To produce the manpower needed for Ethiopia's development requires educational changes based on thorough studies of the education sector and of the country's manpower situation. The studies are being arranged with IDA assistance. In the meantime, efforts should be made to fill the manpower gaps in agriculture, and in teaching and industry. The government is making some moves in these directions.

^{1/} Includes "tap off" to other training courses.

128. Ethiopia's need for university trained personnel is clear. The Haile Selassie I University has a five-year plan to develop the three campuses at Addis Ababa, Alemaya, and Gondar, expanding enrollment from the current 4,700 to 6,000 full-time day students by 1974, and concentrating on the areas of greatest needs. The carrying out of these plans will require an increase in the government subvention for recurrent and capital expenditures.

Health and Water Supply

129. Health in Ethiopia suffers from all the disadvantages that are common at an early stage of economic and social development. However, since the majority of the population live in the highlands, the impact of some tropical diseases is less severe than in many other countries. The first medical and health services came with the establishment of the Ministry of Public Health (MPH) in 1948. In the earlier years the services concentrated in the urban areas and on curative measures; but later they extended to the rural areas and also covered preventive measures. There are also some hospitals and clinics run by private organizations, foreign missionaries, and the Haile Selassie I Foundation. On the average, there are more than 60,000 people for one doctor (this conceals the fact that the ratio is 2,500 in Asmara, 3,000 in Addis Ababa and 100,000-250,000 in the provinces); one hospital bed per 3,400; one registered nurse per 40,000; and one birth in a thousand assisted by a trained midwife. The distribution of the services is very uneven, with most of the hospitals and specialized services concentrated in Addis Ababa and Asmara.

130. The TFYP stresses malaria eradication and to a lesser extent, the prevention of other communicable diseases; the basic health services are to be spread to new areas and are to be complementary with the malaria eradication program. Hospital construction is to be minimal; the Duke of Harrar Memorial Hospital in Addis Ababa is to be completed to provide a modern institution with 500 beds. Provision has been made to increase the flow of trained medical personnel, and also for the supply of safe water to many urban and rural areas.

131. For the malaria eradication program the country has been divided into four types of areas called A, B, C and D. TFYP aimed at completing 'consolidation' in A areas, starting 'attack' in B areas, completing 'preparatory' work in C areas, and starting preparatory in D areas. In the first two years of TFYP the shortage of funds slowed down the program. It is now uncertain whether all the 'A' areas can complete the consolidation phase during the TFYP. In early 1970, the Government decided to restrict the program to 'A' areas only and to some specific regions in B and C areas where development projects will be launched.

132. The basic health services program envisages the strengthening of provincial hospitals, building 56 new health centers and 410 new health stations. Progress so far has been very slow. Only 3 health centers and 14 health stations were completed in 1968/69 fiscal year against the targets

of 14 and 70 respectively. The 1969/70 fiscal year provides for 10 centers and 92 stations but it is doubtful if as much as one-third of these will be built. Scarcity of funds has been a cause but the lack of contractors in the rural area and the unwillingness of the urban contractors to undertake small contracts in remote areas are mainly responsible for the lack of progress. The operation of the basic health services suffered from the scarcity of funds; disbursements have been slow, and the budget squeeze had a serious effect on the health services. The scarcity of funds also affected the completion of the large Duke of Harrar Memorial Hospital. The cost of this project is so high in relation to available resources for health that other important health schemes will have to be delayed.

133. The Medical Faculty of the Haile Selassie I University and the Gondar Public Health College (PHC) produce trained medical personnel. The former runs a 7-year M.D. degree course, and the latter runs a 4-year B.S. degree course. PHC also trains nurses, sanitarians, and laboratory assistants. The products of PHC are used by the Ministry of Public Health in the provincial hospitals, health centers and health stations. The training of personnel is proceeding satisfactorily, but the slow progress in building new health centers and stations poses a problem for the use of such trained manpower.

134. A modern water supply system exists in only four towns: Addis Ababa, Asmara, Debre Zeit and Harrar. None of these systems can cope with the demand; even in Addis Ababa the residents often experience water shortage. The Addis Ababa Municipality has just completed a dam at Lagadadi reservoir with a purification plant and a pipeline to the city, but the project will not be of maximum benefit until the distribution system within the city is improved. The Bank has made a grant for a feasibility study and preliminary engineering for such a project. Besides the four towns already mentioned, there are small water systems in 25 towns, all of which require improvement. Germany has financed feasibility studies for 20 water supply systems, and has agreed to finance the construction of 8 systems; negotiations for 7 more systems are underway.

Tourism

135. Tourism in Ethiopia is small in terms of number of visitors and the income and employment generated. During the next five years the importance of the industry is not expected to alter radically although the number of foreign visitors could double (see Annex 8 for details). The majority of tourists come on multi-country organized tours and frequently visit only Addis Ababa and Asmara. If they do stay more than one or two nights, the most likely destinations in Ethiopia are on the "Historic Route", Bahar Dar, Gondar, Lalibela and Axum. With the exception of those in Bahar Dar, the hotels in the two main cities and along the "Historic Route", operate with low occupancy rates and probably make a little profit. They could handle 100,000 visitors or well over double the present number. The mission projects an increase in visitors by 1975 in the range of 70,000 to 90,000 per year. Thus existing hotels and facilities, with some upgrading and possibly some expansion on the "Historic Route", are likely to be sufficient to handle the increase in the next few years.

136. The TFYP projected a growth of visitors from 36,000 in 1968/69 to 107,000 by 1972/73, but as noted above, this is not likely to be realized. No detailed investment program was given in the TFYP since the Government was awaiting a report by consultants. The consultants report, which will be available shortly, sees the main potential market as the wealthy, multi-destination visitors from North America, and proposes an ETH\$ 40 million program of first class hotels. The report does not estimate the cost of the supporting infrastructure which for several of the hotels would have to be substantial.

137. During the next few years more information should be collected on characteristics of visitors to Ethiopia and feasibility studies should be made of the infrastructure and tourist requirements along the "Historic Route" and the Red Sea Coast. In the meantime, present accommodations, up-graded and possibly expanded where necessary, are likely to be able to handle the expansion of numbers for several years to come. It would also be worthwhile to strengthen the Ethiopia Tourist Organization if it is to stimulate and guide the industry. The proposed Ethiopian Tourism and Hotels Investment Corporation should also be established, and concentrate on improving the financial profitability of the hotels in which Government now has sizeable holdings.

Total Capital Expenditures in the TFYP

138. The prior discussion of the principal sectors provides a basis for assessing the overall implications for total Government capital expenditures for the balance of the TFYP. Making allowance for the fact that capital expenditure on agriculture will probably have to be rephased because of staff constraints, a balanced Government capital program would require Eth\$ 190 to 200 million in each of the last two years of the TFYP. This would constitute a sharp increase in Government capital expenditures compared to the past, as can be seen in the following table:

CENTRAL GOVERNMENT CAPITAL BUDGET (Eth\$ Million)

| | | |
|---------|---------|------------------|
| 1968-69 | 75.9 | estimated actual |
| 1969-70 | 101.9 | " " |
| 1970-71 | 132.0 | budgeted |
| 1971-72 | 190-200 | projected |
| 1972-73 | 190-200 | projected |

139. From the analysis elsewhere in this report it appears possible that finance will not be available for such a large volume of capital expenditure in the last two years of the TFYP. In this case, it may be difficult to achieve a balanced program at a lower level. This is because

the ongoing expenditures vary between the sectors and as it is difficult to reduce them. Any reduction falls more heavily on sectors with relatively low ongoing commitments. This would be the case for agriculture, education and secondary roads. As agriculture, feeder roads and some elements of education are priority sectors, every effort will have to be made to insure that adequate provision is made for them if the Government capital program has to be reduced. Otherwise, these sectors will bear an undue proportion of the reduction, and the investment program will be unbalanced.

CHAPTER V

FUTURE PROSPECTS

Introduction

139. In terms of the availability of capital projects and sector growth prospects, Ethiopia now is in a position to mount a substantially increased development effort. Exports in the medium-term should improve and Ethiopia should take advantage of this situation to undertake an increased development effort. This section of the report explores the implications of such an increased effort for Government economic and financial policy.

Growth Prospects

140. In order to illustrate the implications of a stepped-up development effort, it is helpful to make some quantitative projections for the five-year period 1970-74. Over the past decade, the growth rate of GDP was around 4.5% per year. This growth of total GDP was produced by a growth rate of the monetary GDP of a little over 7% and an implied growth of the subsistence sector at the same rate as of population in the rural areas. For the purpose of analysis and projection of the Ethiopian economy, the growth rate of the monetary GDP is more relevant than total GDP. For this reason, the projections deal primarily with the monetary sector. There is no reliable basis for predicting the future growth rate of GDP, but a growth rate of monetary GDP of 7.5% in the beginning, increasing to 8.0% toward the end of the 1970-74 period, is a plausible target given present growth trends. If non-monetary GDP grows at 2% per year, the overall growth of GDP would rise from 5.2% to 5.5%. These growth rates are all at 1969 market prices; real incomes in individual years will vary, depending on price movements, particularly of the main export - coffee.

141. The growth targets for 1970-74 given above are not high compared to the rates achieved in the early 1960's, but they are higher than those achieved in 1968 and 1969. They imply that monetary agriculture could achieve a growth rate of 5.6% per year, compared to recent rates of 3.3% per year, unless non-monetary agriculture grows at a higher rate than population. The latter is a distinct possibility, but there is no statistical data to measure it. Clearly, the target for monetary agriculture is ambitious, and assumes implementation of the large Government program outlined in previous sections of this report. If sectors other than agriculture grow at even higher rates, then the target for monetary agriculture could be lower. The monetary GDP target also implies that mining and manufacturing grow at about 11% per year. While this is less than the 16.5% rate achieved in the last decade, it is more in line with current prospects (see Annex 2) and recent growth rates. Other sector growth rates reflect continuation of existing trends. The monetary GDP

target implies a much greater volume of Government capital investment and public savings than in the first two years of the TFYP.

Investment and Savings

142. Since there is no reliable basis for predicting the future investment output ratio, a continuation of recent trends has been assumed. Naturally, the investment output ratio could change if the efficiency of investment changes, or exogenous factors such as weather bring about a different growth rate. On this basis, the gross monetary fixed investment required to generate 7.5-8.0% growth rate of the monetary GDP would be about Eth.\$ 2,950 million for the five years 1970-1974. This amount is 50% higher than the actual Eth.\$ 1,970 million gross monetary investment in the preceding five years - 1965-1969. However, the considerable increase in total investment implies only a moderate increase in the monetary investment ratio (monetary investment as percentage of monetary GDP) from an average of 18.5% during 1965-1969 to an average of 20% during 1970-74; in fact, in two out of five years in the past the monetary investment ratio had already reached about 20%.

143. In making the estimates for investment, the mission has taken into account that in recent years the Government has made considerable progress in identifying and preparing projects, particularly for the high priority agriculture sector. It is assumed that this progress on project preparation will continue. It is also assumed that the Government will overcome the administrative and institutional bottlenecks which limit absorptive capacity.

144. To reach the growth targets of the monetary sector and the required monetary investments, the total capital inflow in this period will be about Eth.\$ 550 million. The difference between the estimated investment requirements and the estimated foreign capital inflow is Eth.\$ 2,400 million. This measures the required monetary savings. The average monetary savings ratio (monetary savings as percent of monetary GDP) comes to 16.2%, which is only a little over the average 15.2% ratio realized during 1965-69.

145. There are two methods by which an estimate of Government investment can be derived. One way is to estimate a plausible level of increased public savings, assuming external capital financed about half of Government investment. The second method is to derive Government investment after assuming a plausible level for private investment and subtracting it from the overall monetary investment target. In the past, the monetary savings of the private sector were on the average about 13% of the monetary GDP. This ratio is likely to remain unchanged during 1970-74. This gives about Eth.\$ 1,915 million for private savings. Assuming that the investments in the private sector would be financed by private savings and the net inflow of foreign private capital, which is estimated to be about Eth.\$ 50 million, the total private investments come to about Eth.\$ 1,965 million. The public sector investment would then have to be about Eth.\$ 985 million. The public sector includes the parastatal

institutions (IBTE and EELPA), which have an investment program of about Eth.\$ 160 million. The size of the Central Government's development program would therefore have to reach Eth.\$ 825 million in order to meet the target. 1/

146. As can be seen from the following table, a program of Eth.\$ 825 would mean a steady and fairly sizeable increase in Government investment every year. However, even given such an increase, it would not be possible to carry out all the projects which appear to be ready for execution (see column 3). In other words, it appears that in the next few years, Ethiopia's investment is more likely to be limited by the volume of financial resources than by the availability of projects.

Central Government Capital Budget
(Eth.\$ million)

| | (1) Estimated Actuals | (2) Projected | (3) Project Require- ments |
|---------|-----------------------------|------------------|----------------------------------|
| 1968-69 | 75.9 | - | - |
| 1969-70 | 101.9 | - | - |
| 1970-71 | 132.0 budgeted | - | - |
| 1971-72 | - | 152 | 189-200 |
| 1972-73 | - | 169 | 190-200 |
| 1973-74 | - | 193 | n.a. |
| 1974-75 | - | 216 | n.a. |

147. At the level of Central Government capital expenditure projected in column 2, it will be difficult to accommodate a balanced program given the commitments for ongoing projects, e.g., desirable increases in agriculture, feeder roads, and education. In this sense, the projected levels of Central Government capital expenditure might be considered minimum levels to achieve a balanced development program.

148. The Central Government's target of Eth.\$ 825 million must be financed by current budget savings, internal borrowing and external capital inflow. The direct import content of the Government investment is estimated to be about 40% or about Eth.\$ 330 million out of the total of Eth.\$ 825 million. However, not all the Government capital program will be able to obtain foreign assistance so that if foreign aid is to make a reasonable contribution to the program, some financing of local expenditure will be necessary. It would, in fact, be reasonable to expect that foreign aid would be able to finance about half the capital program, that is

1/ Totals are on a calendar year basis.

to say, about \$410-420 million. This will mean that on the average something well over 50% of the costs of projects should come from external aid.

149. The balance of Eth.\$ 410 million required for public investment will have to come from the Central Government's surplus on current account and from internal borrowing. The Central Government should be able to mobilize about Eth.\$ 290 million as surplus of revenues over current expenditures, without any new taxation. This surplus is before repayment of public debt which is likely to amount to Eth.\$ 120 million. Thus, the Central Government savings available for financing investments comes to Eth.\$ 170 million. This leaves a gap of Eth.\$ 240 million. The estimate for the current surplus assumes that the increase in the current expenditures on general administration would be limited to 4% per year, while current expenditures on economic and social services would be allowed to increase by 10-12% annually. The revenue projections from the existing resources take into account the effects of higher coffee prices in the next few years. Any shortfall in actual revenue collection or any increase in current administrative expenses at a rate over 4% per year will increase the gap to be met by internal borrowing or additional taxation to more than Eth.\$ 240 million.

150. A review of the various possible measures that might add to budget revenue indicates that additional taxation might generate about Eth.\$ 30 million per year. This could come from increases in the rates on corporation income, excises and land taxes and dividends from public enterprises. Depending upon when the tax measures are introduced -- the first opportunity is fiscal 1970-71 -- additional tax revenues could range up to Eth.\$ 135 million for the period 1970-74. If, for example, they were introduced in fiscal 1971-72 then new tax revenues could aggregate Eth.\$ 105 million for the period. This implies that budget savings (after debt repayment) would increase significantly from recent levels of about Eth.\$ 10 million per year; starting with fiscal 1970-71 they might amount to Eth.\$ 41 million, 65 million, 70 million, 80 million and 90 million.

Internal Borrowing

151. If additional tax revenue of the order of Eth.\$ 135 million can be found, the domestic borrowing would have to cover the remaining balance of up to Eth.\$ 105 million for the period. Obviously, to the extent that new tax revenues do not materialize and the other assumptions remain unchanged, the gap to be covered by domestic borrowing will increase. This raises the issue of prudent levels of domestic borrowing if both domestic and external equilibrium is to be kept in balance.

152. There seems little scope for domestic borrowing from non-banking sources although every effort should be made to tap them. The bulk of the domestic borrowing must therefore come from the banking system, and this raises the monetary policy issues of money supply and credit expansion. The expansion of money supply during 1970-74 should be in line with the growth targets and the increased monetization of the economy during this

period. There is no a priori determinant of monetary expansion. However, the IMF mission of 1969 prepared some guidelines according to which money and quasi-money in Ethiopia should expand at a rate 3% above the real growth rate of GDP. The mission's target of real GDP growth rate during 1970-74 is 5.2 - 5.5%. Taking the upper limit of this target (5.5%), the monetary expansion could be at the rate of 8.5% according to the IMF formula. The balance of payments outlook indicates that foreign assets are likely to increase during this period. This increase in foreign assets and the normal increase in the non-monetary liability of the banking system suggest that about 10% annual increase in domestic credit will result in an 8.5% rate of increase in money supply. On this basis, the total credit expansion during 1970-74 should be around Eth.\$ 270 million.

153. It will be unwise to make any distribution of this total credit between the public and private sectors on the basis of any given formula; this should be decided in the individual years on the current assessment of the need for credit by the two sectors. Unless the Government takes new tax measures in 1970-71, the size of the Central Government's budget gap in that year will require increased borrowing, which might restrict the amount of credit available for the private sector. However, for the whole period 1970-74, it does not seem unreasonable to assume that the public sector could borrow the Eth.\$ 105 million which is required to meet the budget gap. However, if tax measures are not taken in 1970-71, or if new taxation produces less than Eth.\$ 135 million additional revenue during 1970-74, the need for deficit financing will exceed Eth.\$ 105 million; this may threaten the pursuance of prudent monetary policy. Revising interest rates upward will contain the demand for private credit, thus leaving more for the public sector. An illustration of the order of magnitudes involved for the remaining years of the TFYP is represented in the following table:

ILLUSTRATIVE GOVERNMENT CAPITAL EXPENDITURE AND FINANCING
(Eth.\$ million)

| | <u>1969-70</u> | <u>1970-71</u> | <u>1971-72</u> | <u>1972-73</u> | <u>1973-74</u> |
|---|------------------------|----------------------------|---------------------|---------------------|---------------------|
| | <u>Esti- mated</u> | <u>Proposed Budget</u> | <u>Projected</u> | <u>Projected</u> | <u>Projected</u> |
| 1. Total revenue from existing taxation | 409.5 | 447.1 | 503.2 | 547.2 | 600.9 |
| 2. Current expenditure | 378.0 | 410.5 | 445.5 ^{/1} | 483.5 ^{/1} | 525.7 ^{/1} |
| 3. Current budget surplus (1-2) | 31.5 | 36.6 | 57.7 | 63.7 | 75.2 |
| 4. Debt service | 22.0 | 22.4 | 23.0 | 24.0 | 25.0 |
| 5. Budget savings (3-4) | 9.5 | 14.2 | 34.7 | 39.7 | 50.2 |
| 6. Capital expenditure | 101.9 | 131.9 | 152.0 | 169.0 | 193.0 |
| 7. Overall budget deficit (5-6) | 92.4 | 117.7 | 117.3 | 129.3 | 142.8 |
| <u>Financing of Deficit</u> | | | | | |
| 8. External assistance | 53.1 | 79.2 | 76.0 ^{/2} | 84.5 ^{/2} | 96.5 ^{/2} |
| 9. Domestic gap (7-8) | 39.3 | 38.5 | 41.3 | 44.8 | 46.3 |
| | | <u>A</u> | <u>B</u> | | |
| 10. New taxation | - | - | 30.0 ^{/3} | 30.0 ^{/3} | 30.0 ^{/3} |
| 11. Domestic borrowing | 39.3 | 46.5 | 8.8 | 11.3 | 14.8 |
| | | | | 14.8 | 16.3 |

^{/1} 4% p.a. increase for administrative sector; 10-12% p.a. increase other sectors.

^{/2} Assumed at 50% of capital expenditure.

^{/3} Assumed by the mission.

154. If anything the above analysis errs on the liberal side in projecting credit expansion. Any evidence of inflationary pressure during the coffee boom period may require more restrictive control of credit expansion. The logic of the coffee cycle, in fact, implies that credit expansion be small during the boom years, anticipated in 1970 and 1971, and more expansionary in the years thereafter as the boom declines. Thus, Government borrowing from the banking system of up to Eth.\$ 105 million should be low in 1970 and 1971 and high thereafter. Moreover, a contra-cyclical monetary policy will be consistent with the revenue and, therefore, public savings outlook for the Government. In times of increased

export earnings and concomitant expansion of the economy, Government revenues will be increasing and Government's borrowing requirements will be relatively less. During such periods, external reserves should increase if a prudent monetary policy is pursued. In times of slow growth or declining exports with resulting slackening in the economy, Government revenues will also slacken. It is at such time that Government borrowing requirements will increase in order to sustain expenditures. This will probably coincide with the need to increase private credit, which, with the increase in public credit, will result in a drawdown of the external reserves accumulated in the buoyant period. This contra-cyclical monetary policy implies that new tax measures be introduced as soon as possible if the increased and desired level of Government investment is to be protected while pursuing a prudent domestic borrowing policy.

155. The first point to note is that without new tax revenues in fiscal 1970-71 and 1971-72, the implied domestic borrowing from the banking system would probably exceed contra-cyclical monetary policy objectives unless private credit were to be unduly squeezed. As a corollary, if new taxes are introduced no later than fiscal 1971-72, preferably 1970-71 for the reasons already noted, then the requirement for domestic borrowing by the Government in fiscal 1972-73 is likely to be less than sufficient to offset the decline in the private sector which would accompany the end of the period of high coffee prices. Higher levels of domestic borrowing by the Government in that year would permit an even higher level of capital expenditure which would be desirable from the project requirement and balanced program points of view. In this connection, it is obvious that an even higher capital expenditure program would be possible if external assistance covered more than 50% of Government capital expenditures.

156. In summary, there are several policies to be followed if Ethiopia is to increase growth and Government capital expenditures. These are:

- (a) Ethiopia takes the steps necessary to organize higher levels of Government capital expenditures. The mission believes that absorptive capacity can be improved to mount an even larger Government capital program than illustrated above, and if possible, this would be desirable from a balanced program perspective.
- (b) Control of current expenditure policy will be necessary to provide the funds for development services while containing non-development expenditures; otherwise, the necessary current budget surplus will be endangered.
- (c) New taxes will be required to finance a higher level of Government capital expenditures.
- (d) While domestic borrowing from the banking system can provide resources for development, monetary policy should be

used to ensure that foreign exchange reserves are increased in 1970 and 1971 so that they may be used later as the coffee boom levels off and declines.

- (e) Ethiopia will be successful in obtaining external finance on average for half the cost of the Central Government's capital investment; that this external finance will include financing for local costs or non-project finance; and that external finance for projects will average well above 50% of projects costs if the limited number of eligible projects are to generate 50% of the total program costs.

Prospects for External Resources

157. The prior section estimated overall growth, investment and capital inflow for the period 1970-74. This section examines to what extent these estimates are consistent with the likely outlook for the balance of payments. In addition, the outlook for foreign private capital inflow and external reserve policy are reconciled with the estimated gross capital inflow. Briefly, the procedure is to estimate exports independently, and then with a given capital inflow, examine the implications for imports. Then to examine the capital account to introduce consideration of a desired external reserve policy. The medium-term prospects for Ethiopia's exports are good; the high coffee prices which are expected to prevail for 3-5 years, will bring about export earnings significantly higher than those of the recent past. This, with a continued inflow of foreign capital, should permit higher rates of investment and growth, given the necessary absorptive capacity and internal resources. However, the medium-term strategy to mobilize and use external resources should keep in view long-term goals and problems. Once coffee prices fall to more normal levels, the balance of payments deficit will increase, if the rate of increase in investment is maintained. This requires that the external economic policy during the upswing of the Ethiopian trade in the medium-term should be such that, while achieving reasonable rates of growth and investment during this period, it leaves the external sector prepared to meet the resource needs when the downswing of the coffee trade comes in full effect.

158. The medium-term strategy should aim at:

- (a) increasing non-coffee exports and services as fast as possible so that total foreign exchange earnings are protected from the downward movement of coffee prices;
- (b) building up the reserves by accumulating a net surplus in the medium-term, so that the reserves could be used to sustain investment at the time, primarily after 1970-74, of lower levels of foreign exchange earnings;

- (c) ensuring an adequate inflow of foreign capital, despite higher export earnings and lower deficit in the current account, so that it is possible to build up foreign reserves.

159. Ethiopia must embark on a vigorous export promotion and diversification policy. In the past, due to the absence of any action program the receipts from oilseeds, pulses, hides and skins, meat, fruits and vegetables were allowed to fluctuate. If Ethiopia now fails to launch an active program to promote non-coffee exports, its development prospects at the end of the present coffee boom will be threatened by the scarcity of external resources. Early exploitation of potash would however, relieve the position. Both incentive policies - such as exemption of export duties and taxes - and organizational and administrative support to exports will be required to launch an export-promotion program. Establishment of an export-promotion organization deserves serious consideration.

160. The mission has made some projections of Ethiopia's balance-of-payments for the period 1970 and 1974 (Appendix A, Table 4). In doing this the mission opted for rather optimistic but realizable assumptions about exports, import of capital goods, and foreign capital inflow. It is assumed that Ethiopia will make a maximum effort to mobilize resources for its medium- and long-term development goals.

Export Projections

161. The coffee export projections assume that the price will remain high for three years, 1970-72 (on the average 50 US cents per pound for Brazilian Santos 4) and will decline by 10-15% in the following two years. Ethiopia also exports some washed "mild" coffee for which the price premium is 25-30%. Ethiopian coffee is generally price responsive - that is, larger amounts reach the market when the price is high. However, some factors such as the inaccessibility of the coffee forests limit the supply elasticity in the short run. Actual supply in a particular year depends primarily on the weather. In 1970/71, Ethiopia expects a bumper coffee crop which should allow a faster than normal increase in exports in 1970 and 1971. After 1971, the quantity exported is assumed to grow at 4% annually.

162. The export of washed coffee is presently about 7-8,000 tons. The Government has prepared a project to process an additional 18,000 tons of washed coffee over a 4-year period. The projection assumes that the project will be implemented and production will begin in 1972. Washed coffee exports are expected to rise from 8,000 tons in 1970 to 22,000 tons in 1974. If this project is delayed, the estimated export earnings will have to be adjusted downwards.

163. Exports of the traditional non-coffee products have been projected to increase steadily, although in the past these exports have not showed any trend. The projections assume a 9% annual growth rate, which is high, and realistic only on the assumption that Ethiopia will launch

a vigorous export-promotion program. The estimates serve as illustrations of what could be achieved with a maximum effort. Even with these projections of non-coffee exports, coffee's share of total exports in 1974 will be about 53% compared to 58% in 1969.

164. Potash exports have not been included because the slow progress in exploitation and the rather unfavorable international market suggest that production will not be profitable until the later half of the decade. Once potash exports start, they should be substantial and will reduce coffee's share significantly.

Invisibles

165. Net receipts of the total non-factor services have been increasing fairly rapidly due to the increased earnings of the Ethiopian Air Line and the Ethiopian Shipping Line, as well as a growing tourist industry. The trend increase is assumed to continue. The net investment income payment will continue to increase, but slowly. Private transfers have been negative in the past years, and it is assumed to remain so in the future, having no particular trend.

Implications for Imports

166. The imports implied by the estimated exports, invisibles and after allowance for increases in external reserves, explained below, may be summarized in the table below:

| | 1970-74 (Eth.\$ million) |
|---------------------------------------|-----------------------------|
| Total exports | 1,973.0 |
| Total invisibles | 238.0 |
| Capital inflow | <u>550.0</u> |
| | 2,761.0 |
| Less increase in external reserves | <u>54.0</u> |
| Implied imports | 2,707.0 |

167. Appendix A, Table 4, shows the annual import implications of these estimates; it implies an import growth rate of 7.5% per year or about the growth rate estimated for monetary GDP. This implies overall that the propensity to import will not change very much during the period.

168. An alternative method is to separately estimate the different components of imports based on their observed relationship with end-uses like investment, consumption and exports. The mission's analysis of these

import relationships indicates that the implied imports would be sufficient to sustain the projected increase in GDP and investment provided there were no radical changes in these import relationships during the period.

Capital Requirement and Inflow

169. The balance on current account after private transfer is the resource gap which is to be met by foreign public grant and loan and foreign private capital. This resource gap is expected to be rather small in the earlier years because of high coffee exports, but in the later years the gap will be much wider with stagnant coffee exports and increased imports. For the entire 1970-74 five-years period, the gap will be nearly Eth \$500 million, compared to Eth \$458 million during 1965-69 period. This rather small increase is due to the expectation of much higher export earnings in the coming years compared to the recent past.

170. The forecasts for public capital inflow have been made keeping in view the past levels and the requirements to finance the projected public investments. Grants are expected to increase somewhat, but are likely to level off. The loan receipts have been projected on the basis of the need for financing the Central Government's capital expenditures, as well as the expected receipts by the autonomous agencies and the Municipality of Addis Ababa. It has been assumed that half of the projected Central Government's capital budget will be met from foreign loans and grants.

171. The balance-of-payments projections for the 1970-74 period have taken into account the need to augment foreign reserves during the period to a level from where they could be drawn down in later years, primarily after 1974, when the resource gap might be too high to be met by capital inflow. At the end of 1969, the reserves were Eth \$181 million - or equivalent to 5-1/2 months merchandize imports of 1969. If the reserves remain unchanged, at the end of 1974 they will be equivalent to less than 3-1/2 months' projected merchandize imports of that year. This is not a satisfactory level from which reserves could be further drawn down. In later years, one must anticipate the possibility of a further decline in coffee prices. It will therefore be appropriate to ensure that capital inflows increase consistently with the increase in the need for capital imports and allow some increase in reserves in the medium term. This will help keeping the need for future capital inflows within reasonable limits.

172. The following table gives the mission's projections of the foreign capital requirements and the inflows during 1970-74, and compares these with the corresponding figures for 1965-69:

| | Five Years 1965-69 (Eth\$ million) | Five Years 1970-74 (Eth\$ million) |
|---|--|--|
| Public loans - gross | 345 | 483 |
| Amortization | <u>124</u> | <u>198</u> |
| Public loans - net | 221 | 285 |
| Public grants - net | 154 | 217 |
| Private capital - net | <u>71</u> | <u>48</u> |
| Total capital - net | 446 | 550 |
| Foreign reserves at the end of the period | 181 | 235 |
| Equivalent of the imports of the terminal year (approximately) | 5-1/2 months | 4-1/2 months |

173. The projected foreign reserves at the end of 1974 will be approximately equal to 4-1/2 months imports of 1974. It will be seen from Appendix A Table 4 that the reserves are expected to decline after 1972. Since potash exports are unlikely to start before 1979, the need for capital inflows in the later half of 1970's will be very high just to ensure continued increase in imports for development and to prevent the reserves from falling to a dangerous level.

174. In regard to capital inflows and the early build-up of external reserves in anticipation of future drawing down of reserves, it is worth emphasizing some basic trends that emerge from this analysis. As the economy hopefully expands with a concomitant increase in investment, the current account deficit can be expected to increase in size annually, e.g., from Eth \$57 million in 1970 to Eth \$153 million in 1974. Underlying the current account deficit is the fact that the propensity to import is not expected to change very much, e.g., imports are projected at 18.3 percent of monetary GDP in 1970 and 18.5 percent in 1974. The increasing current account deficit is due more to the lack of an adequate export growth rate, e.g., exports are projected at 15.7 percent of monetary GDP in 1970 and 12.5 percent in 1974, despite moderately optimistic assumptions regarding export growth during the period. This highlights again the important role of a successful export growth policy.

External Public Debt

175. Ethiopia's external debt at the end of 1969 was US\$272.8 million, including undisbursed commitments of US\$104.7 million. An amount of US\$90.7 million committed under frame agreements, but not yet allocated to projects is not included in these figures.

176. In 1968, interest and amortization payments were US\$16.2 million. Foreign exchange earnings from goods and services in that year amounted to US\$175.2 million. Thus, debt service payments absorbed 9.3 percent of the foreign exchange earnings of 1968. The provisional balance of payments for 1969 indicate that debt service payment in that year was US\$20.6 million, or 11.3 percent of US\$182.1 million exports of goods and services of that year.

177. The weighted average terms of external debts incurred in the period 1964-68 are: maturity - 25.2 years; grace period - 5.7 years; and interest rate 4.13 percent. The weighted average terms of the debts incurred in individual years are as follows:

| | Amount (US\$ 000) | Maturity (years) | Grace years | Interest (%) |
|------|----------------------|---------------------|----------------|-----------------|
| 1964 | 37,534 | 19.8 | 4.3 | 5.388 |
| 1965 | 17,290 | 14.5 | 2.5 | 5.007 |
| 1966 | 37,979 | 36.1 | 8.6 | 2.867 |
| 1967 | 32,560 | 25.0 | 5.8 | 3.257 |
| 1968 | 44,495 | 24.7 | 5.4 | 4.435 |

The terms were the softest in 1966; since then they hardened in all respects.

178. The future external public debt service ratio will depend on (a) the volume of future commitments; (b) the terms of new commitments and (c) the export growth rate. Ethiopia will require a substantial foreign aid for a considerable time. The projection for 1970-74 indicate that the gross inflow of public loans in this period should be of the order of US\$193 million. During 1965-68 commitments were 42 percent higher than actual flows in that period. While the difference between new commitments and disbursements could be narrowed somewhat by speedier disbursement, the increased need for foreign capital in the later years will require high levels of aid commitments. Assuming that for the 1970-74 period commitments will be 40 percent higher than the projected flows, the total required new commitments in this period comes to US\$270 million. As approximately US\$105 million was committed but undisbursed at the end of 1969, the gross amount of new commitments of external aid in the 1970-74 period is projected at US\$165 million, or about US\$33 million per year. However, if the external aid pipeline is to be adequate to sustain Government investment after 1974, then new commitments should prudently average US\$50 to 60 million a year during the 1970-74 period, or a total of US\$250 to 300 million.

179. Ethiopia's debt service capacity will turn as much on the amount of capital inflow, its terms and export growth rate after 1974 as what happens in 1970-74. The mission has constructed some projections to illustrate these possibilities for the period 1970-85 (see Statistical Table 18). The projections used in the report assume that the foreign aid will be sufficient to finance 50 percent of Central Government investment. If investment were to increase by 50 percent in each five-year period, then Ethiopia would require an inflow of aid which would increase by 8.5 percent

each year. The projections show the implications of such an increase for the debt service ratio and also the resulting net aid which Ethiopia would receive. It is clear that the debt service ratio will be greatly influenced by the rate of growth of exports. If exports could increase over the long run at 6.3 percent a year Ethiopia would be unlikely to encounter any debt problems during the period. On the other hand, if exports rise at only 5 percent per year, the debt service ratio would be as high as 15 percent by 1985. Even if aid were to increase at a substantially slower rate, a 5 percent export growth rate would still lead to a 13 percent debt service ratio by 1985.

180. Aid on more concessionary terms would help to keep down the debt service ratio and at the same time would mean a higher inflow of net aid. Indeed as can be seen from Alternative IV of Table 18, if gross aid increases by only 4 percent a year after 1974 and present terms ^{1/} are continued, net aid to Ethiopia will start to decline soon after 1975.

181. Naturally, if exports grow at even higher rates, then the debt service ratio would be even lower and the external debt burden even more manageable for Ethiopia. This again highlights the importance of export policies, but also emphasizes the importance of increased public savings. To the extent that public savings increase for a given level of public investment, the external capital requirement declines with resulting more manageable external debt burden. Thus, while Ethiopia seeks more concessional terms on external borrowing, she should also seek to improve both exports and public savings.

^{1/} Present terms on external borrowing result from a blend of lending comprising 36 percent conventional terms, 26 percent European bilateral terms, and 38 percent concessional. Moderately more concessional terms would consist of 26 percent conventional, 25 percent European bilateral terms and 49 percent concessional.

CHAPTER VI

DEVELOPMENT ISSUES - SPECIAL PROBLEMS

Public Savings and Implications for Tax Policy

182. One of the central economic problems confronting the Ethiopian Government is that of mobilizing domestic resources to meet the projections and expectations of the TFYP, and to match the available foreign assistance. If the growth of the economy is to increase, then Government capital expenditures must increase. And if Government capital expenditures are to increase, then Government savings must rise to support increased capital expenditures. Government savings depend on improved performance in respect of both current expenditures and revenue policies.

183. The role of current expenditures and revenues in affecting public savings can be seen from the experience of the 1960's. During the early 1960's, the growth rate of tax revenue at 12 percent a year was twice the 6 percent growth rate of current expenditures, with the result that public savings increased. Between 1964/5 and 1967/8, the trend reversed as the growth rate of tax revenues fell to 7 percent, while the current expenditure growth rate rose to 10 percent. The reverse movement meant that there was no increase in Government current account savings, which in turn adversely affected the Government's ability to carry out an investment program, utilize available external assistance and provide development services through the current budget.

184. The rise in expenditure was due to a marked rise in expenditure on defense, internal law order, justice and administration services. On the average, these absorbed Eth.\$ 14.6 million annually out of Eth.\$ 21.8 million annual increase in revenue. Apart from sizeable increases for education, there was little left for the economic and social services or for the capital budget, and consequently development capacity in the public sector remained underutilized. Indeed, current expenditures for economic and social services were increasingly squeezed so that ongoing programs were stopped or slowed down, while at the same time capital budgets did not increase. If Ethiopia is to increase capital expenditures and mobilize adequate resources, then current expenditures on defense, internal security and general administration will have to be controlled, while at the same time current expenditures on economic and social services are increased, both to make up for the recent expenditure squeeze and to match increased capital expenditures.

185. On the revenue side, the fall of the tax revenue growth rate has been caused by cyclical as well as by structural factors. The down-turn of the short-term coffee cycle affects the yield of export taxes directly, but more important is its effect on import duties and other taxes via the reduced income streams. The downward movement of coffee prices partly accounted for the decline in tax revenue. But the change in the economy's

structure caused by the growth of industries producing import substitutes has also altered the structure of imports; the higher dutiable consumption goods imports have declined in relation to lower-taxed raw materials and capital goods.

186. On the whole, Ethiopia's tax burden is fairly low - even when it is remembered that openness of the borders limits the Government's ability to administer foreign trade taxes. There are some prospects for increasing taxation and for improving the elasticity of the tax system which are compatible with other economic objectives, such as more rapid industrialization. In addition, the collection of taxes can be improved in the long run.

Direct Taxes

187. Income tax has a high elasticity owing to the progressive rates and the wide coverage of the monetized sector; but because the tax is schedular the tax burden is lower than the tax rates indicate. It would be in the interest of the revenue no less than of equity, that an aggregated system of income tax replaces the schedular system as soon as possible. The introduction of an Agricultural Income Tax in 1967 in place of the Tithe has helped to improve the elasticity of the Income Tax System, both because of the progressive rates and the provision for periodical revaluation.

188. Land taxes are falling as a percentage of total tax revenues and are low in relation to the productive potential of the land. Even at the prevailing level of agricultural services raising the rates of land based taxes would probably induce better and more productive land use and at the same time increase revenues.

Domestic Indirect Taxes

189. The problem of tax elasticity is primarily one of taxes on domestic output. The elasticity of the turnover tax and of the transactions tax on domestic products has been high but their yield is a small percentage of total tax revenues. On the other hand, excise taxes on domestic products which yield much higher revenues have been relatively income inelastic. As dependence on these taxes increases with the growth of import substitution, there is a need to improve their buoyancy. This could be done by increasing tax rates as well as by extending excise taxation to other products, in particular, to services.

Foreign Trade Taxes

190. The system of charges on imports is complicated. Each item is subject to six or seven charges. This appears to be very costly and probably could be simplified. Also there are some 450 tariff categories and tariff rates. This variety of rates appears to have little, if any, economic or social rationale behind it. The industry study (see Annex 2) concludes that from the point of view of an industrial development policy,

a uniform level of tariff would be desirable. An advantage of such a move is that it would focus attention upon policy issues relating to economic and in particular industrial development. The present system of selectivity results in a case-by-case approach with much time devoted to examining each separate case. Further it is agreed with regard to the differential transactions tax rate of 12% on imports compared to 5% on domestic goods, that revenue measures such as the transactions tax should not enhance protective aims as well, that this is the role of import duties. However, if the government finds it difficult to accept uniform import duties, the 7 percent differential in the transaction tax has its merits.

191. On the export side, coffee accounts for about 80% of export tax revenue, but coffee smuggling is so prevalent that it may be imprudent to increase charges unless there are reliable ground to believe that revenue will really be increased. Other exports have been adversely affected by increased freight rates and longer transportation periods resulting from the closure of the Suez Canal. There appears to be little scope for raising taxes on these exports. In fact, as the industry study suggests, there is a strong case not only for waiving export charges on non-traditional exports but even for an export subsidy which would make it at least as profitable to sell output abroad as domestically.

192. The problem of more effectively taxing both imports and coffee exports can only be tackled by sterner administrative action. This would involve strengthening the preventive forces of the Customs Department and also enlisting the armed services. No striking increase in the buoyancy of revenues should be expected from these measures in the short run.

Non-Tax Revenues

193. Non-Tax Revenues consist mainly of revenues from state property and user charges. There is scope for increasing revenues from government investments in public enterprises, as well as from various user charges. A systematic study of the major items of user charges, such as port charges, would be useful.

Government Borrowing

194. Until 1967/68, Government borrowed sparingly from the banking system. Even at the end of 1968/69 after a period of budgetary stringency the short-term borrowing facilities were underutilized by Eth.\$ 30.2 million. However, after consulting the IMF a new formula was agreed which raised the ceiling for government borrowing from the banking system from Eth.\$ 195.2 million to Eth.\$ 299.2 million as at August 1, 1969. The use of the facility is not automatic. The amount to be borrowed depends on the prevailing economic conditions and must be consistent with internal monetary stability and balance-of-payments equilibrium.

195. Government borrowing from the private sector has hardly begun. At the end of 1968/69 only Eth.\$ 11.6 million of Government long-term securities were not held by the Central Bank, and even those were mainly with the Pensions Commissioners and the Commercial Banks. It is apparent from the growth in bank time and savings deposits that there is growing willingness of savers to hold assets in financial institutions. The Government should ensure that the growing institutionalizing of savings is further developed by making available an array of financial assets with varying terms, interest rates, liquidity, etc., to the public. The policy will require an examination of the level and structure of interest rates. These measures can be promoted by financial institutions such as the new Ethiopian Development Corporation (EDC) which will have a role to fulfill as a mobilizer of private savings as well as a lender to industry.

Better Budgeting and Budget-Plan Coordination

196. Annual budgeting has fallen short of what the TFYP prescribes, and what the country needs for the Government to play an effective role in economic development. There are no annual economic surveys, and no annual plans. The annual budgetary process begins too far -- some nine or ten months -- in advance for the resulting budget to be an efficient instrument of fiscal policy; also more economic and financial analyses are needed as a basis for budget preparation.

197. The Ministry of Finance and the spending ministries prepare estimates for both the ordinary expenditure budget and the capital budget, while the Planning Commission and the spending ministries prepare a second estimate for the capital budget. The Ministry prepares estimates of total revenue but revenue projections of the Commission based on the TFYP are also available to the Council of Ministers. As a consequence of these various exercises, the Council then has to spend much time drawing up the final estimates itself. The result of this procedure has been that expenditure budgets were adopted which exceeded the best estimate of likely revenue. Consequently, expenditure had later to be cut on a rather ad hoc basis. This made it very difficult for the spending ministries and agencies to plan operations ahead, and the execution of investment projects tended to be interrupted.

198. It is obvious that the procedures by which expenditure policy is determined, and actual expenditure controlled, require change - if resources are not to be wasted. The changes would have to include procedures by which the Ministry of Finance, the Central Bank and the Planning Commission cooperate to produce an annual economic survey and projections of the major macro-economic aggregates over the ensuing twelve months. This exercise would produce revenue estimates at existing tax rates, recurrent expenditure obligations under existing policies, and thus the level of government savings available for financing capital expenditure. In doing this, it would throw into sharp relief the policy issues in relation to both taxation and expenditure which the Government must face if a given investment program is to be undertaken.

Need For A Policy To Protect Development Effort Against Fluctuations In Export Earnings

199. The Ethiopian economy is subject to periodic swings which derive from shortfalls in export earnings, principally from coffee, and spread through the economy. The impact on budgetary savings and government investment is reflected, for instance, in the fall of government savings from over Eth.\$ 40 million in 1965/66 and 1966/67 to Eth.\$ 16 million in 1967/68 and to about Eth.\$ 30 million in subsequent years. It is also reflected in deviations of actual expenditures from budgeted expenditures in recent years.

200. The issue is the appropriate way in which the Government should react to short-run changes in the economy which could not be anticipated in drawing up a 5-year development program. Part of this problem can be dealt with by internal borrowing policies. A more favorable balance of payments situation than anticipated in the Plan can provide the occasion for building up foreign exchange reserves which can be run down during less favorable years. Internally, this means that neither monetary nor fiscal policy should be expansionary during the boom period. If there are sufficient reserves, then during periods of balance of payments difficulties such as those from which Ethiopia is just emerging, budgetary policy and monetary policy can be used to offset, in some degree, the impact on the internal economy. The Ethiopian authorities are well placed to pursue such a policy. There is a history of monetary discipline which finds expression in the legal limits of government borrowing and, moreover, the country is in a favorable external reserve position. At the moment, its reserves are equivalent to 4 to 5 months' imports and are increasing. Government borrowing policy should, therefore, be in part based on the changing needs of the economy. If this were to be achieved, then the development plan could be implemented to a considerable extent as planned. It remains true, however, that unless fluctuations in export earnings are reasonably moderate or of short duration, some adjustment in government expenditure will have to be made.

Coordination of Public Enterprise Investment and Savings Policy

201. The Government has shareholdings of Eth.\$ 281 million in a number of autonomous concerns which fall into two categories: public utilities and private enterprises. The public utilities are wholly government-owned. Some of the private enterprises are either wholly government-owned while in others the government is a minority shareholder. Most of the investment were financed through the capital budget.

202. These investments raise a number of questions for the mobilization and use of resources by the government, such as, for example, whether the investment decisions particularly of public utilities (including government monopoly enterprises such as the tobacco monopoly), should be as divorced as they are at present from overall fiscal considerations; whether all public enterprises should contribute to Government's resources for example, by paying dividends -- this is particularly relevant when as at present the Government has a public savings problem; whether and in what circumstances Government should continue to appropriate budget savings for private investment purposes.

203. The measures required to deal with the economic effects of the coffee cycle call for more intensive use of fiscal policy. The wider the direct coverage of fiscal policy, the more effective it is likely to be. But the investment decisions of the public enterprises which are controllable by the Government are taken by their Boards on the basis of the particular firm's requirements without regard to overall fiscal considerations. Realizing the inadequacy of dealing merely with the Central Government budget, the TFYP proposes a Consolidated Public Sector Budget which would also include the autonomous public corporations, agencies and trusts; and emphasizes mobilizing general Government and public sector finances to increase effectively the volume of public savings for investment. In this way, the investment policies of autonomous authorities and corporations would be coordinated with overall Government investment policy.

204. On purely financial grounds - that is the need for more budget savings and the further need to obtain the additional funds with the least administrative effort, it is reasonable to expect public enterprises to make some contribution to public savings. These would in the first instance be used to finance the enterprise's own investment. If there is a cash balance after investment by the enterprise, then it could be made available to Government as dividends or loans. In the case of public utilities, the minimum revenue should be sufficient to enable the agency to maintain itself in a sound financial position in the sense that it can be regarded as a creditworthy borrower, able to attract and service the loans necessary to carry out its investment program. Whether or not it is advisable to charge rates which yield revenues in excess of this amount is essentially a question of tax policy. The nature of the utility and of the demand for the service must be considered, higher rates may reduce the demand for the service and this may or may not be desirable, according to the balance between demand and supply.

205. On the whole, the Government-controlled private enterprises have been incurring losses. Preliminary inquiries indicate that these losses may be caused by one or more of the following: poor management, underutilized capacity, unsuitable equipment, bad location, and uneconomic plant size. A detailed study of each firm may give the answers which might provide relief for an already heavily burdened budget. As to new Government investments in private enterprise type activities, the proposed policy is that Government's holdings will be vested in, and managed by, the proposed new Ethiopian Development Corporation (EDC), and that Government funds for this type of activity will be channeled through the EDC which will operate on prudent commercial principles.

Export Promotion and Diversification

206. The sensitivity of the Ethiopian economy to the price of coffee cycle has already been described in earlier sections of this report. If the Ethiopian economy is to mount a sustained growth effort with reasonable stability, then high priority attaches to an effort to promote export growth and diversification. This will require both institutional and policy arrangements. A central institution is required to coordinate efforts

to promote export growth. Much can be achieved through improving quality as with oilseeds, better packaging to prevent the present high losses on agricultural commodities, and improved transport. There is a proposal for an export promotion agency, and this would go a long way to meet this need. On the policy side, there is a case, described for agriculture in Annex 1 and manufacturing in Annex 2, for raising the prices and therefore profits for non-traditional exports. In the first instance, the feasibility of eliminating the export and transaction taxes on exports should be explored. In addition, there might be cases warranting export subsidies. The draft Investment Code proposes a generous rebate of income taxes on exports by enterprises, and this should improve the incentives for exports.

"Absorptive Capacity"

207. One of the requirements for more rapid growth in Ethiopia is a larger volume of savings, which means in practice, larger public savings through the budget and the government agencies. Equally important, however, will be Ethiopia's "absorptive capacity" in the sense of the ability of the Government and government agencies to prepare and carry out projects. This is partly governed by the shortage of skilled manpower, a problem which can be eased by technical assistance but which can be solved in the long run only by education and training. It is also partly a question of organization within the Government to improve the budgeting and planning process, both in general and within the Ministries directly concerned with economic problems. The TFYP proposes a number of specific administrative measures which could bring a major improvement in this respect.

STATISTICAL APPENDIX

| | |
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Table 1: ETHIOPIA - EXTERNAL PUBLIC DEBT OUTSTANDING AS OF DECEMBER 31, 1969 ^{/1}

Debt Repayable in Foreign Currency

(In thousands of U.S. dollars)

| Source | Debt Outstanding December 31, 1969 | |
|--|---------------------------------------|--------------------------|
| | Disbursed only | Including undisbursed |
| TOTAL EXTERNAL PUBLIC DEBT ^{/2} | <u>150,797</u> | <u>254,884</u> |
| Privately held debt | <u>22,560</u> | <u>23,380</u> |
| Suppliers | <u>10,492</u> | <u>11,311</u> |
| Belgium | 404 | 404 |
| France | 106 | 106 |
| Germany (Fed. Rep. of) | 1,254 | 1,254 |
| Italy | 571 | 1,391 |
| Japan | 681 | 681 |
| Netherlands | 5,835 | 5,835 |
| Spain | 24 | 24 |
| Sweden | 291 | 291 |
| United Kingdom | 575 | 575 |
| United States ^{/3} | 750 | 750 |
| Financial institutions | <u>12,069</u> | <u>12,069</u> |
| Italy | 176 | 176 |
| Switzerland | 199 | 199 |
| United Kingdom | 74 | 74 |
| United States | 11,619 | 11,619 |
| Loans from international organizations | <u>64,642</u> | <u>113,584</u> |
| IBRD | <u>44,731</u> | <u>81,684</u> |
| IDA | 19,911 | 31,900 |
| Loans from governments | <u>63,595</u> | <u>117,920</u> |
| Czechoslovakia | 1,368 | 9,322 |
| Germany (Fed. Rep. of) | 2,608 | 17,368 |
| Italy | 9,835 | 10,000 |
| Sweden | 1,588 | 10,342 |
| U.S.S.R. | 13,808 | 13,989 |
| United States ^{/4} | 29,568 | 52,079 |
| Yugoslavia | 4,820 | 4,820 |

^{/1} Debt with an original or extended maturity of over one year.

^{/2} Does not include unallocated amounts under the following frame agreements:

Czechoslovakia \$ 9,799,999 (\$ 857,000 unallocated)

U.S.S.R. \$99,900,000 (\$82,515,000 unallocated)

United Kingdom \$ 4,800,000 (all unallocated)

Yugoslavia \$10,000,000 (\$ 3,317,000 unallocated)

^{/3} Includes \$21,000 arrears of principal.

^{/4} Includes \$112,000 arrears of interest.

Statistical Services Division

Economics Department

September 4, 1970

Table 2: ETHIOPIA - ESTIMATED FUTURE SERVICE PAYMENTS ON EXTERNAL PUBLIC DEBT
OUTSTANDING INCLUDING UNDISBURSED AS OF DECEMBER 31, 1969

Debt Repayable in Foreign Currency

(In thousands of U.S. dollars)

Page 1

| YEAR | DEBT OUTST (BEGIN OF PERIOD) INCLUDING UNDISBURSED | PAYMENTS DURING PERIOD AMORTI- ZATION | INTEREST | TOTAL |
|----------------------------|---|---|----------|--------|
| TOTAL EXTERNAL PUBLIC DEBT | | | | |
| 1970 | 248,593 | 16,640 | 6,368 | 23,009 |
| 1971 | 231,953 | 14,550 | 6,415 | 20,965 |
| 1972 | 217,403 | 12,643 | 6,453 | 19,093 |
| 1973 | 204,760 | 11,527 | 6,393 | 17,921 |
| 1974 | 193,233 | 10,119 | 6,231 | 16,350 |
| 1975 | 183,114 | 9,988 | 5,960 | 15,948 |
| 1976 | 173,126 | 9,884 | 5,734 | 15,619 |
| 1977 | 163,242 | 10,073 | 5,379 | 15,452 |
| 1978 | 153,169 | 9,439 | 5,069 | 14,508 |
| 1979 | 143,730 | 8,549 | 4,741 | 13,291 |
| 1980 | 135,180 | 6,326 | 4,547 | 10,873 |
| 1981 | 128,854 | 6,526 | 4,266 | 10,792 |
| 1982 | 122,326 | 6,548 | 3,976 | 10,524 |
| 1983 | 115,780 | 6,790 | 3,682 | 10,473 |
| 1984 | 108,990 | 7,186 | 3,380 | 10,566 |

Note: Includes service on all debt listed in Table 1 prepared September 4, 1970 with the exception of the following, for which repayment terms are not available:

| | |
|-------------------------|--------------------|
| Suppliers | \$1,272,000 |
| Loans from governments: | |
| Czechoslovakia | 4,889,000 |
| and arrears as follows: | |
| Suppliers | 21,000 |
| Loans from governments: | |
| United States | 112,000 |
| | <u>\$6,294,000</u> |

Table 2: ETHIOPIA - ESTIMATED FUTURE SERVICE PAYMENTS ON EXTERNAL PUBLIC DEBT
OUTSTANDING INCLUDING UNDISBURSED AS OF DECEMBER 31, 1969 (CONT.)

Debt Repayable in Foreign Currency

(In thousands of U.S. dollars)

Page 2

| YEAR | DEBT OUTST (BEGIN OF PERIOD) INCLUDING UNDISBURSED | PAYMENTS DURING PERIOD AMORTI- ZATION | INTEREST | TOTAL |
|---------------------|---|---|----------|-------|
| PRIVATELY-HELD DEBT | | | | |
| 1970 | 22,086 | 6,807 | 1,258 | 8,065 |
| 1971 | 15,279 | 4,883 | 847 | 5,730 |
| 1972 | 10,396 | 4,646 | 563 | 5,209 |
| 1973 | 5,750 | 3,567 | 301 | 3,868 |
| 1974 | 2,182 | 1,468 | 121 | 1,590 |
| 1975 | 714 | 714 | 24 | 738 |

| | | | | |
|-----------|--------|-------|-----|-------|
| SUPPLIERS | | | | |
| 1970 | 10,018 | 2,906 | 540 | 3,446 |
| 1971 | 7,112 | 2,724 | 362 | 3,085 |
| 1972 | 4,388 | 2,288 | 208 | 2,496 |
| 1973 | 2,100 | 2,081 | 81 | 2,163 |
| 1974 | 19 | 19 | 1 | 20 |

Table 2: ETHIOPIA - ESTIMATED FUTURE SERVICE PAYMENTS ON EXTERNAL PUBLIC DEBT
OUTSTANDING INCLUDING UNDISBURSED AS OF DECEMBER 31, 1969 (CONT.)

Debt Repayable in Foreign Currency

(In thousands of U.S. dollars)

Page 3

| YEAR | DEBT OUTST (BEGIN OF PERIOD) INCLUDING UNDISBURSED | PAYMENTS DURING PERIOD AMORTI- ZATION | INTEREST | TOTAL |
|------------------------|---|---|----------|-------|
| PRIVATELY HELD DEBT | | | | |
| FINANCIAL INSTITUTIONS | | | | |
| 1970 | 12,069 | 3,901 | 718 | 4,619 |
| 1971 | 8,167 | 2,159 | 486 | 2,645 |
| 1972 | 6,008 | 2,358 | 355 | 2,713 |
| 1973 | 3,650 | 1,486 | 219 | 1,706 |
| 1974 | 2,153 | 1,449 | 121 | 1,570 |
| 1975 | 714 | 714 | 24 | 738 |

LOANS FROM INTERNATIONAL ORGANIZATIONS

| | | | | |
|------|---------|-------|-------|-------|
| 1970 | 113,584 | 2,948 | 2,884 | 5,832 |
| 1971 | 110,636 | 2,739 | 3,385 | 6,124 |
| 1972 | 107,897 | 2,327 | 3,882 | 6,209 |
| 1973 | 105,570 | 2,786 | 4,236 | 7,021 |
| 1974 | 102,785 | 3,649 | 4,404 | 8,053 |
| 1975 | 99,136 | 3,871 | 4,202 | 8,073 |
| 1976 | 95,265 | 4,162 | 3,983 | 8,145 |
| 1977 | 91,103 | 4,389 | 3,747 | 8,136 |
| 1978 | 86,714 | 3,261 | 3,547 | 6,808 |
| 1979 | 83,453 | 3,491 | 3,390 | 6,881 |
| 1980 | 79,963 | 3,701 | 3,196 | 6,897 |
| 1981 | 76,262 | 3,910 | 2,988 | 6,898 |
| 1982 | 72,352 | 3,977 | 2,770 | 6,747 |
| 1983 | 68,375 | 4,194 | 2,548 | 6,742 |
| 1984 | 64,181 | 4,564 | 2,318 | 6,882 |

Table 2: ETHIOPIA - ESTIMATED FUTURE SERVICE PAYMENTS ON EXTERNAL PUBLIC DEBT
OUTSTANDING INCLUDING UNDISBURSED AS OF DECEMBER 31, 1969 (CONT.)

Debt Repayable in Foreign Currency

(In thousands of U.S. dollars)

Page 4

| YEAR | DEBT OUTST (BEGIN OF PERIOD) INCLUDING UNDISBURSED | PAYMENTS DURING PERIOD AMORTI- ZATION | INTEREST | TOTAL |
|------|---|---|----------|-------|
|------|---|---|----------|-------|

LOANS FROM INTERNATIONAL ORGANIZATIONS

IBRD

| | | | | |
|------|--------|-------|-------|-------|
| 1970 | 81,684 | 2,948 | 2,749 | 5,697 |
| 1971 | 78,736 | 2,739 | 3,239 | 5,978 |
| 1972 | 75,997 | 2,327 | 3,726 | 6,053 |
| 1973 | 73,670 | 2,718 | 4,072 | 6,790 |
| 1974 | 70,952 | 3,514 | 4,234 | 7,748 |
| 1975 | 67,438 | 3,736 | 4,027 | 7,763 |
| 1976 | 63,702 | 3,955 | 3,805 | 7,760 |
| 1977 | 59,747 | 4,182 | 3,570 | 7,752 |
| 1978 | 55,565 | 3,015 | 3,343 | 6,358 |
| 1979 | 52,550 | 3,189 | 3,159 | 6,349 |
| 1980 | 49,361 | 3,382 | 2,967 | 6,349 |
| 1981 | 45,979 | 3,591 | 2,762 | 6,353 |
| 1982 | 42,388 | 3,658 | 2,546 | 6,204 |
| 1983 | 38,730 | 3,740 | 2,326 | 6,066 |
| 1984 | 34,990 | 3,975 | 2,100 | 6,075 |

IDA

| | | | | |
|------|--------|-----|-----|-----|
| 1970 | 31,900 | - | 135 | 135 |
| 1971 | 31,900 | - | 146 | 146 |
| 1972 | 31,900 | - | 156 | 156 |
| 1973 | 31,900 | 68 | 163 | 231 |
| 1974 | 31,833 | 135 | 169 | 304 |
| 1975 | 31,698 | 135 | 175 | 310 |
| 1976 | 31,563 | 207 | 178 | 385 |
| 1977 | 31,356 | 207 | 177 | 384 |
| 1978 | 31,149 | 246 | 204 | 450 |
| 1979 | 30,903 | 302 | 231 | 533 |
| 1980 | 30,602 | 319 | 229 | 548 |
| 1981 | 30,283 | 319 | 227 | 546 |
| 1982 | 29,964 | 319 | 224 | 543 |
| 1983 | 29,645 | 454 | 222 | 676 |
| 1984 | 29,191 | 589 | 218 | 807 |

Table 2: ETHIOPIA - ESTIMATED FUTURE SERVICE PAYMENTS ON EXTERNAL PUBLIC DEBT
OUTSTANDING INCLUDING UNDISBURSED AS OF DECEMBER 31, 1969 (CONT.)

Debt Repayable in Foreign Currency

(In thousands of U.S. dollars)

Page 5

| YEAR | DEBT OUTST (BEGIN OF PERIOD) INCLUDING UNDISBURSED | PAYMENTS DURING PERIOD AMORTI- ZATION | INTEREST | TOTAL |
|------------------------|---|---|----------|-------|
| LOANS FROM GOVERNMENTS | | | | |
| 1970 | 112,923 | 6,885 | 2,226 | 9,111 |
| 1971 | 106,038 | 6,928 | 2,184 | 9,112 |
| 1972 | 99,109 | 5,670 | 2,008 | 7,678 |
| 1973 | 93,440 | 5,174 | 1,857 | 7,031 |
| 1974 | 88,266 | 5,001 | 1,706 | 6,708 |
| 1975 | 83,264 | 5,403 | 1,735 | 7,138 |
| 1976 | 77,862 | 5,722 | 1,752 | 7,474 |
| 1977 | 72,139 | 5,684 | 1,633 | 7,317 |
| 1978 | 66,455 | 6,179 | 1,522 | 7,700 |
| 1979 | 60,277 | 5,059 | 1,351 | 6,410 |
| 1980 | 55,218 | 2,625 | 1,351 | 3,976 |
| 1981 | 52,592 | 2,616 | 1,278 | 3,894 |
| 1982 | 49,977 | 2,571 | 1,206 | 3,777 |
| 1983 | 47,405 | 2,596 | 1,134 | 3,730 |
| 1984 | 44,809 | 2,622 | 1,062 | 3,684 |

CZECHOSLOVAKIA

| | | | | |
|------|-------|-----|----|-----|
| 1970 | 4,433 | 901 | 83 | 984 |
| 1971 | 3,532 | 754 | 98 | 852 |
| 1972 | 2,778 | 437 | 80 | 518 |
| 1973 | 2,340 | 437 | 67 | 504 |
| 1974 | 1,903 | 437 | 54 | 491 |
| 1975 | 1,465 | 437 | 41 | 478 |
| 1976 | 1,028 | 433 | 28 | 461 |
| 1977 | 595 | 405 | 15 | 419 |
| 1978 | 190 | 190 | 3 | 193 |

Table 2: ETHIOPIA - ESTIMATED FUTURE SERVICE PAYMENTS ON EXTERNAL PUBLIC DEBT
OUTSTANDING INCLUDING UNDISBURSED AS OF DECEMBER 31, 1969 (CONT.)

Debt Repayable in Foreign Currency

(In thousands of U.S. dollars)

Page 6

| YEAR | DEBT OUTST (BEGIN OF PERIOD) INCLUDING UNDISBURSED | PAYMENTS DURING PERIOD | | TOTAL |
|------|---|------------------------|----------|-------|
| | | AMORTI- ZATION | INTEREST | |

LOANS FROM GOVERNMENTS

GERMANY (FED. REP. OF)

| | | | | |
|------|--------|-------|-----|-------|
| 1970 | 17,368 | 455 | 138 | 593 |
| 1971 | 16,913 | 455 | 167 | 623 |
| 1972 | 16,458 | 455 | 148 | 603 |
| 1973 | 16,003 | 455 | 129 | 584 |
| 1974 | 15,548 | 455 | 110 | 565 |
| 1975 | 15,092 | 802 | 283 | 1,085 |
| 1976 | 14,291 | 1,148 | 441 | 1,588 |
| 1977 | 13,143 | 1,148 | 401 | 1,549 |
| 1978 | 11,995 | 1,148 | 361 | 1,509 |
| 1979 | 10,847 | 1,150 | 321 | 1,471 |
| 1980 | 9,697 | 693 | 286 | 978 |
| 1981 | 9,005 | 693 | 265 | 958 |
| 1982 | 8,312 | 693 | 244 | 937 |
| 1983 | 7,619 | 693 | 223 | 916 |
| 1984 | 6,927 | 693 | 203 | 895 |

ITALY

| | | | | |
|------|--------|-------|-----|-------|
| 1970 | 10,000 | 1,000 | 570 | 1,570 |
| 1971 | 9,000 | 1,000 | 516 | 1,516 |
| 1972 | 8,000 | 1,000 | 457 | 1,457 |
| 1973 | 7,000 | 1,000 | 398 | 1,398 |
| 1974 | 6,000 | 1,000 | 339 | 1,339 |
| 1975 | 5,000 | 1,000 | 280 | 1,280 |
| 1976 | 4,000 | 1,000 | 221 | 1,221 |
| 1977 | 3,000 | 1,000 | 162 | 1,162 |
| 1978 | 2,000 | 1,000 | 103 | 1,103 |
| 1979 | 1,000 | 1,000 | 44 | 1,044 |

Table 2: ETHIOPIA - ESTIMATED FUTURE SERVICE PAYMENTS ON EXTERNAL PUBLIC DEBT
OUTSTANDING INCLUDING UNDISBURSED AS OF DECEMBER 31, 1969 (CONT.)

Debt Repayable in Foreign Currency

(In thousands of U.S. dollars)

Page 7

| YEAR | DEBT OUTST (BEGIN OF PERIOD) INCLUDING UNDISBURSED | PAYMENTS DURING PERIOD | | TOTAL |
|------|---|------------------------|----------|-------|
| | | AMORTI- ZATION | INTEREST | |

LOANS FROM GOVERNMENTS

SWEDEN

| | | | | |
|------|--------|-----|-----|-----|
| 1970 | 10,342 | - | 21 | 21 |
| 1971 | 10,342 | - | 56 | 56 |
| 1972 | 10,342 | - | 91 | 91 |
| 1973 | 10,342 | - | 117 | 117 |
| 1974 | 10,342 | - | 134 | 134 |
| 1975 | 10,342 | - | 134 | 134 |
| 1976 | 10,342 | - | 134 | 134 |
| 1977 | 10,342 | - | 134 | 134 |
| 1978 | 10,342 | 145 | 134 | 279 |
| 1979 | 10,197 | 296 | 133 | 429 |
| 1980 | 9,900 | 448 | 127 | 575 |
| 1981 | 9,453 | 448 | 120 | 568 |
| 1982 | 9,005 | 448 | 113 | 561 |
| 1983 | 8,557 | 448 | 106 | 554 |
| 1984 | 8,109 | 448 | 99 | 547 |

U.S.S.R.

| | | | | |
|------|--------|-------|-----|-------|
| 1970 | 13,989 | 1,492 | 336 | 1,827 |
| 1971 | 12,497 | 1,593 | 316 | 1,909 |
| 1972 | 10,904 | 1,493 | 275 | 1,769 |
| 1973 | 9,411 | 1,393 | 238 | 1,631 |
| 1974 | 8,018 | 1,393 | 202 | 1,596 |
| 1975 | 6,624 | 1,391 | 167 | 1,558 |
| 1976 | 5,233 | 1,289 | 131 | 1,420 |
| 1977 | 3,944 | 1,289 | 99 | 1,388 |
| 1978 | 2,655 | 1,286 | 66 | 1,352 |
| 1979 | 1,369 | 1,286 | 34 | 1,320 |
| 1980 | 83 | 58 | 2 | 60 |
| 1981 | 25 | 25 | 1 | 26 |

Table 2: ETHIOPIA - ESTIMATED FUTURE SERVICE PAYMENTS ON EXTERNAL PUBLIC DEBT
OUTSTANDING INCLUDING UNDISBURSED AS OF DECEMBER 31, 1969 (CONT.)

Debt Repayable in Foreign Currency

(In thousands of U.S. dollars)

Page 8

| YEAR | DEBT OUTST (BEGIN OF PERIOD) INCLUDING UNDISBURSED | PAYMENTS DURING PERIOD AMORTI- ZATION | INTEREST | TOTAL |
|------|---|---|----------|-------|
|------|---|---|----------|-------|

LOANS FROM GOVERNMENTS

UNITED STATES

| | | | | |
|------|--------|-------|-----|-------|
| 1970 | 51,970 | 1,529 | 946 | 2,475 |
| 1971 | 50,441 | 1,533 | 942 | 2,475 |
| 1972 | 48,908 | 1,538 | 911 | 2,449 |
| 1973 | 47,370 | 1,543 | 880 | 2,423 |
| 1974 | 45,827 | 1,548 | 849 | 2,397 |
| 1975 | 44,279 | 1,619 | 817 | 2,436 |
| 1976 | 42,660 | 1,698 | 789 | 2,487 |
| 1977 | 40,962 | 1,688 | 819 | 2,507 |
| 1978 | 39,274 | 2,410 | 854 | 3,264 |
| 1979 | 36,364 | 1,327 | 819 | 2,145 |
| 1980 | 35,537 | 1,427 | 936 | 2,362 |
| 1981 | 34,110 | 1,450 | 892 | 2,343 |
| 1982 | 32,660 | 1,431 | 848 | 2,279 |
| 1983 | 31,229 | 1,456 | 805 | 2,261 |
| 1984 | 29,773 | 1,482 | 760 | 2,242 |

YUGOSLAVIA

| | | | | |
|------|-------|-------|-----|-------|
| 1970 | 4,820 | 1,508 | 133 | 1,641 |
| 1971 | 3,312 | 1,592 | 88 | 1,680 |
| 1972 | 1,720 | 746 | 45 | 790 |
| 1973 | 975 | 345 | 27 | 372 |
| 1974 | 629 | 167 | 18 | 185 |
| 1975 | 462 | 154 | 13 | 167 |
| 1976 | 308 | 154 | 8 | 162 |
| 1977 | 154 | 154 | 3 | 157 |

Table 1: GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN AT CURRENT FACTOR COST, 1961-69
(Million Ethiopian dollars)

| | 1961 | 1962 | 1963 | 1964 | 1965 | Growth rate 1961-65 % | 1966 | 1967 | 1968 Provisional | 1969 Estimate | Growth rate 1965-69 % | Growth rate 1961-69 % |
|--|---------|---------|---------|---------|---------|-----------------------------|---------|---------|---------------------|------------------|-----------------------------|-----------------------------|
| I. Agriculture | 1,434.4 | 1,439.1 | 1,488.1 | 1,640.7 | 1,897.7 | 7.2 | 1,957.9 | 1,934.5 | 1,972.1 | 2,051.2 | 2.0 | 4.6 |
| Forestry | 65.9 | 67.4 | 70.0 | 71.8 | 72.2 | 2.3 | 73.6 | 79.6 | 85.5 | 84.0 | 3.9 | 3.5 |
| Hunting | 1.3 | 1.5 | 2.1 | 1.0 | 1.3 | 0.0 | 1.6 | 1.5 | 1.7 | 2.0 | 11.3 | 5.5 |
| Fishing | 2.9 | 2.4 | 2.1 | 2.7 | 3.3 | 3.3 | 4.0 | 4.3 | 5.0 | 5.5 | 13.6 | 8.3 |
| Construction of Tukuls ¹ | 76.0 | 77.2 | 78.5 | 79.9 | 81.3 | 1.7 | 82.8 | 84.3 | 85.8 | 87.4 | 1.8 | 1.8 |
| Sub-Total | 1,580.5 | 1,587.6 | 1,640.8 | 1,796.1 | 2,055.8 | 6.8 | 2,119.9 | 2,120.2 | 2,104.2 | 2,230.1 | 2.1 | 4.4 |
| II. Mining and Quarrying | 3.3 | 3.7 | 4.2 | 5.4 | 9.4 | 30.3 | 11.6 | 12.1 | 13.7 | 15.3 | 13.0 | 21.0 |
| Manufacturing | 43.9 | 55.6 | 61.5 | 76.1 | 94.5 | 19.2 | 108.2 | 149.4 | 169.9 | 188.6 | 18.9 | 20.0 |
| Handicrafts and small industries | 98.4 | 101.4 | 103.5 | 118.1 | 126.6 | 6.5 | 136.7 | 149.2 | 160.4 | 172.4 | 8.4 | 7.3 |
| Building and Construction ² | 54.8 | 67.3 | 70.1 | 76.6 | 84.5 | 11.4 | 104.4 | 128.5 | 119.8 | 117.0 | 8.5 | 8.8 |
| Electricity and Water | 10.2 | 10.4 | 11.9 | 13.6 | 14.3 | 8.8 | 14.9 | 17.9 | 20.2 | 22.1 | 11.5 | 10.1 |
| Sub-Total | 210.6 | 238.4 | 251.2 | 289.8 | 329.3 | 11.0 | 375.8 | 457.1 | 484.0 | 515.4 | 12.6 | 11.8 |
| III. Wholesale and Retail Trade | 139.7 | 150.4 | 162.9 | 204.4 | 227.0 | 12.9 | 256.1 | 245.9 | 257.8 | 278.4 | 5.2 | 9.0 |
| Banking, Insurance and Real Estate | 20.2 | 22.4 | 25.2 | 28.0 | 33.8 | 13.7 | 39.6 | 40.6 | 45.7 | 46.8 | 8.5 | 11.1 |
| Transport and Communication | 70.7 | 76.4 | 81.9 | 96.7 | 111.0 | 12.0 | 119.4 | 123.4 | 132.4 | 145.2 | 7.0 | 9.4 |
| Sub-Total | 230.6 | 249.4 | 270.0 | 329.1 | 371.8 | 12.7 | 415.1 | 409.9 | 435.9 | 470.4 | 6.1 | 9.3 |
| IV. Public Administration and Defence | 88.9 | 110.1 | 114.2 | 124.7 | 155.8 | 15.0 | 165.8 | 178.8 | 187.5 | 196.8 | 6.0 | 10.4 |
| Education | 20.5 | 22.1 | 25.9 | 40.0 | 45.5 | 22.0 | 53.2 | 60.4 | 66.1 | 76.4 | 13.8 | 17.9 |
| Health and Medical | 13.8 | 14.6 | 16.5 | 18.8 | 20.7 | 10.7 | 21.9 | 23.3 | 25.1 | 26.7 | 6.6 | 8.6 |
| Sub-Total | 123.2 | 146.8 | 156.6 | 183.5 | 220.0 | 15.6 | 240.9 | 262.5 | 278.7 | 299.9 | 8.1 | 11.8 |
| V. Ownership and Dwellings | 99.9 | 103.1 | 106.5 | 110.1 | 113.9 | 3.4 | 123.5 | 131.5 | 139.2 | 148.5 | 7.0 | 5.3 |
| Domestic Services | 51.2 | 51.2 | 52.3 | 53.0 | 54.2 | 1.5 | 55.2 | 56.0 | 57.0 | 58.8 | 1.4 | 1.5 |
| Other Services | 27.3 | 30.1 | 33.1 | 40.0 | 48.3 | 15.3 | 57.6 | 66.8 | 77.0 | 89.0 | 16.7 | 15.7 |
| Sub-Total | 178.4 | 184.4 | 191.9 | 203.1 | 216.4 | 5.0 | 236.3 | 254.3 | 273.2 | 296.3 | 8.2 | 6.6 |
| VI. Gross Domestic Product | 2,323.3 | 2,406.9 | 2,510.5 | 2,801.6 | 3,193.3 | 8.3 | 3,388.0 | 3,488.0 | 3,621.9 | 3,812.1 | 4.5 | 6.4 |
| VII. Non-Monetary Agriculture | 1,124.0 | 1,130.6 | 1,145.8 | 1,258.0 | 1,415.3 | 5.9 | 1,475.3 | 1,450.6 | 1,479.6 | 1,538.9 | 2.1 | 4.0 |
| Construction of Tukuls | 76.0 | 77.2 | 78.5 | 79.9 | 81.3 | 1.7 | 82.8 | 84.3 | 85.5 | 87.4 | 1.8 | 1.8 |
| Imputed Rent | 64.6 | 65.5 | 66.5 | 67.7 | 68.9 | 1.7 | 70.1 | 71.4 | 72.5 | 73.7 | 1.7 | 1.7 |
| Non-Monetary GDP | 1,264.6 | 1,273.3 | 1,290.8 | 1,405.6 | 1,565.5 | 5.5 | 1,528.2 | 1,606.0 | 1,637.6 | 1,700.0 | 2.0 | 3.8 |
| VIII. Monetary GDP | 1,058.7 | 1,133.6 | 1,219.7 | 1,396.0 | 1,627.8 | 11.3 | 1,759.8 | 1,882.0 | 1,984.3 | 2,112.1 | 6.7 | 7.9 |

¹ Tukuls are round-shaped thatched cottages built by farmers; construction of these is considered agricultural activity for national accounting.

² Excluding construction of Tukuls

Source: Central Statistical Office and Planning Commission (1968 and 1969 figures adjusted by the Mission; agricultural production was raised to be consistent with the movement in prices.)

Table 4: GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN AT 1961 FACTOR COST, 1961-69
(In million Ethiopian dollars)

| | 1961 | 1962 | 1963 | 1964 | 1965 | Growth rate 1961-65 % | 1966 | 1967 | 1968 Provisional | 1969 Estimate | Growth rate 1965-69 % | Growth rate 1961-69 % |
|---|---------|---------|---------|---------|---------|-----------------------------|---------|---------|---------------------|------------------|-----------------------------|-----------------------------|
| I. Agriculture | 1,434.4 | 1,459.3 | 1,490.7 | 1,522.6 | 1,543.1 | 1.8 | 1,571.6 | 1,620.7 | 1,651.9 | 1,679.0 | 2.2 | 2.0 |
| Forestry | 65.9 | 67.4 | 70.0 | 71.8 | 72.2 | 2.3 | 73.6 | 79.7 | 85.5 | 84.0 | 3.9 | 3.1 |
| Hunting | 1.3 | 1.5 | 2.1 | 1.0 | 1.3 | 0.0 | 1.6 | 1.5 | 1.7 | 2.0 | 11.3 | 5.5 |
| Fishing | 2.9 | 2.4 | 2.1 | 2.7 | 3.3 | 3.3 | 4.0 | 4.3 | 5.0 | 5.5 | 13.6 | 8.3 |
| Construction of Tukuls ^{/1} | 76.0 | 77.2 | 78.5 | 79.9 | 81.33 | 1.7 | 82.8 | 84.3 | 85.8 | 87.4 | 1.8 | 1.8 |
| Sub-Total | 1,580.5 | 1,607.8 | 1,643.4 | 1,678.0 | 1,701.2 | 1.9 | 1,733.0 | 1,790.5 | 1,829.9 | 1,857.9 | 2.3 | 2.1 |
| II. Mining and Quarrying | 3.3 | 3.6 | 4.0 | 4.7 | 7.6 | 23.0 | 9.1 | 8.9 | 10.1 | 11.5 | 9.8 | 16.9 |
| Manufacturing | 43.9 | 50.7 | 56.3 | 68.3 | 79.6 | 16.4 | 92.6 | 116.1 | 132.1 | 146.5 | 16.5 | 16.4 |
| Handicrafts and small-scale industry | 98.4 | 101.4 | 103.6 | 118.1 | 126.6 | 6.5 | 136.7 | 149.2 | 160.4 | 172.4 | 8.4 | 7.3 |
| Building and Construction ^{/2} | 54.8 | 67.3 | 70.1 | 76.6 | 84.5 | 11.4 | 104.4 | 128.4 | 119.8 | 117.0 | 8.5 | 10.0 |
| Electricity and Water | 10.2 | 12.5 | 14.9 | 17.3 | 20.9 | 19.6 | 23.2 | 27.0 | 33.7 | 36.5 | 15.0 | 17.3 |
| Sub-Total | 210.6 | 235.5 | 248.9 | 285.0 | 319.2 | 11.0 | 366.0 | 429.6 | 456.1 | 483.9 | 11.0 | 10.9 |
| III. Wholesale and Retail Trade | 139.7 | 153.5 | 164.5 | 185.8 | 204.5 | 10.0 | 226.6 | 227.7 | 231.2 | 249.6 | 5.1 | 7.5 |
| Banking, Insurance and Real Estate | 20.2 | 22.0 | 23.8 | 24.1 | 27.3 | 7.8 | 31.2 | 29.9 | 33.6 | 34.5 | 6.0 | 6.9 |
| Transport and Communication | 70.7 | 78.0 | 84.4 | 97.3 | 110.2 | 11.7 | 121.2 | 130.1 | 139.1 | 150.5 | 8.1 | 9.9 |
| Sub-Total | 230.6 | 253.5 | 272.7 | 307.2 | 342.0 | 10.4 | 379.0 | 387.7 | 403.9 | 434.6 | 6.2 | 8.0 |
| IV. Public Administration and Defence | 88.9 | 109.0 | 111.0 | 116.1 | 141.0 | 12.3 | 148.2 | 155.3 | 162.9 | 170.0 | 4.8 | 8.4 |
| Education | 20.5 | 22.5 | 25.7 | 28.5 | 31.8 | 11.6 | 36.0 | 44.6 | 49.7 | 55.2 | 14.8 | 13.2 |
| Health and Medical | 13.8 | 14.7 | 17.0 | 18.7 | 20.8 | 10.8 | 21.4 | 23.5 | 25.6 | 27.2 | 7.0 | 8.9 |
| Sub-Total | 123.2 | 146.2 | 153.7 | 163.3 | 193.6 | 12.0 | 205.6 | 223.4 | 238.2 | 252.4 | 6.9 | 9.4 |
| V. Ownership of Dwellings | 99.9 | 103.1 | 106.5 | 110.1 | 113.9 | 3.4 | 123.5 | 131.5 | 139.2 | 148.5 | 7.0 | 5.1 |
| Domestic Services | 51.2 | 51.7 | 52.3 | 53.0 | 54.2 | 1.5 | 55.7 | 56.6 | 57.0 | 57.8 | 1.4 | 1.5 |
| Other Services | 27.3 | 29.5 | 31.2 | 34.5 | 38.9 | 9.3 | 45.4 | 47.5 | 54.2 | 64.5 | 13.5 | 11.4 |
| Sub-Total | 178.4 | 184.3 | 190.0 | 197.6 | 207.0 | 5.0 | 224.6 | 235.6 | 250.4 | 270.0 | 6.9 | 5.3 |
| VI. Gross Domestic Product | 2,323.3 | 2,427.3 | 2,508.8 | 2,631.1 | 2,762.6 | 4.4 | 2,909.0 | 3,071.7 | 3,178.5 | 3,295.6 | 4.5 | 4.5 |
| VII. Non-Monetary Agriculture | 1,124.0 | 1,142.0 | 1,162.5 | 1,182.2 | 1,199.7 | 1.7 | 1,221.3 | 1,249.4 | 1,271.9 | 1,292.1 | 1.9 | 1.8 |
| Construction of Tukuls | 76.0 | 77.2 | 78.5 | 79.9 | 81.3 | 1.7 | 82.8 | 84.3 | 85.8 | 87.4 | 1.8 | 1.8 |
| Imputed Rent | 64.6 | 65.5 | 66.6 | 67.7 | 68.9 | 1.7 | 70.1 | 71.4 | 72.5 | 73.8 | 1.7 | 1.7 |
| Non-Monetary GDP | 1,264.6 | 1,284.7 | 1,307.6 | 1,329.8 | 1,349.9 | 1.7 | 1,374.2 | 1,405.1 | 1,430.2 | 1,453.3 | 1.9 | 1.8 |
| VIII. Monetary GDP | 1,058.7 | 1,172.6 | 1,201.2 | 1,301.3 | 1,412.7 | 7.5 | 1,534.8 | 1,666.6 | 1,748.3 | 1,846.3 | 7.0 | 7.2 |

^{/1} Tukuls are round-shaped thatched cottages built by farmers; construction of these is considered agricultural activity for national accounting.

^{/2} Excluding construction of Tukuls.

Source: Central Statistical Office and Planning Commission (1968 and 1969 figures adjusted by the Mission; agricultural production was raised to be consistent with the movement in prices.)

Table 5: SAVINGS AND INVESTMENTS
(Eth\$ Millions)

| | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| <i>Ethiopian years</i> | | | | | | | | | | |
| 1. Gross Domestic Product (GDP) at current factor cost | 2,323 | 2,407 | 2,511 | 2,802 | 3,193 | 3,388 | 3,488 | 3,622 | 3,812 | |
| 2. Non-Monetary GDP at current factor cost | 1,265 | 1,273 | 1,291 | 1,406 | 1,566 | 1,628 | 1,606 | 1,638 | 1,700 | |
| 3. Monetary GDP at current factor cost | 1,058 | 1,134 | 1,220 | 1,396 | 1,627 | 1,760 | 1,882 | 1,984 | 2,112 | |
| 4. Indirect taxes (net of subsidies) | 111 | 127 | 137 | 175 | 202 | 221 | 228 | 230 | 233 | |
| 5. Monetary GDP at current market prices (3+4) | 1,169 | 1,261 | 1,357 | 1,571 | 1,829 | 1,981 | 2,110 | 2,214 | 2,345 | |
| 6. GDP at current market prices | 2,434 | 2,535 | 2,648 | 2,977 | 3,395 | 3,609 | 3,716 | 3,852 | 4,045 | |
| 7. Gross fixed investment | 284 | 308 | 312 | 353 | 400 | 448 | 511 | 530 | 550 | 600 |
| 8. Gross fixed investment in kind | 81 | 89 | 91 | 89 | 91 | 92 | 93 | 95 | 98 | 100 |
| 9. Gross Monetary Fixed Investment (7-8) | 203 | 219 | 221 | 264 | 309 | 356 | 418 | 435 | 452 | 500 |
| 10. Net Imports of Goods and non-factor services | 17 | 53 | 52 | 30 | 66 | 98 | 77 | 84 | 30 | |
| 11. Gross Domestic Savings (7-10) | 267 | 255 | 260 | 323 | 334 | 350 | 434 | 446 | 520 | |
| 12. Gross Domestic Monetary Savings (9-10) | 186 | 166 | 169 | 234 | 243 | 258 | 341 | 351 | 422 | |
| 13. Fixed Investment Rates (7 as % of 6) | 11.7 | 12.1 | 11.8 | 11.9 | 11.8 | 12.4 | 13.7 | 13.7 | 13.6 | |
| 14. Monetary Fixed Investment Rates (9 as % of 5) | 17.4 | 17.4 | 16.3 | 16.8 | 16.9 | 18.0 | 19.8 | 19.6 | 19.3 | |
| 15. Savings Rates (11 as % of 6) | 11.0 | 10.0 | 9.8 | 10.8 | 9.8 | 9.7 | 11.7 | 11.6 | 12.9 | |
| 16. Monetary Savings Rates (12 as % of 5) | 15.9 | 13.2 | 12.5 | 14.9 | 13.3 | 13.0 | 16.2 | 15.9 | 18.0 | |

Source: Central Statistical Office and Planning Commission (1968 and 1969 figures are Mission's estimates)

Table 6: GROSS DOMESTIC FIXED CAPITAL FORMATION, BY INDUSTRIES AND TYPE OF ASSETS
(Million Eth\$)

| | <u>1961</u> | <u>1962</u> | <u>1963</u> | <u>1964</u> | <u>1965</u> | <u>1966</u> | <u>1967</u> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <u>Total Gross Fixed Capital</u> | | | | | | | |
| <u>Formation</u> | | | | | | | |
| Monetary Investment | 202.9 | 219.4 | 220.6 | 264.6 | 309.0 | 356.1 | 418.6 |
| Agriculture | 9.5 | 10.4 | 15.6 | 16.1 | 16.7 | 23.4 | 23.0 |
| Mining & Quarrying | 10.0 | 10.2 | 12.1 | 13.9 | 26.5 | 19.3 | 21.1 |
| Manufacturing | 28.9 | 31.8 | 35.3 | 41.9 | 54.0 | 57.8 | 74.3 |
| Building & Construction | - | - | 0.1 | - | 0.5 | 0.4 | 0.5 |
| Electricity | 10.5 | 10.7 | 11.5 | 14.3 | 24.4 | 36.6 | 40.3 |
| Transport, Communication, Distribution | 55.0 | 62.9 | 73.1 | 64.9 | 80.1 | 107.0 | 111.4 |
| Ownership of Dwellings | 71.0 | 78.8 | 41.2 | 82.0 | 75.1 | 71.8 | 87.8 |
| Public Administration & Defence | 5.9 | 1.4 | 10.9 | 7.7 | 7.0 | 12.5 | 12.0 |
| Educational Services | - | 0.6 | 6.5 | 3.3 | 1.4 | 3.0 | 11.5 |
| Medical & Health Services | - | 0.4 | 2.8 | 3.0 | 4.7 | 3.0 | 16.4 |
| Other Service Industries | 11.2 | 12.2 | 15.8 | 17.5 | 18.6 | 21.3 | 20.3 |
| Investment in Kind | 81.3 | 88.8 | 91.3 | 88.6 | 91.3 | 91.6 | 92.8 |
| Total | 284.2 | 308.2 | 311.9 | 353.2 | 400.3 | 447.7 | 511.4 |
| <u>Land, Building and Works</u> | | | | | | | |
| Monetary Investment | 127.6 | 138.6 | 135.1 | 164.5 | 182.5 | 212.9 | 269.1 |
| Agriculture | 4.1 | 4.1 | 8.2 | 7.6 | 6.4 | 11.2 | 13.0 |
| Mining & Quarrying | 6.0 | 6.0 | 7.7 | 9.2 | 21.4 | 15.5 | 14.5 |
| Manufacturing | 6.8 | 9.5 | 12.7 | 19.5 | 27.0 | 29.9 | 39.9 |
| Building & Construction | - | - | 0.1 | - | 0.5 | 0.4 | 0.5 |
| Electricity | 3.7 | 3.7 | 4.4 | 6.7 | 12.9 | 23.7 | 26.7 |
| Transport, Communication, Distribution | 28.1 | 33.0 | 37.9 | 23.9 | 25.3 | 36.0 | 40.9 |
| Ownership of Dwellings | 71.9 | 78.8 | 41.2 | 82.0 | 75.1 | 71.8 | 87.8 |
| Public Administration & Defence | 5.9 | 1.4 | 10.9 | 7.7 | 7.0 | 12.5 | 12.0 |
| Educational Services | - | 0.6 | 6.5 | 3.3 | 1.4 | 3.0 | 11.5 |
| Medical & Health Services | - | 0.4 | 2.8 | 3.0 | 4.7 | 3.0 | 16.4 |
| Other Service Industries | 1.1 | 1.1 | 2.7 | 1.6 | 0.8 | 5.9 | 5.9 |
| Investment in Kind | 81.3 | 88.8 | 91.3 | 88.6 | 91.3 | 91.6 | 92.8 |
| Total | 208.9 | 227.4 | 226.4 | 253.1 | 273.8 | 304.5 | 361.9 |
| <u>Machinery and Equipment</u> | | | | | | | |
| Monetary Investment | 75.3 | 80.8 | 85.5 | 100.1 | 126.5 | 143.2 | 149.5 |
| Agriculture | 5.4 | 6.3 | 7.0 | 8.5 | 10.3 | 12.2 | 10.0 |
| Mining & Quarrying | 4.0 | 4.2 | 4.2 | 4.7 | 5.1 | 3.8 | 6.6 |
| Manufacturing | 22.1 | 22.3 | 21.5 | 22.4 | 27.0 | 27.9 | 34.4 |
| Electricity | 6.8 | 7.0 | 7.0 | 7.6 | 11.5 | 12.9 | 13.6 |
| Transport, Communication, Distribution | 26.9 | 29.9 | 33.4 | 41.0 | 54.8 | 71.0 | 70.5 |
| Other Service Industries | 10.1 | 11.1 | 12.4 | 15.9 | 17.8 | 15.4 | 14.4 |

Source: Central Statistical Office

Table 7: EXPORT VALUES 1961-66
(thousand Ethiopian dollars)

| | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <u>Coffee</u> | <u>93,839</u> | <u>106,995</u> | <u>110,882</u> | <u>158,841</u> | <u>188,180</u> | <u>155,313</u> | <u>139,182</u> | <u>152,957</u> |
| <u>Oilseeds</u> | <u>15,051</u> | <u>19,535</u> | <u>29,132</u> | <u>26,609</u> | <u>24,795</u> | <u>24,265</u> | <u>22,700</u> | <u>21,440</u> |
| Sesame | 3,658 | 3,861 | 4,254 | 6,768 | 9,993 | 11,221 | 11,385 | 14,041 |
| Ground Nut | 1,760 | 1,806 | 2,641 | 3,702 | 1,910 | 1,245 | 831 | 1,106 |
| Linseed | 4,188 | 8,488 | 13,390 | 10,044 | 6,130 | 3,557 | 2,895 | 1,137 |
| Cotton Seed | n.a. | n.a. | 556 | 814 | 884 | 1,486 | 2,465 | 1,157 |
| Castor Seed | 1,647 | 2,255 | 2,185 | 2,063 | 1,257 | 1,298 | 571 | 405 |
| Niger Seed | n.a. | n.a. | 4,760 | 2,583 | 3,506 | 2,486 | 3,032 | 3,074 |
| Other Seeds | 3,879 | 3,125 | 1,346 | 635 | 1,115 | 2,972 | 1,521 | 502 |
| <u>Oil Cakes</u> | <u>2,323</u> | <u>4,106</u> | <u>3,521</u> | <u>3,517</u> | <u>3,401</u> | <u>2,813</u> | <u>4,375</u> | <u>3,677</u> |
| <u>Pulses</u> | <u>17,900</u> | <u>16,303</u> | <u>15,024</u> | <u>13,379</u> | <u>14,451</u> | <u>21,627</u> | <u>19,666</u> | <u>21,324</u> |
| Lentils | 10,455 | 6,381 | 3,911 | 2,401 | 1,461 | 5,441 | 5,192 | 7,526 |
| Horsebeans | 3,663 | 3,924 | 5,000 | 3,441 | 3,367 | 5,663 | 5,151 | 3,613 |
| Hericot Beans | 1,327 | 4,485 | 3,546 | 3,951 | 6,935 | 7,000 | 6,257 | 6,895 |
| Chick Peas and Other Peas | 2,465 | 1,513 | 2,567 | 3,586 | 2,688 | 3,523 | 3,066 | 3,290 |
| <u>Hides and Skins</u> | <u>22,542</u> | <u>24,665</u> | <u>23,602</u> | <u>21,947</u> | <u>23,662</u> | <u>35,647</u> | <u>29,838</u> | <u>24,855</u> |
| Cattle Hides | 7,922 | 7,181 | 6,753 | 4,090 | 4,351 | 9,444 | 5,776 | 2,776 |
| Goat Skins | 4,372 | 5,408 | 5,216 | 5,926 | 7,334 | 12,087 | 9,890 | 8,695 |
| Sheep Skins | 9,224 | 11,106 | 9,968 | 11,515 | 11,107 | 13,741 | 13,357 | 13,006 |
| Other Skins | 1,024 | 970 | 1,665 | 416 | 870 | 375 | 815 | 378 |
| <u>Animal and Meat</u> | <u>3,719</u> | <u>2,056</u> | <u>3,552</u> | <u>8,379</u> | <u>10,751</u> | <u>9,584</u> | <u>9,730</u> | <u>8,669</u> |
| Live Animals | 506 | 497 | 1,106 | 2,533 | 3,346 | 2,255 | 3,595 | 3,067 |
| Meat | 3,212 | 1,559 | 2,445 | 5,846 | 7,405 | 7,329 | 6,135 | 5,602 |
| <u>Other Exports</u> | <u>26,812</u> | <u>22,536</u> | <u>33,741</u> | <u>26,481</u> | <u>17,804</u> | <u>19,366</u> | <u>24,485</u> | <u>25,095</u> |
| Beewax | 1,489 | 1,105 | 1,295 | 1,088 | 1,415 | 1,337 | 1,441 | 2,176 |
| Chat | 10,844 | 10,444 | 12,544 | 5,051 | 1,839 | 2,170 | 2,921 | 3,003 |
| Fruits and Vegetables | 4,070 | 4,413 | 6,424 | 6,479 | 5,392 | 7,674 | 8,533 | 7,257 |
| Salt | 604 | 1,194 | 1,301 | 747 | 660 | 1,211 | 1,121 | 1,080 |
| Cereals | 127 | 546 | 1,066 | 399 | 666 | 30 | 1,038 | 399 |
| Other | <u>9,678</u> | <u>4,834</u> | <u>12,377</u> | <u>12,717</u> | <u>7,732</u> | <u>7,044</u> | <u>9,431</u> | <u>11,180</u> |
| <u>Total Exports</u> | <u>182,189</u> | <u>196,196</u> | <u>219,454</u> | <u>259,153</u> | <u>283,044</u> | <u>268,615</u> | <u>249,976</u> | <u>258,017</u> |

Source: Customs Head Office and Central Statistical Office

Table 8: EXPORTS: QUANTITIES FROM 1961 TO 1968
(in thousands kg)

| Commodity | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|------------------------------|---------------|---------------|----------------|----------------|----------------|----------------|
| <u>Coffee</u> | <u>66,145</u> | <u>70,163</u> | <u>87,654</u> | <u>73,642</u> | <u>73,604</u> | <u>80,250</u> |
| <u>Oilseeds</u> | <u>84,556</u> | <u>75,848</u> | <u>67,510</u> | <u>53,438</u> | <u>57,798</u> | <u>50,137</u> |
| Sesame | 8,556 | 14,346 | 21,457 | 20,343 | 19,752 | 27,015 |
| Ground Nut | 5,410 | 7,131 | 3,371 | 1,997 | 1,587 | 3,083 |
| Linseed | 37,152 | 31,047 | 18,308 | 10,505 | 9,689 | 3,715 |
| Cotton Seed | 3,846 | 4,920 | 4,958 | 7,860 | 11,206 | 6,891 |
| Castor Seed | 7,249 | 6,789 | 4,453 | 5,173 | 1,919 | 1,056 |
| Niger Seed | 10,076 | 9,344 | 10,848 | 6,804 | 8,841 | 6,933 |
| Other Seed | 12,453 | 2,271 | 3,115 | 756 | 4,804 | 1,444 |
| <u>Pulses and Cereals</u> | <u>75,569</u> | <u>63,707</u> | <u>59,430</u> | <u>69,569</u> | <u>73,044</u> | <u>76,189</u> |
| Lentils | 16,187 | 10,541 | 5,766 | 14,936 | 15,031 | 22,089 |
| Horsebeans | 29,138 | 19,954 | 17,808 | 22,438 | 24,749 | 18,470 |
| Hericot Beans | 9,660 | 10,695 | 19,712 | 19,473 | 17,885 | 19,329 |
| Chick Peas | 8,527 | 15,316 | 9,541 | 10,959 | 10,724 | 13,863 |
| Other Pulses and Cereals | 12,057 | 7,237 | 6,603 | 1,773 | 4,741 | 2,439 |
| <u>Oil Cakes</u> | <u>26,408</u> | <u>22,852</u> | <u>23,335</u> | <u>31,149</u> | <u>31,289</u> | <u>25,846</u> |
| <u>Hides and Skins</u> | <u>14,494</u> | <u>12,471</u> | <u>10,542</u> | <u>19,439</u> | <u>11,408</u> | <u>8,840</u> |
| Hides | 6,738 | 4,406 | 5,293 | 9,409 | 5,873 | 3,466 |
| Goat Skins | 3,790 | 3,759 | 1,806 | 2,154 | 1,739 | 2,096 |
| Sheep Skins | 3,954 | 4,299 | 3,076 | 3,353 | 3,295 | 3,259 |
| Other Skins | 12 | 7 | 367 | 23 | 501 | 19 |
| <u>Animal and Meat</u> | | | <u>14,055</u> | <u>10,392</u> | <u>9,150</u> | <u>8,718</u> |
| Live Animals | | | 5,811 | 2,424 | 3,212 | 3,110 |
| Meat and Meat Products | 3,262 | 5,309 | 8,244 | 7,968 | 5,938 | 5,608 |
| <u>Other Exports</u> | | | <u>119,444</u> | <u>204,736</u> | <u>202,422</u> | <u>223,023</u> |
| Chat | 4,802 | 1,966 | 812 | 799 | 854 | 842 |
| <u>Fruits and Vegetables</u> | <u>22,983</u> | <u>21,378</u> | <u>22,242</u> | <u>27,142</u> | <u>28,206</u> | <u>25,020</u> |
| Bee Wax | 532 | 423 | 556 | 509 | 424 | 599 |
| Salt | 158,195 | 79,675 | 79,455 | 165,523 | 156,480 | 159,524 |
| Other | | | 16,437 | 10,763 | 16,658 | 38,038 |

Source: Customs Head Office and Central Statistical Office

Table 9: UNIT F.O.B. PRICES OF ETHIOPIA'S EXPORTS
(Ethiopian dollars per ton or per unit specified)

| | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <u>Coffee</u> | <u>1677</u> | <u>2263</u> | <u>2146</u> | <u>2110</u> | <u>1891</u> | <u>1905</u> |
| <u>Oilseeds</u> | <u>344</u> | <u>351</u> | <u>367</u> | <u>454</u> | <u>393</u> | <u>450</u> |
| Sesame | 495 | 473 | 467 | 553 | 575 | 518 |
| Ground Nut | 489 | 521 | 562 | 623 | 519 | 357 |
| Linseed | 360 | 324 | 318 | 339 | 298 | 307 |
| Cotton Seed | 146 | 166 | 177 | 188 | 220 | 168 |
| Castor Seed | 303 | 303 | 279 | 250 | 300 | 368 |
| Niger Seed | 471 | 278 | 325 | 366 | 345 | 446 |
| <u>Pulses</u> | <u>221</u> | <u>223</u> | <u>243</u> | <u>313</u> | <u>284</u> | <u>285</u> |
| Lentils | 241 | 229 | 252 | 365 | 346 | 341 |
| Horsebeans | 206 | 172 | 189 | 253 | 209 | 195 |
| Hericot beans | 366 | 369 | 352 | 359 | 350 | 357 |
| Chick peas | 189 | 187 | 231 | 289 | 267 | 219 |
| <u>Hides and Skins</u> | | | | | | |
| Hides | 101 | 93 | 82 | 100 | 98 | 80 |
| Goat Skins (000 pieces) | 137 | 156 | 179 | 265 | 254 | 185 |
| Sheep Skins (000 pieces) | 256 | 268 | 278 | 279 | 290 | 284 |
| <u>Meat</u> | <u>790</u> | <u>1103</u> | <u>903</u> | <u>916</u> | <u>1040</u> | <u>1000</u> |
| <u>Fruits and Vegetables</u> | <u>279</u> | <u>303</u> | <u>243</u> | <u>283</u> | <u>302</u> | <u>290</u> |

Source: Derived from Tables 7 and 8

Table 10: SUMMARY OF LOANS RECEIVED BY ETHIOPIA
(thousand Eth\$)

| | <u>1962</u> | <u>1963</u> | <u>1964</u> | <u>1965</u> | <u>1966</u> | <u>1967</u> | <u>1968</u> | <u>1969</u> (Provisional) |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------------------|
| IBRD | 6,135 | 6,554 | 8,538 | 14,854 | 19,296 | 15,888 | 11,990 | 16,952 |
| IDA | - | 2,363 | 5,099 | 7,515 | 6,879 | 6,475 | 10,366 | 11,081 |
| U.S.A. | 59,579 | 31,248 | 2,773 | 14,740 | 12,863 | 11,524 | 48,200 | 20,360 |
| U.S.S.R. | - | 5,833 | 121 | 8,455 | 9,183 | 9,517 | 5,243 | 966 |
| Yugoslavia | 1,562 | 5,100 | 1,816 | 2,025 | 1,033 | 1,523 | 40 | 255 |
| Italy | - | 1,071 | 586 | - | - | 2,657 | 10,659 | 12,530 |
| Germany | - | - | 1,914 | 6,522 | 128 | 5,025 | 424 | 1,424 |
| Sweden | - | - | - | 2,002 | - | - | 72 | 3,898 |
| Netherlands | - | - | - | - | 27,237 | - | - | - |
| Other | 1,201 | 806 | 1,902 | 1,713 | 1,176 | 167 | 636 | 1,641 |
| TOTAL | <u>68,477</u> | <u>53,975</u> | <u>22,749</u> | <u>57,826</u> | <u>77,795</u> | <u>52,776</u> | <u>87,630</u> | <u>69,107</u> |

Source: Ministry of Finance

Table 11: OFFICIAL LOANS RECEIVED BY SECTORS
(thousand Eth\$)

| | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| I. Infrastructure | 63,392 | 33,907 | 15,426 | 36,348 | 56,126 | 32,277 | 45,062 | 30,169 |
| Civil Aviation | - | - | - | 11,776 | - | - | 25,000 | - |
| Highways | 6,828 | 10,254 | 5,423 | 7,949 | 8,820 | 16,236 | 6,055 | 21,356 |
| Port of Assab | 31 | - | 163 | 793 | - | 153 | - | - |
| Electric power | - | - | 5,346 | 12,413 | 17,191 | 12,480 | 10,091 | 4,852 |
| Telecommunications | - | 1,956 | 3,171 | 3,357 | 2,227 | 3,408 | 3,642 | 3,493 |
| Shipping | - | - | - | - | 27,234 | - | - | - |
| Public Building | - | - | - | - | - | - | 274 | 868 |
| Airport | 56,533 | 21,697 | 1,323 | 60 | 654 | - | - | - |
| II. Industry | 2,625 | 12,008 | 4,780 | 15,523 | 9,093 | 11,280 | 12,351 | 3,824 |
| Mining | 1,354 | 1,027 | 976 | 454 | 98 | 515 | - | - |
| Cement Plants | 158 | 4,727 | 2,559 | 6,562 | - | 9 | (-308) | - |
| Rubber & Canvas shoes | 1,113 | 429 | 314 | 167 | 34 | - | 474 | - |
| Petroleum refinery | - | 5,825 | - | 8,250 | 8,961 | 9,490 | 5,243 | 913 |
| Woollen Mills | - | - | 931 | 90 | - | - | - | - |
| Cotton Mill | - | - | - | - | - | (-147) | (-425) | - |
| Pulp & Paper | - | - | - | - | - | 1,413 | 7,367 | 1,403 |
| Tyre Plant | - | - | - | - | - | - | - | 1,508 |
| III. Agriculture | - | 417 | 69 | 205 | 222 | 452 | - | - |
| Rural Cooperatives | - | 417 | 69 | 205 | 222 | 27 | - | - |
| Stock Ponds | - | - | - | - | - | 425 | - | - |
| IV. Health | - | 330 | 569 | 1,194 | 1,153 | 3,685 | 14,673 | 21,420 |
| Hospital Equipment | - | 330 | 569 | 1,023 | 1,023 | 1,013 | 510 | 338 |
| Water Supply - A.A. | - | - | - | 171 | 128 | 2,672 | 10,380 | 11,632 |
| Malaria eradication | - | - | - | - | - | - | 3,770 | 9,370 |
| V. Education | - | - | - | 1,000 | - | 1,045 | 6,460 | 5,595 |
| H.S.I. University | - | - | - | - | - | - | - | - |
| Ministry of Education | - | - | - | - | - | - | - | - |
| VI. Development Finance | - | - | - | - | - | - | - | - |
| Companies | 2,157 | 2,934 | 1,147 | 1,511 | 295 | - | 1,448 | 4,536 |
| VII. Other | 287 | 3,421 | 759 | 5,795 | 10,904 | 4,037 | 7,627 | 3,417 |
| Stadium | 287 | 27 | - | - | - | - | - | - |
| Helicopter for IEAF | - | - | 759 | - | 391 | - | - | - |
| Program Asst. | - | - | - | 1,302 | 3,926 | 2,272 | - | - |
| Grain Corporation | - | 3,394 | - | 743 | 6,047 | 1,590 | 3,113 | - |
| Hotel | - | - | - | - | - | 175 | 3,714 | - |
| TV Service | - | - | - | - | 540 | - | - | 3,417 |
| TOTAL LOANS RECEIVED | 68,461 | 53,017 | 22,750 | 57,826 | 77,794 | 52,776 | 87,630 | 69,381 |

Source: Ministry of Finance

Table 12: Bilateral and Multilateral Technical Assistance

(Million Eth\$)

| | <u>1963/64</u> | | <u>1964/65</u> | | <u>1965/66</u> | | <u>1966/67</u> | | <u>1967/68</u> | |
|--|----------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|
| | Bilate. | Multi. | Bilate. | Multi. | Bilate. | Multi. | Bilate. | Multi. | Bilate. | Multi. |
| Education | 15.134 | 0.166 | 18.145 | 0.355 | 20.990 | 0.910 | 25.034 | .866 | 29.900 | 2.300 |
| | (64.4) | (0.7) | (29.5) | (0.6) | (28.6) | (1.2) | (32.9) | (1.1) | (40.5) | (3.1) |
| Public Health | 2.850 | 1.050 | 5.205 | 2.395 | 5.749 | 1.051 | 8.837 | 1.163 | 11.800 | 1.500 |
| | (12.1) | (4.5) | (8.5) | (3.9) | (7.8) | (1.4) | (11.6) | (1.5) | (16.0) | (2.0) |
| Agriculture, Commerce and Industry and Natural Resources * | 2.444 | 0.856 | 1.165 | 1.535 | 2.131 | 2.469 | 14.546 | 2.754 | 9.000 | 5.200 |
| | (10.4) | (3.6) | (1.9) | (2.5) | (2.9) | (3.5) | (19.1) | (3.6) | (12.2) | (7.0) |
| Transport & Communication | 0.029 | 0.271 | 3.921 | 0.279 | 0.333 | 0.267 | 0.114 | 0.186 | 0.750 | 0.150 |
| | (0.1) | (1.2) | (6.4) | (0.4) | (0.5) | (0.4) | (0.2) | (0.2) | (1.0) | (0.2) |
| Community Development | 0.089 | 0.111 | 0.225 | 0.075 | 1.076 | 0.224 | 0.494 | 0.206 | 0.200 | 0.300 |
| | (0.4) | (0.5) | (0.4) | (0.1) | (1.5) | (0.3) | (0.6) | (0.3) | (0.2) | (0.4) |
| Mapping | - | - | 24.200 | - | 24.200 | - | 20.000 | - | 10.000 | 0.100 |
| | | | (39.3) | | (33.0) | | (26.4) | | (13.6) | (0.1) |
| Other Fields ** | 0.434 | 0.066 | 3.301 | 0.699 | 13.404 | .496 | 1.900 | - | 2.200 | 0.500 |
| | (1.8) | (0.3) | (5.4) | (1.1) | (18.3) | (0.6) | (2.5) | | (3.0) | (0.7) |
| Sub-Total | 20.980 | 2.520 | 56.162 | 5.338 | 67.883 | 5.417 | 70.925 | 5.175 | 63.850 | 10.050 |
| | | 10.8% | | 8.6% | | 7.4% | | 6.7% | | 13.5% |
| Total | 23.500 | | 61.500 | | 73.300 | | 76.100 | | 73.900 | |

* Includes Mining, Water Resources, Wildlife & Land Reform.

** Planning, Statistics, Technical Agency, Financial Intermediaries, Finance, Information, Public Administration & Miscellaneous.

Note. Figures in brackets are percentages.

Source: Planning Commission

Table 13: Actual Current Budgetary Revenues

(Eth\$ Million)

| | <u>1963/64</u> | <u>1964/65</u> | <u>1965/66</u> | <u>1966/67</u> | <u>1967/68</u> | <u>1968/69</u> |
|---|----------------|----------------|----------------|----------------|-------------------|-------------------|
| <u>Direct Taxes</u> | <u>56.9</u> | <u>59.1</u> | <u>63.2</u> | <u>77.1</u> | <u>76.6</u> | <u>97.7</u> |
| Income tax | 30.5 | 32.5 | 35.9 | 49.5 | 59.6 | 79.0 |
| Land and cattle tax | 26.4 | 26.6 | 27.3 | 27.6 | 17.0 | 18.7 |
| <u>Indirect Taxes on Imports and Exports</u> | <u>133.9</u> | <u>155.0</u> | <u>169.9</u> | <u>165.8</u> | <u>166.6</u> | <u>161.8</u> |
| Motor fuel | 20.3 | 22.6 | 26.5 | 26.1 | 37.4 ⁴ | 33.6 ⁴ |
| Import duties | 61.0 | 68.9 | 81.0 | 77.8 | 71.4 | 70.8 |
| Export duties | 21.6 | 28.0 | 20.1 | 21.6 | 21.1 | 19.0 |
| Transaction taxes on imports and exports | 27.6 | 31.4 | 34.0 | 34.6 | 32.7 | 31.2 |
| Excises on imported goods ^{1/} | 2.3 | 2.8 | 7.2 | 4.7 | 3.3 | 6.5 |
| Miscellaneous import charges | 1.1 | 1.3 | 1.1 | 1.0 | 0.7 | 0.7 |
| <u>Indirect Taxes on Domestic Goods</u> | <u>45.1</u> | <u>51.3</u> | <u>56.9</u> | <u>70.6</u> | <u>71.6</u> | <u>77.7</u> |
| Excise on alcohol | 12.7 | 14.8 | 15.5 | 17.1 | 17.2 | 17.8 |
| Tobacco (monopoly profit, regie tax and licenses) | 3.6 | 3.7 | 5.0 | 7.2 | 4.9 | 5.0 |
| Stamp duties | 3.6 | 3.5 | 4.2 | 4.4 | 4.5 | 4.7 |
| Salt tax | 5.7 | 5.9 | 6.4 | 6.2 | 6.8 | 7.2 |
| Excises on domestic goods | 11.8 | 13.4 | 13.9 | 20.9 | 18.1 | 18.6 |
| Transaction taxes on domestic goods ^{2/} | <u>7.7</u> | <u>10.0</u> | <u>11.9</u> | <u>14.8</u> | <u>20.1</u> | <u>24.4</u> |
| Total Tax Revenues | 235.9 | 265.4 | 290.0 | 313.5 | 314.8 | 337.2 |
| Non-Tax Revenues ^{3/} | <u>36.6</u> | <u>30.3</u> | <u>37.0</u> | <u>43.7</u> | <u>44.8</u> | <u>55.0</u> |
| Total Current Revenues ^{3/} | <u>272.5</u> | <u>295.7</u> | <u>327.0</u> | <u>357.2</u> | <u>359.6</u> | <u>292.2</u> |

^{1/} Includes federal alcohol tax.

^{2/} Includes turnover tax and tax on construction.

^{3/} Does not include EAL reimbursements and government pension contribution.

^{4/} Includes excise on domestic petroleum product.

Source: Ministry of Finance

Table 14: ACTUAL BUDGETARY EXPENDITURES
(Eth\$ Million)

1

| | 1963/64 | 1964/65 | 1965/66 | 1966/67 | 1967/68 | 1968/69 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| I. CURRENT EXPENDITURES | | | | | | |
| <u>General Administration</u> | 146.5 | 164.7 | 179.5 | 190.8 | 207.3 | 212.9 |
| General services | 16.4 | 17.4 | 18.6 | 22.4 | 22.0 | 24.1 |
| National defense | 57.6 | 67.4 | 74.8 | 73.5 | 86.8 | 86.8 |
| Internal order and justice | 51.2 | 58.5 | 63.2 | 69.2 | 69.5 | 75.1 |
| Foreign relations | 7.7 | 6.8 | 7.0 | 7.9 | 7.3 | 8.0 |
| Finance and planning | 13.6 | 14.6 | 15.9 | 17.8 | 21.7 | 18.9 |
| <u>Economic Services</u> | 35.4 | 36.9 | 31.8 | 37.5 | 39.9 | 43.7 |
| Agriculture | 5.4 | 6.6 | 6.6 | 8.4 | 9.1 | 10.0 |
| Industry and commerce | 3.9 | 3.8 | 4.1 | 4.6 | 4.7 | 4.8 |
| Public works, infrastructure and communications /2 | 26.1 | 26.5 | 21.1 | 24.5 | 26.1 | 28.9 |
| <u>Social Services</u> | 51.3 | 59.6 | 69.3 | 77.6 | 85.9 | 93.2 |
| Education | 29.9 | 34.1 | 41.1 | 45.8 | 50.9 | 54.9 |
| Health | 15.9 | 17.7 | 18.2 | 18.9 | 19.8 | 18.8 |
| Social affairs /3 | 5.5 | 7.8 | 10.0 | 12.9 | 15.2 | 19.5 |
| <u>Interest on Public Debt</u> /4 | 2.2 | 4.2 | 5.1 | 8.4 | 10.5 | 12.0 |
| Total Current Expenditures | 235.4 | 265.6 | 285.7 | 314.3 | 343.6 | 361.8 |
| II. CAPITAL EXPENDITURES | | | | | | |
| <u>Economic Development</u> | 55.6 | 38.7 | 70.1 | 62.3 | 56.4 | 39.8 |
| Infrastructure | 28.3 | 19.4 | 25.1 | 29.2 | 24.3 | 14.9 |
| Industry, mining, commerce | 16.5 | 6.8 | 25.5 | 15.9 | 15.1 | 9.7 |
| Agriculture | 4.3 | 3.1 | 3.9 | 2.9 | 10.6 | 6.1 |
| Multi-purpose projects | 3.1 | 4.3 | 3.4 | 2.7 | 4.3 | 5.2 |
| Subscriptions to financial institutions and others | 3.5 | 5.1 | 12.2 | 11.6 | 2.1 | 4.0 |
| <u>Social Developments</u> | 2.8 | 3.0 | 3.5 | 6.0 | 11.1 | 23.0 |
| Education | 1.8 | 1.7 | .8 | 2.2 | 6.1 | 12.5 |
| Health | 0.9 | 0.8 | 2.5 | 3.5 | 4.1 | 8.9 |
| Community development and Social | 0.1 | 0.5 | 0.2 | 0.3 | 0.9 | 1.6 |
| <u>Public Buildings</u> | 3.0 | 2.6 | 2.4 | 3.1 | 4.0 | 4.8 |
| Total Capital Expenditures | 61.4 | 44.3 | 76.0 | 71.4 | 71.7 | 64.7 |

/1 Excluding expenditures financed as external assistance, but including those financed from foreign loans.

/2 Includes subsidy to Ethiopian Air Lines (EAL) equal to difference between debt service by Government, minus recovery from EAL, in 1963/64: Eth \$3.2 million; 1964/65: Eth \$5.1 million; 1965/66: Eth \$4.1 million (minus); 1966/67: Eth \$0.7 million; 1967/68 (actual): Eth \$1.0 million (minus); 1968/69: Eth \$1.0 million.

/3 Includes pension expenditures.

/4 Does not include interest paid on EAL loans: 1963/64: Eth \$2.6 million; 1964/65: Eth \$2.1 million; 1965/66: Eth \$1.9 million; 1966/67: Eth \$1.6 million; 1967/68: Eth \$1.3 million; 1968/69: Eth \$1.0 million.

Table 15: FINANCING OF BUDGETARY EXPENDITURES ^{1/}
(Million Eth\$)

| | <u>1963/64</u> Actual | <u>1964/65</u> Actual | <u>1965/66</u> Actual | <u>1966/67</u> Actual | <u>1967/68</u> Actual | <u>1968/69</u> Actual |
|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Current revenues | 272.5 | 295.7 | 327.0 | 357.2 | 359.6 | 392.2 |
| Current expenditures ^{2/} | <u>235.3</u> | <u>266.6</u> | <u>285.7</u> | <u>315.0</u> | <u>343.6</u> | <u>361.8</u> |
| Public savings | 37.2 | 29.1 | 41.3 | 42.2 | 16.0 | 30.4 |
| Capital expenditures | <u>61.4</u> | <u>40.0</u> | <u>76.0</u> | <u>71.4</u> | <u>71.0</u> | <u>64.7</u> |
| Deficit | 24.2 | 10.9 | 34.7 | 29.2 | 55.0 | 34.3 |
| Foreign loans | 26.4 | 10.7 | 38.3 | 27.5 | 26.0 | 23.6 |
| Repayment of loans | <u>7.6</u> | <u>7.7</u> | <u>10.4</u> | <u>12.3</u> | <u>13.4</u> | <u>24.0</u> |
| Net foreign loans | 18.8 | 3.0 | 27.9 | 15.2 | 12.6 | - 0.4 |
| Cash deficit | 5.4 | 7.9 | 6.8 | 14.0 | 42.4 | 34.7 |
| Unpaid bills | - | - | - | 2.1 | 7.4 | |

1/ Exclude expenditures financed through technical assistance.

2/ Includes some very minor extraordinary expenditures.

Source: Ministry of Finance

Table 16: MONETARY SURVEY 1963 - 1969
(million Ethiopian dollars)

| End of Year | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <u>Composition</u> | | | | | | | |
| <u>Money</u> | <u>259.5</u> | <u>303.3</u> | <u>350.1</u> | <u>363.8</u> | <u>356.1</u> | <u>383.8</u> | <u>431.7</u> |
| Currency in Circulation | 191.9 | 221.7 | 253.9 | 267.5 | 250.8 | 273.8 | 319.1 |
| Private Demand Deposit | 67.6 | 81.6 | 96.2 | 96.2 | 105.3 | 110.0 | 112.6 |
| <u>Quasi-money</u> | <u>47.0</u> | <u>68.6</u> | <u>71.4</u> | <u>85.7</u> | <u>100.3</u> | <u>125.1</u> | <u>150.0</u> |
| Savings Deposit | 28.0 | 35.4 | 43.2 | 53.9 | 67.3 | 86.1 | 106.3 |
| Time Deposit | 19.0 | 33.2 | 28.2 | 31.8 | 33.0 | 39.0 | 43.7 |
| <u>Money and Quasi-money</u> | <u>306.5</u> | <u>371.9</u> | <u>421.5</u> | <u>449.5</u> | <u>456.4</u> | <u>508.9</u> | <u>581.7</u> |
| <u>Uses</u> | | | | | | | |
| <u>Domestic Credit</u> | <u>160.5</u> | <u>212.3</u> | <u>240.5</u> | <u>270.3</u> | <u>320.0</u> | <u>384.1</u> | <u>444.4</u> |
| Claims on Government (net) | 30.6 | 54.0 | 47.0 | 40.7 | 78.1 | 96.5 | 119.5 |
| Claims on Private Sector | 129.9 | 158.3 | 193.5 | 229.6 | 241.9 | 287.6 | 324.8 |
| <u>Foreign Assets (net)</u> | <u>153.8</u> | <u>180.6</u> | <u>214.3</u> | <u>206.6</u> | <u>162.8</u> | <u>170.7</u> | <u>180.8</u> |
| <u>Other Items</u> | <u>7.8</u> | <u>21.0</u> | <u>33.3</u> | <u>27.4</u> | <u>26.4</u> | <u>45.9</u> | <u>43.5</u> |
| <u>Total Uses</u> | <u>306.5</u> | <u>371.9</u> | <u>421.5</u> | <u>449.5</u> | <u>456.4</u> | <u>508.9</u> | <u>581.7</u> |

Sources: International Financial Statistics (IMF) and National Bank of Ethiopia

Table 17: THIRD FIVE-YEAR PLAN INVESTMENT ALLOCATIONS
(Million Eth\$)

| | Public ^{/1} | Private | Total | % of Total |
|---|----------------------|---------|---------|---------------|
| Gross Fixed Monetary Investment | | | | |
| Agriculture, forestry and fishing | 206.5 | 105.6 | 312.1 | 10.9 |
| Manufacturing and handicrafts | 316.5 | 248.5 | 565.0 | 19.7 |
| Mining | 19.7 | 159.7 | 179.4 | 6.3 |
| Transport and Communications | 449.1 | 174.9 | 624.0 | 21.8 |
| Electric Power | 107.5 | 12.5 | 120.0 | 4.2 |
| Education | 97.6 | 11.0 | 108.6 | 3.8 |
| Health | 21.3 | 19.7 | 41.0 | 1.4 |
| Housing | 19.0 | 505.6 | 524.6 | 18.3 |
| Social Welfare, Rural Water Development | 23.5 | - | 23.5 | 0.8 |
| Other and Unallocated | 223.2 | 143.6 | 366.8 | 12.8 |
| Total Gross Fixed Investment at 1967-68 prices | 1,483.9 | 1,381.1 | 2,865.0 | 100.0 |
| % of total | 51.8 | 48.2 | 100.0 | |
| Total Gross Fixed Investment at Current Prices | | | 2,960 | |
| Changes in stocks | | | 155 | |
| Investment in kind | | | 550 | |
| Total Investment | | | 3,665 | |

^{/1} Includes central government, local government, statutory bodies and public enterprise.

Source: Planning Commission

Table 18: EXTERNAL CAPITAL INFLOWS AND DEBT SERVICE RATIO

(U.S. \$ Million unless otherwise stated)

| | <u>ALTERNATIVE I</u> | | | | <u>ALTERNATIVE II</u> | | | | <u>ALTERNATIVE III</u> | | | | <u>ALTERNATIVE IV</u> | | | |
|------------------------------------|--|------|------|-------|---|------|------|-------|--|------|------|-------|--|------|------|------|
| | Exports grow at 6.3% 1969-1985; continuation of present terms on external lending; capital inflow increases 8.5% per annum after 1974. | | | | Exports grow 6.3% compound 1969-1985; softer terms on external lending; capital inflow increases 8.5% per annum after 1974. | | | | Exports grow at 5.0% 1969-1985; continuation of present terms on external lending; capital inflow increases 8.5% per annum after 1974. | | | | Exports grow at 6.3% 1969-1985; continuation of present terms on external lending; capital inflow increases 4.0% per annum after 1974. | | | |
| | 1970 | 1975 | 1980 | 1985 | 1970 | 1975 | 1980 | 1985 | 1970 | 1975 | 1980 | 1985 | 1970 | 1975 | 1980 | 1985 |
| Exports | 215 | 287 | 398 | 490 | 215 | 287 | 398 | 490 | 194 | 243 | 316 | 404 | 215 | 287 | 398 | 490 |
| Gross public capital inflow | 32 | 53 | 79.7 | 119.8 | 32 | 53 | 79.7 | 119.8 | 32 | 53 | 79.7 | 119.8 | 32 | 53 | 64.5 | 78.5 |
| Total public external debt service | 20.4 | 23 | 36.7 | 61.8 | 20.4 | 21 | 30.5 | 49.8 | 20.4 | 23 | 36.7 | 61.8 | 20.4 | 23 | 34.9 | 52.5 |
| Net public capital inflow | 11.6 | 30 | 43 | 58 | 11.6 | 32 | 49.2 | 70.0 | 11.6 | 30 | 43 | 58 | 11.6 | 30 | 29.6 | 26 |
| Debt service ratio (percent) | 9.5 | 8.0 | 9.2 | 12.6 | 9.5 | 7.3 | 7.7 | 10.2 | 10.5 | 9.3 | 11.6 | 15.3 | 9.5 | 8.0 | 8.8 | 11.8 |

Footnotes

1. Exports. 1969 to 1974 as in Appendix A, table 6. For 6.3 percent growth rate, between 1975-1985: coffee price of U.S.40 cent/lb. and quantity increase 2.5 percent p.a.; non-coffee exports grow 6.3 percent p.a. excluding potash; potash in production by 1980; and services 7.5 percent 1975-80 and 5.0 percent 1980-85. Total export growth of 5 percent arbitrarily assumed.
2. Capital inflow. 8.5 percent rate after 1974 derived by assuming external aid would finance one half of Government investment, and this investment would grow 50 percent in each 5-year period after 1974. Four percent rate arbitrarily assumed.
3. Present terms on external borrowing. Lending flow comprising 12 percent private suppliers credits; 24 percent IBRD; 26 percent average European bi-lateral; 26 percent U.S. AID and 12 percent IDA.
4. Concessional terms on external borrowing comprises a flow of 10 percent private supplier credits; 16 percent IBRD; 24 percent IDA; 25 percent U.S. AID, and 25 percent average European bi-lateral.

APPENDIX A

Illustrative Growth and Investment Projections

For illustrative purposes, the Mission has built up a five-year projection for the period 1970-74. The projections are based on the assumption that the growth of the Ethiopian economy depends primarily on investments for expanding the monetary sector. Therefore, assumed growth targets for the monetary GDP and the required investments to achieve these growth rates characterize the projections. Appendix A Table 1 and 2 illustrate the model, while Tables 3-6 describe the estimation of internal and external resources with main focus on the Central Government's capital budget.

Appendix A

Table 1: PROJECTION OF GROSS DOMESTIC PRODUCT
AND GROSS MONETARY INVESTMENT AT 1969
MARKET PRICES FOR 1970 TO 1974

(Million Eth\$)

| | <u>1969</u> <u>Bench-mark</u> | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1973</u> | <u>1974</u> | <u>1970-74</u> |
|--|----------------------------------|-------------|-------------|-------------|-------------|-------------|----------------|
| 1. Gross Monetary Domestic Product | 2,345 | 2,521 | 2,714 | 2,925 | 3,157 | 3,409 | |
| 2. Gross Non-Monetary Domestic Product | 1,700 | 1,734 | 1,769 | 1,804 | 1,840 | 1,877 | |
| 3. Gross Domestic Product | 4,045 | 4,255 | 4,483 | 4,729 | 4,997 | 5,386 | |
| 4. Gross Monetary Fixed Investment | | 505 | 547 | 585 | 630 | 683 | 2,950 |
| (a) Private and Government Statutory Bodies | | 369 | 398 | 431 | 446 | 481 | 2,125 |
| (b) Central Government | Projection | 136 | 149 | 154 | 184 | 202 | 825 |
| | Budgeted | 116 | | | | | |

Assumptions

- Item: 1. Growth rate of 7.5% in 1970 rising to 8% in 1974 assumed.
 " 2. Growth rate of 2% assumed.
 " 3. Implied growth rate increasing from 5.2% in 1970 to 5.5% in 1974.
 " 4. Gross monetary fixed investment as 20% of gross monetary domestic product.
 " 4(a). Constitutes private investment, foreign private investment and investment
 by the Government statutory bodies.
 " 4(b). Represents investment from The Central Government's capital budget.

Source: Mission's projections..

Appendix A

Table 2: FINANCING OF GROSS MONETARY FIXED INVESTMENT 1970-74

(Million Eth\$)

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1973</u> | <u>1974</u> | <u>1970-74</u> <u>Projection</u> |
|---|-------------|-------------|-------------|-------------|-------------|-------------------------------------|
| <u>A. Private and Government Statutory Bodies</u> | | | | | | |
| 1. Domestic Savings | 329 | 352 | 380 | 410 | 444 | 1,915 |
| 2. Savings of IBTE and EELPA | 18 | 16 | 19 | 10 | 12 | 75 |
| 3. Foreign Capital for IBTE and EELPA | 17 | 22 | 22 | 14 | 10 | 85 |
| 4. Foreign Private Capital (net) | 5 | 8 | 10 | 12 | 15 | 50 |
| 5. Total Investment | <u>369</u> | <u>398</u> | <u>431</u> | <u>446</u> | <u>481</u> | <u>2,125</u> |
| <u>Budgeted Projection</u> | | | | | | |
| <u>B. Central Government</u> | | | | | | |
| <u>External Financing</u> | | | | | | |
| 6. Loans | 52 | 56 | 62 | 64 | 79 | 350 |
| 7. Grants | 12 | 12 | 13 | 13 | 13 | 65 |
| 8. Total External Financing | <u>64</u> | <u>68</u> | <u>75</u> | <u>77</u> | <u>92</u> | <u>415</u> |
| <u>Internal Financing</u> | | | | | | |
| 9. Current Surplus from Existing Sources | 34 | 34 | 47 | 61 | 69 | 290 |
| 10. Repayment of Foreign Loans | 22 | 22 | 23 | 24 | 25 | 120 |
| 11. Budget Surplus (9-10) | 12 | 12 | 24 | 37 | 44 | 170 |
| 12. Domestic Resource Gap (15-11) | 40 | 56 | 50 | 40 | 48 | 240 |
| 13. New Taxation | 15 | 15 | 30 | 30 | 30 | 135 |
| 14. Deficit Financing | 25 | 41 | 20 | 10 | 17 | 105 |
| 15. Total Internal Financing (16-8) | <u>52</u> | <u>68</u> | <u>74</u> | <u>77</u> | <u>92</u> | <u>410</u> |
| 16. Total Investment | <u>116</u> | <u>136</u> | <u>149</u> | <u>154</u> | <u>202</u> | <u>825</u> |

Source: Mission's Projection.

Notes on Table 2:

- Item A - 1 Estimated as 13% of Monetary GDP.
 2) Taken from accounts of IBTE and EELPA.
 3)
 4 Balance of Payments Projections (figures for 1971 and 1972 have been slightly changed to make Eth\$50 million for the whole period.
- B - 6-11 Taken from Table 3.
 13 Assumed new taxes.
 14 Required deficit financing if the assumed new taxes materialize.

Appendix A

**Table 3: CENTRAL GOVERNMENT SURPLUS, CAPITAL EXPENDITURES,
DEFICIT AND ITS FINANCING**

(Million Eth\$)

| | Actual 1968/9 | Revised 1969/70 | Proposed 1970/71 | P r o j e c t i o n s | | |
|---|------------------|--------------------|---------------------|-----------------------|--------------|--------------|
| | | | | 1971/72 | 1972/73 | 1973/74 |
| Current Revenue | 392.2 | 409.5 | 447.1 | 503.2 | 547.2 | 600.9 |
| Current Expenditures | <u>361.8</u> | <u>378.0</u> | <u>410.5</u> | <u>445.5</u> | <u>483.5</u> | <u>525.7</u> |
| Current Surplus | <u>30.4</u> | <u>31.5</u> | <u>36.6</u> | <u>57.7</u> | <u>63.7</u> | <u>75.2</u> |
| Capital Expenditure ^{/1} | 75.9 | 101.9 | 131.9 | 152.0 | 169.0 | 193.0 |
| Current Surplus | <u>30.4</u> | <u>31.5</u> | <u>36.6</u> | <u>57.7</u> | <u>63.7</u> | <u>75.2</u> |
| Deficit | <u>45.5</u> | <u>70.4</u> | <u>95.3</u> | <u>94.3</u> | <u>105.3</u> | <u>117.8</u> |
| Financing | | | | | | |
| External Borrowing (net) | .4 | 19.2 | 44.0 | 40.0 | 47.0 | 58.0 |
| Borrowing | 23.6 | 41.2 | 66.4 | 63.0 | 71.0 | 83.0 |
| Redemption | 24.0 | 22.0 | 22.4 | 23.0 | 24.0 | 25.0 |
| External Assistance (Grants) | <u>11.2</u> | <u>11.9</u> | <u>12.8</u> | <u>13.0</u> | <u>13.5</u> | <u>13.5</u> |
| Domestic Resource Gap (Domestic borrowing through 1969/70) | <u>34.7</u> | <u>39.3</u> | <u>38.5</u> | <u>41.3</u> | <u>44.8</u> | <u>46.3</u> |

Sources: Ministry of Finance and Mission Estimates.

^{/1} Includes expenditure financed by external assistance (grants)

Appendix A

Notes on Table 3

- A. Actual 1968/69 - obtained from the Government accounts published by the Ministry of Finance.
- B. Revised 1969/70 - supplied by the Ministry of Finance.
- C. Proposed 1970/71 - proposals by the Council of Ministers to Parliament.
- D. Projections - Based on the following assumptions:

I. Current Revenue

- (a) Income tax - Schedules A-C - Income elasticity of 1.5
- (b) Excise tax on domestic products - growth at same rate as the manufacturing sector.
- (c) Turnover tax - income elasticity of 2.5.
- (d) Taxes on imports and exports - projected imports and exports used in the model.
- (e) Non tax - Revenues - growth rate similar to rate of growth 1963/64-1970/71.

II. Current Expenditure

Growth rate

General Administration 4%
Economic and Social Services 10%-12%

III. Capital Expenditure

Same as the figures in the model.

IV. Financing

50% of Capital Expenditure is financed from external sources.

Appendix A

Table 4: BALANCE OF PAYMENTS
(Million Eth\$)

| | Actual | | | | | Projection | | | | |
|---|--------|-------|-------|-------|-----------------------|------------|-------|-------|-------|-------|
| | 1965 | 1966 | 1967 | 1968 | 1969 (Provisional) | 1970 | 1971 | 1972 | 1973 | 1974 |
| <u>Exports f.o.b.</u> ^{/1} | 292 | 281 | 257 | 275 | 301 | 364 | 380 | 396 | 407 | 426 |
| Coffee | (188) | (155) | (139) | (153) | (174) | (235) | (237) | (237) | (230) | (229) |
| Other exports | (102) | (123) | (113) | (113) | (124) | (129) | (143) | (159) | (177) | (197) |
| Non-monetary gold | (2) | (3) | (5) | (9) | (3) | | | | | |
| <u>Imports C.I.F.</u> ^{/1} | 376 | 404 | 358 | 432 | 388 | 443 | 495 | 547 | 588 | 634 |
| <u>Trade Balance</u> | - 84 | -123 | -101 | -157 | - 87 | - 79 | -115 | -151 | -181 | -208 |
| <u>Non-factor services (net)</u> | 18 | 25 | 24 | 73 | 57 | 65 | 73 | 78 | 84 | 87 |
| Transportation | (15) | (17) | (26) | (37) | (36) | 40 | 44 | 47 | 50 | 52 |
| Travel | (-9) | (-9) | (-7) | (-1) | (-2) | - | 2 | 3 | 4 | 5 |
| Government n.i.e. | (15) | (13) | (10) | (10) | (14) | 15 | 15 | 15 | 15 | 15 |
| Other services | (-3) | (4) | (-5) | (27) | (9) | 10 | 12 | 13 | 15 | 15 |
| <u>Net exports and non-factor services</u> | -66 | -98 | -77 | -84 | -30 | -14 | -42 | -73 | -97 | -121 |
| Investment income (net) | -9 | -13 | -17 | -23 | -20 | -22 | -24 | -25 | -26 | -27 |
| Private transfer | 2 | - | -10 | - 6 | - 7 | - 5 | - 5 | - 5 | - 5 | - 5 |
| <u>Current account balance before public transfer</u> | -73 | -111 | -104 | -113 | -57 | -41 | -71 | -103 | -128 | -153 |
| Public grants (net) | 31 | 29 | 24 | 35 | 35 | 40 | 42 | 45 | 45 | 45 |
| Gross public loans | (58) | (78) | (53) | (87) | (69) | (80) | (96) | (100) | (102) | (105) |
| Repayment of public loans | (16) | (22) | (26) | (28) | (32) | (34) | (37) | (40) | (42) | (45) |
| Net public loans | 42 | 56 | 27 | 59 | 37 | 46 | 59 | 60 | 60 | 60 |
| Private capital (net) | 26 | 16 | 7 | 16 | 6 | 5 | 7 | 9 | 12 | 15 |
| <u>Monetary movement (increase -)</u> | -34 | 8 | 44 | -8 | -11 | -50 | -37 | -11 | 11 | 33 |
| <u>Errors and Omission</u> | 8 | 2 | 2 | 11 | -10 | | | | | |

^{/1} For details of projections see Table 5 with notes.

Source: National Bank of Ethiopia and International Monetary Fund.
Projections by the Mission.

Appendix A

Table 5: PROJECTIONS OF EXPORTS AND IMPORTS

(Million Eth\$)

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1973</u> | <u>1974</u> |
|--|-------------|-------------|-------------|-------------|-------------|
| I. <u>Exports</u> | | | | | |
| 1. Coffee | 235 | 237 | 237 | 230 | 229 |
| 2. Oilseeds | 25 | 27 | 29 | 32 | 35 |
| 3. Oilseed cakes | 4 | 5 | 6 | 7 | 8 |
| 4. Pulses and Cereals | 26 | 28 | 31 | 34 | 38 |
| 5. Hides and Skins | 31 | 33 | 36 | 39 | 43 |
| 6. Meat and Meat Products | 5 | 6 | 7 | 8 | 9 |
| 7. Fruits and Vegetables | 6 | 7 | 9 | 12 | 14 |
| 8. Other exports | 23 | 27 | 30 | 33 | 37 |
| 9. Re-exports | <u>9</u> | <u>10</u> | <u>11</u> | <u>12</u> | <u>13</u> |
| 10. Total Exports | 364 | 380 | 396 | 407 | 426 |
| II. <u>Imports</u> | | | | | |
| 1. Consumer Goods | 115 | 127 | 134 | 140 | 145 |
| (Non-durable) | (83) | (91) | (96) | (100) | (103) |
| (Durable) | (32) | (36) | (38) | (40) | (42) |
| 2. Raw materials and Inter- mediate goods for industries | 77 | 88 | 99 | 109 | 122 |
| 3. Material for construction | 32 | 34 | 37 | 40 | 43 |
| 4. Fuel | 27 | 29 | 32 | 35 | 39 |
| 5. Machinery and transport equipment | 182 | 206 | 234 | 252 | 273 |
| 6. Miscellaneous | <u>10</u> | <u>11</u> | <u>11</u> | <u>12</u> | <u>12</u> |
| 7. Total Imports | 443 | 495 | 547 | 588 | 634 |

Source: Mission's Projections.

Appendix A

Notes on Table 5:

Exports

Coffee - Details of estimation given in Table 6.

Other exports - Estimates are based on the judgement of agricultural experts working in Ethiopia.

Imports

Non-durable consumer goods: Past data indicate that there is a one-year lagged relationship between the import of this category and the total export of the previous year. Projections are based on the assumption that import of this category will make 25% of the total exports of the previous year; the figure for 1970 and 1971 have been smoothed out to avoid a sudden jump in 1971.

Durable consumer goods: Import of this category is assumed to make 10% of the total exports of the previous year.

Raw materials and intermediate goods for industries: Import requirement of cotton has been derived on the basis of production possibilities and mill requirements. Other raw materials and intermediate goods are projected to increase at 15% per year.

Materials for construction: 6.3% of Gross Monetary Fixed Investment

Machinery and equipment: 40% of monetary fixed investment.

Appendix A

Table 6: COFFEE EXPORT PROJECTIONS

| | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1973</u> | <u>1974</u> |
|--|--------------|--------------|--------------|--------------|--------------|
| N.Y. Price for Brazilian Coffee U.S. cents/lb. | 52 | 50 | 48 | 45 | 43 |
| N.Y. Price for Ethiopian Coffee U.S. cents/lb. ^{/1} | 48.5 | 46.5 | 44.5 | 41.5 | 39.5 |
| F.O.B. Djibouti U.S. cents/lb. ^{/2} | 45 | 43 | 41 | 38 | 36 |
| F.O.B. Djibouti Eth\$ per M. Ton | <u>2,475</u> | <u>2,365</u> | <u>2,255</u> | <u>2,090</u> | <u>1,980</u> |
| Premium for Washed Coffee | 600 | 550 | 550 | 500 | 500 |
| F.O.B. for Washed Coffee | 3,075 | 2,915 | 2,805 | 2,590 | 2,480 |

| | | <u>(000 ton)</u> | <u>Million Eth\$</u> |
|------|----------|------------------|----------------------|
| 1970 | Washed | 8 | 24.6 |
| | Unwashed | 85 | 210.4 |
| | | <u>93</u> | <u>235.0</u> |
| 1971 | Washed | 9 | 26.2 |
| | Unwashed | 89 | 210.5 |
| | | <u>98</u> | <u>236.7</u> |
| 1972 | Washed | 12 | 33.7 |
| | Unwashed | 90 | 203.0 |
| | | <u>102</u> | <u>236.7</u> |
| 1973 | Washed | 17 | 44.0 |
| | Unwashed | 89 | 186.0 |
| | | <u>106</u> | <u>230.0</u> |
| 1974 | Washed | 22 | 54.6 |
| | Unwashed | 88 | 174.2 |
| | | <u>111</u> | <u>228.8</u> |

^{/1} The average difference in N.Y. spot price for Brazilian and Ethiopian Coffee is about 3.5 U.S. cents per lb. (see International Financial Statistics).

^{/2} Ocean freight, insurance and handling cost is about U.S. cents 3.5 per lb. (National Coffee Board.)

Source: Mission's Projection.

APPENDIX B

PRE-INVESTMENT STUDIES

Administrative Machinery

1. Under present arrangements, the responsibility for project preparation rests with each operating department, ministry or agency frequently with the assistance of the Planning Commission. A special feature has been the project preparation work of the Technical Agency, a department of the Planning Commission, which has initiated pre-investment studies under its own authority as well as assisting other departments and ministries in project preparation. Project proposals are first screened by the Planning Commission and when approved by the Council of Ministers are incorporated into the Five-Year Development Plan. Resources for the implementation of project proposals are allocated at the time of the annual budget. In the budget process, proposals of the operating department or ministry are reviewed by the Planning Commission, the Ministry of Finance, and finally by the budget subcommittee of the Council of Ministers.
2. Proposals for pre-investment studies generally flow through the same machinery as do project proposals. At the time of preparing the Third Five-Year Plan, the Planning Commission made a survey and inventory of pre-investment proposals, and the major ones are outlined in the TFYP. Subsequent to the Plan preparation, the Planning Commission has increasingly become the coordinating center for pre-investment proposals. While departments, ministries and the Technical Agency still can initiate proposals, the review, coordination and assignment of priorities increasingly rests with the Planning Commission. The contracting of external assistance for pre-investment studies is also nominally coordinated by the Planning Commission, but some agencies still approach donors directly. However, ultimate approval of pre-investment proposals must incorporate the concurrence of the Planning Commission.
3. One possible change in administrative machinery is the proposal, now under discussion, for disbanding the Technical Agency, and assigning its staff to operating departments and ministries.

Inventory of Resources

4. Surveys of basic resources establish the basis for more detailed pre-investment studies. Major resource studies completed, underway or planned include the following:
 - (a) In agriculture, survey of the Blue Nile Basin (completed 1964), survey of the Awash Valley (completed 1966), survey of the Wabi Shebelli Basin (started 1967 and underway), preliminary surveys of the Omo and Tekkeze rivers were recently started; survey of land tenure are continuing; and a survey of land settlement and the potential of Government lands was recently completed;

- (b) In minerals, surveys by the Geological Survey of the northern provinces of Tigre, Beghemdir and Eritrea; a UNDP-sponsored survey of parts of Sidamo, Wollega and Gojjam; private sector surveys of petroleum both on-shore and offshore; and private sector surveys for potash, nickel, copper and sulphur.
- (c) In energy, a UNDP-sponsored survey of the geothermal potential of the Rift Valley, and also a UNDP supported survey of additional hydro-electric sites within economic distance of the national electric grid.
- (d) A manpower survey is planned with the assistance of UNDP.

5. There are no surveys of livestock, timber or fisheries. Aside from surveys of the irrigation potential of the Awash, there are no detailed investigations of irrigation underway.

Pre-investment Studies

6. The major pre-investment studies at all stages of preparation are presented in Table B1 below. As indicated in Table B1, most studies are carried out with the technical help of international consultants, and most studies are financed by grant aid from external donors. The major studies carried out or in progress under the UNDP program are as indicated in Table B2.

Table B1: MAJOR PRE-INVESTMENT STUDIES - BY SECTOR

| Sector & Study | Status/1 | Consultant or Agency for Study | Financial Arrangement | Remarks |
|---|----------|---------------------------------------|--------------------------|---|
| <u>A. AGRICULTURE</u> | | | | |
| A.1 Development Programme for the ADA District (1969) | C | Stanford Research Institute (S.R.I.) | U.S.A.I.D. Grant | Project now being prepared by U.S.A.I.D. |
| A.2 Shasha manne Farm Development Project (1970) | C | | U.S.A.I.D. Grant | Now being discussed by Government |
| A.3 Outline proposal for a package programme in Welga Province (1969) | C | Battelle Advisory Group | Technical Agency I.E.G. | Under discussion |
| A.4 Agricultural & Industrial Development of Awassa Area (1968) | C | S.A.T.E.C. | I.E.G. | Under discussion |
| A.5 Melka-Sadi Amibara Irrigation Project (1969) | C | ITALCONSULT | I.E.G. | Appraised by IBRD. Now under discussion |
| A.6 Supplemental Irrigation Project on the Desset River (1969) | C | S.R.I. | U.S.A.I.D. Grant | Funds for ancillary studies requested by Technical Agency from I.E.G. |
| A.7 Supplemental Irrigation Project in the Borkenna Valley (1969) | C | S.R.I. | U.S.A.I.D. Grant | Further study awaits approval by Planning Commission |
| A.8 Agricultural potential of 30,000 hectares N.W. of Erer-Gota | P | | Technical Agency | Included in Technical Agency request for funds for F.Y. 1970 |
| A.9 Preliminary survey of Tibila Area (1969) | C | Institute of Agric. Research & A.V.A. | Awash Valley Authority | Under consideration |

| Sector & Study | Status | Consultant or Agency for Study | Financial Arrangement | Remarks |
|--|--------|--|-------------------------------|--|
| A.10 Survey of Humera Region (1968) | C | Institute of Agric. Research & others | Ministry of Agriculture | IBRD assisted proj- ect will commence in Humera mid-1970 |
| A.11 National Range De- velopment Project (1969) | C | U.S.A.I.D. | U.S.A.I.D. Grant | Pilot project in operation |
| A.12 Addis Ababa Dairy Development Project (1969) | C | A.D.S.-IBRD | I.E.G. | Appraised by IBRD May 1970 |
| A.13 Development of the Ethiopian Livestock Industry (1969) | C | S.R.I. | U.S.A.I.D. Grant | Livestock surveys now being conducted in several provinces |
| A.14 Production and Utiliza- tion of feeds and feed- ing compounds | P | | Technical Agency | Included in Technical Agency's request for funds for F.Y. 1970 |
| A.15 Analysis of a commer- cial feed lot in South- ern Ethiopia (1969) | C | S.R.I. | U.S.A.I.D. Grant | No action to date |
| A.16 Development of a fish- ing industry in Ethiopia (1965) | C | W.S. Atkins & Partners | Technical Agency | Lack of funds delay- ing contract for plant to process Nile Perch on Lake Abaye |
| A.17 Export of fresh eggs to neighboring coun- tries | U | Battelle Advisory Group | Technical Agency | More detailed study planned if present investigation proves favorable |
| A.18 The Ethiopian Grain Corporation & recom- mendations for future operations (1966) | C | Experience incorporated | U.S.A.I.D.) Grant | The future of the Grain Corporation and its role in marketing now under discussion by Government |
| A.19 Appraisal of opportuni- ties with Ethiopian grain market (1965) | C | A.D. Little | Technical) Agency) | |
| A.20 Production of grains and pulses in Ethiopia (1969) | C | S.R.I. | U.S.A.I.D. Grant | Technical Agency planning further study |

| Sector & Study | Status | Consultant or Agency for Study | Financial Arrangement | Remarks |
|--|--------|--------------------------------------|--------------------------|---|
| A.21 Marketing of grains and pulses in Ethiopia (1969) | C | S.R.I. | U.S.A.I.D. Grant | Technical Agency planning further study |
| A.22 Grain storage losses and allied problems (1969) | C | Tropical Products Institute | U.K. Grant | Now under consider- ation |
| A.23 Agricultural pro- duction credit study (1969) | C | IBRD/IDA | IBRD | Reorganization of financial inter- mediaries now under consideration |
| A.24 An agricultural credit programme for Ethiopia (1969) | C | S.R.I. | U.S.A.I.D. Grant | |
| A.25 Possibility of estab- lishing a tea industry (1965) | C | Tropical Products Institute | U.K. Grant | Now under consideration |
| A.26 Production & marketing of honey and beeswax | U | Tech. Agency | I.E.G. | Study nearing completion |
| A.27 Export trade in major Agricultural commo- dities (1969) | C | S.R.I. | U.S.A.I.D. Grant | Studies of specific investment opportunities will be carried out by the Technical Agency |
| A.28 Import substitution and export possibilities | P | Battelle Advisory Group | Technical Agency | |
| A.29 Potential fertilizer demand (1968) | C | S.R.I. | U.S.A.I.D. Grant | Technical Agency UNIDO discussing possible UN assistance in establishment of fertilizer mixing plant |
| A.30 Potential agricultural chemicals demand (1968) | C | S.R.I. | U.S.A.I.D. | Follow-up studies included in Technical Agency's programme for 1970/71 |

| Sector & Study | Status | Consultant or Agency for Study | Financial Arrangement | Remarks |
|---|--------|--------------------------------------|---------------------------------|--|
| A.31 Industrial afforestation and the use of Eucalyptus wood for cellulose fibre production | P | | I.E.G. | Preliminary investigations carried out in 1965 by S.V. Consultants of Milan, Italy |
| A.32 Increasing production of washed coffee (Coffee Processing Project) (1970) | C | A.D.S. Nairobi | I.E.G. | Project will be appraised by Bank in 1970 |
| A.33 Production of soluble coffee (1970) | C | UNIDO | UNDP | Under consideration |
| A.34 Development of fruit processing industries (1969) | C | Industrial Consult, Italy | I.E.G. | Further volumes delayed due to serious injury of project leader |
| A.35 Vegetable processing | P | UNIDO and Technical Agency | UNDP and Technical Agency | Was expected to start mid-1970 |
| A.36 Possibility of a maize processing industry (1969) | C | G.O.P.A. | Technical Agency | No immediate plans for promoting its project |
| A.37 Solvent extraction of oil cake (1969) | C | S.R.I. | U.S.A.I.D. | Bids from equipment suppliers now being studied by the Investment Corporation |
| A.38 Survey of wood processing industries (1967) | C | SVENSKA | Technical Agency | Money requested from Coffee Diversification Fund to finance project |
| A.39 Economic feasibility of drysalting treatment of cattle hides (1968) | C | S.R.I. | U.S.A.I.D. Grant | No action yet |
| A.40 Fish processing plant at Lake Abaye (1968) | C | Various bids submitted | Ministry of Agri- culture | No funds yet available for contract |

| Sector & Study | Status | Consultant or Agency for Study | Financial Arrangement | Remarks |
|---|--------|--------------------------------------|-------------------------------|---|
| A.41 Packaging of agricultural commodities for export | P | | Technical Agency | |
| A.42 Survey of the fibre industry (1969) | C | Tropical Products Institute | UK Grant | No further action planned at present |
| B. <u>INDUSTRY</u> | | | | |
| B.1 Castor Seed production & processing (Febr. 1969) | C | S.R.I. | US Aid Grant)))) | Battelle Institute looking for investors Battelle Institute & EIC soliciting bids from suppliers |
| B.2 Solvent Extraction of Ethiopian Oil cake (Febr. 1969) | C | S.R.I. | US AID Grant | |
| B.3 Ethiopian Oilseeds industry (Jan. 1969) | C | S.R.I. | US AID Grant | |
| B.4 Maize processing possibilities (Sept. 1969) | C | GOPA (Germany) | Not known | |
| B.5 Maize processing possibilities (1969) | C | SATEC (France) | IEG contract | Study being revised |
| B.6 Ceramic industry prefeasibility study (March 1969) | C | Eng. Jelene | Technical Agency | |
| B.7 Survey on Fibre Industry (May-June 1969) | C | Tropical Product Institute | UK Grant | |

| Sector & Study | Status | Consultant or Agency for Study | Financial Arrangement | Remarks |
|---|--------|---|------------------------------------|---|
| B.8 Utilization of Sugar Cane by products (Aug. 1969) | C | Tate & Lyle Techn. Services Ltd. | Not known | |
| B.9 Identification of Potential Indus- tries (May 1969) | C | Netherlands Economic Inst. | Not known | Study being revised |
| B.10 Sectoral Study of Chemical indus- tries (March 1969) | C | Battelle Inst. | Germany Grant | |
| B.11 Soluble Coffee plant prefeasibility study (1969) | C | UNIDO | UNIDO Grant | Project being further studied by Tech. Agency |
| B.12 Hides & Skins Industry in conjunction with the Tannery Project (1970) | U | UNIDO | Not known | |
| B.13 Vegetable Processing Study (1970) | P | UNIDO | UNIDO Grant | |
| B.14 Dry Cells Battery Plant (1970) | P | Technical Agency | Not known | US investor may be interested |
| B.15 Textile Sector Study (1970) | U | Technical Agency | Not known | |
| B.16 Petroleum Sector and study of refinery location (1970) | U | French Petroleum Inst. | Assab Refinery S.C. contract | |
| B.17 Industrial capacity under-utilisation problems (1970) | P | UNIDO | UNIDO | |

| Sector & Study | Status | Consultant or Agency for Study | Financial Arrangement | Remarks |
|---|--------|---|--------------------------|--|
| C. <u>MINING</u> | | | | |
| C.1 Sulfur in Ethiopia - Preliminary evaluation (Mar. '69) | C | Eng. Jelenc | Technical Agency | |
| C.2 Marketing potential for potash in the Indian subcontinent & in East Africa (1970) | P | UNCTAD | UNDP | |
| D. <u>TRANSPORTATION</u> | | | | |
| D.1 General Road Study 1969 | C | IBRD with Rendel, Palmer & Tritton; The Eco. Intelligence Unit - as subcontractor | UNDP | Also covered modes other than highways |
| D.2 Improvement of Ethiopian Ports 1968 | C | S.R.I. | USAID | Report No.4 of Agro-Industrial Sector Study |
| D.3 East African Transport Development Study Sudan-Ethiopia-Somalia (1967) | C | Italian Transport Mission | Italian Government | Study of international links |
| D.4 Survey of Ethiopian Civil Aviation 1964 | C | USFAA | USAID | Economic rather than engineering study |
| D.5 Airport Improvement Study for Ethiopia 1968 | C | TAMS | USAID | Study of improvements needed at Addis Ababa & Asmara |
| D.6 Road Feasibility Studies | U | Sauti | IBRD IDA | Included in Fourth Highway Project |

| Sector & Study | Status | Consultant or Agency for Study | Financial Arrangement | Remarks |
|---|--------|--------------------------------------|---|--|
| D.7 Reorganisation des Transports Commerciaux Routiers 1966 | C | Marc Longevin | UN Technical Assistance | Recommends restrictive vehicle licensing (not a pre-investment study). |
| E. <u>TOURISM</u> | | | | |
| E.1 Ethiopia Tourist Dev. Plan (1966) | C | Ianus S.P.A. | Italian bilateral technical assistance | |
| E.2 A Plan for Developing Tourism in the Empire of Ethiopia | C | Arthur D. Little | ETO Capital Budget | Results being studied |
| E.3 Proposals for the Development of Sites & Monuments in Ethiopia as contribution to the growth of Cultural Tourism (1968). Revised (1969) | C | UNESCO (Angelini & Moujin) | Not known | |
| E.4 Ethiopia: Conservation of Nature & Natural Resources (1965) | C | UNESCO (Brown) | Not known | |
| E.5 Survey of the Dahlac Islands | C | British Scientific Exploration | Provided free except for local subsistence costs and air transportation | Not yet published |
| E.6 Establishment of Zoological Gardens in Addis Ababa | C | FAO (Fiedler & Petter) | Not known | |

/1 C = completed; U = underway; P = planned.

Table B2: UNDP PROJECTS IN PROGRESS

| Symbol | Project | Agency | Approved by Governing Council | Project Duration | Governing Council Ear- markings | Plan of Oper- ation Signed | Authori- zation to commence execution |
|--------|--|--------|--|---------------------|--|-------------------------------------|--|
| ETH 7 | Institute of Agri- cultural Research | FAO | Jan. 1965 | 5 | 2,093,800 | 11 Feb. 1966 | 21 Feb. 1966 |
| ETH 8 | Training of Secondary School Teachers, Faculty of Education, Haile Selassie I University, Addis Ababa | UNESCO | Jan. 1965 | 5½ | 1,607,700 | 14 Sept. 1965 | 1 Nov. 1965 |
| ETH 11 | Assistance in Strengthening the Awash Valley Authority | FAO | June 1965 | 3 | 655,200 ^{/1} | 10 Aug. 1966 | 15 Sept. 1966 (April 70) ^{/2} |
| ETH 17 | Mineral Survey in Two Selected Areas | UN | Jan. 1967 | 4 | 1,347,200 | 9 May 1967 | 27 July 1967 |
| ETH 9 | Management and Entre- preneurship Training and Advisory Centre, Addis Ababa | ILO | June 1967 | 5 | 929,000 | 15 July 1968 | 20 Aug. 1968 |
| ETH 12 | General Road Study | IBRD | Jan. 1968 | 1-1/3 | 330,900 | 12 Dec. 1968 | 8 Jan. 1969 (Sept. 69) ^{/2} |
| ETH 15 | Work-Oriented Adult Literacy Project | UNESCO | Jan. 1968 | 5 | 1,586,500 | 31 July 1968 | 21 Oct. 1968 |
| ETH 18 | School for Animal Health Assistants, Debre Zeit (Phase II) | FAO | Jan. 1968 | 5 | 991,500 | 24 Sept. 1968 | 4 June 1969 |
| ETH 14 | National Industrial Vocational Training Scheme | ILO | June 1968 | 5 | 1,067,500 | 21 Aug. 1969 | 19 Sept. 1969 |
| ETH 26 | Investigations of Geothermal Resources for Power Development | UN | June 1969 | 1½ | 184,600 | 22 Jan. 1970 | 30 Jan. 1970 |

^{/1} Includes supplementary earmarkings of \$92,800 approved by the Governing Council at its January 1969 session and further supplementary earmarkings of \$95,700 approved by the Governing Council at its June 1969 session.

^{/2} Field work completed.

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

ECONOMIC GROWTH AND PROSPECTS

IN

ETHIOPIA

(in five volumes)

VOLUME III

Annex 4: Transportation

Annex 5: Electric Power

Annex 6: Telecommunications

September 22, 1970

EQUIVALENTS

CURRENCY

| | | |
|------------|---|---------------------------|
| Unit | = | Ethiopian dollar (Eth.\$) |
| U.S.\$1.00 | = | Eth.\$2.50 |
| ETH.\$1.00 | = | U.S.\$0.40 |

WEIGHTS

Unless otherwise stated, tons in this report refers to long tons.

| | | |
|------------|---|------------------|
| 1 metric | = | 2,205 lb. |
| | = | 1,000 kg. |
| | = | 0.9844 long tons |
| 1 long ton | = | 2,240 lb. |
| | = | 1,016 kg. |

MEASURES

| | | |
|--------------------|---|--------------------|
| 1 meter (m) | = | 39.37 inches |
| 1 kilometer (km) | = | 0.62 miles |
| 1 hectare (ha) | = | 2.471 acres |
| 1 square kilometer | = | 0.386 square miles |

TIME

The Ethiopian calendar year (EC) runs from September 11 to September 10. There is a difference of about 7-3/4 years between the Gregorian and the Ethiopian era. For example 1963 EC runs from September 11, 1970 to September 10, 1971. Most of the Ethiopian statistics are converted to the Gregorian calendar. Throughout the report the Gregorian calendar is used.

The Ethiopian budget year runs from July 8 to July 7. For example, Ethiopian budget year 1963 runs from July 8, 1970 to July 7, 1971. In the report this year is referred to as budget year 1970/71.

THE MISSION

This report is based on the findings of a mission in January - February, 1970 to Ethiopia composed of :

| | |
|------------------|------------------------|
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| VOLUME II | Annex 1 - Agriculture Annex 2 - Manufacturing Industry Annex 3 - Mining |
| VOLUME III | Annex 4 - Transport Annex 5 - Power Annex 6 - Telecommunications |
| VOLUME IV | Annex 7 - Education Annex 8 - Tourism |
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TRANSPORTATION

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CHART

TRANSPORTATION

SUMMARY AND CONCLUSIONS

1. For a country of its size and population Ethiopia's transport facilities are poorly developed, with most of the country still remote from modern means of communication and still relying predominantly on animal transport. The priorities for development in the transport sector have been properly concentrated on improving the road network, though there has been some imbalance in the road investment program itself. Extensions to the trunk road system have tended to outpace construction of the subsidiary feeder and access roads which are essential if the trunk system itself is to be properly utilized. The Government accepts the need for special emphasis on minor roads, but progress has been hampered by the shortage of local funds, a situation which has been made worse by the need to earmark funds for other commitments, particularly trunk road projects, entered into with the international and foreign lending agencies.
2. The Imperial Highway Authority (IHA), is an autonomous agency directed by a Board of Commissioners chaired by the Minister of Public Works. It is responsible for constructing and maintaining the country's all weather roads as well as a few dry weather roads. The latter are mainly the responsibility of local agencies. The design standards which IHA uses are patterned after U.S. standards and applied to roads identified by their classification without regard to traffic volumes. These standards should be changed to fit expected conditions. This would enable better use of the design division and also reduce cost. IHA's road construction is handled by a contract construction division and an operations division which also handles road maintenance. The work of the operations division tends to lack basic investigations and designs, the number of units engaged in construction and maintenance is too large and many of them too small, and the level and flow of funds are unsatisfactory. Much could be achieved by correcting these three shortcomings as quickly as possible.
3. IHA has established a Planning Division but there is need for further improvement in road program planning including better coordination with other sectors. Also although the TFYP emphasizes completing a larger network of secondary, feeder, and service-to-traffic roads, so far the main activity has been the construction of primary roads possibly because of commitments of counterpart funds in connection with foreign assistance to primary roads. Ethiopia's development is likely to be better served by the implementation of the proposal for a central body which would include representation from all major sectors of the economy, and by greater concentration of local resources and request for foreign assistance on secondary, feeder, and service-to-traffic roads in the future.
4. The Government has established a Road Transport Administration to introduce restrictive licensing and to determine maximum and minimum tariffs

for the road transport industry. The object of the scheme is considered to be ill-advised, and its control over vehicle numbers is thought to be better executed by varying the level of vehicle taxation, which would still leave the ultimate decision to operate vehicles to the vehicle operators themselves. A proposal by consultants to reduce "variable" taxes such as those on fuel, and for commensurate increases in "fixed" taxes such as vehicle import duties, is considered to be conceptually attractive; "It aims at optimizing the use of the road facilities and should perhaps be introduced in stages but with due regard to the importance of the purely revenue element in road user charges until additional revenue can be obtained from other sources.

5. Until the early 1960's, Djibouti, in the French Territory of the Afars and Issas, was the only port serving the greater part of Ethiopia, but since then the port, along with the Franco-Ethiopian Railway (FER) which links it to Addis Ababa, has been increasingly challenged by the new Ethiopian port at Assab. As a result both the port and the railway are now operating at a financial loss. The competition from Assab will become stronger when an IDA-financed road between Awash and Tendaho, due for completion by 1972, provides a much better route between Assab and Addis Ababa. On the other hand, port charges are unduly low at Assab, and must be raised if the port is to recoup the heavy investment outlays on its construction.

6. The Ethiopian Government, which has a 50% interest in the FER, is now investigating the railway's activities to see whether its financial viability might still be restored, in spite of the competition from Assab, by improving its operating efficiency. It is recommended that this should be followed by a wider study aimed at comparing the overall economic merits of the two ports for Ethiopian traffic. The study, which would have to include a comparison of the road route to Assab with the rail route to Djibouti, would also prepare a master plan for the future development of Assab.

7. Massawa, the only port serving the northernmost area of Ethiopia, also needs a master plan for its rehabilitation and development, and here again there is need for preliminary study of the inland transport facilities serving the port. Massawa relies partly on the Northern Ethiopia Railway (NER), but unlike Djibouti most of its traffic is carried by road. There seems to be a strong economic case for abandoning the railway. Its rolling stock, track and other equipment is in poor shape, the mountainous terrain and short hauls involved make the route inherently unsuitable for railway operations, and the railway is incurring increasing financial deficits, even though it enjoys unusually wide powers over competing road transport, and collects substantial revenues from the road vehicle licenses it issues in its own right. The future of the railway must be settled before a master plan for the port is produced, because the choice between rail or road affects the kind of reception and handling facilities required, and the layout of the port in general. In focussing the study on the port requirements the opportunity can also be taken to provide a rational view of the railway's operations, as well as to suggest any improvements needed to the alternative road to Massawa, particularly if the conclusion is that the railway should be closed.

8. Ethiopia's two main airports at Addis Ababa and Asmara are only equipped for daylight operations, but night landing facilities will be installed in the near future, and the runways properly strengthened to withstand the loads of modern jet aircraft. Probably the most important consequence will be to encourage more airlines to include these airports as transit stops in their schedules, and thus to improve the country's communications with Europe and the African countries further south.

9. Although scheduled air services are provided to no less than 43 domestic airports, facilities at most of these are minimal, and many are only open during the dry season. Any improvements to them have to be considered in the light of the type of aircraft that Ethiopian Airlines (EAL) must soon decide upon to replace its ageing Douglas DC-3's on the domestic routes. It would be useful to have a brief preliminary study by an expert in aviation economics, to consider together the questions of a suitable aircraft replacement and the related airport facilities it will require.

10. EAL accounts show the airline to be breaking even financially, in spite of heavy losses on its domestic flights. These results are influenced by the fact that EAL pays no landing fees at any airport in the country (though it does itself undertake maintenance at domestic airports). The international services, which achieved a load factor of only 35% in 1969, are likely to fare better if Addis Ababa could be considered, operationally, more as a transit airport than as the terminus for its European flights. The biggest attractions for tourists lie further south in East Africa. Ethiopia has much to offer tourists, and is well placed to attract visitors on their way between Europe and other parts of Africa; but it seems unlikely that a really substantial business could be developed from tourists making Ethiopia their only destination in Africa.

11. When it was first established in 1964 as the country's national carrier, Ethiopian Shipping Lines (ESL) had to face severe competition from the numerous lines calling at Red Sea ports on voyages transitting the Suez Canal. The situation was reversed when the Canal was closed in 1967, and the ships entering the Red Sea were reduced to a fraction of their former numbers. With shipping space for Ethiopian traffic in short supply, ESL suddenly had more traffic on offer than it could cope with. Its fleet of dry cargo ships has now been increased from two to four, with a fifth vessel due for delivery soon. Present conditions are very favourable for the line, but once the Canal is reopened the situation will again be reversed, and ESL is likely to find it difficult to meet the renewed competition from other carriers. The fact remains that Ethiopia has to have enough shipping capacity to accommodate her overseas trade in the meantime, and has no better alternative than having ESL expand its fleet, whatever problems the line might be faced with in the future.

12. The Government recognizes the need for more effective coordination between the individual agencies in the transport sector, and to this end has recently approved a number of administrative reforms. A Central Planning and

Coordinating Committee representing all the agencies is to be set up under the chairmanship of the Minister of Communications. The principle of semi-autonomy will be extended to the ports, and to the Civil Aviation Administration controlling the airports. At the same time it is intended that those agencies already enjoying a considerable degree of autonomy should be brought under more effective control, especially so far as finances and planning are concerned. The proposals appear to be sound in principle, and are likely to result in a more methodical and rational basis for the Government's administration of the transport sector.

I. GENERAL

1. Transport facilities in Ethiopia are strongly focussed around the only two large cities, Addis Ababa and Asmara, and on their links with the three seaports serving them. Road transport is heavily concentrated on the network radiating from Addis Ababa, and to a lesser extent Asmara, while the most heavily trafficked long-distance road route is the 860-km road between the capital and the new port of Assab. The most important railway functions essentially as a 780-km link between Addis Ababa and the port of Djibouti, and the only other railway similarly connects Asmara with the northern port of Massawa. Even domestic air transport, which provides scheduled services between a total of 43 airports, relies on the Addis Ababa - Asmara route for a large proportion of its passenger and freight traffic.

2. This concentration reflects the effective demand for transport facilities, but most of the country and its 25 million population, of which more than 90% live in rural areas, remain remote from the influence and benefits of modern transportation. Fortunately much more use is made of animal transport than in many African countries, but it is still probably true that the potential need for better communications, and particularly for local feeder and access routes in the rural areas, is greater in Ethiopia than anywhere else in the continent at the present time.

Organization

3. Road transport operations, by far the most important of all modes, are in the hands of private firms, but the rest of the sector is organized in semi-autonomous public authorities and Government departments (see Chart), and there is a tendency for Government regulation of the road operators to increase substantially. One of the more obvious features has been the lack of effective coordination between the modes, which is basically a problem of organization. In particular, improvements are needed in establishing priorities for development expenditure within the transport sector, which, in the first place, should be the responsibility of the sector itself, and of the Ministries of Communications and Works. So far as actual transport operations are concerned, however, there is less need for coordination than in many other countries, because the scope for competition between transport modes is still limited. But there are nevertheless important examples of conflicting interests between the modes. For instance, the ports of Assab and Djibouti compete with each other, and the road route from the former is similarly competing with the rail route from the latter for the bulk of traffic moving to the Addis Ababa area. At present there is no proper governmental organization to investigate the relative advantages of each route. This role is left, by default, to the Planning Commission, but in the first place it should be the prime concern of the transport sector itself, represented by an appropriate arm of the Government.

4. The Ministry of Communications was created in 1965 as an instrument for closer coordination within the transport sector, but this goal, especially in planning, is still far from achievement. One reason is that road construction, which absorbs far more capital than any other sub-sector, is the responsibility of the Imperial Highway Authority (IHA), created as a semi-autonomous agency in 1951. The IHA is responsible to the Ministry of Public Works, which on the face of it represents a quite usual arrangement, with road construction and maintenance under one ministry, and the other transport agencies grouped loosely under another. In Ethiopia, however, the IHA has so far enjoyed more autonomy than is normally granted to a highway department, with the result that the coordination that would usually be attempted at ministerial levels has proved difficult to achieve.

5. More important still has been the status, so far, of the Ministry of Communication as a nominal but ineffective controller of the rail, water and air agencies grouped under it. In practice some of these agencies appear to operate as if they were virtually autonomous. Although the Chairman of their boards is in each case the Minister of Communications, this seems in the past to have hindered the involvement of the Ministry as a whole, because the Chairman can be overruled by other members of the boards, or can actively become party to prior decisions which the Ministry is then precluded from influencing. This could remain a problem even when the Ministry is adequately staffed to exert such influence properly.

6. The Planning Commission (established in 1966 as the Ministry of Planning and Development) is beginning to exercise considerable influence over the investment plans and policies of the transport agencies, and is introducing more effective coordination with other sectors of the economy. The need now is for adequate coordination and control of the various agencies within the transportation sector. To this end the Government has accepted a proposal to create a permanent Central Planning and Coordinating Committee (CPCC) with representatives for all the relevant Government departments and agencies, including the Ministry of the Interior, under the chairmanship of the Minister of Communications. This Committee will approve all planning and policy proposals before their presentation to the Government, for the whole of the transport sector, including the IHA and other semi-autonomous agencies. It will be assisted by a secretariat in the form of a Research and Planning Unit, staffed by economists, engineers and other technical specialists, who will be responsible for data collection and processing, project preparation, and drafting of the overall investment plan for transportation.

7. These measures appear to be desirable in principle, though in some respects they serve to emphasize rather than to answer some of the basic problems in ensuring an efficient organization. For example, the IHA and Ministry of Public Works must clearly remain responsible for much of the detailed identification and preparation of projects, and it may not be easy to fit this in smoothly with the CPCC and its secretariat.

8. More generally, there is the whole question of ensuring adequate, but not stifling, control on all the transportation agencies. To some extent further extensions of the principle of semi-autonomy can be supported. For example, the Government recognizes that the seaports and airports, which are still run by Government departments, are likely to function best in a more commercial environment, free from interference in the detail of their day-to-day operations, but subject to the disciplines of operating as financially viable entities. At the same time it is clear that the revenue-earning agencies, which include all but IHA, should not act as if they had complete financial autonomy, for example, in the disposal of any operating surplus, and as if they need only relinquish this autonomy when they run into financial difficulties. In view especially of the Government's financial situation, there must be a strong case for looking to the agencies as a source of revenue for the central exchequer, in addition to financing their own development expenditure to the greatest extent possible. Given the present financial condition of most of them, however, this represents a policy objective rather than a practicable expectation for the immediate future.

The Second Five-Year Plan (1962/63 to 1966/67)

9. Table 1 summarizes the investment expenditures planned for the transport sector during the five years ending July, 1967, and those actually achieved. The total expenditure was about one-third higher than originally planned, but although this did not reflect significant increases in unit prices the physical achievements are in general considered to have been unsatisfactory. Road construction, accounting for more than one-third of the total expenditure, actually produced 40% fewer roads in terms of kilometers built than had been planned, but expenditure was not reduced at all, due largely to faulty estimates in the Plan, and to the adoption of unnecessarily higher design standards for many roads. Actual expenditures on motor vehicles was much higher than expected, due, in part at least, to an underestimation in the Plan of the real requirements. For the railways, it had been intended that one-third of the total outlay would be used for studies to explore their future role, but none of these were implemented. For air transport, procurement of jet aircraft for international routes, the construction of Addis Ababa Airport and the improvement of the Asmara Airport were all achieved, at a cost higher than expected, but improvements to domestic air services were left in abeyance. For water transport an Ethiopian shipping line was created, at a cost more than 60% higher than planned.

10. In general, investment achievements during the Second Five-Year Plan give the impression of having resulted from somewhat haphazard, and in some cases ill-conceived, decisions which in many ways have little or no relation to the original plan. Particularly serious was the failure of the program for constructing minor feeder and access roads in the rural areas, for which the achievement in physical terms was 60% less than planned.

The Third Five-Year Plan 1968/69 to 1972/73)

11. Expenditure envisaged in the Third Five-Year Plan period was to have been more than twice that originally proposed for the Second Five-Year Plan, but up to now there have been substantial shortfall in actual achievements (see Table 2).

12. For the highways, the program for feeder and access roads is being curtailed by the shortage of domestic funds, and although it has been the intention to give particular emphasis to this program, in practice priority has to be given first to meeting local currency obligations arising from foreign-aid financed trunk roads.

13. For the railways, investments have been much lower than expected, due in part to their financial problems, and to their inability to generate sufficient funds themselves, but also to an uncertainty as to their future role in the country's transportation network.

14. Expenditures for the improvement of Addis Ababa Airport's runway (USAID-financed) have been affected by delays in bidding, while the expected acquisition of navigational aids for both Addis Ababa and Asmara Airports (UK-financed) has also been delayed. Particular importance was to have been given to improving the domestic airports, but no substantial work is yet underway, due in part at least to the absence of a clear understanding of the real requirements. Ethiopian Airlines has still to decide on an aircraft replacement for its DC-3's on domestic routes, and until it does, minimum runway lengths and load-bearing characteristics etc. cannot be determined.

15. For the ports there has been virtually no new investment so far, and a proposed British credit for equipment and service boats has still not been confirmed. For Ethiopian Shipping Lines, another deep sea dry cargo vessel was added to its fleet at the beginning of the Plan period, and delivery of another is expected in a year or two. For inland waterways it seems likely that virtually none of the Eth.\$ 1.9 million investment originally proposed will be disbursed during the Plan period.

16. Though it now seems unlikely that all the items of high priority in the Plan will be implemented during the period, the rate of investment expenditure can be expected to accelerate during the remaining years, due especially to the number of firm contracts made for foreign aid-financed projects. Most of these are for highway construction, but another important item is the improvement of the two principal airports at Addis Ababa and Asmara. In addition, there is particular need for new investments in the port of Massawa and in the domestic airports, but adequate preinvestment studies for these items are still not underway.

II. ROADS: THE IMPERIAL HIGHWAY AUTHORITY

General

17. Ethiopia has a present road network totalling about 23,400 km, comprised of about 7,800 km of all weather roads and about 15,600 km of dry weather roads and trails. The Imperial Highway Authority (IHA) is an autonomous agency under the direction of a Board of Commissioners chaired by the Minister of Public Works. It is responsible for maintaining about 6,800 km of all weather roads and for construction of additional roads of this type. The IHA is also responsible for the construction of some dry weather roads but these are usually undertaken by local, provincial or other governments utilizing funds raised locally by the agencies responsible. Local agencies are also responsible for maintaining practically all the dry weather roads and trails.

18. At present the IHA has about 3,400 permanent employees and normally retains about 7,500 temporary laborers for maintenance and force account work. The IHA is presently in the process of implementing a complete reorganization with the assistance of management consultants financed under the Bank's 4th Highway Project. Setting up of the basic new organizational structure is essentially complete and the main efforts are now directed towards improving methods and operations in the various divisions. So far there have been some major improvements realised although problems remain and further improvements are necessary as mentioned below under discussion of the specific IHA functions.

Design

19. At present there appears to be some unused capacity in the design division of the IHA although there is a shortage of experienced engineers. For the design and supervision of construction of new major roads, the IHA relies heavily on consultants. Most other construction work carried out by the IHA consists of upgrading, minor improvements and the construction of dry weather roads for which very little design effort has been used. This lack of design and proper cost estimates is believed to be largely responsible for the substantial cost overruns on the majority of force account work in the past few years.

20. The design standards presently in use by the IHA are patterned after US standards and are applied to roads identified by their classification without regard to traffic volumes. The UNDP-financed General Roads Study (Roads Study) recommends very worthwhile changes in the design standards and more judgment in the application of these standards to fit expected conditions and reduce initial cost by stage construction. Implementation of these recommendations is essential, and requirements along these lines should be incorporated in any future externally-financed road projects.

Construction

21. Road construction by the IHA is handled in two divisions; the contract construction division and the operations division.

22. The contract construction division is responsible for all work by contract, including design by consultants, tendering and construction. In the past there have been some difficulties in establishing this division's proper role with respect to the responsibilities and operations of contract works. There has, however, been some improvements in this division's operation in recent months.

23. The operations division handles all road construction done by force account, as well as maintenance of all roads under the responsibility of the IHA. Force account construction is presently carried out by 16 separate units, some quite small, and this has resulted in management problems and inefficient use of equipment and labor. In addition, much of the force account work is undertaken without basic investigations and designs (para. 19). These problems, coupled with insufficient and very uncertain flows of budget funds, have resulted in substantial cost overruns on force account work and a considerable shortfall in the physical progress as compared to planned targets (para. 32). The Roads Study recommends consolidation of present force account units into larger and more easily managed units, more pre-construction investigation and design, and an adjustment of the quantity of force account work undertaken to better fit realistic estimates of funds to be made available. These recommendations should be implemented as part of any future road projects.

24. Although the present inventory of IHA equipment is only approximate, the information available indicates that no major expansion of the equipment fleet for construction and maintenance is required in the next few years; this is confirmed in the Roads Study. It is expected that a comprehensive program of equipment inventory and evaluation, presently being implemented with the assistance of the management consultants will identify needs for replacing obsolete equipment and provide a sound basis for determining added equipment needs related to expected construction and maintenance programs. Future highway projects should consider maintenance equipment needs if these have been clearly identified and justified by the above mentioned inventory.

Road Maintenance

25. Maintenance of the paved road network by the IHA is generally fair. The basic maintenance organization being implemented with the assistance of management consultants is sound, and acceptable methods and techniques are being used in most cases.

26. At present there are two main problems connected with road maintenance; uncertain allocation of maintenance funds and the maintenance of equipment. With respect to maintenance funds, it is not so much a problem of the total amounts made available as the problem of uncertain and non-uniform flow of funds. This problem makes work scheduling extremely difficult and is very wasteful of manpower and equipment. If the measures for fiscal reform in Annex 9 are implemented, this problem should be solved.

27. With respect to maintenance equipment, the major problem is the lack of essential spare parts and some deficiencies in field workshops. The Government recently obtained a USAID loan of US\$3.5 million for the purchase of spare parts, improvement of workshops facilities and technical assistance by expatriate workshop mechanics. This loan should do much to improve the situation. Further inventory and evaluation of additional equipment is needed for future requirements of additional or replacement equipment can be identified.

28. The allocations for road maintenance will need to be increased in the future to keep pace with the additional length of road being constructed and to provide for other existing roads which may be taken over for maintenance by the IHA as recommended in the Roads Study. Based on a practical road development plan as presented in the Roads Study, this increase in maintenance funds is estimated to be about 8% per year.

Planning

29. In the past there has been very little sound road planning in Ethiopia. What may have been termed road planning was carried out by the IHA in the preparation of 5-year plans and in the preparation of annual budget requests. These efforts, however, included little economic evaluation or comparison of road projects, and there was essentially no coordination with other sectors such as agriculture, industry, etc. Cost estimates were only approximate, and in most cases proved to be unrealistically low. The Planning Commission is attempting to overcome these and similar shortcomings in all sectors and, since its formation in 1966, has succeeded in effecting some meaningful improvements. In addition, the IHA has established a Planning Division which is staffed by competent transport economists and engineers and this could do much to improve road project selection.

30. Although some forward steps have been taken, there is still need for improved coordination and planning in road program development. The Roads Study has recommended the formation of a Roads Planning Board which would include representation from all major sectors of the economy as a means of assuring that future road planning is more closely tied to overall economic development. In basic principle there is need for such a Planning Board, but the details of membership and specific functions need to be carefully framed to avoid conflict or duplication of efforts by the IHA Board of Commissioners and the Planning Commission and to assure that such a Board would be appropriate in view of the Government's proposal to form a Central Planning and Coordinating Committee.

Financing

31. Total investment expenditures by the IHA are set out in Five Year Plans and annual budget allocation for IHA capital and current expenditures are approved on the basis of annual requests.

32. For the Second Five Year Plan the planned investment in road construction was Eth.\$ 140 million; total expenditures were Eth.\$ 130 million, or about 93% of the Plan. Actual road construction, however, fell considerably short of target, with about 77% of the primary road program completed and only about 39% of the secondary and feeder roads constructed. This substantial shortfall in actual construction was caused mainly by poor estimation in the Plan but was partly the result of irregular disbursement of funds to the IHA. The latter problem required the construction of many roads to be halted for periods of time although equipment, work force, etc., mobilized for the project was usually maintained. The result was continuing overhead costs without any physical accomplishment.

33. The IHA contends that they do not have the authority to reduce the number of approved projects or to completely halt work on specific construction when there is a shortfall of funds and that it is necessary for them to spread the allocation over all on-going projects. Obviously, this results in a very inefficient use of plant and labor.

34. The Third Five Year Plan states that the building of unduly costly and premature roads will be avoided and that emphasis will be placed on completing a larger network of secondary, feeder and service-to-traffic roads designed to standards compatible with expected traffic volumes. A summary of planned capital and current expenditures for the IHA in the Third Plan is as follows:

| <u>Item</u> | <u>Length km</u> | <u>Cost Eth.\$ million</u> | |
|---|------------------|--------------------------------|--------------|
| Primary Roads | 700 | 136.5 | |
| Secondary, Feeder and Service-to-Traffic Roads | 4,500 | 96.0 | |
| Asphalting Projects | 520 | 19.2 | |
| Bailey Bridges | - | 6.7 | |
| Surveys and Designs | - | <u>7.0</u> | |
| Sub-total: Capital Expenditures | | | <u>265.4</u> |
| Road Maintenance | - | 123.3 | |
| Other Current Expenditures | - | 34.4 | |
| Road Maintenance Equipment | - | <u>15.0</u> | |
| Sub-total: Current Expenditures | | | <u>172.7</u> |
| TOTAL: Current and Capital Expenditures | | | <u>438.1</u> |

Source: Planning Commission

35. Of the above total it is expected that about Eth\$ 15 million in payments would be carried over into the Fourth Plan period, and that about Eth.\$ 112 million or 42% of the total capital expenditure would be financed by foreign loans.

36. For the first two years of the Third Plan there has been a substantial shortfall in IHA's funds, as indicated in the following tabulation:

| | <u>ET\$ Millions</u> | | | |
|--------------|----------------------|-----------------------------------|--------------------------------|-----------------------------|
| | <u>5-Year Plan</u> | <u>Approved Annual Budget</u> | <u>Actual Disbursement</u> | <u>Committed by IHA</u> |
| FY 1968/1969 | 40.93 ^{/1} | 37.06 | 26.63 | 29.33 |
| FY 1969/1970 | 39.85 ^{/1} | 36.47 | 10.24 ^{/2} | N.A. |

^{/1} Adjusted to about 84% of original Plan allocation to eliminate double counting of certain current expenditures related to road maintenance. Includes capital and current together.

^{/2} Amount released for first half of fiscal year.

Source: Planning Commission.

37. For the first year of the Third Plan IHA's expenditures exceeded actual disbursements and similar over-commitment is expected in the second year. It is IHA's practice to contract for materials and supplies on a credit basis with the result that the initial allocations in a fiscal year are seriously eroded by the necessity to pay these debts. This further complicates the problem of efficient operation in both construction and maintenance.

38. The provisional IHA budget for 1970/71 as submitted to Parliament is as follows:

| <u>Eth.\$ Million</u> | |
|----------------------------------|---------------------|
| <u>Contract Projects</u> | |
| Primary Roads | 31.43 ^{/1} |
| Secondary Roads | 0.23 |
| Surveys and Studies | <u>0.32</u> |
| <u>Force Account Projects</u> | |
| Primary Roads | 0.60 |
| Feeder Roads | 0.34 |
| Service-to-Traffic Roads | 0.59 |
| Bailey Bridges | <u>0.25</u> |
| | 1.78 |
| Sub-total - Capital Expenditures | <u>33.76</u> |
| Sub-total - Current Expenditures | <u>22.89</u> |
| TOTAL: 1970/1971 IHA Budget | <u>56.65</u> |

/1 Includes Eth\$ 21.7 million in foreign loans.

39. The above tabulation indicates that about 95% of capital expenditures in FY 1971 will be for primary road construction. This serious imbalance is due to priority assignment of funds to foreign-aided primary road projects together with a shortfall of about 40% in capital funds available as compared to the amount expected for 1970/71 in the Third Plan.

Future Road Programs

40. The recommendations of the Roads Study is that Ethiopia's economic growth can best be served by shifting the emphasis in future road programs from extension of the primary road network to the construction of secondary, feeder and service-to-traffic roads. These recommendations confirm the stated intent of the Third Plan.

41. The Planning Commission's estimates of probable capital funds to be allocated to the IHA during the remaining three years of the Third Plan to achieve the objectives of the Road Study are as follows:

| <u>Eth.\$ Million</u> | |
|-----------------------|--------------------------------|
| FY 1970/71 | 47.2 (provisional budget 33.8) |
| FY 1971/72 | 56.3 |
| FY 1972/73 | 73.3 |

These estimates together with approved annual budgets for FY 1969 and FY 1970 represent a shortfall of about Eth.\$ 120 million in the original Third Plan target.

42. The Roads Study recommends a road development plan for this three-year period with emphasis on low standard roads. The greater part of available funds, however, Eth.\$ 139.3 million, will be required to finance foreign-aided projects, and it is estimated that only about Eth.\$ 38 million would be available during the next three years for the capital costs of force account road construction, which includes feeder roads, by the IHA. It is therefore quite apparent that a significant portion of the Third Plan targets for low standard road construction cannot be met.

43. The main conclusions and recommendations regarding the effect of this situation on Ethiopia's future road program and IHA's operations are as follows:

- (a) IHA's force account construction operations for the remaining three years of the Third Plan will be quite nominal and will underutilize IHA's present capacity. Operations should be concentrated on the higher priority low standard roads giving full consideration to the recommendations of the Roads Study and keyed to realistic estimates of annual fund allocations.
- (b) The IHA should utilize fully the capacity of its design division for investigation and design of roads selected in (a) above. The design division should also undertake a review of present design standards considering the recommendations of the Roads Study and prepare guidelines for application of agreed standards. Better preconstruction investigation and design and more judicious application of appropriate design standards would result in more efficient use of staff and equipment, shorter construction times and a reduction in the overall cost of force account road construction as compared with past performance.
- (c) Because of the expected reduction in force account work, the IHA should take the opportunity to consolidate their force account construction units and to utilize any excess capacity to supplement maintenance operations within the limits of available funds.

- (d) As compared to the present emphasis on primary road construction because of its attraction for foreign aid, future externally-aided road projects should be oriented towards secondary, feeder and other low standards roads. Externally-aided projects should come at more frequent intervals and for lesser amounts than in the past to avoid "bundling" of construction with the corresponding demand for a substantial proportion of IHA's allocations. In addition, the IHA should be allowed to execute these projects by force account to the extent of their current capacity but care must be taken that the IHA does not build up a capacity to execute all such works, thus precluding the development of a reliable local contracting industry.
- (e) Future planning of road programs by the IHA should involve considerably more coordination with other transport modes and with other principal sectors of the economy. Formation of the Roads Planning Board as recommended in the Roads Study or some other comparable arrangement is necessary to assure this improved coordination.
- (f) For future road planning the IHA should be advised of a realistic estimate of probable funds allocations so that priority road projects within a reasonable financial framework would be submitted. This would avoid the present practice of partial funding of many road projects and the arbitrary deletion of some proposed road projects by budget review agencies completely unfamiliar with the economic importance of the individual projects.

III. ROADS: TRAFFIC, REGULATION AND ROAD USER CHARGES

The Vehicle Fleet

44. Vehicle registration and licensing records are still not good enough to offer an accurate record of the vehicle population, but estimates made in the General Road Study are given in Table 3. The number of vehicles is still extremely low, amounting to about only one vehicle per 600 persons and one automobile per 800 persons. (In neighbouring Kenya, the figures are in the order of one vehicle per 80 and one automobile per 150 people). One reason, of course, is the severe limitations of the road system, and in particular the almost complete absence of all-weather feeder and access roads in large areas of the country; so long as these are for the most part confined to the hinterlands of Addis Ababa and Asmara, road traffic and road vehicles must similarly be confined.

Freight Traffic

45. The number of trucks has recently been growing more slowly than road vehicles as a whole, but their average capacity has been increasing and on some routes ten-ton capacity vehicles hauling a trailer of twelve tons or more are now commonplace. Even so, a fleet of no more than 3,000 trucks, and somewhat fewer pick-ups, remains very small in a country which can only rely on other modern modes of transport to a very limited extent.

46. The principal road routes for freight, in order of importance, are as follows:

| <u>Route</u> | <u>Approx. Distance Km.</u> | <u>Remarks</u> |
|--------------------------------------|-------------------------------------|---|
| Addis Ababa-Assab | 860 | Essentially Port Traffic |
| South Shewa Province- Addis Ababa | 100 | Traffic collected and distributed in Addis Ababa |
| North Shewa Province- Addis Ababa | 100 | Traffic collected and distributed in Addis Ababa |
| Jimma-Addis Ababa | 330 | Traffic collected and distributed in Addis Ababa. The largest flow is coffee. |
| Massawa-Asmara | 115 | Only port and other traf- fic that the parallel railway allows to be con- veyed by road. |

Freight Rates

47. With the exception of imported goods from Assab to Addis Ababa, there are no standard tariffs for freight traffic, though the duty of the Government to regulate all road freight rates has already passed into law. Rates per km vary widely, and for the most part in a healthy fashion, according to competitive demand and supply conditions determined by seasonal influences, the availability of return loads, the length of haul and the conditions of the roads, etc. To illustrate the range of variance, a rate of 12.6 Eth. cents/ton-km. is quoted for the 635 km. from Addis Ababa to Denbi Dolo, but more than Eth.\$ 1.00/ton-km. is charged for the additional 73 km. from Denbi Dolo to Gambela over very poor roads. Over bitumenized roads (Addis Ababa-Nazret for example) average rates can be as low as between 2 and 5 Eth. cents/ton-km. depending on the season. On the main routes from Addis Ababa which are partly bitumenized but mostly involve driving over reasonable gravel roads (to Jimma or to Nekemte for example) the range is generally from about 4.5 to 7.5 Eth. cents/ton-km.

48. For imported goods on the important route from Assab to Addis Ababa the Ministry of Communications operates a "first come first served" system for truckers at the Port, and stipulates minimum charges which vary between 5.2 cents/ton-km. for cement and 11.6 cents/ton-km. for transported motor vehicles. The system appears to have put the truckers in a strong bargaining position, and in practice rates are said to be well above the minima.

49. The fact that road rates charged for imports from the port are generally higher than for exports in the reverse direction may seem anomalous at first sight, because the volume of dry cargo imports through the port is lower than for exports. But the export figures include large quantities of salt produced in Assab and not entering into the tonnage by road from Addis Ababa, while conversely, movements of salt from Assab to Addis Ababa supplement the imports moving by road, and so further help to restore the balance of traffic. Indeed, sample figures from the General Road Study suggest there may be considerably more empty truck movements from the capital to Assab than in the reverse direction. The rates for exports, being freely determined between truckers and shippers, show considerable variation, but the following examples illustrate the general order:

| | <u>Eth. Cents/ton-km.</u> | |
|------------------|---------------------------|-------------------|
| | <u>Peak Season</u> | <u>Off Season</u> |
| Hides and coffee | 4.1 - 4.6 | 2.3 - 2.9 |
| Cereals | 2.9 | 1.7 |

50. Substantial reductions in the operating costs of vehicles working between Addis Ababa and Assab can be expected in the near future, when the route via Awash is completed. This has an important bearing on the port's ability to compete with Djibouti, and could substantially affect the future of both ports.

Government Regulation of Road Freight Operations

51. The Government has accepted most of the recommendations contained in a 1966 report by a UN expert on the steps needed for reorganising commercial road transport. Accordingly, it established in 1967 a Road Transport Administration (RTA) as an "autonomous Public Authority" with the Minister of Communications as its Chairman. The functions of the RTA include the following:

- (i) to establish capacity requirements and to restrict the number of commercial vehicles to those needed to meet these requirements;
- (ii) to establish minimum and maximum tariffs; and
- (iii) to encourage formation of commercial road transport associations, and to create, supervise and control them "where such encouragement proves insufficient".

Control of the number of commercial vehicles is to be exercised by restrictive licensing, but the RTA also has the right to regulate the actual import of vehicles.

52. None of these functions has so far been fulfilled, and it is most unlikely that they ever could be in any satisfactory manner. Even if the basic objectives were correct in principle, the assumptions that a Government department can in practice properly calculate the country's optimum requirement for road transport, and can establish an appropriate level of maximum and minimum charges to meet every situation of peak and off-peak demand, balanced and unbalanced traffic, etc., seems quite unrealistic.

53. Equally impracticable, probably, is the assumption that violations of the law on a scale sufficient to negate the whole scheme could be avoided. In practice it would be very difficult to ensure that private vehicles, permitted only to carry their owners' own goods, do not also carry goods for hire or reward. (Worse still, if they stay within the law and refrain from using spare capacity to carry other people's goods, this will mean vehicle underutilisation of the very sort the scheme is supposed to eliminate). Experience in other countries suggests that the number of private commercial vehicles, now insignificant in Ethiopia, will rapidly increase once other vehicles are restricted, and will not easily be confined to the activities the law prescribes. Even more difficult will be the enforcement of maximum and minimum tariffs. Truckers will have a quite proper incentive to offer any rate, however, low, for a back load, if the alternative is to return

empty; and shippers may well be prepared to go beyond the legal maxima whenever capacity is in short supply. It is difficult to see how the detailed enforcement necessary to curb these natural incentives could ever be achieved in practice.

54. Another problem arises from the considerable value that will be attached to granting a license to operate. Unless the fee is high enough virtually to absorb this value the incentive for malpractices in the issue of licenses may well prove impossible to counter.

55. All of these are problems of implementation. As to the basic objectives of the scheme, these appear to be based principally on a belief that there is excessive freight capacity in the country, and that the truckers themselves, as well as the Franco Ethiopian Railway, should be protected from the resulting "cut-throat" competition. The General Road Study has found no evidence that competition is unreasonable because it is unrestricted, and points out that excess capacity during the marked off-peak seasons is no more than an economic necessity if the peaks are to be catered for adequately. In any case, even if restriction were desirable, for example, to conserve foreign exchange, the mission considers that the means should be one (such as increased import duties) that still leaves the ultimate freedom of choice to the vehicle operator.

Passenger Traffic

56. For many years public road passenger transport has been expanding rapidly, though the total bus fleet, estimated at about 3,500 vehicles, is still quite small in relation to the population. About half of them are mini-buses whose growth has been largely due to the fact that on inter-urban routes, until recently, they were free from the regulation of routes and schedules exercised by the Ministry of Communication over other bus services. Recent legislation, however, makes no such distinction, and the average size of buses is currently on the increase.

57. Inter-urban services are provided by a large number of operators, many of whom own no more than one or two buses. Many passengers are also carried on freight trucks, which are legally allowed to carry up to six persons, either in the cab or on top of the load.

58. In Addis Ababa city bus services are in the hands of a single semi-public company, but its operations are supplemented by numerous taxis carrying multiple passengers on selected routes at low standard fares. Their competition is irksome to the bus company, but they are popular with the public. The case against them will be stronger when city street congestion becomes more serious than it is now.

59. One usual feature is the Municipality's interest in the possibility of introducing electric traction on some routes in the capital, at a time when many cities elsewhere have discarded their street cars and trolley buses on ground of high operating costs, and their particularly high contribu-

tion to traffic congestion. For Addis Ababa it is thought that the much reduced efficiency of standard internal combustion engines at such an altitude (2,400 m) might tip the balance in favour of electric traction. Whatever the results of the technical comparison, however, the likely effects in terms of future street congestion, difficult as they are to calculate, should not be underestimated; they could well provide the overriding consideration.

Road User Taxation

60. Estimates prepared by the IHA suggest that, taking one year with another, receipts from fuel duty, import duties on vehicles, tyres and spares, and from other road user taxes, have been more than sufficient to cover all the actual capital and recurrent outlays on improving and maintaining the road system (Table 4). The General Road Study's independent investigations have led to the same conclusions.

61. This leaves open, however, questions of the economic soundness of the taxes raised, in the light of their influence on the volume of traffic moving by road, the type of vehicles used, etc., and on the competitive position of road transport compared with alternative modes. The General Road Study concludes that about 75% of the total revenue is raised from taxes on fuel, tyres and spare parts, which are items varying closely with the amount of use made of vehicles; whereas only a small proportion of the total costs of providing and maintaining the roads can be said to vary in close ratio to the actual movement of vehicles on the roads. As a result, the General Road Study considers that the present tax structure artificially inflates the variable cost element of vehicle journeys to the road users; it recommends that a bigger proportion of revenue should be sought from taxes that do not vary directly with the day-to-day utilization of vehicles, such as import duties and license fees.

62. The Study's proposal also incorporate bigger tax penalties for heavy trucks whose limited number of axles can be expected to give rise to axle loadings causing unduly heavy wear and tear on the roads. For example, for a truck-trailer combination the tax comparison, on average, is estimated as follows: (all items expressed per annum)

| <u>Tax Rates</u> | <u>Annual License</u> | <u>Duty on Tyres</u> | <u>Duty on Spares</u> | <u>Fuel Tax</u> | <u>Import and Other Duties On Purchase</u> | <u>Total</u> |
|------------------|-----------------------|----------------------|-----------------------|-----------------|--|--------------|
| Present | 320 | nil ^{/1} | 878 | 4,070 | 601 | 5,869 |
| Proposed - | | | | | | |
| Four axles | 1,224 | 962 | 878 | 1,980 | 1,568 | 6,612 |
| Six axles | 400 | 481 | 1,069 | 1,980 | 1,386 | 5,316 |

^{/1} There is no tax at present on truck tyres.

63. The conceptual merit of these proposals is sound. However the study estimates that the proposals would increase the total first cost of trucks by between 16% and 30% depending on the type of vehicle. This may tend to restrict the expansion of the vehicle fleet without compensation by way of additional utilization of existing vehicles resulting from the lower fuel tax. It may be preferable to introduce the proposals in stages over a period bearing in mind when fixing the rates at each stage that road taxation has a purely revenue element which cannot be foregone unless a compensating source is found.

64. It may be tempting to suggest that since transport in Ethiopia is still in an early stage of development, more rapid growth should be encouraged by an all-round lowering of road user taxes. It might at least be thought that taxes should be set without regard to the crude criterion of matching current capital outlays on road construction, as well as maintenance, with current user tax revenues, and that an attempt should alternatively be made to recover the initial investments from the expanding traffic over the life of the new roads. The simple answer to this is that, at a time when the Government faces serious Treasury deficits, and is being forced to make severe cuts in development and other expenditure, including that planned for road construction, it would not be feasible, or indeed logical, to argue the case for lower taxes with the single-minded purpose of encouraging faster vehicle growth. Indeed, having regard to the relative case of collecting road user taxes, the present situation may well call for higher rates of tax. All that can be said is that the expansion in the vehicle fleet, and in road operations generally, should be carefully watched, to ensure that unduly heavy taxation does not cause road transport shortages to emerge as a bottleneck in the development of the economy generally.

65. The IHA is pressing for the establishment of a special road fund, in which revenues from road user taxation would be earmarked to meet expenditures on the highways. This is no doubt motivated particularly by the emergency reductions made in Treasury financing for the road development program. However, the Government's present financial situation serves to emphasize rather than to deny the need to consider priorities in the road sector within the context of the economy as a whole. It would be wrong to give automatic precedence to roads simply because road user taxation represents one of the more practicable means of revenue collection.

IV. PORTS

General

66. Until Eritrea was federated with the Empire in 1952, Ethiopia was a land-locked country relying on the ports of neighbouring countries for its overseas trade movements. The main outlet was through the Port of Djibouti, connected since 1917 by the Franco-Ethiopian Railway to Addis Ababa and serving the central plateau area generating the bulk of the country's exports and imports. In 1961, however, a new deep-water port was completed at Assab in Eritrea which covers much the same hinterland as Djibouti and is actively competing with it. The second Eritrean port at Massawa serves the northern part of Ethiopia, and in view of the poor communications to the south competes very little with the other two ports.

67. Traffic statistics are unreliable, but the estimates in Table 5 are thought to offer a reasonable picture of movements through the three ports. Part at least of the growth of general cargo traffic through Assab (nearly 12% p.a. between 1963 and 1968) represents exports diverted from Djibouti. Oil traffic has similarly been diverted since the refinery at Assab came on stream in 1967, and although some returns by coastal tanker to Djibouti and Massawa, much of the refinery's products are consigned by road. (The General Road Study has briefly examined the feasibility of a 6" multi-product pipeline from Assab to Addis Ababa and considers the prospects sufficiently encouraging to justify further detailed study).

68. Traffic at all three ports has been affected by the Suez Canal closure. The number of ships calling has been substantially reduced and the average size of consignments loaded and discharged has increased correspondingly. Djibouti in particular has also lost the substantial bunkering and servicing business for vessels previously transitting the canal.

69. The two Ethiopian ports are administered by the Marine Department of the Ministry of Communications, which is involved in the detail of operational, commercial, personnel and financial matters arising in their day-to-day activities. The ports have no financial autonomy, their budgets forming part of the Department's budget, which also includes inland waterways. However, the Government has now accepted the need to establish both ports as semi-autonomous public agencies under a Port Authority.

70. A summary of revenue and expenses for the two Ethiopian ports in past selected years is shown in Table 6. On the basis used for calculation, which excludes depreciation and debt servicing on all but minor items, revenue has shown substantial surpluses over expenditure, particularly since the new facilities came into full operation at Assab. However, it has been calculated that if depreciation and debt servicing were properly included, both ports would actually be shown as operating in deficit. For the calendar year 1968, for example, the following results have been estimated:

| | (Eth.\$ 000) | | |
|---------------------------------|----------------|--------------|--------------|
| | <u>Massawa</u> | <u>Assab</u> | <u>Total</u> |
| Revenue | 1,535 | 1,938 | 3,473 |
| Expenditure | 881 | 722 | 1,603 |
| | + 654 | +1,216 | +1,870 |
| Depreciation and debt servicing | 1,038 | 1,380 | 2,418 |
| Net Margin | - 384 | - 164 | - 548 |

Source: SRI Report

71. To improve the financial situation there appears to be room for considering substantial increase in the port charges raised at both ports. It has been estimated that their average charges for general cargo, compared with those at Djibouti, are approximately as follows:

| | (Eth.\$) | | |
|--|----------------|--------------|-----------------|
| | <u>Massawa</u> | <u>Assab</u> | <u>Djibouti</u> |
| Port dues, pilotage, berthing, etc. | 0.74 | 0.74 | 0.40 |
| Cranage | 0.30 | - | - |
| Cargo dues (wharfage) | 1.12 | 1.12 | 7.78 |
| Handling charges | 5.19 | 4.98 | 6.42 |
| Total | 7.35 | 6.84 | 14.60 |

Source: General Road Study

Cargo dues, at 45 US cents/ton, are low compared with most other ports in the world, as well as with Djibouti. The SRI report concludes that the total charges might be raised by about 30% at Massawa, and by about 10% at Assab, but this is simply based on what is thought to be necessary to ensure that revenues should roughly equal the financial commitments of the two ports.

72. However, this is not a sufficient criterion. Even if the objective were to earn revenues no greater than expenditures, it would still be necessary to have regard to the demand side, to avoid increasing tariffs so much as to discourage traffic from using the ports, and perhaps even risking an actual fall in gross revenues. It is not sufficient to consider the costs side alone in isolation from demand.

73. Furthermore, the aim should be to earn a reasonable return on the ports' operations as well as to ensure the accumulation of funds to cover any further investment outlays. This further emphasises the need to calculate the extent to which tariff increases can be introduced without harmful effect on traffic volumes through the ports.

74. For Assab, a major factor determining the pattern of traffic demand is the competition from Djibouti, where port and handling charges are twice as high as Assab's, but where other factors, such as comparative transport charges and services between the ports and points inland, must also be taken into account. (For example, Djibouti offers a convenient arrangement for shipping imports in bond by rail to Addis Ababa, the consignee paying duty upon collection of the goods from a bonded warehouse). The question of competition between the two ports is important and complex, but it does seem that there is room for specific increases in the tariffs at Assab, which need not necessarily change the actual distribution of traffic between them.

The Port of Massawa

75. Massawa, which is a natural Port, has six berths for ocean-going vessels with a total length of 900 m. In practice only berths 3 through 5 (411 m) are reasonably suited to accept modern cargo ships, and these can only accommodate two vessels at a time. All the berths were designed for depths of more than 9 m ^{1/} immediately alongside, but in the absence of dredging for many years, berths 3 to 5 now offer only about 8.4 m and the remainder from 5.5 to 9.0 m. The loading terminal for the salt factory is also silted to about 9.4 m.

76. Only berth 4 has a transit shed for direct movement of cargo to and from shelter, and even the paved space used for stacking goods in the open is very limited, as well as providing unsatisfactory accommodation for a wide range of goods in the hot climatic conditions. The wharves and buildings are about 35 years and the quay cranes about 30 years old, but almost all facilities are in a worse condition than could be expected if they had been efficiently maintained. None of the cranes still in working order can lift up to its capacity and there is very little other handling equipment, almost all cargo being handled manually (see Table 7). The slow rate of handling has become of more serious concern since the Suez Canal closure, because with fewer vessels calling the average volume of cargo has increased from about 200 to 500 tons. Delays to ships are aggravated by the practice of employing one stevedore gang of 25 men around the clock if necessary, paid on a piece-work basis and with breaks only for meals. This system works well for small cargoes, but is quite inappropriate for handling large tonnages that can keep a gang working continuously for as much as two days.

^{1/} The tidal range at Massawa is about 1.0 m.

77. The port has two small pilot boats and a water supply boat which are frequently out of operation, and only two 350 h.p. tug boats, which are incapable of handling the larger ships now entering the Red Sea. The only bunkering facilities are on berth 6, where both fueling and water supply systems are inadequate.

78. In spite of the poor condition of facilities generally, there is little evidence of congestion in moving traffic through the port. The present dry cargo capacity is estimated to be in the order of 700,000 tons p.a. of break-bulk cargo, which compares with a present traffic level of about 280,000 tons, and should be more than sufficient to meet traffic requirements for at least ten years. Capacity would be further expanded if container services began to operate in the Red Sea, and one of the ports' berths were adapted accordingly.

79. The main benefits that SRI claims for proposed new investments in the port are consequently in terms of increased efficiency; lower handling costs, for example, by introducing more mechanical aids, or less tangible benefits from dredging and improving No. 6 berth to accommodate the larger cargo vessels that will increase substantially in numbers once Suez is reopened.

80. The Third Five-Year Plan includes new investment of Eth.\$ 8.8 million for the port, the details of which are shown in Table 8. Nearly 80% of the total sum is accounted for by the proposed extension and improvement of No. 6 berth, the purchase of cargo handling equipment and new service boats, surfacing of the quay, stacking area and roads, and dredging of the berths. So far, however, virtually none of these proposals are underway. It is understood that the British Government is likely to provide an interest-free loan of about £ 330,000 (Eth.\$ 2.0 million) for part of the cargo handling equipment required.

The Port of Assab

81. At Assab the main port consists of two finger piers protected by an island breakwater, and containing six general cargo berths plus one for coasters. The reported depths at the six berths are from 10.1 to 10.7 ¹/_m. Berths 1 to 3 (492 m.) and 4 to 6 (478 m.) are in straight lines, so sizeable general cargo ships can be accommodated without difficulty. Only berth 4 is served by a fixed quay crane (30 tons) and even this is at present unserviceable. The three transit sheds are situated on other quays. Four of the seven berths have only very limited paved space for stacking cargo.

82. Outside and away from the finger piers, the oil refinery is served by a buoy berth with a present depth of 12 m. In addition there is an off-shore loading terminal for the salt works which, with a depth of 9.4 m., at present accommodates ships of 15,000 dwt., but which the private company proposes to improve to take vessels of 25,000 dwt.

¹/_{The tidal range at Assab is about 0.6 m.}

83. For general cargo the port's capacity is thought to be in the order of a million tons of break-bulk cargo annually, which far exceeds the existing traffic level of about 240,000 tons.

84. As at Massawa, cargo handling efficiency has deteriorated rapidly since the Suez Canal closure has reduced the number of ships calling, and has concentrated the traffic into much bigger cargoes than the single-shift system of labour was designed to cope with. Here again, there is need also for new investment in equipment for cargo handling, almost all of which is now done manually.

85. Even though the new port facilities are less than ten years old, like those at Massawa they have been demonstrating the effects of inadequate maintenance. Much of the equipment, including the single 30-ton fixed quay crane, has been out of service awaiting repairs for long periods and the new buildings are already showing the results of improper upkeep. In general the maintenance facilities are considered inadequate for this task, which has to some extent been recognised by including investments in new workshops and equipment in the Third Five-Year Plan. As at Massawa, SRI considers improvement of the maintenance function as probably the most important recommendation in their report.

86. The Third Five-Year Plan includes Eth.\$ 5.5 million for the port, of which Eth.\$ 2.1 million is for cargo handling equipment, Eth.\$ 1.3 is for service vessels, Eth.\$ 500,000 for new transit sheds and Eth.\$ 430,000 for a workshop and machinery.

The Future of the Ports

87. Massawa provides the natural outlet for Northern Ethiopia, for which neither Assab or Port Sudan could be considered as an effective substitute. Fairly substantial expenditures at this port, primarily to allow larger general cargo ships to be accommodated, and to mechanise cargo handling operations, appear to be justified.

88. When the improvements proposed in the Third Five-Year Plan are undertaken at Massawa, it is proposed also to include remodelling of the railway layout within the port. In para. 107 below the justification for continuing any of the railway's activities is brought into question. A clear policy on the future of the railway, and on the access to be allowed to competing road transport, is obviously a prerequisite to determining the rail and road facilities needed at the port.

89. The General Road Study recommends a further study of Massawa to provide a master plan for the port and to review operating, financial and managerial aspects of the ports activities. Such a study should also consider the case for continuing the railway's operations or for relying instead exclusively on road transport, supplemented perhaps by an aerial ropeway to serve the port. In doing so it should have regard to related questions, such as the scope for improving the existing road over the escarpment to Asmara, and the practicability of limiting the maximum size of vehicles permitted on this route.

90. For Assab, the future depends essentially on the ability of its new road-served port to compete for traffic to and from virtually the same hinterland as for rail-served Djibouti. Assab was created primarily to provide an Ethiopian port to serve the central and southern areas, and to reduce dependence on the railway route via the French Territory. Present traffic at both ports is much below their capacity, which could be further expanded by containerization and other innovations. Assab has already won a substantial amount of traffic that would otherwise have passed through Djibouti, and its competitive position will be further improved when the Awash-Tendaho road is completed in 1973. Both Djibouti and its railway are now operating in deficit, the railway being obliged to make substantial reductions in its tariff to prevent further diversion to Assab.

91. Assab was not created primarily for economic reasons, and the Ethiopian Government will have to take account of other considerations in deciding the future role of the two ports. For example, the Ethiopian traffic provides a major activity, not only for Djibouti but for the French Territory as a whole, and any future Ethiopian interests in the area would be much reduced if all the traffic diverted to Assab. This situation multiplies the difficulties of finding a pragmatic solution that pays regard to the relative economic advantages of the two ports. The non-economic implications cannot be brushed aside: all that can be said is, first, that a clear policy on the two ports is needed before any major new investments are made at Assab; and second, that any decision should at least have regard to the price to be paid in terms of foregoing the best economic solution for Ethiopia.

92. The General Road Study recommends a master plan for the port of Assab, similar to that proposed for Massawa but it is felt that the first objective should be to consider the comparative economic advantages to Ethiopia of using Assab and its road route on the one hand, and Djibouti and its rail route on the other, as a basic question to be answered before deciding the detail of further developments at Assab. The study should include an analysis of such questions as the future port capacity requirements for Ethiopian traffic, and the best means for meeting them; the comparative costs and relative advantages of road and rail as well as port operations of each of the two alternatives, at varying traffic levels; the means for reducing these costs and improving the quality of service; and appropriate policy for determining the level of road, rail and port charges, and the extent to which thy Government should attempt to influence each port's share of traffic on economic grounds. All of these questions needed to be considered before a master plan for Assab can be established on a sound basis.

V. RAILWAYS

The Franco-Ethiopian Railway

93. Of the two railways operating nowadays in Ethiopia, the Franco-Ethiopian Railway (FER) is the most important. Its activities are mostly confined to the movement of port traffic over the 781 km between Djibouti and Addis Ababa, 100 km of which are in the French Territory of Afars and Issas. It is 50% owned by the Ethiopian Government, the remaining 50% interest being shared almost equally by the French Government and private French shareholders. It has no branch lines, and its metre-gauge track extends no further inland than Addis Ababa.

94. The Railway's freight and passenger traffic is shown in Table 9. Most of the freight tonnage represents Ethiopian traffic passing through the port of Djibouti. The fortunes of the railway are thus intimately related to those of the port.

95. The FER is completely dieselized; in general its permanent way, fixed installations, rolling stock and maintenance facilities are in good condition but a replacement program is proposed for the 309 km section between Djibouti and Dire-Dawa, where most of the rails are 50 years old or more. The purchase of six diesel locomotives and fifty freight wagons is also included in the Third Five-Year Plan, but these represent no more than normal replacement during the five years (Table 10).

96. Recently the railway's financial results have been showing an unfavorable trend, as the following summary shows:

(Eth.\$ 000)

| <u>Financial Year</u> <u>ending July</u> | <u>Revenue</u> | <u>Costs</u> <u>(Incl. depreciation</u> <u>and other charges)</u> | <u>Margin</u> |
|---|----------------|---|---------------|
| 1964 | 15,604 | 15,561 | + 43 |
| 1965 | 14,829 | 14,786 | + 43 |
| 1966 | 16,165 | 16,022 | +143 |
| 1967 | 14,679 | 14,832 | +153 |
| 1968 | 13,743 | 14,152 | -409 |
| 1969 | 13,473 | 14,160 | -687 |

In particular, freight receipts have been falling steadily over the last three years, and by 1969 were 23% lower than in 1966, while freight ton-km were 16% lower. In order to compete with the alternative road route for Ethiopian overseas traffic via Assab, the railway has reduced some of its tariffs by substantial amounts. For example, the rate for coffee from Addis Ababa to Djibouti has recently been cut from Eth.\$ 30 to Eth.\$ 16/ton, and there have been similar reductions to Eth.\$ 16/ton for dried vegetables, and to Eth.\$ 15/ton for oilcake. These rates are so low as to yield only mar-

ginal revenues for the railway, though in terms of volume the commodities in question are far from representing marginal traffic; together they account for the bulk of the railway's export tonnages.

97. The freight tariff contains wide differentials between commodities and between different collecting points for exports. For coffee the rate of Eth.\$ 16/ton for the 781 km from Addis Ababa contrasts with Eth.\$ 42.25 for the 309 km from Dire Dawa to Djibouti. The reason is that a present Dire Dawa has no alternative road route to either Djibouti or Assab; but the mission was told that at these rail rates exporters actually find it worth while to ship their coffee back to Addis Ababa by road for no other reason than to take advantage of the lower rail charges from there to Djibouti, an anomalous situation which benefits neither the exporters nor the railway.

98. The serious competition the FER is experiencing will be much increased as soon as the new road to Assab via Awash is completed, when vehicle operating costs on the Addis Ababa route are likely to be reduced by 20% or more. The road will also provide intermediate points on the railway, such as Dire Dawa, with a practicable route to Assab, and although Djibouti is much closer, traffic from this area as well will have scope either for diverting from the railway, or for forcing sizeable reductions in the rail rates.

99. The outlook therefore, for the railway and the port of Djibouti is not encouraging. It is understood that the railway has already asked the Ethiopian Government to provide it with a subsidy under the terms of an agreement made a few years ago. As a first step, however, the Government is asking the railway as a matter of urgency to provide financial data and operating statistics in much greater detail than has previously been available, with a view to assessing the scope for restoring its viability by improving its efficiency. This investigation, which is clearly the right approach, will also serve as an important preliminary step in the proposed study of the economic advantages of Djibouti compared with the Assab route (see para. 92). The study itself will also serve to provide a proper foundation for the railway's future investment plans.

100. At one stage it was proposed to extend the railway line some 370 km beyond Addis Ababa to Dilla, but the Government deleted this from the Third Five-Year Plan on the grounds that the potential traffic was quite insufficient to justify this expensive project.

101. The Survey of African Regional Studies undertaken by SRI in 1968 recommended that the FER "should be encouraged to work toward 1.067 m gauge over the long term", presumably on the assumption that a link with Sudan Railways might some day be provided. All new equipment ordered by the Railway is accordingly to be convertible from metre gauge, and preparations are also being made for similar conversion to the track during normal maintenance. The proposed link appears to be so speculative that nothing more than purely nominal expenditures in this regard seems justifiable.

The Northern Ethiopia Railway

102. The main function of the Northern Ethiopia Railway (NER), which is wholly Government-owned, is to provide a 117 km link between the port of Masswa and Asmara. A further 189 km between Asmara and Agordat was recently brought back into service after sabotage had closed the line for some time, but there is no freight traffic west of Asmara. The line used to extend 36 km further west to Biscia, but the track was taken up in 1942. During the 1930's construction started on a further 66 km extension from Biscia to Aicota, but was never completed.

103. The track (0.95 m gauge) follows a tortuous alignment from the coast to Asmara, climbing from sea level to 2,340 m. through 30 tunnels and over 35 bridges. With continuous gradients of up to 3.5% and numerous curves with 70 m. minimum radius, effective train capacity on one 50 km section is limited to only 55 trailing tons for some of the steam engines and to only 90 tons for the 550 hp. diesel locomotives. Maximum speed anywhere on the railway is only 25 km/hour.

104. Modernization of the NER has proceeded very slowly. Diesel motive power was introduced thirty years ago, but there are still 19 steam locomotives (including 8 shunting engines) compared with 7 diesels (including 8 shunting engines) compared with 7 diesels (including 3 shunting). The continued use of two forms of motive power on such a small railway compounds the difficulties of providing adequate maintenance facilities. Most of the 600 freight wagons are more than fifty, and some seventy, years old, the only modern stock being 34 x 25 ton covered wagons put into service two years ago. The average wagon capacity is only 12 tons. The track and other fixed assets are also in poor condition.

105. Port traffic consigned or delivered at Asmara dominates the railway's freight carryings, while cement and salt from Masswa to Asmara account for a large proportion of local traffic (see Table 11). Since 1966, freight as well as passenger traffic has continued to decline, in spite of the fact that, for freight, competitive road transport can only operate if granted a special license by the NER, and in practice is mostly confined to carrying perishables and petroleum products.

106. In company with the decline in traffic, and with the increasing age of its equipment and other assets, the financial position of NER has deteriorated sharply over the past five years, as the following figures demonstrate:

(Eth.\$ 000)

| <u>Financial Year</u> <u>ending June</u> | <u>Revenue</u> | <u>Costs</u> <u>(Incl. depreciation</u> <u>and other charges)</u> | <u>Margin</u> |
|---|----------------|---|---------------|
| 1964 | 2,736 | 2,390 | +346 |
| 1965 | 3,058 | 2,757 | +301 |
| 1966 | 3,020 | 2,930 | + 90 |
| 1967 | 2,489 | 3,161 | -672 |
| 1968 | 2,333 | 2,877 | -544 |
| 1969 | 2,198 | 2,477 | -279 |
| 1970 (Est.) | 2,245 | 2,994 | -749 |

More than 10% of NER's revenues actually come from fees for licenses that road freight vehicles require before they are allowed to operate, not only on the route parallel to the railway, but anywhere in Eritrea Province. NER thus has unusual powers to use road transport as a source of financing as well as to control its competitors, yet in spite of this it has not been able to avoid serious financial deficits. These are likely to become worse in future with the railway's problems being compounded by expected wage increases.

107. The Third Five-Year Plan includes investments of Eth.\$ 7.3 million for the NER, of which Eth.\$ 5.1 million is for new locomotives and other rolling stock (Table 10). So far, however, none of the planned expenditures have been made. The continued existence of the railway and the need for substantial injections of capital for its rehabilitation ought not to be taken for granted. It seems most unlikely that, even after modernization, it could provide the most efficient mode of transport on this route, and this would almost certainly be quickly demonstrated if road transport were free to compete with it. The route is inherently unsuitable for railway operations; the short distance between Massawa and Asmara, the steep gradients, the seasonal nature of much of the traffic, the large hinterland that the railway can only serve if road vehicles feed traffic into it instead of moving directly to the port; all of these are factors favoring road transport, and together they suggest that the continuation of railway operations is economically unsound, particularly when the total new investment to ensure this is likely to be substantial in the near future.

108. It is said that its closure would cause political difficulties, particularly in view of its location in Eritrea; but the total staff of the railway is only 1,400, so no substantial unemployment problem would be created. Furthermore, to relieve road operators of the railway's restrictive licensing and associated fees (which only apply to vehicles in Eritrea) would surely have nothing but favorable political repercussions in addition to the economic benefits.

109. The Plan also includes provision for a study of the feasibility of extending the line to the Sudanese border, where a 26 km spur line, no longer used, links the town of Tessenei with Sudan Railways. Even if the

existing railway operations were viable, it seems most doubtful that such a proposal would merit a study at the present time. Sudan Railways operate on 1.067 m gauge track, and the NER on 0.95 m gauge, which, when added to the problem of the railway's present run-down condition means that a virtually new railway would have to be built all the way from the coast. In Ethiopia, supporters of the extension are apparently prompted by a belief that Sudanese traffic would be encouraged to divert from Port Sudan to Masswa, but Sudan is unlikely to promote the use of a foreign port in preference to its own. It also seems improbable that Sudan Railways would be party to any proposal for switching traffic from Port Sudan, which they themselves operate; their own interest in joining the two railways would be to encourage Ethiopian traffic to use Port Sudan, which is hardly likely to offer an attractive proposition for Ethiopia, or for Masswa, under present conditions. It appears that for the short term the proposal is too impracticable to justify detailed study. In the long term the situation may change, but that is no reason to keep the present NER, with its obsolete equipment and 0.95 m gauge, in working order, or for accepting the large expenditures that this will require.

110. Instead a proposed study to provide a master plan for the port of Massawa should also investigate the future of the railway in its primary role of serving the port (para. 89). A comprehensive study would include a survey of the best means for serving the developing areas closer to the Sudan border, and would also assess the need for any major road improvements, particularly between Asmara and Massawa. In this way the investigation will be properly focussed on the port's requirements, with the railway and competing road transport considered in the general context of transport facilities serving its hinterland.

VI. AIR TRANSPORT

The Airports

111. Ethiopia's airports come under the jurisdiction of the Civil Aviation Administration (CAA), which is a department of the Ministry of Communications. There are plans for its reorganisation as a financially self-supporting agency, but up to now its revenues have been sufficient to cover only about 75% of recurrent expenditures, and it would have had no funds to support its own investment plans. The reason is that Ethiopian Airlines (EAL), by far the biggest user of the airports, pays no landing fees anywhere in the country, a situation that must be remedied before the CAA can become semi-autonomous in any meaningful sense. On the other hand, EAL itself undertakes maintenance at 35 of the domestic airports in the meantime. If the airline did pay the standard fees, CAA's income would be more than doubled.

112. Landing fees for a Boeing 707 type aircraft are about Eth.\$ 700 (US\$280). This is not a high figure, but CAA has no plans to increase the tariff, preferring to expand revenues by encouraging more business. This seems a sensible attitude at the present time.

113. The country has some 46 civil airports and airfields in regular use, and about 25 minor landing strips. The three international airports, at Addis Ababa, Asmara, and Dire Dawa, are only equipped for daylight operation and were originally designed for aircraft no heavier than the Douglas DC-6. Of the remainder, only Jimma Airport can take aircraft equivalent to a fully laden DC-6, though Assab and Masswa do accept this type at reduced loads. Apart from Jimma, none of the domestic airports have proper runways, most of them consisting of simple grass fields which are frequently closed during the rainy season.

114. Expenditures on airport improvements proposed during the Third Five-Year Plan Period are shown in Table 12. Improvements at Addis Ababa and Asmara Airports, which are being undertaken with the help of financing from USAID and the U.K., include the installation of night landing facilities and reconstruction of the runways, which in view of their constant use by heavy jet aircraft are approaching a dangerous condition. Night operations will not only allow foreign airlines to call at the Airports without substantial alteration to their timetables; it will also permit heavier take-off weights than is possible during the day, owing to the high altitude. At Addis Ababa the passenger terminal, with its present layout, is already too small for efficient operations, but no financing has been arranged for its improvement. It seems that the existing building's interior design could be much improved, and its capacity expanded at relatively small cost.

115. Development expenditure at Assab (Eth.\$ 7.3 million) is for its proposed improvement to international status, the main purpose of which is apparently to provide another alternate for Addis Ababa within Ethiopia. It seems certain that there can be no economic justification for the considerable outlay required.

116. Apart from Jimma, which was improved under the Second Five-Year Plan, none of the investment proposals for the domestic airports has so far been implemented. This is due partly to the first call that Addis Ababa and Asmara are making on scarce local currency investment as a counterpart to foreign loan commitments, and partly to problems of selecting the type of aircraft to replace EAL's DC-3 fleet on domestic services. Until the aircraft type is known runway lengths and other airport facilities required are still open to speculation. There is no doubt about the critical need for improving the two main international airports, but early progress in improving the domestic airports has also become a matter of high priority. Given the shortage of surface facilities over large areas of Ethiopia, air transport can play an important part in the country's development, and to a limited extent is already doing so.

Ethiopian Airlines

117. Ethiopian Airlines, created after the last World War with management, operational and training assistance from TWA, now operate the following fleet on international and domestic services:

| | |
|------------------------|-----------------------|
| 4 x Boeing 707 and 720 | |
| 2 x Douglas DC-6B | |
| 10 x Douglas DC-3 | |
| 3 x Bell helicopter |) |
| |) for private charter |
| 3 x Cessna |) |
| |) and training |
| 4 x Piper Cub |) |

One of the Boeing jet aircraft was leased to Middle East Airlines, but it is understood that the lease has been terminated since the mission's visit, and that the aircraft has been leased to Nigeria Airways. The remainder work the international routes to Europe, the Middle East, India and East and West Africa, and also serve the most important domestic route between Addis Ababa and Asmara. The Douglas piston-engined aircraft provide scheduled services to 43 domestic airports and to neighbouring countries.

118. Fundamentally, EAL is an efficient undertaking, which probably more than any other African airline has managed to combine a high absorption of local staff (about 80% of its pilots are Ethiopian) with the retention of high technical standards. However, its financial results, summarised below, have not recently been encouraging:

| Calendar Years: | 1968 | | | 1969 | | |
|-----------------------------|-----------------|----------------------|--------------|-----------------|----------------------|--------------|
| | <u>Domestic</u> | <u>International</u> | <u>Total</u> | <u>Domestic</u> | <u>International</u> | <u>Total</u> |
| <u>Operating Revenues</u> | | | | | | |
| Passengers | 3,484 | 34,978 | 38,462 | 3,588 | 34,075 | 38,563 |
| Freight | 770 | 7,634 | 8,404 | 813 | 7,014 | 7,827 |
| Other | 1,689 | 6,701 | 8,390 | 1,308 | 9,077 | 10,385 |
| Total | 5,943 | 49,313 | 55,256 | 5,709 | 51,066 | 56,775 |
| <u>Operating Expenses</u> | | | | | | |
| Depreciation of Aircraft | 164 | 7,482 | 7,646 | 221 | 8,545 | 8,766 |
| Other | 8,846 | 41,397 | 50,243 | 8,647 | 39,541 | 48,188 |
| Total | 9,010 | 48,879 | 57,889 | 8,868 | 48,086 | 56,954 |
| Margin | -3,067 | + 434 | - 2,633 | -3,159 | + 2,980 | - 179 |

(Note: These results differ from those shown in EAL's accounts which include receipts from the leased Boeing as "Domestic".)

Source: EAL

119. The results in effect include a hidden subsidy, to the extent that EAL pays no landing fees at any Ethiopian airport (though this is to a small extent offset by maintenance etc. undertaken by EAL on the domestic air-fields). It is estimated that in 1969 these would have amounted to about Eth.\$ 1.7 million on international flights alone. Although the deficits are shown to be incurred on domestic flights, the international services also seem to be faced with bigger problems than the accounts may suggest. They achieved an overall payload factor of only 35% in 1969, though this was offset by (and partly caused by) the high fare structure on Ethiopia's international routes. For example, the regular round-trip economy class fare Rome/Addis Ababa (4,450 km) is US\$627, compared with US\$573 for Rome/New York (6,850 km). On the expenditure side, the financial picture is influenced by the high depreciation rate for at least one of the four Boeing aircraft; 1970 is assumed as the same terminal date for both the Boeing 720-B's, though one was acquired in 1962 and the other not until 1965. Another feature of note is the heavy outlay on sales and promotion services, which at Eth.\$ 9 million absorb nearly 20% of total operating costs for the international services.

120. EAL has suffered from acts of terrorism against its aircraft, which in addition to their direct results have probably had some effect on passengers' willingness to use their services. More important commercially, however, is the original assumption that traffic, and particularly the tourist business, would expand faster than it actually has. In the four years to the end of 1969, total seat-miles increased at an average rate of 12.2% p.a., due essentially to the increase in capacity on the international services. Over the same period passenger-miles increased by only 6.6% p.a. It seems that an over-optimistic view was taken of the number of tourists who would come to Africa to see Ethiopia as their prime objective, but a much bigger expansion in tourism is taking place further south, in East Africa, and there may well be a considerable scope for Ethiopia to share in this expansion, by setting out to attract tourists to call en route to and from the East African countries. At present only three of the nine weekly EAL flights to Europe start from East African airports; the remainder originate from Addis Ababa.

121. If more traffic rights could be secured from East Africa this would offer an immediate prospect of securing more through traffic to Europe, as well as the scope for building up new business, from tourists who would choose to see Ethiopia as well as East Africa, at little extra cost. But there seems to be little incentive on the part of the East African Community to grant such rights, because this would increase competition for the existing European traffic into their own airline, East African Airways, without offering compensatory advantages of the same order. Over the long term the best solution for both airlines might well lie in progressive integration for their operations, with the eventual objective of complete merger; but at present this amounts to no more than speculation well into the future.

122. It is said that the restriction of aircraft movements at Addis Ababa Airport to the hours of daylight makes it difficult for EAL to plan efficient operations; but most of the nine daytime flights a week to Europe (terminating at Rome, Madrid or Frankfurt) begin their return flights on the same day, arriving in Addis Ababa the next morning, which on the face of it at least offers a basis for quite reasonable utilisation of the aircraft. More important, perhaps, is the lack of flexibility offered to other airlines, which are reluctant to call en route at the airport until it offers night landings and heavier take-off loads. The mission was told that EAL has plans to exchange traffic rights with BOAC to London, but BOAC will not operate through Addis Ababa until the runway is improved (see para 114).

123. EAL's domestic services are primarily still provided by Douglas DC-3's. A replacement is being considered, but EAL maintain that so far they have not found one likely to meet requirements better than the DC-3, which is typically engaged on short stage flights with as many as eight landings on a one-way journey. One problem is that modern aircraft, even if no bigger, can offer big increases in seat-mile capacity owing to higher speeds and less time devoted to servicing and maintenance. This demands a complete re-scheduling of services, perhaps taking into account

the scope for more flights combining domestic with international flights to neighbouring countries, particularly to the East African group. There is also an urgent need to review the services with the aim of either improving their viability, or of demonstrating the economic and social case for incurring such heavy losses on the combined domestic operations of EAL and the CAA.

124. It would be helpful to appoint an independent expert in aviation economics to undertake a brief review of the concomitant aircraft and airport requirements for the domestic services. The prime intention would be to select the optimum investment package from the alternatives available in aircraft characteristics and in the interrelated airport facilities required.

125. EAL's proposed capital expenditure during the Third Five-Year Plan period is summarised in Table 13. The largest item is for aircraft for domestic and regional routes to replace both the DC-3 and DC-6 fleet, but since the new aircraft type has not yet been selected the expenditure estimate is very tentative. The other principal item is for an additional Boeing 707, to be delivered in 1973 towards the end of the Plan period. The reasoning is that once airport improvements, particularly night flying facilities, are completed at Addis Ababa and Asmara, the way will be open for an exchange of traffic rights with other countries and for a big expansion in business. But resulting traffic forecasts are bound to be very speculative, and an unsure basis for an investment as big as the Eth.\$ 17.6 million for the aircraft. At a time when EAL's own jet capacity is already under-utilized, and when there is at least the risk that additional foreign flights to Ethiopia might mean less rather than more traffic available for EAL, it seems unlikely that any definite commitment will be justified for some time to come.

VII. WATER TRANSPORT

Ethiopian Shipping Lines

126. Established in 1964 as the country's national maritime carrier, Ethiopian Shipping Lines (ESL) encountered substantial difficulties in building up its operations. The initial fleet was badly selected; the two specially-built dry cargo vessels each of 5,200 grt (2,800 nrt) were expensive in relation to their cargo carrying capacity, while the third ship, a tanker of 21,800 grt was so unsuitable that within two years it was leased on time charter and no longer carries Ethiopian traffic.

127. ESL also had to face severe competition from the numerous shipping companies calling at Red Sea ports. With the Suez Canal closure in 1967, however, the situation changed dramatically; out of 30 or 40 liner companies formerly transiting the Red Sea there are now only seven or eight trading in the area on a regular basis, and these have much reduced schedules. The total number of calls made by ships to load or discharge cargo at Massawa, Assab and Djibouti fell from more than 300 a month before June 1967 to less than 190 subsequently. As a result of this, and of increased voyage times for its own vessels around the Cape, ESL's capacity was suddenly insufficient to cope with the new traffic demand.

128. ESL now operates four deep-sea dry cargo ships, providing a total capacity of about 10,000 nrt, and all operating on the route to Europe. The Third Five-Year Plan provides for two vessels, one of which (3,000 nrt) is still to be delivered, by about mid-1971. The total dry cargo capacity will thus have more than doubled since the Suez closure. This development, it seems, has been inevitable to avoid crippling Ethiopia's overseas trade through lack of capacity, but it raises the question of ESL's position once the Suez Canal is reopened. ESL believes it will be able to retain most of the traffic it handles at present, and that it can also inaugurate a service on a new route, probably to the Far East to absorb the spare capacity made available by shorter journey times to Europe. However, in view of the competition experienced before the Suez closure and of the possible world-wide surplus of shipping capacity likely to be created immediately the Canal can be used again, this is bound to be a difficult period for the Line. Its management accepts the potential advantages of working arrangements with other shipping lines, but so long as Suez is closed the attraction of the Red Sea area to other lines is clearly limited.

129. The line is now a profitable venture, but only earned an estimated Eth.\$ 547,000 in calendar 1969, after meeting operating, depreciation, cargo handling, administration and other general expenses of Eth.\$ 13.41 million. It is able to attract financing for its own development plans, but the loans outstanding on its ships are in fact still serviced by the Government, so ESL is building up substantial depreciation funds which will be available for investment in new ships. It seems clear, however, that decisions on the

use of these funds must rest with the Government, and that they should not be regarded as automatically earmarked solely for financing future fleet expansions.

Inland Waterways

130. Inland waterways play a very minor and declining part in Ethiopia's transport system. The most important service is that provided by the Navigatana Company on Lake Tana, between Gorgore and Bahar Dar, but of the Company's six boats, only one is in regular use, and since a competing highway was completed in 1962 the Company has been operating at a substantial financial loss.

131. Other passenger and freight services are provided by the Department of Marine On Lake Tana (four services a week), Lakes Abaya and Chammo (one service every two weeks in each case), and the Baro and Akobo river between Gambela and Akobo (one service a week during the high water season). In 1968/69 these limited services together earned gross revenues of only Eth.\$ 36,800 and experienced an operating deficit of Eth.\$ 73,000 before taking account of depreciation and administrative charges.

132. The Third Five-Year Plan envisaged a total investment by the Marine Department of Eth.\$ 1.7 million in new vessels and terminal facilities, and a further Eth.\$ 0.2 million expenditure on studies and surveys of the inland waterings. So far, however, none of this has been implemented. In view of the parlous financial situation of all the services, and the very limited and diminishing traffic they are now carrying, expenditure on the scale proposed could only be justified by demonstrating that their rehabilitation or extension could attract substantial increases in traffic demands. No study has yet been commissioned, but in any case it seems unlikely that any reasonable prospects could be held for traffic increases of the order required. Certainly in the absence of a study any new investment would be ill advised.

**Table 1 - INVESTMENT EXPENDITURES FOR
TRANSPORTATION DURING THE SECOND FIVE-
YEAR PLAN PERIOD (1962/3-1966/7)**

| | <u>Eth.\$ Million</u> | | <u>Actual com- pared with Planned</u> |
|------------------------------|-----------------------|---------------------|---|
| | <u>Planned</u> | <u>Actual</u> | |
| Road Construction | 140.1 | 144.0 ^{1/} | + 2.8% |
| Motor Vehicles ^{2/} | 21.5 | 58.1 | + 170.2% |
| Railways | 10.0 | 13.1 | + 31.0% |
| Air Transport | 89.1 | 121.8 | + 36.7% |
| Water Transport | 24.2 | 40.4 | + 66.9% |
| Total | 284.9 | 377.4 | + 32.5% |

^{1/} includes local contributions in kind of
\$ 14.0 million not foreseen by the Plan.

^{2/} Commercial vehicles for hire or reward.

Source: Planning Commission

**Table 2 - INVESTMENT EXPENDITURES FOR TRANSPORTATION DURING THE
THIRD FIVE-YEAR PLAN (1968/9-1972/3)**

| Eth. \$. million | | | | | | | | |
|---------------------------|---|-------------|-----------------------|-------------|-------------------------|--|--------------------|--------------------|
| | Planned for 5 years ending mid- 1973 | 1968/9 | | 1969/70 | | 1970/71 1971/72 1972/73 | | |
| | | Budget | Actual Expenditure | Budget | Expected Actual Exp. | Expenditure committed or judged Indispensable | | |
| Road Construction | 265.4 ^{1/} | 34.9 | 16.8 | 39.5 | 32.0 | 37.5 | 52.9 | 49.9 |
| Public Transport Vehicles | 185.8 | 24.4 | 16.0 | n.a. | 17.0 ^{2/} | 19.0 ^{2/} | 20.0 ^{2/} | 22.0 ^{2/} |
| Railways - | | | | | | | | |
| Franco-Ethiopian | 9.1 | 3.0 | 1.0 | n.a. | 1.0 ^{2/} | 1.0 ^{2/} | 1.0 ^{2/} | 1.0 ^{2/} |
| Northern Ethiopia | 7.3 | 1.2 | nil | n.a. | nil ^{2/} | nil ^{2/} | nil ^{2/} | nil ^{2/} |
| Air Transport - | | | | | | | | |
| Airports | 73.4 | 4.4 | 0.9 | 5.2 | 2.9 | 14.9 | 14.8 | 4.3 |
| Ethiopian Airlines | 41.6 | 14.4 | 8.8 | n.a. | nil ^{2/} | nil ^{2/} | 7.0 ^{2/} | 7.0 ^{2/} |
| Water Transport - | | | | | | | | |
| Maritime Ports | 19.6 | 1.0 | nil | 3.1 | 0.2 | 1.9 | 1.3 | 0.3 |
| Maritime Shipping | 7.3 | 5.5 | 3.5 | n.a. | nil ^{2/} | nil ^{2/} | 2.7 ^{2/} | nil ^{2/} |
| Inland Waterways | 1.9 | nil | nil | 0.2 | nil | nil | nil | nil |
| Total | 591.4 | 88.8 | 47.0 | n.a. | 53.1 | 74.3 | 99.7 | 84.5 |

^{1/} Including investments in kind of Eth. \$. 15 million

^{2/} Mission's Assumptions

Source : Planning Commission

Table 3 - ESTIMATED ACTIVE ROAD VEHICLE FLEET

| | In use July | Automobiles | Pick-ups | Buses | Trucks | Total excl. Trailers and Motor-cycles | Trailers |
|------|----------------|-------------|----------|-------|--------|---|----------|
| | | | | | | | |
| 1955 | | 11,790 | 2,030 | 220 | 430 | 14,470 | - |
| 56 | | 12,180 | 3,580 | 220 | 640 | 16,620 | - |
| 57 | | 12,470 | 3,890 | 240 | 830 | 17,430 | - |
| 58 | | 12,650 | 3,870 | 310 | 1,170 | 18,000 | - |
| 59 | | 13,010 | 4,020 | 360 | 1,250 | 18,640 | - |
| 60 | | 13,010 | 4,120 | 460 | 1,550 | 19,140 | - |
| 61 | | 13,520 | 4,140 | 610 | 1,710 | 19,980 | 850 |
| 62 | | 15,150 | 2,540 | 910 | 1,720 | 20,320 | 910 |
| 63 | | 17,460 | 2,190 | 1,200 | 1,610 | 22,460 | 970 |
| 64 | | 21,410 | 2,130 | 1,560 | 1,500 | 26,600 | 1,030 |
| 65 | | 23,460 | 2,090 | 1,820 | 1,320 | 28,690 | 1,370 |
| 66 | | 26,440 | 2,170 | 2,290 | 2,070 | 32,970 | 1,700 |
| 67 | | 29,590 | 2,430 | 2,610 | 2,740 | 37,370 | 1,950 |
| 68 | Projections | 30,000 | 2,470 | 2,890 | 2,760 | 38,120 | - |
| 69 | | 30,200 | 2,350 | 3,210 | 3,060 | 38,820 | - |
| 70 | | 30,900 | 2,300 | 3,500 | 3,160 | 39,860 | - |
| 71 | | 33,500 | 2,340 | 3,460 | 3,410 | 42,710 | - |
| 72 | | 38,500 | 2,470 | 3,590 | 3,640 | 48,200 | - |
| 73 | | 45,000 | 2,610 | 3,740 | 3,880 | 55,230 | - |

Average Annual

Growth Rate during 6 years :

| | | | | | | |
|------------|-----|-------|-----|-----|-----|-----|
| 1955 to 61 | 2% | 13% | 19% | 26% | 6% | - |
| 1961 to 67 | 14% | (-3%) | 27% | 8% | 11% | 15% |
| 1967 to 73 | 7% | 1% | 6% | 6% | 7% | - |

Source: General Road Study

**Table 4 - ESTIMATED HIGHWAY EXPENDITURES AND
RECEIPTS FROM ROAD USER TAXES**

(Eth.\$, million)

| Year | Highway Expenditures | | | | Receipts for Taxation etc. | | | Receipts as % of Expenditure |
|--------------------------|----------------------|------------------|-----------------------------|-------|-------------------------------|-------|-------|---------------------------------|
| | Construc- tion | Main- tenance | Administra- tion & Other | Total | Fuel Duty | Other | Total | |
| 1959 | 6.1 | 11.6 | 0.4 | 18.1 | 14.2 | 6.2 | 20.4 | 113 |
| 1960 | 8.0 | 9.3 | 0.5 | 17.8 | 12.5 | 6.5 | 19.0 | 107 |
| 1961 | 15.8 | 10.5 | 1.2 | 27.5 | 15.9 | 6.5 | 22.4 | 81 |
| 1962 | 14.0 | 8.4 | 1.8 | 24.2 | 16.7 | 7.3 | 24.0 | 99 |
| 1963 | 15.9 | 8.4 | 0.8 | 25.1 | 19.1 | 8.1 | 27.2 | 108 |
| 1964 | 12.4 | 9.4 | 3.5 | 25.3 | 20.3 | 10.3 | 30.6 | 121 |
| 1965 | 12.1 | 10.7 | 7.7 | 30.5 | 22.6 | 11.4 | 34.0 | 111 |
| 1966 | 24.1 | 12.4 | 3.4 | 39.9 | 25.3 | 14.9 | 40.2 | 101 |
| 1967 | 25.2 | 13.9 | 6.9 | 46.0 | 27.8 | 16.4 | 44.2 | 96 |
| 1968 | 23.6 | 14.0 | 6.0 ^{1/} | 43.6 | 31.9 | 15.0 | 46.9 | 108 |
| Total in Ten years | 157.2 | 108.6 | 32.2 | 298.0 | 206.3 | 102.6 | 308.9 | 104 |

^{1/} Assumed as average of previous three years.

Source: Imperial Highway Authority

Table 5 - ESTIMATED TRAFFIC THROUGH THE PORTS

(000 metric tons)

| Year | Massawa | | Assab | | Djibouti | | TOTAL | |
|---------|-----------|----------------------------------|---------------|----------------------------------|-----------|----------------------------------|-----------|----------------------------------|
| | | | | | | | | |
| | | | I M P O R T S | | | | | |
| | Dry Cargo | Petroleum Products ^{1/} | Dry Cargo | Petroleum Products ^{1/} | Dry Cargo | Petroleum Products ^{1/} | Dry Cargo | Petroleum Products ^{1/} |
| 1963 | 96 | 90 | 54 | 42 | 181 | 38 | 331 | 170 |
| 1964 | 110 | 85 | 75 | 57 | 170 | 100 | 355 | 242 |
| 1965 | 150 | 109 | 100 | 104 | 224 | 65 | 474 | 273 |
| 1966 | 168 | 127 | 98 | 153 | n.a. | n.a. | n.a. | n.a. |
| 1967 | 101 | 106 | 94 | 339 | n.a. | n.a. | n.a. | n.a. |
| 1968 | 151 | 121 | 117 | 474 | 192 | n.a. | 460 | n.a. |
| FY 1969 | 114 | 136 | 83 | 172 | n.a. | n.a. | n.a. | n.a. |

| Year | Massawa | | Assab | | Djibouti | | TOTAL |
|---------|------------------------|------|------------------------|------|------------------------|------|--------------|
| | | | | | | | |
| | | | E X P O R T S | | | | |
| | Dry Cargo (excl. salt) | Salt | Dry Cargo (excl. salt) | Salt | Dry Cargo (excl. salt) | Salt | (incl. salt) |
| 1963 | 116 | 61 | 83 | 139 | 136 | Nil | 535 |
| 1964 | 122 | 53 | 101 | 108 | 126 | Nil | 510 |
| 1965 | 144 | 41 | 82 | 85 | 139 | Nil | 491 |
| 1966 | 118 | 71 | 89 | 126 | n.a. | Nil | n.a. |
| 1967 | 130 | 50 | 111 | 69 | n.a. | Nil | n.a. |
| 1968 | 127 | 73 | 123 | 92 | 109 | Nil | 524 |
| FY 1969 | 144 | 69 | 115 | 108 | n.a. | Nil | n.a. |

^{1/} Import tonnages shown for petroleum products represent total "imports" minus "exports" mainly comprising bunker fuel. This may have caused inaccuracies in the figures shown.

Source : Stanford Research Institute Report.

Table 6- REVENUE AND EXPENDITURE (EXCLUDING DEPRECIATION) OF
MASSAWA AND ASSAB PORTS IN SELECTED YEARS

(Eth.\$. 000)

| FY | <u>Massawa</u> | | | <u>Assab</u> | | | <u>Total</u> | | |
|------------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | <u>1962/3</u> | <u>1964/5</u> | <u>1966/7</u> | <u>1962/3</u> | <u>1964/5</u> | <u>1966/7</u> | <u>1962/3</u> | <u>1964/5</u> | <u>1966/7</u> |
| <u>Revenue</u> | | | | | | | | | |
| Vessel movement | 307 | 314 | 300 | 240 | 258 | 367 | 547 | 572 | 667 |
| Berthing | 150 | 196 | 302 | 130 | 427 | 559 | 280 | 623 | 861 |
| Port dues on imports | - | 173 | 264 | - | 177 | 287 | - | 350 | 551 |
| Cargo services | 185 | 289 | 357 | 126 | 295 | 436 | 311 | 584 | 793 |
| Other | 30 | 136 | 102 | 51 | 61 | 79 | 81 | 197 | 181 |
| Total | 672 | 1,108 | 1,325 | 547 | 1,218 | 1,728 | 1,219 | 2,326 | 3,053 |
| <u>Expenditure</u> | | | | | | | | | |
| Labour | 521 | 494 | 573 | 361 | 358 | 516 | 882 | 852 | 1,089 |
| Plant | 22 | 1 | 3 | 2 | 1 | 1 | 24 | 2 | 4 |
| Maintenance | 138 | 61 | 121 | 93 | 55 | 122 | 231 | 116 | 243 |
| Stores | 7 | 4 | 7 | - | 1 | 3 | 7 | 5 | 10 |
| Other operating expenses | 72 | 68 | 66 | 65 | 53 | 52 | 137 | 121 | 138 |
| Total | 760 | 628 | 790 | 521 | 468 | 694 | 1,281 | 1,096 | 1,484 |
| <u>Margin of revenue over cost</u> | -88 | +480 | +535 | +26 | +750 | +1,034 | -62 | +1,230 | +1,569 |

Source : Stanford Research Institute Report

Table 7 - CARGO HANDLING EQUIPMENT AT THE PORTS

| <u>Equipment</u> | <u>Massawa</u> | <u>Assab</u> | <u>Djibouti</u> |
|-----------------------|-----------------------|-------------------------------------|----------------------|
| Quay cranes on tracks | (1,60-ton) 6,5-ton | - | (1,5-ton) 1,3-ton |
| Mobile cranes | - | 1,9-ton (1,12-ton) (1,20-ton) | 1,20-ton |
| Fixed quay cranes | - | (1,30ton) | - |
| Floating cranes | (1,80-ton) | 1,5-ton | 1,80-ton |
| Forklift trucks | 4 | 15 (8) | 21 |
| Tow trucks | 7 | 14 (3) | 17 |
| Pallets | - | - | 3,000 |
| Trailers | 45 | 181 (10) | 60 |

Sources: Stanford Research Institute Report (December 1968)

Note: Unserviceable units are shown in brackets.

Table 8 - PORT INVESTMENTS PROPOSED IN
THE THIRD FIVE-YEAR PLAN
(in Eth\$ 000)

| | Massawa | | | Assab | | |
|--|--------------|----------------|--------------|--------------|----------------|--------------|
| | <u>Local</u> | <u>Foreign</u> | <u>Total</u> | <u>Local</u> | <u>Foreign</u> | <u>Total</u> |
| Cargo handling equipment | 500 | 2,000 | 2,500 | 300 | 1,800 | 2,100 |
| Two pilot boats, one large tug-boat, and one water tender at each port | 120 | 1,200 | 1,320 | 120 | 1,180 | 1,300 |
| Extension and improvement of No. 6 berth | 550 | 1,550 | 2,100 | - | - | - |
| Surfacing of quays, stacking areas and roads | 500 | 100 | 600 | - | - | - |
| Dredging of berths | 170 | 130 | 300 | - | - | - |
| Construction of living quarters | 350 | 100 | 450 | 570 | 180 | 750 |
| Navigational aids | 220 | 150 | 370 | 20 | 65 | 85 |
| Workshop and machinery | - | - | - | 130 | 300 | 430 |
| Improvement of cargo storage facilities | 120 | 40 | 160 | 395 | 130 | 525 |
| Other | 670 | 330 | 1,000 | 165 | 145 | 310 |
| <u>Total</u> | 3,200 | 5,600 | 8,800 | 1,700 | 3,800 | 5,500 |

Source : Planning Commission

**Table 9 - FREIGHT AND PASSENGER TRAFFIC ON
THE FRANCO-ETHIOPIAN RAILWAY**

| Financial Year ending July | Freight | | | | | Passengers | |
|-------------------------------------|---------|---------|----------|-------|------------------------------|----------------------|-------------------------------|
| | Imports | Exports | Domestic | Total | (million ton-km) Total | (thousands) Total | (million pass-km) Total |
| 1961 | 111.9 | 105.9 | 82.7 | 300.5 | 168.4 | 387.9 | 51.9 |
| 1962 | 116.6 | 122.2 | 100.5 | 339.3 | 187.6 | 398.4 | 53.2 |
| 1963 | 127.7 | 110.7 | 98.4 | 336.8 | 182.0 | 465.1 | 62.3 |
| 1964 | 149.4 | 122.2 | 126.0 | 397.6 | 218.1 | 453.1 | 67.0 |
| 1965 | 155.2 | 129.1 | 90.9 | 375.2 | 201.9 | 452.8 | 74.6 |
| 1966 | 215.4 | 93.4 | 88.2 | 397.0 | 226.4 | 461.5 | 79.5 |
| 1967 | 181.0 | 106.9 | 86.0 | 373.9 | 215.6 | 459.5 | 81.9 |
| 1968 | 162.1 | 77.1 | 82.9 | 322.1 | 174.9 | 386.0 | 81.3 |
| 1969 | 158.9 | 91.8 | 104.5 | 355.2 | 189.9 | 411.2 | 82.9 |
| <u>Four Months</u> | | | | | | | |
| <u>Aug. to Nov.</u> | | | | | | | |
| 1968 | 51.5 | 16.7 | 32.4 | 100.6 | n.a. | n.a. | n.a. |
| 1969 | 48.3 | 38.5 | 38.4 | 125.2 | n.a. | n.a. | n.a. |

Source: Franco-Ethiopian Railway

**Table 10 - RAILWAY INVESTMENTS PROPOSED
IN THE THIRD FIVE-YEAR PLAN**

| (Eth.\$. 000) | | | |
|----------------------------------|--------------|----------------|--------------|
| <u>Franco-Ethiopian Railway</u> | | | |
| | <u>Local</u> | <u>Foreign</u> | <u>Total</u> |
| Rolling stock - | | | |
| 2 x 1,850 hp. diesel locomotives | 2 | 1,898 | 1,900 |
| 4 x 1,000 hp. " " " " | 3 | 1,947 | 1,950 |
| 50 x 20 ton covered wagons | 190 | 1,360 | 1,550 |
| Renewal of permanent way | 270 | 3,030 | 3,300 |
| Other | 145 | 255 | 400 |
| Total | 610 | 8,490 | 9,100 |

| <u>Northern Ethiopia Railway</u> | | | |
|----------------------------------|--------------|----------------|--------------|
| | <u>Local</u> | <u>Foreign</u> | <u>Total</u> |
| Rolling stock - | | | |
| 4 x 1,500 hp. diesel locomotives | 3 | 2,672 | 2,675 |
| 4 x 40 seat diesel railcars | 2 | 1,098 | 1,100 |
| 6 x 44 seat passenger coaches | 100 | 700 | 800 |
| 16 x 25 ton covered wagons | 60 | 410 | 470 |
| 2 x diesel trolleys | - | 50 | 50 |
| Renewal of permanent way | 130 | 1,370 | 1,500 |
| Other | 260 | 460 | 720 |
| Total | 555 | 6,760 | 7,315 |

Source : Planning Commission

**Table 11 - FREIGHT AND PASSENGER TRAFFIC ON
THE NORTHERN ETHIOPIA RAILWAY**

| Financial Year ending July | <u>Freight</u> (000 tons) | | | | <u>Passengers</u> | | |
|----------------------------------|------------------------------|----------------|--------------------|--------------|-------------------------------------|----------------------------------|--------------------------------------|
| | <u>Imports</u> | <u>Exports</u> | <u>Domestic</u> | <u>Total</u> | (million ton-km) <u>Total</u> | (Thou- sands) <u>Total</u> | (million pass km) <u>Total</u> |
| 1964 | 57.3 | 99.5 | 37.3 | 194.1 | 22.1 | 411.2 | 20.2 |
| 1965 | 67.8 | 100.5 | 37.3 | 205.6 | 24.4 | 437.5 | 21.7 |
| 1966 | 79.9 | 86.9 | 42.6 | 209.4 | 24.0 | 446.2 | 22.5 |
| 1967 | 46.2 | 80.0 | 64.0 ^{1/} | 190.2 | 21.8 | 358.7 | 19.4 |
| 1968 | 48.2 | 61.5 | 53.5 | 163.2 | 19.3 | 268.2 | 15.0 |
| 1969 | 42.2 | 69.3 | 39.7 | 151.2 | 18.3 | 238.3 | 12.8 |

^{1/} Increase due to new cement works
opened in Massawa.

Source : Northern Ethiopia Railway

Table 12 - INVESTMENTS IN AIRPORTS AND RELATED FACILITIES
PROPOSED IN THE THIRD FIVE-YEAR PLAN

(Eth.\$. 000)

| | <u>Local</u> | <u>Foreign</u> | <u>Total</u> |
|--|---------------|----------------|---------------|
| <u>International Airports</u> | | | |
| Addis Ababa | 9,930 | 23,166 | 33,096 |
| Asmara | 5,115 | 11,946 | 17,061 |
| Assab | 4,911 | 2,350 | 7,261 |
| | <u>19,956</u> | <u>37,462</u> | <u>57,418</u> |
| <u>Domestic Airports</u> | | | |
| Class 1 (Humera, Goba, Gambella and Metema) | 1,560 | 376 | 1,936 |
| Class 2 (Lalibella, Axum, Bahar Dar, Gondar and Arba Minch) | 7,490 | 5,350 | 12,840 |
| Study of domestic airports | 40 | 11 | 51 |
| | <u>9,090</u> | <u>5,737</u> | <u>14,827</u> |
| <u>Other</u> | | | |
| Air Traffic Control | 44 | 396 | 440 |
| Meteorology | 77 | 660 | 737 |
| | <u>121</u> | <u>1,056</u> | <u>1,177</u> |
| Total | <u>29,167</u> | <u>44,255</u> | <u>73,422</u> |

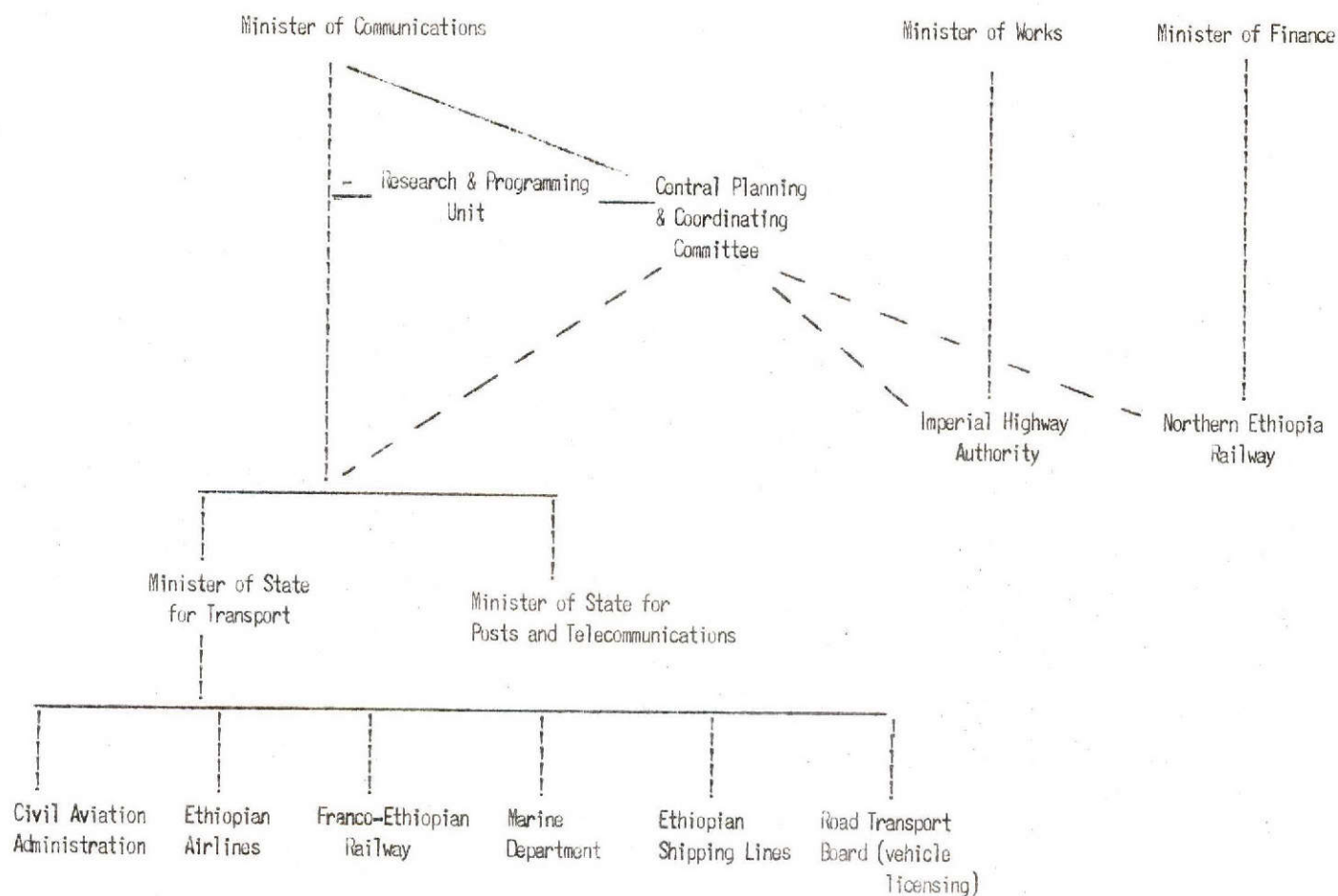
**Table 13 - INVESTMENTS IN ETHIOPIAN AIRLINES PROPOSED
IN THE THIRD FIVE-YEAR PLAN**

(Eth.\$. 000)

| | <u>Local</u> | <u>Foreign</u> | <u>Total</u> |
|--|--------------|----------------|--------------|
| Modification of Boeing 707 (acquired second hand) | - | 700 | 700 |
| Additional long range aircraft (1 x Boeing 707) | 400 | 17,200 | 17,600 |
| Aircraft for domestic and regional services | 680 | 18,570 | 19,250 |
| Extension of headquarters | 1,500 | 1,000 | 2,500 |
| Other equipment | 300 | 1,200 | 1,500 |
| Total | 2,880 | 38,670 | 41,550 |

Source : Planning Commission

ETHIOPIA - GOVERNMENT ORGANISATION IN THE TRANSPORT SECTOR



Note: The organisation of the Ministry of Communications is shown as it is expected to appear when proposals now accepted by the Government have been implemented.

VOLUME III

ANNEX 5: ELECTRIC POWER

ELECTRIC POWER

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ELECTRIC POWER

General

1. The Ethiopian Electric Light and Power Authority (EELPA), Societe Electric dell'Africa Oriental (SEDAO), and a few mainly large manufacturing concerns, are the main producers of electric power in Ethiopia. EELPA is a wholly government-owned chartered Company. It operates two systems - the interconnected and the self-contained, which together provide 71% of the country's electric power consumption. The interconnected system is an integrated production and grid operation based mainly on hydro installations in the Awash Valley. It produces about 85 of EELPA's output. The aptly named self-contained system consists of 27 single hydro and thermal plants which produce the remaining 15% of EELPA's output and provide power mainly to the provincial towns. One plant on the Tis-Abbay near Bahar Dar accounts for 40% of the self-contained system's generating capacity. This gives some idea of the small sizes of the other self-contained operations. In addition EELPA buys power from the Oil Refinery in Assab for distribution in that town. This is the only EELPA operation in Eretrea. SEDAO is a private concern. It operates only in the Asmara/Massawa area of Eretrea and produces 17% of the country's electric power consumption. The HVA (Ethiopia) sugar enterprise and the Assab Oil Refinery together generate most of the remaining 12% of total electric power consumption.

2. Table 1 shows a rapid expansion of electricity production and consumption in recent years. Between 1962 and 1967, total production increased at 15.5% a year, EELPA's at 18.7%, SEDAO's at 12.9%, and the other at 4.6%. Also industrial and commercial consumption rose at 16.5% a year and household and public lighting consumption at 14% a year.

Third Five Year Plan

3. The principal objectives of the Plan for power development are to: (a) keep power supply ahead of demand; (b) support sound industrial development with firm power supply at reasonable prices; (c) contribute to a rising standard of living for the population by providing sufficient electricity at reasonable tariffs for domestic needs, with particular attention to the gradual extension of services to new urban areas, and also to key rural areas; (d) improve technology and management in order to reduce cost and permit the financing of necessary improvement; and (e) possibly integrate the EELPA and SEDAO service areas into a national grid system. In the effort to achieve these objectives, the TFYP sets the targets given in Table 2. Whereas demand and supply each increased at about 15.8% per annum in the SFYP period (Table 1), the TFYP sets the corresponding annual growth target at about 21.5%. In particular industrial and commercial demand was expected to grow at 23.4% a year (Table 2). Table 3 shows the cost of meeting the targets and the sources of finance.

4. EELPA is planned to produce and distribute the bulk of the anticipated growing needs of electric power. The consumption growth rates are based on past trends adjusted to take account of anticipated industrial development, overall economic growth, and possible unforeseen developments. Eth.\$ 107.5 million of the Eth.\$ 120 million investment program has been allocated to EELPA in keeping with its responsibility to produce most of the planned increase in power production. The balance of Eth.\$ 12.5 million is for SEDAO's expansion program. Table 3 shows that about 70% of EELPA's investment budget is earmarked for the Finchaa hydro-electric project which is expected to raise the capacity of the interconnected system from 125.30 MW to 225.30 MW when it is commissioned in 1972.

Plan Implementation

5. EELPA - So far performance has been below the planned targets. On the supply side because of technical difficulties, the Awash III hydro-electric project scheduled for completion in 1968, will not be commissioned until around September 1970. It will increase the installed generating capacity of the inter-connected system from 93.72 MW to 125.30 MW. Also the start of work on the Finchaa hydroelectric project has been delayed by about a year because of a change in the source of foreign financing. Despite this delay, however, the project is expected to be completed in 1972. Investment and generating capacity increases in the self-contained system accord with the planned targets. On the whole, therefore, the targets for investment (Table 6) and generating capacity are expected to be achieved by the end of the plan period, although their phasing over the period will, for the reasons given, differ from the phasing of the Plan.

6. The failure of planned supply in the interconnected system to materialize so far, has not resulted in unsatisfied demand. In the inter-connected system industrial and commercial demand has been below the planned target partly because the target tended to be over-ambitious and partly because a few prospective large consuming concerns are commencing operations later than was anticipated. In the self-contained system, the Bahar Dar Textile Company which consumed 12 million kwh a year changed from EELPA produced power to fuel-fired boilers. The depressed economic conditions over the past two years may also have dampened industrial and commercial demand. However, household demand has grown in accordance with the Plan. On the whole, as economic activity improves with higher coffee prices and some of the expected prospective large consumers are established, the tempo of demand will accelerate but total demand is expected to fall short of the planned target (Table 5).

7. The Plan's investment, production, and consumption targets for SEDAO are no more than indicative. SEDAO is private, operates privately without accountability to any public body, and its operations are probably motivated primarily by narrow profitability considerations. SEDAO's tariffs are 31% higher than EELPA's. Information is not available about its investment program, but it is known that SEDAO's power supply and demand are below the planned target and will fall short of the target for the duration of the Plan (Table 5).

8. Power production for own use is predominantly a matter for the particular firms and is expected to increase slightly during the Plan period.

9. Ethiopia's per capita power consumption is low in the absolute as well as relative to other underdeveloped countries. This is essentially a function of the country's relatively low level of economic development. Although electric power may influence economic development, the greater influence is that which economic development exerts on the demand for electric power.

Policy Discussions

10. The availability of electric power is an economic advantage. It may be technically and economically feasible for large industrial operations to generate their own electric power. But industrial development also takes the form of relatively small operations geared to produce for a small domestic market. This type of operation may be restricted if a dependable supply of power is not already available at a reasonable price. Also power (i) facilitates the use of power-driven tools and equipment and, therefore, encourages improved efficiency at all levels of operation; (ii) encourages additional effort to satisfy the induced demand for electrical goods; and (iii) when extended to the rural areas, creates an atmosphere which discourages the exodus from country to town with its attendant economic and social problems. Assessed against these factors, the policy objectives of the TFYP to keep power supply ahead of demand, to provide power at a reasonable price, and to expand power availability geographically, are sound, although the physical targets are over optimistic and are resulting in more underutilized capacity than was envisaged.

11. These objectives are being pursued. The commissioning of Finchaa in 1972 will enable EELPA to meet the power demand of the area supplied by the interconnected system even beyond the target date 1977. Further, EELPA has projected demand through to 1980 and because of the long gestation period of electric power projects, is already preparing for a preliminary study of a project to follow Finchaa. In its operations EELPA has sought not only the least cost but also the most economic solution to the challenge of increasing power production.

12. There are two tariff systems for electricity - the EELPA and the SEDAO. The EELPA tariff has been unchanged since 1960 when it was reduced. EELPA has engaged a firm of consultants to study its tariff and the consultants' report will shortly be available. In Annex 9 the payment of dividends by wholly government owned monopolies such as EELPA is suggested as a possible source of revenue particularly while as at present, there is a government savings problem. If this is implemented, it may be necessary to raise the tariff level. This raises the question of the possible effect of tariff increases on optimizing the use of power facilities. Preliminary thinking is that the increases if any, will be small and that the demand elasticity for power is such that demand will be little affected.

13. It would be desirable to reduce the discrepancy between the higher SEDAO rates and the EELPA rates because it places the SEDAO service area at a relative disadvantage. The prospects of harmonizing the two tariffs under the two existing ownership patterns appears to be doubtful. It is partly in this connection that the TFYP provides for the possibility of integrating the EELPA and SEDAO systems. So far very little has been done to that end.

Table 1: OUTPUT AND VALUE OF SERVICES, 1961/62 to 1966/67 - SFYP

| | Target 1966/67 | Rate of Growth 1961/62 to 1966/67 | <u>Actual Results</u> | | Rate of Growth 1961/62 to 1966/67 |
|---|-------------------|--|-----------------------|---------|--|
| | | | 1961/62 | 1966/67 | |
| Installed generating capacity (000 KW) | - | - | 73 | 151 | 15.6 |
| Value of electric power generated (\$ million) | 28.3 | 18.4 | 13.3 | 26.2 | 14.5 |
| Electric power generation (mill KWh) | 355 | 18.6 | 151 | 316 | 15.9 |
| Electric power consumption (mill KWh) <u>/1</u> | 290 | 17.2 | 131 | 272 | 15.8 |
| Industrial and Commer- cial | 208 | 20.4 | 82 | 176 | 16.5 |
| Households and Public Lighting | 82 | 10.8 | 49 | 96 | 14.4 |

/1 Includes industrial firms' own generation

Source: Third Five-Year Plan

Table 2: ELECTRIC POWER ACTIVITY TARGETS - TFYP

| | <u>1967/8</u> | <u>1968/9</u> | <u>1972/3</u> | <u>% increase 1967/8-1972/3</u> | <u>Annual % increase 1968/9-1972/3</u> |
|--|---------------|---------------|---------------|-------------------------------------|--|
| Generating capacity (000 KW) | <u>184.2</u> | <u>189.1</u> | <u>325.3</u> | <u>76.6</u> | <u>18.0</u> |
| EELPA | 145.6 | 150.5 | 271.7 | 86.6 | 20.1 |
| SEDAO | 23.1 | 23.1 | 38.1 | 64.9 | 16.2 |
| Other | 15.5 | 15.5 | 15.5 | - | |
| Volume of power produced (million kWh) | <u>398</u> | <u>455</u> | <u>852</u> | <u>114.1</u> | 21.8 |
| EELPA | 272 | 323 | 651 | 139.3 | 25.4 |
| SEDAO | 71 | 80 | 131 | 84.5 | 16.0 |
| Others | 55 | 52 | 70 | 27.3 | 8.6 |
| Volume of power sold (million kWh) /1 | <u>346</u> | <u>395</u> | <u>735</u> | <u>112.0</u> | <u>21.5</u> |
| Industrial and commercial | 236 | 268 | 519 | 120.0 | 23.4 |
| Household and municipal lighting | 110 | 127 | 216 | 95.8 | 17.5 |
| Value of electricity sold (million Eth\$) | 29.4 | 34.3 | 61.4 | 108.6 | 20.0 |

/1 Includes industrial firms' own generation.

Source: Third Five-Year Plan

Table 3: INVESTMENT PROGRAM AND ITS FINANCING - TFYP

| | <u>Eth \$ million</u> | <u>Percent</u> |
|-------------------------------|-----------------------|----------------|
| Total capital investment | <u>120.0</u> | <u>100.0</u> |
| E.E.L.P.A. | 107.5 | 89.6 |
| S.E.D.A.O. | 12.5 | 10.4 |
| Financing of investment | <u>120.0</u> | <u>100.0</u> |
| Domestic resources | <u>57.0</u> | <u>47.5</u> |
| Own funds: E.E.L.P.A. | 49.5 | 41.2 |
| S.E.D.A.O. | 5.0 | 4.2 |
| Internal loans | 2.5 | 2.1 |
| External Resources | <u>63.0</u> | <u>52.5</u> |
| Loans and Credits: E.E.L.P.A. | 58.0 | 48.3 |
| S.E.D.A.O. | 5.0 | 4.2 |

Source: Third Five-Year Plan

Table 4: ALLOCATION OF PLANNED INVESTMENT - TYFP

(In millions of Eth. \$)

| | |
|---|---------------------|
| Finchaa Hydroelectric Project | 72.4 |
| Interconnected system other than Finchaa | 14.2 |
| Existing self-contained systems | 15.5 |
| New self-contained systems | 5.4 |
| S.E.D.A.O.'s expansion program | <u>12.5</u> |
| TOTAL | <u><u>120.0</u></u> |

Source: Supplement to Third Five-Year Plan

Table 5: REVISED FORECAST OF ELECTRIC POWER SUPPLY AND DEMAND
(In millions of kWh)

| | <u>ACTUAL FORECAST</u> | | | | | | | Annual Growth Rate 1968-1973 |
|---------------------------|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------------------|
| | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | % |
| | <u>EELPA</u> | | | | | | | |
| | (i) <u>Interconnected System</u> | | | | | | | |
| <u>Demand</u> | | | | | | | | |
| Commercial and Industrial | 99.1 | 110.1 | 119.1 | 124.5 | 148.5 | 178.5 | 209.0 | |
| Household and Public | 63.1 | 71.7 | 76.3 | 80.5 | 91.5 | 106.5 | 121.0 | |
| | <u>162.2</u> | <u>181.8</u> | <u>195.4</u> | <u>205.0</u> | <u>240.0</u> | <u>285.0</u> | <u>330.0</u> | |
| | (ii) <u>Self-Contained</u> | | | | | | | |
| Commercial and Industrial | 21.6 | 23.4 | 13.2 | 14.0 | 15.1 | 15.6 | 17.4 | |
| Household and Public | 14.1 | 16.1 | 18.6 | 20.0 | 24.9 | 31.4 | 38.6 | |
| | <u>35.7</u> | <u>39.5</u> | <u>31.8</u> | <u>34.0</u> | <u>40.0</u> | <u>47.0</u> | <u>56.0</u> | |
| | (iii) <u>Total</u> | | | | | | | |
| Commercial and Industrial | 120.7 | 133.5 | 132.3 | 138.5 | 163.6 | 194.1 | 226.4 | |
| Household and Public | 77.2 | 87.8 | 94.9 | 100.5 | 116.4 | 137.9 | 159.6 | |
| | <u>197.9</u> | <u>221.3</u> | <u>227.2</u> | <u>239.0</u> | <u>280.0</u> | <u>332.0</u> | <u>386.0</u> | 15.0 |
| <u>Supply</u> | <u>228.8</u> | <u>254.7</u> | <u>265.2</u> | <u>279.3</u> | <u>327.5</u> | <u>338.6</u> | <u>450.0</u> | 15.3 |
| | <u>SEDAO</u> | | | | | | | |
| <u>Demand</u> | <u>55.6</u> | <u>58.0</u> | <u>61.0</u> | <u>66.2</u> | <u>72.5</u> | <u>81.1</u> | <u>91.5</u> | 11.5 |
| <u>Supply</u> | <u>65.6</u> | <u>67.7</u> | <u>72.3</u> | <u>78.0</u> | <u>85.0</u> | <u>95.0</u> | <u>107.0</u> | 11.6 |
| | <u>OTHER</u> | | | | | | | |

Not Available

Source: EELPA

Table 6: REVISED ESTIMATED SOURCE AND APPLICATION OF FUNDS - 1969 to 1974
(in millions of Ethiopian Dollars)

| YEAR ENDING SEPTEMBER 10 | 1969 FORECAST | 1969 ACTUAL | 1970 | 1971 | 1972 | 1973 | 1974 | SIX YEAR TOTAL 1969 - 1974 |
|---|------------------|----------------|---------|---------|--------|--------|--------|----------------------------------|
| SOURCE OF FUNDS | | | | | | | | |
| Internal Cash Generation | | | | | | | | |
| Operating Income | 6.64 | 7.01 | 7.24 | 7.83 | 9.70 | 10.62 | 12.68 | 55.08 |
| Depreciation | 4.06 | 3.91 | 4.26 | 5.22 | 5.49 | 7.33 | 7.95 | 34.16 |
| Total Internal Cash Generation | 10.70 | 10.92 | 11.50 | 13.05 | 15.19 | 17.95 | 20.63 | 89.24 |
| Increase in Consumers' deposits | 0.22 | 0.30 | 0.22 | 0.20 | 0.20 | 0.20 | 0.20 | 1.32 |
| Borrowings | | | | | | | | |
| IBRD Loan No. 375 ET | 3.50 | 4.54 | 0.91 | 0.17 | - | - | - | 5.62 |
| IBRD Loan No. 596 ET | 1.65 | - | 7.53 | 22.03 | 15.76 | 6.62 | 1.53 | 53.47 |
| USAID Loan No. 663-H-011 | 1.00 | 0.79 | 0.48 | 0.13 | 0.13 | 0.13 | 0.07 | 1.73 |
| Total Borrowings | 6.15 | 5.33 | 8.92 | 22.33 | 15.89 | 6.75 | 1.60 | 60.82 |
| Total Source of Funds | 17.07 | 16.55 | 20.64 | 35.58 | 31.28 | 24.90 | 22.43 | 151.38 |
| APPLICATION OF FUNDS | | | | | | | | |
| Construction Expenditures | | | | | | | | |
| Finchaa Project | | | | | | | | |
| Foreign | 1.50 | - | 6.18 | 20.71 | 13.37 | 3.46 | - | 43.72 |
| Local (1) | 5.50 | 4.42 | 7.17 | 8.67 | 5.20 | 1.36 | - | 26.82 |
| Total Finchaa Project | 7.00 | 4.42 | 13.35 | 29.38 | 18.57 | 4.82 | - | 70.54 |
| Interconnected System | 1.50 | 1.99 | 1.85 | 2.40 | 4.43 | 6.38 | 4.96 | 22.01 |
| Self-Contained Systems | 4.00 | 0.47 | 3.67 | 4.82 | 3.53 | 4.07 | 3.00 | 19.56 |
| IBRD Loan 375 ET Project | 3.50 | 2.16 | 1.68(2) | 0.66(3) | - | - | - | 4.50 |
| Future Hydro Project | - | - | - | 0.15 | - | - | 5.00 | 5.15 |
| Total Construction Expenditure | 16.00 | 9.04 | 20.55 | 37.41 | 26.53 | 15.27 | 12.96 | 121.76 |
| Debt Service | | | | | | | | |
| Interest | | | | | | | | |
| INGRA, Yugoslavia | 0.04 | 0.04 | 0.03 | 0.02 | 0.01 | 0.01 | - | 0.11 |
| IBRD Loan 375 ET | 2.96 | 3.04 | 3.10 | 3.02 | 2.92 | 2.82 | 2.71 | 17.61 |
| IBRD Loan 596 ET | 0.15 | 0.07 | 0.59 | 1.47 | 2.62 | 3.47 | 3.44 | 11.46 |
| USAID 663-H-011 | - | 0.11 | 0.14 | 0.16 | 0.16 | 0.16 | 0.19 | 0.92 |
| Total Interest | 3.15 | 3.26 | 3.86 | 4.67 | 5.71 | 6.26 | 6.34 | 30.10 |
| Amortization | | | | | | | | |
| INGRA, Yugoslavia | 0.27 | 0.25 | 0.27 | 0.27 | 0.27 | 0.28 | - | 1.34 |
| IBRD Loan 375 ET | 1.60 | 1.60 | 1.70 | 1.80 | 1.90 | 2.00 | 2.10 | 11.10 |
| IBRD Loan 596 ET | - | - | - | - | - | - | 0.69 | 0.69 |
| USAID Loan 663-H-011 | - | - | - | - | - | - | 0.11 | 0.11 |
| Total Amortization | 1.87 | 1.85 | 1.97 | 2.07 | 2.17 | 2.28 | 2.90 | 13.24 |
| Total Debt Service | 5.02 | 5.11 | 5.83 | 6.74 | 7.88 | 8.54 | 9.24 | 43.34 |
| Increase or (Decrease) in Net Working Capital Excluding Cash | | | | | | | | |
| Accounts receivable and prepayments | 0.32 | (0.14) | 0.35 | 0.50 | 0.50 | 0.60 | 0.70 | 2.51 |
| Materials and supplies | 0.23 | 0.03 | 0.33 | 0.40 | 0.50 | 0.50 | 0.50 | 2.26 |
| Accounts Payable and Accruals | (0.18) | 2.14 | 0.14 | (0.20) | (.20) | (.20) | (.20) | 1.48 |
| Provision for Taxes | (0.35) | 0.50 | (0.78) | 0.15 | (0.56) | (0.24) | (1.32) | (2.25) |
| Total Increase or (Decrease) in Net Working Capital | 0.02 | 2.53 | 0.04 | 0.85 | 0.24 | 0.66 | (0.32) | 4.00 |
| Total Application of Funds | 21.04 | 16.68 | 26.42 | 45.00 | 34.65 | 24.47 | 21.88 | 169.10 |
| Net Cash Accrual or (Deficit) | (3.97) | (0.13) | (5.78) | (9.42) | (3.37) | 0.43 | 0.55 | (17.72) |
| Cash Balance Beginning of Year | 11.75 | 11.39 | 11.26 | 5.48 | (3.94) | (7.31) | (6.88) | 11.39 |
| Cash Balance End of Year | 7.78 | 11.26 | 5.48 | (3.94) | (7.31) | (6.88) | (6.33) | (6.33) |
| Times annual Debt Service covered by Internal Cash Generation | 2.1 | 2.1 | 2.0 | 1.9 | 1.9 | 2.1 | 2.2 | |

- (1) Includes disbursements from USAID Loan
(2) Includes US \$350,000 from Loan 596 ET
(3) Includes US \$ 50,000 from Loan 596 ET

Source: EELPA

May 1970

VOLUME III

ANNEX 6: TELECOMMUNICATIONS

TELECOMMUNICATIONS

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2. Third Five-Year Plan Investment Programme
3. Sources of Finance Third Five-Year Plan Investment Program
4. Demand Growth - Telecommunications Services

TELECOMMUNICATIONS

General

1. The Imperial Board of Telecommunications of Ethiopia (IBTE) is responsible for the country's telecommunications services. It was formed as a government-owned statutory body in 1952 for that purpose. Table 1 shown how rapidly the services have since grown. All services - urban, inter-urban and international - have also improved significantly. The expansion and improvements have been assisted by external loans and technical assistance.

2. At the end of the Second Five-Year Plan, there were 260 telephone offices, 19 radio stations, and automatic equipment in Addis Ababa and 10 provincial towns; another 187 manually operated exchanges were scattered throughout the country; all important interurban telephone routes and 12-channel carriers, and where telephone connection was difficult or costly to install, there was point to point H. F. communication; there were telex exchanges in Addis Ababa, Asmara, Dire Dawa, and Assab, and 280 teleprinter apparatus of which 120 units were on subscribers premises; the Addis Ababa central telex exchange was automatized; there were direct connections to a number of African, Asian and European cities through which services to other cities were also available. The services tended to be concentrated in Showa, Eritrea, Harrage, and Wollo because these provinces were the more highly developed ones.

Third Five-Year Plan

3. Previously, services in urban areas predominated. This is understandable. The number of urban telephones grew at 17% a year over the past six years, but it is unlikely that the tempo will be maintained. The inter-urban network was inadequate to the toll traffic needs. It was almost entirely based on open wire working and also subject to frequent interruptions. The rapid growth in the number of telephones contributed to the strain on the rather meagre and unreliable inter-urban facilities. Also the international service was unsatisfactory because of the high frequency radio systems' limitations for handling calls. The demand for both services grew faster than supply. For these reasons the main objectives of the Third Five-Year Plan are to increase the transmission capacity of inter-urban telephone stations, extend the facilities in the provinces, and improve and expand the international communication system, while satisfying the lower growth rate of the urban system.

4. Attaining the objective for the inter-urban service entails replacing the wire system of transmission between the main urban centers by means of high capacity microwave and VHF/UHF radio relay systems associated with automatic trunk switching exchanges. The routes chosen for this development are (i) Addis Ababa - Dessie - Asmara, (ii) Addis Ababa - Nazareth - Dire Dawa/Harrar, (iii) Addis Ababa - Jimma and (iv) Addis Ababa - Shashamane. On routes which do not now justify radio systems such as Addis

Ababa - Bahar Dar-Gondar, the open wire carrier channels will be increased commensurate with demand. For the provinces, the plan provides additional connections in areas which at present have little or no telecommunications services, but with emphasis on developing areas and populated locations unserved in the past. Plans for the international communications system include expanding the H. F. radio transmitting and receiving stations in Addis Ababa, together with associated radio-telephone terminals, aerials, etc.; and setting up an H. F. monitoring station to improve the operation. For telex services, the objective is to increase the number of teleprinters from 280 to 335 during the plan period. In the urban areas, the plan provides for extending the existing networks and automating local exchanges in a number of towns as telephone traffic demands. The investment program required to achieve the objectives is given in Table 2 and the agreed financing of the program in Table 3.

Plan Implementation

5. Except for the telex system, the investment program is either proceeding as planned or the planned target will be achieved with very slight modification in the phasing of the program. The target for telex was based on the abnormally high growth rates of the system's early years. It is now clear that the momentum cannot be maintained and that the target will have to be reduced. Table 4 gives growth rates of demand for various telecommunications services for the first two years of the plan. The lower rates of increases in 1968 than previously assumed, reflect the depressed economic situation. Similarly the improved results for 1969 indicate the economic upswing which started in the final third of that year as a result of booming coffee prices. The 1969 results are nearer the planned growth targets but on the whole, demand is slightly below what the plan envisaged. It is hoped that the anticipated higher level of economic activity for the rest of the plan period will help the achievement of the demand targets. Looking further into the future, it appears that if supply is not to fall behind demand, a further programme of expansion must be put into effect in 1973/74. One variation may be made in the investment program in addition to the already mentioned modification of the telex investment. Ethiopia is expected to contribute to the Pan-African Telecommunications Network multi-channel telecommunication links with its three neighbors -- Kenya, Somalia, and Sudan. The decision has not been taken whether the UNDP or the Ethiopian Government will finance the project. Should the Government have to meet the cost, an additional US\$1 million may be required during the plan period.

Discussion

6. Telecommunications services like other forms of communications such as roads are part of a country's infrastructure. They help to encourage and to improve economic performance by allowing quicker, in some cases instant communications between distances of all lengths. Ideally therefore the supplies of these services should be kept slightly ahead of the demand created by development. To the extent that the opposite is allowed to occur, the economy is the less efficient and development may be constrained.

Viewed against this background, in general the objectives of the Third Five-Year Plan accord with the country's telecommunications needs.

7. Annex V suggests that government owned monopolies such as IBTE should, for financial reasons, contribute to government revenues by way of annual dividends on share capital. If this is implemented it may be necessary to increase the rates of telephone charges. The rates have not changed for seventeen years and are among the lowest in Africa. The financial ability to maintain the rates over such a long period during which wage and other cost rates have increased, may partly be due to economies of scale and to improved efficiency. There is no indication that marginal cost pricing is used and it is therefore difficult to assess what effect an upward adjustment of tariffs would have on optimizing the use of telecommunications facilities. However, it is considered that the effect is likely to be negligible.

Table 1: MISCELLANEOUS TELECOMMUNICATIONS STATISTICS

| | <u>1953</u> | <u>1958</u> | <u>1963</u> | <u>1968</u> | <u>1969</u> |
|----------------------|-------------|-------------|-------------|-------------|-------------|
| Telephone Lines | 3,640 | 7,132 | 12,002 | 25,476 | 29,297 |
| Telephone Apparatus | 4,606 | 9,770 | 17,865 | 36,034 | 41,106 |
| Telephone Calls - | | | | | |
| Urban | 10 mil. | 18.8 mil. | 27.6 mil. | 53.7 mil. | 62.5 mil. |
| Inter-urban | 190,613 | 806,030 | 1.1 mil. | 2.6 mil. | 2.8 mil. |
| International (1954) | 4,814 | 18,611 | 27,581 | 36,534 | 41,182 |
| Telex | | | | | |
| Subscribers | - | - | - | 131 | 153 |
| Inland Calls | - | - | - | 15,674 | 23,834 |
| International Calls | - | - | - | 39,620 | 49,544 |

Source: I.B.T.E.

Table 2: THIRD FIVE-YEAR INVESTMENT PROGRAM

| | <u>Eth\$ (millions)</u> | | | <u>US\$ (millions)</u> | | |
|--|-------------------------|----------------|--------------|------------------------|----------------|--------------|
| | <u>Local</u> | <u>Foreign</u> | <u>Total</u> | <u>Local</u> | <u>Foreign</u> | <u>Total</u> |
| Local Telephone Network (including exchanges, network and subscribers plant) | 8.22 | 14.63 | 22.85 | 3.30 | 5.85 | 9.15 |
| Long Distance Network (including microwave, VHF/UHF radio links and trunk switching) | 6.20 | 15.55 | 21.75 | 2.49 | 6.22 | 8.71 |
| Telegraph and Telex | 0.06 | 1.80 | 1.86 | 0.02 | 0.72 | 0.74 |
| International H/F Radio | 0.05 | 0.79 | 0.84 | 0.02 | 0.32 | 0.34 |
| Land and Buildings | 6.71 | - | 6.71 | 2.68 | - | 2.68 |
| Miscellaneous | 0.49 | 3.73 | 4.22 | 0.19 | 1.49 | 1.68 |
| Contingencies | 1.77 | 3.50 | 5.27 | 0.70 | 1.40 | 2.10 |
| Working Capital | <u>9.80</u> | <u>-</u> | <u>9.80</u> | <u>3.90</u> | <u>-</u> | <u>3.90</u> |
| TOTAL | <u>33.30</u> | <u>40.00</u> | <u>73.30</u> | <u>13.30</u> | <u>16.00</u> | <u>29.30</u> |

Source: I.B.T.E.

Table 3: SOURCES OF FINANCE THIRD FIVE-YEAR PLAN
INVESTMENT PROGRAM

| | <u>Eth. \$ million</u> | <u>US \$ million</u> | <u>%</u> |
|------------------------------------|------------------------|----------------------|------------|
| <u>Sources</u> | | | |
| Internal cash generation | 39.0 | 15.6 | 53 |
| Borrowing | | | |
| IBRD 441-ET | 7.1 | 2.8 | |
| IBRD (proposed) | 11.2 | 4.5 | |
| Swedish Government | 11.2 | 4.5 | |
| Pension Fund | 2.0 | 0.8 | |
| Supplier's Credit (LM Ericsson) | <u>2.8</u> | <u>1.1</u> | |
| | <u>34.3</u> | <u>13.7</u> | <u>47</u> |
| TOTAL | <u>73.3</u> | <u>29.3</u> | <u>100</u> |

Source: I.B.R.D.

Table 4: DEMAND GROWTH - TELECOMMUNICATIONS SERVICE

| | <u>Annual Percentage Rate of Growth</u> | |
|--------------------------------|---|---------------|
| | <u>1968 %</u> | <u>1969 %</u> |
| <u>Telephone Subscriptions</u> | | |
| Lines | 12.7 | 15.0 |
| Apparatus | 11.3 | 14.1 |
| <u>Telephone Calls</u> | | |
| Urban | 16.0 | 16.3 |
| Inter-urban | 13.0 | 8.4 |
| International | 1.0 | 12.7 |
| <u>Telex</u> | | |
| Subscribers | 16.3 | 16.1 |
| Inland Calls | 61.2 | 52.5 |
| International Calls | 20.0 | 20.0 |

Source: I.B.T.E.

