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SOME MAJOR ASPECTS OF THE ECONOMY OF THE YEMEN ARAB REPUBLIC

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Agency for International Development

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INTRODUCTORY NOTES

Summary and excerpts. The paper has been divided into two parts. The first, "Summary and Excerpts," is to be translated into Arabic and has been written to be a self-contained paper. As such, it includes extensive verbatim excerpts from the main body, particularly from sections III and VII, where a summarization seemed inadequate in presenting the basic analysis. The reader of both parts will therefore find some repetition.

Sources. To avoid what otherwise would be a very large number of footnotes, sources have not been specifically cited in most cases. Most of the data come from Government sources, some directly and some through World Bank and IMF publications, including, in addition to country reports, the World Bank Atlas and International Financial Statistics. In some cases the statistics are estimates or projections by the present writer. Where this is not clear from context, it is specifically noted. So far as is known, the magnitudes -- if not the exact numbers -- of all of the statistics used without indicating a source are generally accepted ones.

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SUMMARY AND EXCERPTS

Highlights

With the levelling off of worker remittances -- the driving force in the striking transformation of the Yemeni economy since 1974 -- the economic development of Yemen is entering a new phase. This levelling off of remittances will doubtless mean a slower rate of growth than the very rapid pace of the past five years, but it will also provide an opportunity for the consolidation of the enormous gains over the period.

The most important immediate opportunity -- and challenge -- is the possibility of bringing inflation under control. The opportunity arises from the fact that most of the inflation of the past five years has come from the massive increase in remittances and the monetization of the resultant increase in foreign exchange reserves, an inflationary force that is now largely spent. The challenge is that avoiding new inflationary pressures will require a much more selective budgeting of expenditures than in the past.

Major changes in the trends of both government revenues and government expenditures have brought an end to the period when the budget produced surpluses almost automatically; these surpluses have given way to deficits. The rapid increase in revenues is tapering off as customs duties, the major revenue source, follow the movement in remittances and imports. On the expenditures side, the Yemen Arab Republic Government is showing an increasing capability for spending money effectively as more trained people are becoming available and more capital projects are reaching the implementation stage. If the trends in revenues and expenditures are allowed to continue at recent rates for just one more year (i.e., through FY 1980/81), the overall deficit would reach YR (Yemeni rials) 2½ billion ($550 million).

Of perhaps even greater concern, the structure of the budget may well make such inflationary deficits self-perpetuating at an ever-increasing level. Costs will rise at roughly the same rate as inflation but revenues, being largely dependent on customs duties, will increase much less. The Government must move, and move quickly, to set much stricter priorities in order to slow down sharply the rate of increase in expenditures.

This summary is devoted primarily to analyzing these immediate questions of fiscal policy and priorities as they relate to inflation. It will also consider briefly, in the concluding section, the longer-term prospects of remittances and the possibility of their substantial decline in the years ahead.

The big buildup in the economy

There have been remarkable changes, that are perhaps unprecedented anywhere, in the economy of the Yemen Arab Republic since 1974. These have been due largely to the effects, both direct and indirect, of massive worker migration and an enormous increase in worker remittances.

The level of worker migration is now almost certainly one-third, and may even approach one-half, of the labor force; and remittances, which roughly doubled each year from 1973/74 to 1976/77,* have continued to a level of YR 6.4 billion ($1.4 billion) in 1978/79. Over these five years, imports have increased more than seven-fold to a 1978/79 level of $1.4 billion. Despite this increase in imports, foreign-exchange reserves still rose from $250 million to a peak of $1.6 billion. Family savings, while not measurable with precision, have plainly reached high levels. And government revenues -- derived predominantly from customs duties and interest earnings on foreign-exchange reserves -- rose in the five years from YR 277 million to an estimated FY 1978/79 level of YR 2.2 billion ($490 million).

The increased demand for all kinds of goods and services, the rapid growth of transportation and commerce in handling imports, and the expansion of government activities have led to a substantial increase in Gross Domestic Product (GDP). And Gross National Product (GNP), which includes worker remittances, has more than doubled in real terms from the per capita level of about YR 900 ($200) in 1975.

Levelling off

In the last two years, however, worker remittances have begun to level off. After increases of roughly 100 percent each year through 1976/77, the increase dropped to 32 percent the next year and to only 6 percent in 1978/79 -- in real terms, a modest decline. The possible future course of remittances is considered in the concluding section. For the present, it is assumed that remittances will continue at about present levels for at least the next two or three years.

The levelling off of remittances is having a number of major consequences. One important effect is a tendency for imports to begin to level off as well, although doubtless at a slower pace and with some lag in time. To a degree, this has already started. In the two years since the remittance trend began to flatten out, the annual increase in imports averaged only 39 percent as compared to nearly 70 percent in the previous two years. Whether the demand for imports will level off soon, as remittances appear to be doing, is not clear. But even if imports continue to increase for a time, financed by a drawdown of foreign-exchange reserves, they will have to level off eventually as the reserves are depleted. (The data through December 1979 show that reserves had fallen by $186 million from their peak of $1,613 million in March.)

As the import trend begins to flatten out, revenues will be significantly affected because of the importance of import-related revenues in the total. The

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*The split year refers throughout the paper to the Yemen fiscal year, July through June.

preliminary data for 1977/78 show customs duties as 68 percent of total revenues (with earnings on foreign-exchange reserves accounting for an additional 12 or 13 percent). The period of revenue increases of 50 to 100 percent per year is clearly coming to an end.

Family savings, which have been a major use of remittances, are probably also beginning to level off. While there are no firm data on these savings, they are plainly quantitatively important. A very rough estimate (working backwards from the relationship between increases in the money supply and increases in GNP) suggests that in 1977 household savings in cash were probably as much as YR 1 billion ($220 million); and they probably continued to increase for a time thereafter.

Inflation

One important result of remittances yet to be considered is inflation. The Sana retail price index (the only indicator available) shows an increase of slightly more than 20 percent each year from 1974/75 through 1977/78, and even this, many observers believe, substantially understates the true rate of inflation. The massive increase in remittances gave rise to a great increase in the demand for domestic goods and services, and for imports. But the capacity of the economy to increase supply has been limited, and the increase in total demand reflected in an increased demand for imports was not great enough to make up the difference. The result has been large increases in the price level. (It might be noted that the inflationary forces involved have been largely beyond governmental control.)

The effect of remittances on inflation can also be stated in monetary terms. Most of the remittances, originally in foreign exchange, were converted into Yemeni rials and thus increased the money supply. The subsequent conversion throughout the economy of rials into foreign exchange to buy imports was in a lesser amount, thus leaving net increases in both the money supply and the level of foreign-exchange reserves. The predominance of the monetization of foreign-exchange reserves in increasing the money supply can be seen from the following:

(millions of Yemeni rials)

	Money supply	Foreign exchange reserves
1973/74	728	693
1974/75	1,142	1,186
1975/76	2,509	2,607
1976/77	4,370	4,106
1977/78	6,205	6,119

The price increases during this period were thus in large part the unavoidable cost of the large accumulation of foreign-exchange reserves. As such, they may well have been, at least up to a point, worth their cost in economic distortions and inequities. In any case, with the economy booming and most elements moving upward together, they were probably more acceptable than they are likely to be in the period ahead.

There were also, of course, other factors affecting the money supply, primarily the budget and bank credit. These factors, however, were quantitatively much smaller.

Starting in 1978/79 the monetary situation began to change. The monetization of the increase in foreign-exchange reserves, taken alone, increased the money supply by only 12 percent during 1978/79 as compared with 46 percent in the preceding year. (And the Sana price index for the last half of calendar year 1978 (latest available) increased at an annual rate of only 17 percent as compared to the preceding 21 percent.) Moreover, the indications are that a drawdown of reserves actually had a contractionary effect in the last half of calendar year 1979. During this period, commercial bank credit continued to increase at only moderate rates. These indications strongly suggest that the rate of inflation is definitely dropping.

With the major -- and largely uncontrollable -- source of <u>past</u> inflation evidently abated, there is now the first real opportunity to bring inflation under control. One requirement will of course be continued restraint in the expansion of commercial bank credit, but very much more important will be controlling the <u>growing</u> forces leading to rapidly increasing budgetary deficits.

Taking advantage of this opportunity to control inflation is of great importance; the opportunity may not occur again if large-scale inflationary financing becomes an established pattern in budget formulation. In fact, if budget deficits are allowed to grow, not only will they tend to become self-perpetuating, but they may well be at increasingly inflation-producing levels.

Curbing inflation at this stage appears to be important -- and perhaps even critical -- to Yemen in achieving sustained economic growth. Although sustained growth is sometimes achieved despite inflation (Brazil is probably the most conspicuous case), the more typical case is with relative price stability. This is illustrated by Taiwan and Korea, who have been the leaders among the developing countries in economic growth (with annual rates in real terms from 1960 to 1976 of 9.0 and 9.6 percent) and where inflation has been relatively low during their periods of most rapid growth.

One basic aspect of inflation needs to be made explicit. It can be stated briefly. When an economy is operating at near capacity, as is the case in most sectors of the Yemen economy today, inflationary financing does not increase the total resources available by very much; it merely reallocates their use. This is particularly the case in the construction sector.

There are two special additional reasons why controlling inflation is important at this time in Yemen. One is political. Although political

considerations are in general beyond the scope of this paper, the possible political effects of inflation on accumulated savings seem worth noting. As already observed, household savings in cash in 1977 were probably at least YR 1 billion, and they have doubtless increased substantially since. When remittances, and presumably savings, were doubling each year, some loss through inflation in the value of savings was probably accepted with equanimity. But with remittances and the level of savings flattening out, attitudes will change. A continuing inflation rate of 20 percent would reduce the value of savings by half in only three years. It seems likely that this would create widespread dissatisfaction.

The other special consideration has already been noted. Inflation generated by the budget would, under present circumstances, very probably be self-perpetuating at ever-increasing levels. In the Yemeni fiscal structure, the main effect of inflation would be on expenditures, where costs would tend to go up at the inflationary rate. It would not affect customs duties, the main source of revenue, by nearly as much. Inflation would thus tend automatically, over time, to increase the size of the deficit relative to the total budget. (This subject will be considered in more detail below.)

The Budget: the key to controlling inflation

For the future, the main inflationary danger may be expected to come from the budget. Yemen is passing from a period when budget surpluses were almost automatic to a situation in which deficits are large and growing.

Two trends are rapidly increasing the inflationary effect of the budget. With the levelling off of remittances and a reduction in the rate of growth of imports, the principal source of revenue, customs duties, is also showing a reduced rate of increase. At the same time, on the expenditures side, the Government is showing a rapidly increasing capacity to spend money effectively. For the current budget, the previous constraints of a lack of trained personnel are evidently beginning to give way. And for the capital budget, the long period of necessary preparation has been completed for an increasing number of projects, and the implementation phase is accelerating.

These trends do not reflect changing policies but, rather, are simply the result of changing circumstances. Even so, they are resulting in large and growing deficits. And these deficits will increase unless policy decisions are made to sharply reduce the rate of increase in expenditures.

The change in trends shows up clearly in the annual budgets as indicated by the key figures summarized in the following table:

During the period FY 1974/75 to FY 1976/77, revenues were increasing at an average annual rate of 84 percent, while expenditures were increasing at an annual rate of only 49 percent. In FY 1977/78 the two rates of increase were more nearly equal. Over the next two years (i.e., through the current fiscal year 1979/80), the relationship has reversed sharply. As budgeted (actual data are not yet available), revenues will have increased on the order of only 25 percent annually, as against an increase of 44 percent in expenditures.

MAJOR COMPONENTS OF GOVERNMENT FINANCE*
(in millions of Yemeni rials)

	Actual				Budget estimates
	1973/74	1974/75	1976/77	1977/78 (prelim)	1979/80
Revenues:	277	381	1,293	1,925	3,012
Customs and investment earnings		260	1,086	1,580	2,400[e]
Other		121	207	344	612[e]
Expenditures:	336	562	1,256	2,102	4,383
Current	322	472	841	1,235	2,426
Budgeted capital expenditures	14	69	274	599	1,272
Capital transfers	0	21	141	268	685
Overall surplus or deficit	-59	-181	+37	-177	-1,371
Cash grants for budget support	128	389	418	401	400[e]
Change in net position with the Central Bank**	+47	+207	+485	+66	-971

e/Estimate by writer

*The figures here, in conformity with the Yemeni formal budget, include foreign cash grants for budget support, but do not include either the receipts or the expenditures from foreign loans. Since the proceeds from these loans and the outlays financed by them tend to coincide even within the same time frame, the surpluses (or deficits) are not significantly affected by the omission.

It might also be noted that the preliminary actuals for FY 1977/78 are being compared, in effect, with the budget estimates for FY 1979/80. This is done because the FY 1977/78 budget estimates seriously understated customs revenues and investment earnings, underestimates that seem to have been corrected by the FY 1979/80 budget. (For the other items, the FY 1977/78 budget estimates were reasonably accurate.)

**The change in net position does not exactly equal the difference between overall surplus (or deficit) and cash grants for budget support. The discrepancy represents a "statistical adjustment" reflecting in part various lags in reporting. The adjustments are small for all of the years except FY 1977/78, presumably attributable to the fact that the revenue and expenditures data for the year are still preliminary.

At the same time, foreign cash grants in support of the budget have tended to remain relatively constant over most of the period. Using the Government's net position with the Central Bank (roughly approximating the overall surplus or deficit after allowance for cash grants) as a relatively conservative indicator of the inflationary impact of government finances,* the budgeted revenues and expenditures for FY 1979/80 will have resulted in a sharp swing from a deflationary surplus of YR 66 million in FY 1977/78 to an inflationary deficit of YR 971 million in FY 1979/80,** equal to 32 percent of total revenues. Such a major reversal in so short a time calls for serious attention.

At the deficit level of nearly YR one billion, the inflationary pressures are already disturbing. They would become much more so if the budget trends of the last two years were to continue for just one more year. Revenues would increase by 25 percent to YR 3.8 billion while expenditures would increase by 44 percent to YR 6.3 billion. The FY 1980/81 budget would have an "inflationary deficit" (after allowing for budget support estimated at a continued YR 400 million***) of YR 2.1 billion.

A deficit at this level would have severe inflationary consequences (unless there were to be a large contractionary increase in saleable imports). It would result in an increase in the money supply on the order of 25 percent, much more than the needs of the economy. The past needs of the economy for a rapidly expanding money supply to cover rapid growth, rapid monetization, and sizable increases in cash saving are presumably tapering off, although the need for modest increases in commercial bank credit will continue. Given these factors,

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*Neither the "overall surplus or deficit" (the difference between revenues and expenditures), or the "change in net position with the Central Bank" is wholly satisfactory as a measure of the deflationary/inflationary impact in that each of them reflects external (as well as domestic) receipts and expenditures which do not affect the economy directly. As between these two possible measures of the "inflationary deficit", the change in net position with the Bank is the more conservative, since it includes foreign cash grants even though, as external receipts, they do not actually have a direct deflationary effect. (Rough estimates from the limited information available suggest that for FY 1978/79 the inclusion of external transactions, including budget support, results in an understatement of the inflationary impact of the budget, but this would not necessarily be the case for future years.)

**As reported in IMF's International Financial Statistics, the Government's net position with the Central Bank had decreased by YR 702 million in the first quarter of FY 1979/80, suggesting that the actual deficit may turn out to be even greater than the budget estimate, although there may have been special factors operating during the period.

***The future level of budget support is of course uncertain, but the figures for the recent past in the table suggest no major changes. Recent developments as reported in the press make the future levels of budget support even more uncertain. Whatever they turn out to be, however, the underlying trends in the budget analyzed in this study will continue to merit attention.

the budget-created increase in the money supply might be expected to cause price increases in 1980/81 on the order of 20 percent if -- but only if -- present trends are allowed to continue.

At this point an even more adverse possible consequence must be considered in some detail. The structure of the Yemeni budget is such that even if there were to be no further increase in expenditures after FY 1980/81, except to allow for price increases, the percentage of the budget covered by inflationary financing would still increase. Costs would generally go up by the rate of inflation. But the principal source of revenue, customs duties (and, presumably, interest earnings on foreign-exchange reserves), would increase much less.

The critical implications of this relationship can be illustrated by making projections for an additional two years. Starting with the projection above for FY 1980/81, this further illustrative projection assumes that imports and customs duties will have levelled off and that other revenues will have continued to increase at the same rate as inflation. For expenditures, it is assumed that no increases are made except to cover the presumed inflation rate of 20 percent. Projections on these assumptions would increase the "inflationary deficit" from the level of YR 2.15 billion projected on past trends for FY 1980/81 to a level of YR 4.5 billion, roughly one-third of the estimated money supply, by FY 1982/83.* The size of the budget deficits and the rate of inflation would have to be continuously increased just to keep government services and real investment at a constant level.

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*The key figures in the illustrative projections are:

	Budget 1979/80	Illustrative projections 1980/81	1982/83
Revenues			
Customs and investment earnings	2,400[e]	2,820	2,820
Other	612[e]	940	1,360
Total	3,012	3,760	4,180
Expenditures	4,383	6,310	9,090
Cash grants	400[e]	400	400
Borrowing from the Central Bank	971	2,150	4,510

e/ Estimate by writer

The projections are of course not predictions. And some of the underlying assumptions and some of the specific figures are, of course, open to some question. (For example, customs receipts may increase some, and it may be possible to get substantial percentage increases in taxes other than customs.) The projections do, however, strongly suggest that present budgetary trends, if unchecked, might well start an inflationary spiral that would be serious indeed.

Plainly the time to deal with this serious danger is before it becomes critical; and this point has very nearly been reached. The budgets for FY 1980/81 and FY 1981/82 must utilize much more stringent criteria than have been required in the past. And the Second Five-Year Plan must be more selective than the First.

The basic concept is priorities in order to slow the rate of increase in expenditures. Hard priority-choices have not been necessary, until recently, since non-inflationary financing has generally been available for all desirable activities. But now the choice of outlays must be much more selective. And, for the immediate future, priorities should give at least as much weight to the urgency, or the deferability, of a given activity or project as to its intrinsic desirability. Other actions of course should also be taken. Maximum efforts should be made to increase non-customs tax revenues. In the longer run, non-customs revenues should be of great importance but, since they start from a low base, even large percentage increases will not yield large absolute increases in the short run. Also, further economies in current expenditures may be possible. For example, the increase in Title I (salary category) of the Budget of 189 percent between FY 1976/77 and FY 1978/79 may have been adequate to correct past deficiencies. But the basic approach must be priorities to sharply, and quickly, reduce the rate of increase in expenditures.

Some observations on priorities

A number of general observations seem useful even though some priorities clearly must be determined on a project-by-project basis.

Investment in people versus investment in infrastructure. A basic choice in the budget will be between investment in people and investment in infrastructure. Although expenditures for education and health are often thought of as consumption, which of course they are, they are also very important investments in the future development of the country.

The investment element of education and health programs is difficult to quantify, but it is clearly important. It is interesting to note, for instance, that in Taiwan and Korea which, as already stated, are development leaders, literacy rates are extremely high. In 1975 adult literacy stood at 82 and 91 percent, respectively, and in Korea had already reached 71 percent as early as 1960. As to health, it is obvious that a worker with a debilitating disease cannot be a fully productive one, although again the quantitative relationship is not clear.

The investment aspect of programs in health and education should not, however, obscure their importance in meeting basic human needs. This has a particular relevance for Yemen which lags behind in precisely these areas. With the rapid rise in remittances, the basic needs of food and clothing are surely being more adequately met with the vast increase in imports. But in education and health services, which cannot be imported, Yemen continues to lag far behind most other countries with similar incomes simply because of the time it takes to develop these areas adequately.

Either the productivity of investing in people or the importance of satisfying unmet basic human needs would give a high priority to increased government services. When these two priorities coincide in the case of education and health, the priority is high indeed.

The Government has recognized the priority of investment in people. Funding for education and health has been the fastest rising item in the whole budget. Even so, since it started from such a low base, it is still only 18 percent of total allocations in the FY 1979/80 budget. Here as elsewhere, however, priorities even within a priority category should be selective. For example, general university education can be overexpanded, as is shown by the problem of the "educated unemployed" in many developing countries. In the health field, modern hospital facilities are simply too expensive at this stage to be affordable except for the fortunate few, while general health services at a much lower cost and higher relative return should be aimed at gradually becoming available to all. Continued priority seems clearly desirable for health and education to the extent that they can use additional funds effectively.

Capital expenditures in the budget have been growing more rapidly than current expenditures. This suggests that, as a practical matter, reductions in the rate of increase in overall expenditures will need to be concentrated here. Fortunately, priority considerations point in the same direction.

Most of the direct government investment is in infrastructure. (Capital transfers will be considered separately later.) Of this, highways are by far the largest single category. They were scheduled to receive about 40 percent of total government investment in the First Five-Year Plan. (Although the overly-ambitious Plan has been scaled down considerably, the relationships have not necessarily changed.) Given their large amount and the fact that similar characteristics apply to some other infrastructure, highways may be taken as being reasonably illustrative of the infrastructure sector as a whole.

Highways provide a good example of the wide variation of project priorities within a single sector. The 736 kilometer network, completed in 1970, which links the three main cities, has been indispensable to the development of Yemen. Its benefit-cost ratio, taking into account the vast indirect benefits, must be very high indeed. But construction of the additional 2,342 kilometers proposed in the Plan would have very much lower benefits. An inspection of a population density map and a map showing the basic highway network indicates that some 90 percent of the population lives within 60

kilometers (as the crow flies) of one of the highways that have already been completed. It thus appears that new highways, with some exceptions such as a link to the Saudi Arabian system, will have a very much lower rate of return than the basic highway program did and the feeder-road program will, and could be deferred for a time without any major effect on the rate of economic growth. Similar considerations would appear to apply to some other large infrastructure projects as well.

The conclusions with respect to large infrastructure projects do not necessarily apply to small ones, which are often of a different type. For example, feeder roads are estimated to have a cost per kilometer of only 7 percent of that for highways, and they would appear to have much higher relative benefits. Similar conditions often apply for small potable water projects. Such small projects are likely to have a very favorable benefit-cost ratio, particularly where they have strong local support with financial participation -- generally through the Local Development Associations -- which helps to keep costs down and assure adequate attention to efficient use and maintenance.

In the case of some large infrastructure projects, the availability of concessional financing through foreign assistance must be taken into account in setting priorities. Other things being equal, such projects would have a higher priority. These projects, however, can also have an inflationary impact, particularly where local costs (the demand for local resources) are large relative to the import component. (In FY 1977/78, the latest year for which data are available, total capital project expenditures were YR 871 million of which only 31 percent was financed by foreign loans.) The availability of foreign aid should thus not in itself be considered adequate justification for going ahead with a project, particularly if the aid is only a part of the total cost. And obviously donors should be urged to concentrate on the highest priority projects and activities even if they are not the easiest to implement.

Agriculture and industry. Investments in these sectors are less related to fiscal policy than those considered above since the bulk of agricultural and industrial (or at least manufacturing) investment will be in the private sector. Additionally, desirable investments in these areas are likely to be limited by the scarcity of good large-scale project posibilities in agriculture and the fact that at present there is no need for import substitution to save foreign exchange or for investment to create additional employment. (There are, however, some areas in manufacturing where Yemen production can be competitive with imports; cement and some other building materials with high transportation costs appear to be a good case in point.) Investments financed largely from private savings will not have a major inflationary impact; moreover, they will have met at least one important test of economic feasibility -- the investor's willingness to risk his own money.

A major part of the planned public investment in agriculture is for irrigation works to capture runoff that would otherwise be wasted. Many of these will presumably prove to be highly productive investments, although there are no indications of any great need for carrying them out immediately. Nor is

their individual justifiability always clear. For example, the Plan allocates YR 105 million for starting the Marib dam while noting that "the project cost is not yet estimated." Thus it would appear that some of the projects could be deferred for fiscal reasons at no great loss and that some of them should be deferred in any case pending further study.

In industry, public investments in the Plan include both public corporations and the so-called "mixed sector", to be made up of joint ventures with the private sector. The economic justification for some of the latter (for example, a steel plant) seems doubtful; in any case, to date none has been undertaken. Industries that are largely or wholly owned by the government include cement, the large Sana textile plant, electricity, the petroleum company, and the airline. Large investments in public corporations were called for in the Plan and, although detailed information is not available, it appears that much of this investment has taken place. This is evidently financed through the "capital transfer" (direct transfers from the Central Bank) section of the capital budget. This section was budgeted for YR 184 million in FY 1977/78 (the preliminary actual was YR 268 million), and is budgeted for YR 685 million for FY 1979/80. While most of these investments may well be desirable in the long run (even though they have not been subjected to the test of private-investor determination of profitability), their urgency is not clear. For example, even in the case of increased capacity for cement production, which appears definitely to be economically sound, a continued major reliance on imports for an additional period would have at most a negligible deterrent effect on economic growth. It would thus appear that the "capital transfer" item in the budget might at least be levelled off, and possibly even reduced, for the time being.

In summary, it appears that many of the government capital investment projects could be deferred for a time without serious development consequences. This would appear to be definitely the case for most of the new highway projects and, presumably, for much other infrastructure and for public corporations. Even for efficient import substitution such as cement and the most productive irrigation projects, there does not appear to be any great urgency since foreign exchange reserves are equal to a full year's imports.

The need for early action

As indicated above, the need to seize the present opportunity to control inflation is urgent. The FY 1979-80 budget already has a large inflationary deficit. If expenditure trends are allowed to continue into FY 1980/81 and FY 1981/82, there is a serious danger that a self-perpetuating spiral of inflation will have been started. Decisions must be made quickly as to where and how to reduce the rate of increase in expenditures.

One practical problem in deferring expenditures arises from projects that are already well into the implementation stage. It seems sensible that in most cases these should be continued, but, even with such projects, it may sometimes be preferable to slow the rate of expenditures. In the absence of detailed information, one cannot be sure of the effect of these projects on future budgets. It seems likely that a significant part of the investment budget for at least the next year will be determined by projects already started.

Given the requirements of ongoing projects and the time required for accurately determining project-by-project priorities, it may well be desirable -- and perhaps even essential -- to adopt a rule of no new starts of capital projects for the next year or two.

The targets suggested below, although difficult, would appear to be achievable.

For FY 1980/81, to hold the increase in total expenditures to a level somewhat below the expected increase in revenues and thus to achieve some reduction in the deficit.

For FY 1981/82, by which time there will have been more time to make necessary adjustments, to hold the increase in expenditures to a level enough below the expected increase in revenues to eliminate inflationary financing.

The various suggestions for deferral of some investment programs do not imply investment at too low a level to achieve a satisfactory rate of growth. The levels of investment are already high. Government capital expenditures, including both those in the Budget and those financed from foreign loans, appear to have been at least YR 2 billion in FY 1978/79. To this must be added the large amount of private investment financed from remittances and profits from importing and distribution. The most recent estimates are for FY 1976/77 when private investment (exclusive of inventory increases) stood at YR 829 million, nearly three-fifths of total investment. There have doubtless been major increases in private investment since then. Total investment in FY 1978/79 has thus probably been in the neighborhood of YR 3½-4 billion. This would be on the order of 30 percent of GDP (or around 20 percent of GNP), a high level for a developing country. There is clearly no overriding need for still further increases in government investment to achieve a satisfactory rate of economic growth.

Achieving a non-inflationary budget by FY 1981/82 should be a firm target. It will not be easy. But it should be possible. And if this target is met, it should bring an end to the high rates of inflation that have characterized the Yemeni economy for at least a decade. Some prices will continue to rise, no doubt including those for petroleum products and perhaps construction costs, but widespread, general inflation will have been brought under a reasonable degree of control. This accomplishment will eliminate the economic distortions and inequities -- particularly to savers -- that rapid inflation always brings. It will establish a sound basis for continuing growth and development in the period ahead, a basis that will be especially needed since available resources will not be increasing as rapidly as they have been in the boom period of the recent past.

The future of remittances

All of the analysis above assumes that worker remittances will continue for a time at roughly present levels. This prospect seems the most likely one on the basis of recent performance.* This assumption, however, may well turn out to be very optimistic. There are several reasons.

It seems clear that in Saudi Arabia (which employs at least 90 percent of the Yemeni migrant workers), the rate of increase in investment is declining. Increases during the Third Development Plan, 1980-84, will be much less than during the early years of the Second Plan. The big acceleration is over. Saudi Arabia has decided on a generally more conservative fiscal policy, in part to halt inflation. (The consumer price index is reported to have actually shown a slight decline in 1978.)

As the Saudi Arabian development program continues to progress, there will be a further gradual shift from construction to operation and maintenance. This may decrease the need for foreign workers somewhat and in any case will call for a different kind of worker. The bulk of Yemeni workers to date have been in construction.

The most striking recent change has been the rapid increase in the number of Asian workers in Saudi Arabia. There are no overall estimates of this increase, but the total number of Asian workers in 1975 was estimated at 38,000 and the Government of Pakistan estimates that their workers alone numbered 90,000 by 1977/78. There are also large numbers of Indians, Koreans, and Filipinos. In some respects Asian workers are more acceptable to the Saudi Arabians than Arab workers because they tend to live apart and are unlikely to have much effect on the fabric of Saudi society. There are also some indications that for equal work they are willing to work for less pay.

It is clear that the three developments noted above are taking place. What is not clear is their effect on the demand for Arab workers. For example, the rapid increase in Asian workers may have served merely to help meet the continuing growth in Saudi Arabian demand, or it may actually have started to displace some Arab, including Yemeni, workers. Some observers believe the latter to be the case. On the other hand, there is considerable evidence that Yemeni workers are highly regarded in Saudi Arabia both because of their cultural affinity and because they have a reputation for being hard workers.

Two close observers of worker migration in the Middle East conclude that "the number of Yemeni migrants abroad will fall from about 550,000 in 1977/78

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*Beginning in mid-1977, following three years of doubling each year, remittances for seven consecutive quarters followed a nearly horizontal trend. For the three latest quarters (of which the most recent is the highest) the movement has been up an average of 9 percent, a modest increase in nominal terms but probably down slightly since mid-1977 in real terms.

to about 300,000 [the estimated number in 1975] by 1980" and that "remittances will decline rapidly, reflecting the falling number of migrants and the decline in wage rates."* Most observers (including the writer) believe that this prediction is much too extreme, but its warning should not be disregarded, particularly if the time specified were to be extended by two or three years.

Since the changing forces in Saudi Arabia were already underway during the two and a half years, beginning in 1977, when Yemeni remittances were constant or increasing somewhat, no sharp, immediate decline in remittances seems probable. But if the competition from Asians were to increase substantially, as is clearly possible, at least a modest downturn, even in the short run, could be expected. (Some upturn in remittances is also possible, but this possibility does not require any advance planning.) Even if Asians do not actually displace Yemeni workers, they may exert a downward pressure on wages.

The relatively high probability of a modest decline (say up to 10 percent per year in real terms) in remittances in the near future is not a cause for immediate concern. (In fact, with some reduction in the labor shortages in Yemen, there might even be advantages.) The high levels of foreign-exchange reserves and of household savings (although the latter will decline if they continue to be eroded by inflation) would cushion the impact for a long enough time for adjustments to be made. But adjustments would be necessary.

For many purposes, however, it is important to look beyond the immediate future. For the longer term, say 3 to 10 years and beyond, the likelihood of a substantial decline in remittances is much greater than in the short run. A reduction in the rate of increase in Saudi Arabian investment, a change in the kind of foreign labor needed, and increasing competition from Asian labor can potentially have a greater impact over a longer period of time. The possibility of a major reduction in worker earnings and remittances, say of the order of 50 percent or more in real terms, over the next 5 to 10 years must be considered a real one. Although the future course of remittances is at this time unknowable, it will be necessary to monitor their movement closely, and prudent planning should, of course, take the possibility of a substantial decline into account.

Current longer-range planning, including the Second Five-Year Plan, 1981/82 -1985/86, will need to take into account, among other things, the changes in the relative costs of imports and wages that would result from a major reduction in migration and remittances. If there is a continuing

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*The observers are Drs. Stace Birks and Clive Sinclair of the University of Durham who have been working on a study of Middle East labor migration for the International Labor Office since 1976. The quotation is from an unpublished report of May 1979, page 127, prepared for the Agency for International Development.

decline in the level of foreign-exchange reserves, devaluation or some other means of reducing imports will eventually become necessary. On wages, a net return of migrant workers would cause a decrease -- or a slower rate of increase -- in labor costs. Planning now for long-term investment will thus have to allow for the possibility that a shift to less capital (import) intensive activities may be called for. And agricultural research undertaken now will need to include consideration of the fact that Yemen may well have to once again produce domestically a larger proportion of its foodstuffs than it does today.

Even more important for immediate Government action, the prospect of a substantial decline in remittances in the years ahead reinforces the urgency of changes in Government fiscal and budgetary policies that are already called for to bring inflation under control. Broadening the tax base and continuing to improve tax administration are already clearly needed; the need becomes even more compelling in the face of a potential sharp drop in remittances and, with them, customs revenues. The same is true for improving the efficiency of budgeting and government spending. The same considerations also hold for the need to postpone deferrable capital projects, and with even greater weight, since this is the only area in which it seems likely that large-scale anti-inflationary results can be achieved quickly.

I. INTRODUCTION

To understand almost any aspect of the Yemen economy one must be aware of three primary characteristics of the country.

First, Yemen is still in the early stages of rapid movement toward modernization. It is an old civilization that had some highly developed irrigation systems even in the pre-Christian era, but it is not a modern society. Although the observation in the London Economist more than two decades ago that Yemen was "rushing madly into the 14th century" would have to be modified considerably today, it still has important elements of validity. Imam Yahya, who ruled from the time the Turks were driven out in 1918 until his assassination in 1948, was essentially a feudal monarch. He was deliberately isolationist, to avoid new ideas that might undermine his absolute rule, and at one time he even banned the use of printing presses. He never went outside the country. His son and successor, Imam Ahmed, who ruled until his death in 1962, was not greatly different. He continued to discourage the entry of outsiders and his first trip outside the country was to a conference in Saudi Arabia in 1956. The revolution, from 1962 until 1970, supported as it was by Egypt, opened the country to considerable Egyptian influence, particularly in the military sphere, but did not foster the rapid development of modern institutions. The first comprehensive budget was for the fiscal year 1973-74. The Central Bank had been established only two years earlier. Tribal influence, although now diminishing rapidly, is still important, especially in the north. Clearly, modern institutions are just getting started in Yemen.

Second, the recent phenomenon of the sharp growth in worker emigration and worker remittances is probably unparalleled in any other country at any time in history. The proportion of the male labor force working abroad reached a level of at least a third, and perhaps as much as a half, by 1977 or 1978. Remittances in 1977/78 1/ amounted to $1.3 billion. This compares with a total GNP of only $1.1 billion just four years earlier. Moreover, remittances -- at least initially -- increased domestic growth by stimulating the demand for housing, wholesale and retail trade, and other services. In per capita terms, real GNP went from about $200 (YR 900) in 1974 to at least $400 (in 1975 prices) in 1978. The enormous consequences for the economy are obvious.

1/ The split year refers throughout the paper to the Yemen fiscal year, July through June.

Third, despite its present relatively high per capita GNP, Yemen is still in many ways a very backward, underdeveloped country. Given the fact that Yemen began serious modernization less than a decade ago and that its dominant new economic force has been important for less than half that time, this is not surprising. The indications of backwardness are ubiquitous: Some 87 percent of the people are illiterate. At least 80 percent live in villages of 500 or less, many of which are still inaccessible to vehicular traffic. Girls marry, on the average, at 14. Such diseases as intestinal disorders, tuberculosis, malaria, and schistosomiasis are very prevalent. Infant mortality is at least 150 per thousand. Life expectancy at birth is only 45 years.

Yemen has made enormous strides in its socio-economic development in the brief period since the end of the revolution. The first section of this paper deals briefly with these developments in macro-economic terms.

Recently there has been a levelling off of worker remittances and with it the economic development of Yemen is entering a new phase. This levelling off of remittances will doubtless mean a slower rate of growth than the very rapid pace of the last five years, but it will also provide an opportunity for the consolidation of the enormous gains over the period.

The most important immediate opportunity -- and challenge -- is the possibility of bringing inflation under control. The opportunity arises from the fact that most of the inflation of the past five years has come from the enormous increase in remittances and the monetization of the resultant increase in foreign exchange reserves, an increase that is levelling off. The challenge is that curbing inflation will require a much tighter budgeting of expenditures than in the past.

A major part of this study is concerned with analyzing questions of budgeting and priorities as they relate to bringing inflation under control. In the analysis it is assumed that worker remittances, the most important factor in the present economy, will continue at about current levels for the immediate future.

There is, however, a distinct possibility that remittances will decline -- perhaps significantly -- particularly if the time span considered is 3 to 10 years or longer. In the sections on social services, infrastructure, agriculture, and industry, which are concerned with more than the immediate future, the discussion also considers the possibility of a significant decline in remittances.

The concluding section of the study considers in greater detail the longer-run prospects for remittances and analyzes some of the overall implications of a possible substantial decline.

II. WORKER MIGRATION AND REMITTANCES AND THE MACRO-ECONOMIC VARIABLES

Between 1973/74 and 1976/77 worker remittances roughly doubled each year. By the latter year they totalled more than $1 billion, or about $200 (YR 900) per capita, roughly equal to total per capita GNP at the beginning of the period.

In 1977/78, worker remittances began to taper off. In 1978/79, they showed an increase of only 6 percent in current prices, a modest decline in real terms.

This massive increase in remittances and their subsequent levelling off are the two dominant factors in the Yemen economy in the recent past.

As already emphasized, the economy of Yemen in the recent past has revolved around worker remittances. This section, accordingly, examines the main macro-economic variables in juxtaposition to those remittances.

The best available estimates on workers abroad and worker remittances are as follows:

Table 1

EMIGRATION AND REMITTANCES*

Fiscal year	Labor force (000)	Workers abroad (000)	Emigrants as percent of labor force	Remittances ($ mils)	Remittances (YR mils)
1969/70	1,280	150	12%	$49	YR 220
1970/71		168		51	230
1971/72		196		65	292
1972/73	1,350	211	16	117	525
1973/74		258		132	595
1974/75	1,414	278	20	225	1,013
1975/76				525	2,363
1976/77				1,013	4,561
1977/78	1,500	550-750	37-50	1,340	6,031
1978/79				1,423	6,404

*The worker figures for 1974/75 are derived from the census of January 1975 which, after adjustment by the Swiss Technical Team, are believed to be reasonably accurate; those for the other years, especially 1977/78, are very much less certain. The remittance figures, as the principal source of foreign exchange earnings, are believed to be quite accurate throughout. They do not, however, include remittances in kind.

As shown in table 1, both emigration and remittances were important well in advance of the quadrupling of oil prices in 1973/74. But they shot up thereafter. Remittances roughly doubled each year in the three years 1973/74 to 1976/77, while the number of workers abroad probably at least doubled over the period. (The estimates of workers abroad subsequent to the census figure for 1974/75 are quite uncertain. But in the light of the remittance figures, which are reasonably firm, they seem reasonable.) Plainly, these were very large and sudden changes.

The increase in workers abroad as a percent of the labor force is probably unprecedented. The total number abroad in 1977 was almost certainly one-third, and may even have approached one-half, of the country's labor force. It is obvious that this must have had a major impact on domestic production, particularly in agriculture which employed 73 percent of the resident labor force in 1975. (This impact, however, is somewhat less than the figures as such would suggest. At the beginning of the period, there was substantial underemployment. And, so far as agriculture is concerned, much of the labor is traditionally done by women who, for the most part, are not included in the labor-force statistics.) The impact of the reduced labor availability in the other sectors was much less. In fact, emigration to the cities, while much smaller in absolute numbers than emigration abroad, probably reflects an increase in the labor force in the non-agricultural portion of the economy.

The relationship of the growth in remittances to the growth in GNP, shown in table 2, shows how predominant a role remittances played in that growth.

Table 2

REMITTANCES AND ECONOMIC GROWTH

(amounts in millions of Yemeni rials)

Fiscal year	(in constant 1975 prices) GDP Amount	GDP Percent change	Remittances*	GNP Amount	GNP Percent change	in current prices Amount	Percent change
1969/70	3,163		477	3,640		1,399	
1970/71	3,807	20%	468	4,275	17%	1,746	24%
1971/72	3,996	5	562	4,558	7	2,091	20
1972/73	4,358	9	788	5,146	13	2,514	21
1973/74	4,292	-1	567	4,859	-6	3,260	30
1974/75	5,016	17	1,012	6,028	24	4,473	37
1975/76	5,180	3	2,115	7,295	21	5,180	16
1976/77	5,766	11	4,108	9,874	36	7,545	46
1977/78**	6,227[p]	8[p]	4,982	11,209[p]	14[p]	n.a.	
1978/79	n.a.		4,756	n.a.		n.a.	

p/ Preliminary

*Converted to 1975 prices on the basis of the IFS import price index.

**Figures for GDP and GNP in constant prices have been calculated on the basis of an estimated 8 percent increase in real GDP.

From 1973/74 to 1977/78, real GNP (i.e., in constant prices) increases by YR 6,350 million, an average for the four-year period of 23 percent per year. Of this increase, YR 4,415 million, or 69 percent, came from increased remittances. Moreover, the effect of remittances went beyond this direct effect. The most rapidly growing sectors in GDP were trade, finance, and government, which accounted for nearly half of the total. The large and growing remittances were obviously a main stimulus in these sectors. And in the other main growth sector, agriculture, much of the increase was due to better weather. On the whole, it appears that as much as 85 to 90 percent of the GNP growth (other than weather-induced) may, directly and indirectly, have been due to remittances.

Not only have remittances greatly increased per capita GNP, but the increased income has gone directly to the masses of the people and has been widely distributed. Benefits were widely dispersed geographically as shown by the 1975 census. For each of the 10 governates, except one small one, the proportion of the population working abroad fell within a range of 5 to 8 percent. With many workers returning after two or three years and being replaced by others, and with the total abroad evidently having increased greatly from the year of the census through at least 1977, it appears that the preponderance of rural families (and most of the emigrants are rural) have benefited directly over the last few years. The proportion of families benefited is even more pronounced in terms of the extended family, which is still characteristic of much of rural Yemen. Moreover, most of those not benefiting directly will have benefited indirectly with unemployment having largely disappeared and wages having risen faster than prices.

Remittances were also, as one would expect, the main factor in the balance of payments. The key elements are as follows.

Table 3

MAIN BALANCE-OF-PAYMENTS ITEMS
(millions of dollars)

Fiscal year	Remittances	Imports	Exports	Foreign aid*	Reserves (end year)
1971/72	$65	$86	$9	$15	$67
1972/73	117	120	8	15	77
1973/74	132	194	14	30	70
1974/75	225	258	13	130	248
1975/76	525	382	12	176	520
1976/77	1,013	730	19	250	974
1977/78	1,340	834	7	249	1,347
1978/79	1,423	1,409	3	n.a.	1,543**

*OECD statistics. Includes both cash grants and project disbursements.

**Down from the peak of $1,613 million in March 1979.

As table 3 shows, exports in recent years have been negligible. Foreign aid has been large and growing. But by far the largest element in financing the enormous growth in imports and increase in reserves has been worker remittances. In 1977/78 remittances were more than five times as much as foreign aid receipts, and greater than total imports.

In public finance also, remittances are the most important element. Although very little of the remittances is subject to direct taxation, a considerable portion is captured indirectly through customs duties on imports, which are financed largely by remittances. The main magnitudes are shown in table 4.

Table 4

CUSTOMS DUTIES AND GOVERNMENT REVENUES*
(amounts in millions of Yemeni rials)

Fiscal year	Total revenue	Customs duties	Duties as percent of revenue
1970/71	YR 94	YR 53	56%
1971/72	151	77	51
1972/73	199	113	57
1973/74	277	156	56
1974/75	381	222	58
1975/76	605	395	65
1976/77	1,293	929	72
1977/78	1,925	1,304	68

*Exclusive of foreign grants and loans.

Plainly, import taxes have been the primary source of revenue. (Earnings on foreign-exchange reserves held abroad, also closely related to the remittance phenomenon, have recently become an important source of revenue as well.) Moreover, import taxes have been an even more important factor in the increase in revenue. From 1973/74, the last year before the great surge in remittances began, through 1976/77, customs revenue increased sixfold while the increase in other revenues was only threefold.

In summary, it is clear that from 1973/74 through 1976/77 worker remittances was the predominant element in the strong upward movements in all of the main macroeconomic areas.

In 1977/78, things began to change.

For remittances, after roughly doubling each year through 1976/77, the increase dropped to 32 percent the next year and to only 6 percent in 1978/79,

in real terms, a modest decline. /The possible future course of remittances will be considered in the concluding section of this study. In the present discussion it is assumed that remittances will continue at about present levels for at least the next two or three years. Where a longer time-horizon is considered, this assumption is modified./

The levelling off of remittances is having a number of major consequences. One important effect is a tendency for imports to begin to level off as well, although doubtless at a slower pace and with some lag in time. To a degree, this has already started. In the two years since the remittance trend began to flatten out, the annual increase in imports averaged only 39 percent as compared to nearly 70 percent for the previous two years. Whether the demand for imports will level off soon, as remittances appear to be doing, is not clear. But even if imports continue to increase for a time, financed by a drawdown of foreign-exchange reserves, they will have to level off eventually as the reserves are depleted. (The data through December 1979 show that reserves had fallen by $186 million from their peak of $1,613 million in March.)

As the import trend begins to flatten out, revenues will be significantly affected because of the importance of import-related revenues in the total. The preliminary data for 1977/78 show customs duties as 68 percent of total revenues (with interest on foreign-exchange reserves accounting for an additional 12 or 13 percent). The period of revenue increases of 50 to 100 percent per year is clearly coming to an end.

Family savings, which have been a major use of remittances, are probably also beginning to level off. While there are no firm data on these savings, they are plainly quantitatively important. A very rough estimate (working backwards from the relationship between increases in the money supply and increases in GNP) suggests that in 1977 household savings in cash were probably as much as YR 1 billion ($220 million); and they probably continued to increase for a time thereafter.

The data are not yet available for a clear assessment of the effect of the levelling off of remittances on GNP growth, but it probably is substantial as is suggested by the preliminary data for 1977/78.

III. THE GOVERNMENT AND THE ECONOMY

The Government has generally been following economic policies that provide an open economy, leaving most price and related decisions to market forces. Monetary policy appears to have been generally well-suited to the needs of the economy. These areas will be considered, but only briefly because no major changes seem indicated.

The most important role of the government in the immediate future should be to take advantage of the present opportunity to curb inflation. With remittances and the amount of foreign exchange reserves levelling off, the principal cause of past inflation, i.e., monetization of the foreign-exchange reserves, is gone. The limited evidence available suggests that the rate of inflation is dropping significantly. Whether that decline continues or whether there will be a renewed increase -- or even a spiral -- in inflation will depend primarily on government choices in the fiscal area.

Overall government finance is examined in this section largely within the context of its relation to price increases. This is the urgent priority. Curbing inflation is an immediate opportunity -- and the challenge. It must be dealt with, if it is to be dealt with effectively, within the next year.

In the case of revenues, however, the discussion here goes somewhat beyond the immediate question of their relation to inflation, in order also to consider an objective that is both immediate and longer term -- that of broadening the tax base and increasing revenues from domestic sources.

In the case of expenditures, a rate of increase lower than that in the recent past appears to be the key to controlling inflation. This will require stricter priorities. Expenditure priorities are discussed only in general terms in this section, with a more concrete treatment deferred until after consideration of the areas to which priorities must be applied -- public services, infrastructure, agriculture, and industry.

A. Economic Policies

An open economy. Many developing countries with shortages in foreign exchange, tax revenues, investment capital, and employment opportunities, resort to systems of government controls and bureaucratically determined allocations in an effort to "stretch" their scarce resources. Unfortunately, these efforts are often unsuccessful in achieving even their immediate objectives. And nearly always the substitution of bureaucratic decisions for market-determined ones slows the rate of overall growth.

The Yemen Arab Republic Government did not adopt such a system of controls in its early years. And with the sharp increase in remittances beginning in 1974/75, the kinds of pressures often leading to such regulations and controls has largely abated. The Yemen economy is a relatively open one with market forces generally allowed full play.

Government economic policies in the main policy areas are as follows:

Foreign exchange is freely available without controls. The licensing system is for statistical information only.

Tariffs, which run on an average at about 25 percent, are generally for revenue only. There are a few exceptions, of which the tariff on cotton textiles, to provide some protection to the government-owned textile plant, is the most important.

Subsidies are not used extensively. There is some subsidy on petroleum products which is roughly equal to the excise tax on them. The recently created government supply agency sells wheat and other imported foodstuffs to government workers at prices below those in the market. Another government action lowering the price of imported foods, although not a subsidy, was the elimination in 1977 of customs duties on wheat, flour, and some milk products.

Yemen has not had any need in recent years to create artificial employment opportunities as, for example, Egypt and Syria have done.

Public sector enterprises are a relatively small part of the total economy, which is still heavily agricultural. They are of course a much larger part of the modern sector. Yemen has about a dozen state economic enterprises, most of which were created between 1970 and 1975. The most important include the airline, the Sana textile plant, the cement company, the electric power company, the Yemen Development Bank and the petroleum company. Most of these government entities are in activities too large for financing by the private sector, and some are subjected to a degree of competition through imports or otherwise. (Public sector enterprises are discussed further in the section on industry.)

As implied by the comments above, the private sector is relatively unhampered by regulations or controls. It has, to the extent that predominantly small-scale enterprises can be expected to, shown a considerable degree of dynamism in meeting the burgeoning demands arising from the growth of worker remittances.

These policies providing for an open economy, with most price and related decisions being determined by market forces, have served the country well. This orientation of economic policies should be continued -- as presumably it will be.

Monetary policy and commercial credit. The regulation of bank credit has been the principal instrument of monetary policy, but it has been only a modest one. The vast increase in the money supply in recent years has been very largely due, as will be shown below, to the monetization of the rapidly increasing foreign exchange reserves, which in turn was due to forces largely beyond the Government's control.

Bank credit has not played a major role in the Yemen economy because most transactions are carried out in cash and the banking system is limited primarily to the few major cities. Even with continuing expansion of the banking system, demand deposits are equal to only 13 percent of currency in circulation, and all bank deposits together are only slightly more than a quarter of the total of broad money (i.e., money and quasi-money combined).

The bulk of commercial bank credit (from 60 to 70 percent) has been in short-term loans to finance imports and their distribution. The net effect of this bank credit has doubtless been deflationary since it has served directly to increase the supply of goods available. Some bank credit has been used, indirectly, to finance speculation in land and real estate. Although this seems clearly undesirable, the amounts involved are believed to be small.

The commercial banks are being urged to extend more medium-term credit for fixed investments. While such credit is largely beyond the scope of usual commercial-bank activity, there has been a substantial increase. In 1978/79 medium-term loans made up four percent of total bank credit. The principal recipients are reported to be hotels in Sana and a brick factory. The major limitation to the extension of such credit appears to be a lack of bankable projects.

On the whole, monetary policy seems to have been well adapted to the needs of the economy and to have served the private sector satisfactorily.

One aspect of monetary policy does call for rectification. Interest rates for bank loans, which had been at 12 to 14 percent, were reduced in 1978 to 10 percent, in order to bring the rates in line with international rates and eliminate an incentive for an inflow of unneeded international funds. But with international short-term rates having since risen sharply, the effect of Yemen's reduced interest rate is the reverse of that intended. The rate should surely be returned to at least the 14 percent level (unless this has already been done) which under present circumstances is probably still a negative rate in real terms.

B. Curbing Inflation: A Major Government Role for the Immediate Future*

Inflation has been running at a high rate in recent years. The Sana retail price index (the only indicator available) shows an increase of slightly more than 20 percent each year from 1974/75 through 1977/78, and even this, many observers believe, substantially understates the true rate of inflation.

Remittances have been the main underlying factor. The massive increase in remittances gave rise to a great increase in the demand for domestic goods and services, and for imports. But the capacity of the economy to increase supply has been limited, and the increase in total demand reflected in an increased demand for imports was not great enough to make up the (Until the expansion of the effective capacity of the main port, Hodeida,

*This part, and part D below on a non-inflationary budget, are extensively excerpted in the Summary and Excerpts section of the paper.

beginning in 1978, there was also an important physical limitation to the level of imports.) It should be noted that the inflationary forces involved have been largely beyond governmental control.

The effect of remittances on inflation can also be stated in monetary terms. Most of the remittances, originally in foreign exchange, were converted into Yemeni rials and thus increased the money supply. The subsequent conversion throughout the economy of rials into foreign exchange to buy imports was in a lesser amount, thus leaving net increases in both the money supply and the level of foreign exchange reserves. The predominance of the monetization of foreign-exchange reserves in increasing the money supply can be seen from the following:

(millions of Yemeni rials)

	Money supply	Foreign exchange reserves
1973/74	728	693
1974/75	1,142	1,186
1975/76	2,509	2,607
1976/77	4,370	4,106
1977/78	6,205	6,119

The price increases during this period were thus in large part the unavoidable cost of the large buildup that took place in foreign exchange reserves. As such, they may well have been, at least up to a point, worth the cost. In any case, with the economy booming and most elements moving upward together, they were probably more acceptable than they are likely to be in the future.

There were also, of course, other factors affecting the money supply, primarily the budget and bank credit. These factors, however, were quantitatively much smaller.

Starting in 1978/79 the monetary situation began to change. The monetization of the increases in foreign-exchange reserves, taken alone, increased the money supply by only 12 percent during 1978/79 as compared with 46 percent in the preceding year. (The corresponding figures for the total money supply, including quasi-money, are 22 percent and 72 percent.) The Sana price index for the last half of calendar year 1978 (latest available) increased at an annual rate of only 17 percent as compared to the preceding 21 percent. Moreover, the indications are that a drawdown of reserves actually had a contractionary effect in the last half of calendar year 1979. During this period commercial bank credit continued to increase at only moderate rates. These indications strongly suggest that the rate of inflation is definitely dropping.

With the major -- and largely uncontrollable -- source of past inflation evidently abated, there is now the first real opportunity to bring inflation under control. One factor will of course be continuing restraint in the expansion of commercial bank credit, but very much more important will be controlling the growing forces leading to rapidly increasing budgetary deficits.

Taking advantage of this opportunity to control inflation is of great importance; the opportunity may not occur again if large-scale inflationary financing becomes an established pattern in budget formulation. In fact, as will be shown below, if budget deficits are allowed to grow, not only will they tend to become self-perpetuating, but they may well be at increasingly higher levels.

Curbing inflation at this stage appears to be important -- and perhaps even critical -- to Yemen in achieving sustained economic growth. Although sustained growth is sometimes achieved despite inflation (Brazil is probably the most conspicuous case), the more typical case is with relative price stability. This is shown in Taiwan and Korea, who have been the leaders among the developing countries in economic growth with annual rates in real terms from 1960 to 1976 of 9.0 and 9.6 percent. In Taiwan, from 1961 through 1972 (after which prices there, as nearly everywhere else, rose rapidly for a time) the annual rate of inflation was less than 3 percent. In Korea, from the end of the war until 1964, per capita GNP growth averaged only 1.7 percent while inflation averaged 20 percent. During the next decade, when inflation had dropped to an average of 9 percent, per capita growth jumped to an average of 8.1 percent. /All data are from the World Bank Atlas and the IMF's International Financial Statistics./

There are two special additional reasons why controlling inflation is important at this time in Yemen. One is political. Although political considerations are in general beyond the scope of this paper, the possible political effects of inflation on savings seem worth noting. As already observed, household savings in cash in 1977 were probably at least YR 1 billion, and they have doubtless increased substantially since. When remittances, and presumably savings, were doubling every year, some loss to inflation was probably accepted with equanimity. But with remittances and the level of savings flattening out, attitudes will change. A continuing inflation rate of 20 percent would reduce the value of savings by half in only three years. It seems likely that this would create widespread dissatisfaction.

The other special consideration has already been noted. Inflation generated by the budget would, under present circumstances, very probably be self-perpetuating at ever-increasing levels. In the Yemeni fiscal structure, the main effect of inflation would be on expenditures, where costs would tend to go up at the inflationary rate. It would not affect customs duties, the main source of revenue, by nearly as much. Inflation would thus tend automatically, over time, to widen the budgetary gap. (This subject will be considered in more detail later.)

C. The Budget

For the future, the main inflationary danger may be expected to come from the budget. Yemen is passing from a period when budget surpluses were almost automatic to a situation in which deficits are large and growing.

Two trends are rapidly increasing the inflationary effect of the budget. With the levelling off of remittances and a reduction in the rate of growth of imports, customs duties are also showing a reduced rate of increase. On the expenditure side, however, the government is showing a rapidly increasing capacity to spend money effectively. For the current budget, the previous constraints of a lack of trained personnel are evidently beginning to give way. And for the capital budget, the long period of necessary preparation has been completed for an increasing number of projects and the implementation phase is accelerating.

These trends do not reflect changing policies but, rather, are simply the result of changing circumstances. Even so, they are resulting in large and growing deficits. And these deficits will increase unless policy decisions are made to sharply reduce the rate of increase in expenditures.

Before assessing further the potential inflationary consequences of these recent overall developments, the main components of the budget -- revenues, current (operating) expenditures, and capital expenditures -- will be examined in some detail.

Revenues. Prior to the revolution, taxes were the private preserve of the Imam. There could scarcely have been much feeling on the part of the taxpayer that he was getting much in return (except, perhaps, from the religious taxes). Given the lack of a tradition of tax-consciousness or tax obligation, the tax performance in Yemen in recent years has been surprisingly good.

Since the end of the revolution, revenues have shown a continuous upward trend, as shown in table 5. Total revenues have increased about twenty-fold, which in real terms is on the order of six-fold. As a percent of GNP they have gone from 5 to 13 percent.

The revenue increase has been a striking development but, like nearly everything else in the Yemen economy, it has been primarily dependent on the increase in remittances. The biggest revenue source by far has been customs duties. The second largest source -- approaching the magnitude of all non-customs taxes combined -- has been government investment earnings, of which the main element is interest earnings on foreign-exchange reserves held abroad.

Recently, the rate of increase in revenus has begun to drop. From FY 1974/75 to FY 1976/77, the annual increase averaged 84 percent. But

Table 5

GOVERNMENT REVENUES, AND
THEIR RELATIONSHIP TO GROSS NATIONAL PRODUCT

(amounts in millions of Yemeni rials)

	Actual				Budget		
	1970/71	1973/74	1976/77	1977/78 (prelim)	1977/78	1978/79	1979/80
Gross national product	1,976	3,789	11,462[p]	14,976[e]			
Total revenues*							
Amount	97	277	1,293	1,925	1,456	2,198	3,012
Percent of GNP	4.9	7.3	11.3	12.9			
Customs duties							
Amount	53	156	929	1,304	989	1,395	
Percent of GNP	2.7	4.1	8.1	8.7			
Investment earnings**							
Amount	3	16	157	276	115	320	
Percent of GNP	0.2	0.4	1.4	1.8			
Other revenues*							
Amount	41	106	207	344	348	483	
Percent of GNP	2.1	2.8	1.8	2.3			

p/ Preliminary
e/ Estimate by writer
*Exclusive of foreign grants and loans
**Includes profits from government enterprises. Major component is interest earned on foreign-exchange reserves held abroad.

from FY 1977/78 to the present budget, the increase has been averaging only 25 percent, attributable primarily to the declining rate of increase in customs revenues. It is difficult to assess this trend accurately from the budget estimates, given the serious underestimate for FY 1977/78, an underestimate that appears to have been corrected by FY 1979/80. In any case, the direction is clear. The rate of increase in imports is declining -- from an annual rate of 68 percent between 1974/75 and 1976/77, to a rate of 39 percent between 1976/77 and 1978/79 -- and a further tapering off is very probable.

The schedule of customs duties has been constructed as a revenue tariff (cotton textiles being a major exception), with rates averaging about 25 percent. Some reexamination to increase its revenue potential might be in order. For example, the rate of 167 percent on cigarettes is a strong incentive for smuggling, which is reportedly widespread. A lower rate with stronger enforcement might well increase yields. Also at some future time reimposition of a revenue tariff on food imports will probably be advisable. At least token levies now, to establish the principle, would appear to be desirable.

With the rate of increase in customs receipts beginning to taper off, taxes other than customs will, in the years ahead, need to increase substantially; initially, large percentage increases will be needed just to achieve moderate absolute increases. It is therefore useful to examine these taxes in some detail. Historical data are summarized in table 6.

Personal and business income taxes were instituted in 1968 and 1972, respectively. Although still yielding only 0.7 percent of GNP, they have increased substantially. (The large differences between the budget estimates for 1977/78 and the preliminary actuals for that year, as well the fact that budgeted amounts for 1978/79 are below the reported actuals for the previous year, raise some question as to the comparability of the figures.) The reported increase in the tax receipts since FY 1973/74 is, if reasonably accurate, a good performance. Even so, the limited evidence available indicates that the efficiency of collection leaves a great deal to be desired. Present rates are relatively low, a maximum of 15 percent on personal income and of 25 percent for most business income.

Taxes on petroleum and on vehicles (YR 300 for a five-passenger car) should be capable of yielding substantial increases in revenue. Since cars are a luxury item and large investments are being made in roads, high taxes on their use appear warranted and should be seriously considered.

The zakat, or religious taxes, are traditional taxes similar to a tithe. There are several, the most important of which is a 10 percent tax on the value of crop production. No major increases are likely here. Even so, the tax is a very important one since three-quarters of the yield is reserved for local use through the Local Development Associations (LDAs), a very important institution for self-help development activities at the local level.

Table 6

REVENUES FROM THE DOMESTIC ECONOMY*
(amounts in millions of Yemeni rials)

	Actual			1977/78		
	1970/71	1973/74	1976/77	Actual (prelim)	Budget	1978/79 Budget
Personal income tax						
Amount	2	10	16	39	16	31
Percent of GNP	0.1%	0.3%	0.2%	0.3%		
Business income tax						
Amount	0	6	22	57	24	54
Percent of GNP		0.2%	0.2%	0.4%		
Petroleum tax						
Amount	8	18	21	39	42	70
Percent of GNP	0.4%	0.5%	0.2%	0.3%		
Motor vehicle taxes						
Amount	2	3	6	22	8	30
Percent GNP	0.1%	0.1%	0.1%	0.1%		
Religious taxes (Zakat)						
Amount	7	16	33	32	30	54
Percent of GNP	0.4%	0.4%	0.3%	0.2%		
Stamp taxes						
Amount		9	34	61	27	60
Percent of GNP		0.2%	0.3%	0.4%		
Administrative fees						
Amount	21	27	47	61	84	119
Percent of GNP	1.0%	0.7%	0.4%	0.4%		
Miscellaneous						
Amount	1	16	28	33	117	65
Percent of GNP	0.1%	0.4%	0.2%	0.2%		
TOTAL REVENUES FROM THE DOMESTIC ECONOMY*						
Amount	41	106	207	344	348	483
Percent of GNP	2.1%	2.8%	1.8%	2.3%		

*Does not include the portion of revenue from government investment, reported in table 5, that is derived from domestic government enterprises.

The large discrepancies between the amounts budgeted for FY 1977/78 for some of the individual revenue categories and the preliminary figures for the actual receipts would appear to be attributable to a difference in classification, since the figures for total revenues from the domestic economy check in very closely.

Other major revenue sources are stamp taxes and administrative fees. There should be a good prospect for increasing them somewhat, but they are not likely to become a really major source of revenue.

It is also reported that a turnover tax has recently been instituted, but it does not show up in budget data presently available. The possibilities of this and/or a sales tax should be fully explored along with property taxes in urban areas, as a parallel to the agricultural zakat in rural areas.

For the future, these non-customs taxes will have to yield very much higher levels of revenue if Yemen is to avoid serious fiscal problems. Since it will take time to develop them, early action is important. Among the needs are what is called elsewhere a "tax consciousness" or sense of "tax obligation." One important element in achieving public acceptance is strengthened and improved administration -- the development of a collection system that is equitable, efficient and certain. The Ministry of Finance is reportedly making strong efforts in this direction. It is important that these efforts receive full support.

Operating expenditures. The rate of increase in current (operating) expenditures continues to show some upward movement, as is indicated in table 7. This is true despite the increasingly large absolute amounts involved and some tapering off in the rate of increase in revenues.

Table 7

GOVERNMENT CURRENT EXPENDITURES
(amounts in millions of Yemeni rials)

	Actual		Budget			Percentage distribution	
	1975/76	1976/77	1977/78	1978/79	1979/80	1975/76	1978/79 budget
Offices of the President and Prime Minister	YR 46	YR 64	YR 112	YR 144		8%	9%
Finance	57	61	99	128		9	8
Interior (security)	58	77	103	160		9	9
Defense	300	423	463	612		49	36
Education	52	63	117	265		8	16
Health	22	30	64	83		3.6	5.0
Agriculture	3	4	12	14		.5	.8
All other	78	119	237	270		13	16
TOTAL	616	841	1,206	1,676	2,426	100	100
Annual increase		36%	43%	39%	45%		

There have also been important changes in the composition of current expenditures, also shown in table 7. The four to five-fold increase in only three years in the budgets for the Ministries of Education, Health, and Agriculture indicates a serious concern for increasing services in these areas. The fact that the absolute amounts are still relatively small is presumably a reflection of the fact that personnel must be specially trained in these areas to be very useful and the number of trained people remains small.

There has been another important change in composition in the current budget: salary payments have gone up more rapidly than the budget as a whole. Following an increase in Chapter I of the Budget (the salary component) of only 16 percent in FY 1976/77, the increases in the next two years were 94 percent and 50 percent. It is not known (from information available here) how much of these increases were concentrated at the higher levels -- where the needs to attract and retain capable people were the greatest -- or how much went to pay increased numbers of personnel. But, from the sheer magnitude of the increases, it seems safe to presume that they have gone a long way toward making government employment more competitive with employment elsewhere.

There are no obvious candidates for major reductions in current-account expenditures. The large recent increases do suggest, however, the possibility that some areas may have been expanded at a rate that exceeds the growth in the capability to use funds effectively.

There are some specific items that should be considered. One item, although not entirely in the current budget per se, is subsidies on petroleum products which, taken together, are estimated at YR 80 million for FY 1979. These should surely be discontinued. Another possibility is reduction in personnel. Although there is an acute shortage of qualified people for the top positions, there is reason to think that there is an excess of personnel at some levels. Total civilian personnel is reported to have increased from 13,500 in 1970 to 31,300 in 1975, and has probably increased substantially since then. Personnel reductions are always difficult but should be easier in this period of labor shortages and might yield savings that could be very important in the years ahead.

For the future, the rate of increase in current expenditures should surely be less than that experienced in the recent past. But for the present, really substantial savings in current expenditures are probably not practicable without serious curtailment of needed public services.

The capital budget. In principle, the capital expenditures in the annual budgets are guided by the Five Year Development Plan, 1976/77 to 1980/81. The Plan calls for total investment of YR 16 billion ($3.5 billion) in constant 1975/76 prices. Roughly one-third of the total investment is to be carried out by the Central Government per se, one-third by public- and mixed-enterprises, and nearly one-third by the private sector. Over 60 percent of the total is for projects in infrastructure and other service sectors. More than half the investments are to be financed from domestic savings.

The Plan is obviously too ambitious. It calls for an increase in gross fixed-capital formation from 10 percent of GNP in the base year, 1975/76, to 51 percent of GNP (72 percent of GDP) by 1980/81. The overly ambitious size of the Plan was reportedly generally agreed to at the International Development Conference with aid donors held in Sana in late 1977. It is important, however, not only that the overall investment levels be cut back (some of which has taken place), but that this process be carried out selectively rather than haphazardly.

As can be seen in table 8, capital expenditures in the annual budget have been increasing sharply.

Table 8
GOVERNMENT CAPITAL EXPENDITURES
(in millions of Yemeni rials)

	Actual				Budget		
	1974/75	1975/76	1976/77	1977/78 (prelim)	1977/78	1978/79	1979/80
Capital expenditures included in budget documents:							
Budgeted expenditures	69	131	274	599	632	1,007	1,272
Capital transfers	21	39	141	268	184	454	685
Total	90	170	415	867	816	1,461	1,957
Capital expenditures financed from foreign loans*	115	191	188	271	510	675**	n.a.
TOTAL CAPITAL EXPENDITURES	205	361	603	1,138	1,326	2,136	

*Figures actually represent proceeds from foreign loans, a close approximation of the expenditures finaced by them.
**Preliminary balance-of-payments data indicate an actual level of YR 575 million.

After more than doubling in FY 1976/77 and again in FY 1977/78, capital expenditures for FY 1979/80 (including those financed from capital transfers but not those from foreign loans, which are not included in the Yemeni budget documents) were budgeted to increase to almost YR 2 billion, reflecting an average annual increase that is still more than 50 percent. The absolute amounts of the increases continue to grow. As a percent of the total budget, capital expenditures (excluding those financed externally) have increased from 16 percent in FY 1974/75 to 45 percent in FY 1979/80.

It is clear simply from the magnitudes that any major anti-inflationary budgetary policy will have to be based to a considerable degree on reducing the high amounts of the increases in the capital budget. Such action will also help to ease future budgetary pressures since most non-revenue-producing capital projects require current expenditures in subsequent years for their operation and maintenance.

As a part of the capital budget, a large and growing item is capital transfers, which are used primarily for financing government enterprises. By FY 1979/80, they have become more than one-third of the total capital budget. As also shown in the table, the preliminary actuals for FY 1977/78 exceeded the budgeted amount by nearly half, which suggests that these expenditures (evidently financed in large part by direct borrowings from the Central Bank) are subject to less strict budgetary controls than other expenditures. There is not enough information available (here) to analyze the capital transfers in detail, but it seems clear that they should be subject to careful scrutiny.

An important item of capital expenditures not included in the regular budget is expenditures from foreign project assistance. As shown in table 8, this is a major source of investment. Preliminary balance-of-payments data for FY 1978/79 indicate disbursements of YR 575 million ($128 million), an increase of 112 percent over the previous year. It is evident that many foreign-aided projects are reaching the stage of rapid implementation. Since foreign funding approximately equals expenditures for this category, it does not have a direct inflationary effect. But indirectly it may have. To the extent that only the foreign-exchange component is financed by aid, the local cost component adds to total capital expenditures in the budget. And even if the aid covers local costs as well, there may be some pressure on domestic prices to the extent that the aid foreign exchange is not needed for additional total imports into the economy. None of this is to say that foreign aid projects should be turned down because they might have some inflationary effect. But Yemen should seek aid financing for the total costs of projects (including domestic costs) where possible, and foreign aid should be channeled into the highest priority activities.

The content of the capital budget will be considered further in the sections on infrastructure, agriculture, and industry below.

D. The Key to Inflation Control: a Non-inflationary Budget

With the past major cause of inflation -- the monetization of the huge increases in foreign exchange reserves -- abated, and with credit expansion for the private sector limited, budget deficits may be expected to be the principal cause of any inflation that takes place in the immediate future.

Until recently, the budget has had surpluses with some deflationary effects. In a sense, these surpluses were almost automatic, with sizable foreign budget support and the large increases in customs revenues outstripping the government's capacity to make effective expenditures. Current expenditures were limited to a considerable degree by the availability of qualified personnel, and capital expenditures on a major scale awaited completion of the project preparation phase for many projects before implementation on a large scale could begin.

Recently, however, there has been a marked change in both the revenue and the expenditure trends: revenues are increasing much less rapidly, while expenditures continue to climb.

As can be seen from table 9, during the period FY 1974/75 to FY 1976/77 revenues were increasing at an average annual rate of 84 percent, while expenditures were increasing at an annual rate of only 49 percent. In FY 1977/78 the two rates of increase were more nearly equal. Over the next two years (i.e., through the current fiscal year 1979/80), the relationship has reversed sharply. As budgeted (actual data are not yet available), revenues will have increased on the order of only 25 percent annually as against an increase of 44 percent in expenditures.

At the same time, foreign cash grants in support of the budget have tended to remain relatively constant over most of the period. Using the Government's net position with the Central Bank (roughly approximating the difference between government revenues and expenditures after allowance for the cash grants for budget support) as a relatively conservative indicator of the inflationary impact of government finances,* the budgeted revenues and expenditures for FY 1979/80 will have resulted in a sharp swing from a deflationary surplus of YR 66 million in FY 1977/78 to an inflationary deficit of YR 971 million in FY 1979/80,** equal to 32 percent of total revenues. Such a major reversal in so short a time calls for serious attention.

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*Neither the "overall surplus or deficit" (the difference between revenues and expenditures), or the "change in net position with the Central Bank" is wholly satisfactory as a measure of the deflationary/inflationary impact in that each of them reflects external (as well as domestic) receipts and expenditures which do not affect the economy directly. /For example, the earnings on foreign-exchange reserves held abroad do not decrease purchasing power in the economy (as do taxes collected); and government expenditures for purchases from abroad do not increase domestic purchasing power (as do government capital projects involving local labor costs, or an increase in government salaries)./ It is not, however, possible with the information available here to estimate with any accuracy the net effect of these external transactions in the recent past, much less to project it for the future.

As between the two possible measures of the "inflationary deficit" shown in table 9, the change in net position with the Bank is the more conservative measure, since it includes foreign cash grants even though, as external receipts, they do not actually have a direct deflationary effect. (Rough estimates from the limited information available suggest that for FY 1978/79 the inclusion of external transactions, including budget support, results in an understatement of the inflationary impact of the budget, but this would not necessarily be the case for future years.)

**As reported in IMF's International Financial Statistics, the Government's net position with the Central Bank had decreased by YR 702 million in the first quarter of FY 1979/80 suggesting that the actual deficit may turn out to be even greater than the budget estimate, although there may have been special factors operating during the period.

Table 9

MAJOR COMPONENTS OF GOVERNMENT FINANCE*
(in millions of Yemeni rials)

	Actual				Budget estimates
	1973/74	1974/75	1976/77	1977/78 (prelim)	1979/80
Revenues:	277	381	1,293	1,925	3,012
Customs and investment earnings		260	1,086	1,580	2,400e
Other		121	207	344	612e
Expenditures:	336	562	1,256	2,102	4,383
Current	322	472	841	1,235	2,426
Budgeted capital expenditures	14	69	274	599	1,272
Capital transfers	0	21	141	268	685
Overall surplus or deficit	-59	-181	+37	-177	-1,371
Cash grants for budget support	128	389	418	401	400e
Change in net position with the Central Bank**	+47	+207	+485	+66	-971

e/Estimate by writer

*The figures here, in conformity with the Yemeni formal budget, include foreign cash grants for budget support, but do not include either the receipts or the expenditures from foreign loans. Since the proceeds from these loans and the outlays financed by them tend to coincide even within the same time frame, the surpluses (or deficits) are not significantly affected by the omission. (The proceeds from foreign loans are shown in tables 8 and 10.)

It might also be noted that the preliminary actuals for FY 1977/78 are being compared, in effect, with the budget estimates for FY 1979/80. This is done because the FY 1977/78 budget estimates seriously understated customs revenues and investment earnings, underestimates that seem to have been corrected by the FY 1979/80 budget. (For the other items, the FY 1977/78 budget estimates were reasonably accurate.)

**The change in net position does not exactly equal the difference between overall surplus (or deficit) and cash grants for budget support. The discrepancy represents a "statistical adjustment" reflecting in part various lags in reporting. The adjustments are small for all of the years except FY 1977/78, presumably attributable to the fact that the revenue and expenditures data for the year are still preliminary.

At this deficit of nearly YR one billion, the inflationary pressures are already disturbing. If the budget trends of the past two years were to continue for just one more year, they would become very much more so. Revenues would increase by 25 percent to YR 3.8 billion while expenditures would increase by 44 percent to YR 6.3 billion. The FY 1980/81 budget would then have an "inflationary deficit" (even after allowing for budget support estimated at a continued YR 400 million)* of YR 2.1 billion.

A deficit at this level would have severe inflationary consequences (unless there were to be a large contractionary increase in saleable imports). It would result in an increase in the money supply on the order of 25 percent, much more than the needs of the economy. The past needs of the economy for a rapidly expanding money supply to cover rapid growth, rapid monetization, and large increases in cash saving are presumably tapering off, although the need for modest increases in commercial bank credit will continue. Given these factors, the budget-created increase in the money supply might be expected to cause price increases in 1980/81 on the order of 20 percent if -- but only if -- present trends are allowed to continue.

At this point an even more adverse possible consequence must be considered in some detail. The structure of the Yemeni budget is such that even if there were to be no further increases in expenditures after FY 1980/81, except to allow for price increase, the proportion of the budget covered by inflationary financing would still increase. Costs would generally go up by the rate of inflation. But the principal sources of revenue, customs duties (and presumably interest earnings on foreign exchange reserves), would increase much less.

The critical implications of this relationship can be illustrated by making projections for an additional two years. Starting with the projection made above for FY 1980/81, this further illustrative projection assumes that imports and customs duties will have levelled off and that other revenues will have continued to increase at the same rate as inflation. For expenditures, it is assumed that no increases are made except to cover the presumed inflation rate of 20 percent. Projections on these assumptions would increase the "inflationary deficit" from a level of YR 2.15 billion projected on past trends for FY 1980/81 to a level of YR 4.5 billion, roughly 32 percent of the estimated money supply, by FY 1982/83.** <u>The size of the budget deficits and the rate of inflation would have to be continuously increased just to keep government services and real investment at a constant level</u>.

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*The future level of budget support is of course uncertain, but the figures for the recent past in table 9 suggest no major change. Recent developments as reported in the press make the future levels of budget support even more uncertain. Whatever they turn out to be, however, the underlying trends in the budget analyzed in this study will continue to merit attention.

**(footnote on next page)

The projections above are of course not predictions. And some of the underlying assumptions and some of the specific figures are, of course, open to some question. (For example, customs duty receipts may increase some and it may be possible to get substantial percentage increases in taxes other than customs.) The projections do, however, strongly suggest that the present budgetary trends, if unchecked, might well start an inflationary spiral that would be serious indeed.

Plainly the time to deal with this serious danger is before it becomes critical, and this point has very nearly been reached. The budgets for FY 1980/81 and FY 1981/82 must utilize much more stringent criteria than have been required in the past. And the Second Plan must be more selective than the first.

The basic concept is priorities in order to slow the rate of increase in expenditures. Hard priority choices have not been necessary (until recently) since non-inflationary financing was generally available for all "good" activities. But now the choice of outlays must be much more selective. And, for the immediate future, priorities should give at least as much weight to the urgency, or the deferability, of a given project as to its intrinsic desirability. Other actions of course should also be taken. Maximum efforts should be made to increase non-customs tax revenues. In the longer run, non-customs revenues should be of great importance but, since they start from a low base, even large percentage increases will not yield large absolute increases in the short run. Also, further economies in current expenditures may be possible. For example, the increase in Title I (the salary category of the budget) of 189 percent between FY 1976/77 and FY 1977/79 may have been adequate to correct past deficiencies if future inflation is held in check. But the basic approach must be priorities to sharply, and quickly, reduce the rate of increase in expenditures.

(Footnote from preceding page)

**The key figures in the illustrative projections are:[1]

	Budget 1979/80	Illustrative projections 1980/81	1982/83
Revenues			
Customs and investment earnings	2,400[e]	2,820	2,820
Other	612[e]	940	1,360
Total	3,012	3,760	4,180
Expenditures	4,383	6,310	9,090
Cash grants	400[e]	400	400
Borrowings from the Central Bank	971	2,150	4,510

e/ Estimate by writer

1/ Both revenues and expenditures exclude disbursements from project loans.

This central question of strict priorities in the budget as the basis for controlling inflation will be examined more concretely after the following consideration of the main areas -- public services, infrastructure, agriculture, and industry -- to which priorities must be applied.

IV. INVESTMENT IN PEOPLE AND INVESTMENT IN INFRASTRUCTURE

A basic choice must be made on the relative emphasis between investment in people and investment in infrastructure. These are the principal developmental expenditures of the government (except for capital transfers to public entities, which will be considered in the section on industry below). The budgetary priority given to education and health relative to such areas as roads and electric power will be of basic importance in how socio-economic development actually takes place in Yemen in the years ahead.

Unlike agriculture and traditional industry, these areas had an almost negligible base until recent years. Considerable progress has been made in infrastructure, particularly the basic transportation network, although a great deal remains to be done. In the social services, only a small beginning has been made outside of the urban areas.

A. Investment in People

The people of Yemen are its most valuable resource. Land and water are scarce. There is no known mineral wealth (although exploration to date has been limited and is of course to be pursued). Although Yemen is starting from a low base of education and health, the importance of its human resources is already demonstrated by the role of remittances in the economy. An important asset in this regard is the reputation that the Yemeni have in Saudi Arabia and elsewhere for being hard workers.

The investment element in education and health programs is difficult to quantify, but it is clearly important. It is interesting to note, for example, that in Taiwan and Korea, which as already stated are development leaders, literacy rates are extremely high. In 1975, adult literacy stood at 82 percent and 91 percent, respectively, and in Korea had already reached 71 percent as early as 1960. As to health, it is obvious that a worker with a debilitating disease cannot be a fully productive one, although again the quantitative relationship is not clear.

The investment aspect of programs in health and education should not obscure their importance in meeting basic human needs. This has a particular relevance for Yemen, which lags behind in precisely these areas. With the rapid rise in remittances, the basic needs of food and clothing are surely being more adequately met from vastly increased imports. But in education and health services, which cannot be imported, Yemen continues to lag far behind most other countries with similar incomes simply because of the time it takes to develop these areas adequately. For example, adult literacy at 13 percent (although up an encouraging degree from the 3 percent level of 1962) compares with an average of 38 percent for countries in the $250-449 per capita GNP range.

Either the productivity of investing in people or the importance of satisfying unmet basic needs would give a high priority to increased government services. When these two priorities coincide in the case of education and health, the priority is high indeed.

The Government has recognized the priority of investment in people. Funding for education and health has been the fastest rising element in the whole budget. Even so, since it started from such a low base, it is still only 18 percent of total allocations in the FY 1979/80 budget. Here as elsewhere, however, priorities even within a priority category should be selective. For example, general university education can be overexpanded as is shown by the problem of the "educated unemployed" in many developing countries. In the health field, modern hospital facilities are simply too expensive at this stage to be affordable except for the fortunate few, while general health services at a much lower cost and higher relative return should be aimed at gradually being available to all. Continued priority seems clearly desirable for health and education to the extent that they can use additional funds effectively.

The treatment of public services in this paper will not attempt a comprehensive survey of this whole broad area. It will simply make some brief observations on primary education, health services (including safe drinking water), and rural development activities as carried out by the Local Development Associations (LDAs). The problems of education and health are predominantly rural simply because that is where the people are. Roughly 90 percent of the population lives in some 17,000 villages, most of them with populations of 500 or less. The LDAs are proving to be an important means of linking the villages with the resources available for increasing public services.

Primary Education. The discussion here is limited to primary education. This is for reasons of brevity and is not intended to downgrade the importance of secondary, vocational, and higher education. Primary education, however, is the starting point. Widespread, high-quality primary education -- in addition to its intrinsic importance -- is a prerequisite for an effective large-scale expansion of education at the higher levels.

The growth of primary education in Yemen in recent years has been impressive. From 1970 to 1976 enrollment increased by an average of 27 percent per year. Even so, the enrollment of 253,000 pupils by 1976 was only 27 percent of the relevant age group. Moreover, there is reason to think that some of this increase in quantity was at the expense of quality. Often teachers in the first and second grades are dropouts from

the fifth and sixth grades. In addition, it appears that the growth has been concentrated in urban areas where some schoolrooms are overcrowded with more than 100 students while many rural schools are unused for lack of teachers. This imbalance suggests increasing difficulties for future expansion as schools in increasingly remote areas have to be staffed.

The Five Year Plan envisages a rate of growth in enrollment of 11 percent per year. This would bring enrollment by 1981 to 415,000, about 40 percent of the relevant age group.

The main constraint on continued expansion of primary education in the years ahead will probably continue to be the availability of qualified teachers. It is instructive that USAID's effort in primary education cannot start with training the teachers, it must start with training the teacher trainers. Additional school construction, covered in the capital budget, will continue to be needed but, with local help in both the financing and the actual construction, this is not likely to be a major limitation.

Some increase in the availability of trained primary teachers will be provided by the World Bank-USAID support for the Primary Teacher Training Institutes (PTTIs). But their output in the period 1977-81 is expected to be only about 1,900. This, an increase of only 28 percent over the number of teachers at the beginning of the period, compares to the need for an additional 4,000 teachers. A part of the problem is enrollment at less than the capacity of the Institutes since a preponderance of the limited number of preparatory school graduates prefers to continue into general secondary education rather than enrolling in the PTTIs. As the recent big surge in school enrollment is increasingly reflected in increased numbers of primary and preparatory school graduates, and with the improved quality of teacher training, this problem should be reduced. But it will take time.

For the period required to get the training of primary teachers to a satisfactory level, consideration might be given to hiring more foreign teachers. (In 1976, 398 of the 6,701 primary teachers were foreigners, primarily Egyptians.) This would help to break the circle of too few graduates from primary and preparatory schools which limits the numbers entering teacher training which in turn limits the further expansion of the primary school system.

Primary education should be expanded on a "no frills" basis, as is evidently being done. Overall budgetary stringencies that are already beginning to appear may become increasingly severe. Moreover, increasingly higher teachers' salaries and amenities, such as housing, may be required to attract qualified teachers to rural areas, particularly the more remote ones. So other costs should be kept as low as possible.

The degree to which it will be possible to meet the increasing budgetary requirements for education will depend in part on how highly the people come to value their schools. If the rural population of Yemen comes to value education highly, they will presumably be willing to contribute to paying for it. But this will require some mechanism for regular collection of

additional taxes in some fashion at the local level. To a degree this is being done through the Local Development Associations (LDAs). To date, however, their educational activities have been limited largely to school construction, a one-time requirement. Establishing some system of local taxation to meet continuing costs will be more difficult. It will require local initiative and new techniques. An incentive might be provided, if it is administratively workable, by assigning teachers first to those communities that are willing to pay a part of their salaries. However it is done, it is desirable to make a beginning now. Communities that place a high value on education -- probably a requirement for success however the schools are financed -- will then be in a position to reflect this value in a practical, operational way.

On the optimistic assumption that the Plan goal of an 11 percent per year increase in primary school enrollment is achieved during the Plan period and continued thereafter (and assuming that the 6-11 age group increases at 3 percent per year), it would take until 1985 before half of the 6-11 year olds were in school, and by 1990 there would still be only 74 percent. Clearly a very high priority will continue to be needed for primary education for many years to come.

Health. The availability of health services in Yemen is seriously inadequate. As of 1976 there were only 234 doctors in the country, one per 23,256 population, and 796 medical assistants. A program for medical assistants and nurses is scheduled to train 1,140 during the Plan period. In addition about 500 Yemenis are studying medicine, dentistry, and pharmacy abroad of whom many are expected to return to their country. But even with training at the highest rate possible, it will be many years before Yemen has enough medical personnel to provide reasonably adequate health services.

In the medium term, the greatest progress in improved health is likely to come indirectly. Nutrition is presumably improving with rising standards of living. The expanding program of primary education will provide a means for extending the understanding of basic sanitation. And the program for expanding the availability of clean water (see below) will help to reduce one of the main cause of morbidity.

Limited though these medium-term approaches may be, they may be expected to produce a significant reduction in the death rate. This is most obviously highly desirable. But it brings with it the potential problem of rapid population growth. Many countries have experienced major declines in the death rate before mounting effective program for reducing the birth rate and have discovered that rapid population growth places heavy pressures on available land, schools, housing and other resources. Yemen is in a position to have the two move forward together. Although the population problem is almost totally obscured for the moment by the present shortage of labor, this situation may be expected to change in the years ahead. With almost no possibilities for increasing the amount of arable land, the problems of a rapidly growing population are even more serious for Yemen than for many developing countries. The present writer is not in a position to judge what

means of encouraging family planning will be most effective in Yemen. But policy makers in the government should be acutely aware of the potential problem and should be actively seeking the most effective ways of dealing with it. The introduction of some kind of family planning programs along with the expansion of health services seems clearly indicated.

Expenditures on hospitals account for more than half of the development expenditures for health in the Five Year Plan. This is not an indication of relative priorities but simply a reflection of the fact that, given the acute shortages of personnel, hospitals are in a better position to utilize funds effectively than are other health activities. But the emphasis for the foreseeable future should be on preventive more than curative medicine. It will be decades before Yemen will be able to afford -- either in terms of money or of trained manpower -- a health system that makes hospitals and doctors available to all.

To the extent that curative medicine is expanded, private or local government expenditure should be built into the system from the outset. Free curative medical services financed by the central government budget will probably not be affordable and efforts to provide them would not only place a heavy burden on the budget but, by introducing a financial constraint, might well slow down the expansion of medical care. A system that enables individuals and communities to obtain curative medical services in accordance with the value they place upon them is most likely to direct the optimum amount of resources to this use.

A USAID project is providing assistance to a pilot project in the coastal area of Yemen. The project provides for a network of health care centers throughout the region, training of nurses, health care workers, and midwives to staff them, and a referral system linked to the regional hospital in Hodeida. To the extent that it is successful, it can provide a model for similar efforts elsewhere in the country.

Progress in the field of health, given its very extensive training requirements, will necessarily be a long-term endeavor. Concentration on preventive medicine and the training of paramedics, without waiting until enough doctors can be trained, will speed the process somewhat. But, given the unavoidable time constraints to the training of the needed personnel, there should not -- except possibly for hospital construction -- be any budgetary constraints added to them.

Rural development - the Local Development Associations (LDAs). Since more than 85 percent of Yemen's population is rural, the countryside must be the main area of attention for government social services. One channel for providing such service is through the Local Development Associations (LDAs).

The tribal structure in Yemen has provided a traditional base of local government. The LDAs, started in 1963, have built on this base. In 1977

there were 150 LDAs and by early 1979 there were reported to be 187. They are reported to cover a majority of Yemen's 17,000 villages. Average population covered by each LDA is of the order of 10-15,000 which means that some may include as many as several dozen villages. Their leadership is elected by the association members. The LDAs are supervised by the Ministry of Social Affairs and are supported by the Confederation of Yemeni Development Associations (CYDA), which was established in 1973.

There is no precise record of LDA accomplishments, but estimates for the three years ending in FY 1975/76 are that they had built several hundred kilometers of access roads, 850 water supply projects, and 600 schools.

Financing for LDA activities comes from a number of sources. The central government makes contributions. In addition, LDAs are allocated three quarters of the agricultural zakat (the religious land tax) and 2½ percent of customs revenues. There are also local contributions in both cash and labor which often amount to a half or more of the total cost. This local participation reduces total costs, accelerates implementation, and greatly increases the prospects for satisfactory operation and maintenance.

The USAID has several projects in the rural development area. A pilot project, initiated in FY 1976/77, focuses on training LDA officials and supporting small-scale projects in two districts within Mahweit Governate (province). Based in part on this experience, a new project was initiated in FY 1978/79 working on similar activities with the CYDA. In addition, USAID has been active in aiding with projects for providing clean water. A project begun in FY 1972/73 has been very well received. It is being followed by a new project planned to assist with 240 small rural water projects and to benefit an estimated 48,000 rural families.

The proposals in the Five Year Plan for investments through the LDAs is as follows:

Roads	YR	616 million
Education		270
Water supply		104
Health		58
Other		40
	YR	1,088 million

The proposed funding for roads is intended to finance 7,800 kilometers of feeder roads. Given the fact that highways interconnecting the major population centers are already completed, it would appear that these low-cost connecting roads will -- rial for rial -- make a much greater contribution to development than a further extension of the highway system.

Other LDA activities will also make a major contribution in education and health, including water supply. This system not only provides an additional source of financing but, perhaps more importantly, it provides

a means of incorporating local participation and commitment. This should make for a much more effective use of facilities once they are completed. It is also to be hoped, as indicated in the sections on education and health, that local participation can be developed in meeting the operating costs as well as the capital costs in the provision of public services.

B. Infrastructure

The Five Year Plan calls for government budgetary investment in infrastructure of YR $5.4 billion ($1.2 billion) in 1975/76 prices. This is a little over one third of total Plan expenditures, with the remainder divided about equally between public and "mixed" enterprises, and the private sector. Of the Plan expenditures, 60 percent is scheduled for the last two years -- FYs 1979/80 and 1980/81. (It is not possible to translate the 1975/76 price figures accurately into current prices, but, for the last two years it would be a multiple on the order of two or three.)

An indication of the magnitude of this five-year government investment program is a comparison of the YR 5.4 billion in 1975/76 prices and total GDP in 1975/76 of YR 5.0 billion. The physical limits of carrying out such a program are obviously great. The Yemen construction industry was already overextended in 1975/76. As a result of a number of problems, most construction firms incurred losses in 1976 and 1977, so they are not expanding. Major reliance on foreign contractors will be necessary but they, like domestic firms, will be limited by the shortages of construction labor. It seems clear that these physical limitations alone will require major cutbacks in the Plan's infrastructure program, some of which have already taken place.

The planned government capital budget program covers a wide range of infrastructure activities. Education and health construction are planned at YR 302 million, about 6 percent of the total. But by far the largest single item is highways for which the Plan calls for investment of YR 2,340 million ($520 million) in 1975/76 prices, 43 percent of the total budgetary investment program. Other major areas of infrastructure are public works, telecommunications, and airports. Together these account for 32 percent of the total.

For the public and mixed enterprises, a portion of proposed investment is in infrastructure or infrastructure-type activities. The largest of these is the Electricity General Establishment for which the Five Year Plan proposes investment of YR 860 million (in 1975/76 prices).

Rather than trying to consider all of the proposed government investments in infrastructure, the remainder of this section will deal with only the highway program and the program for electric power. They are not only of major importance in themselves because of the large amount of planned investment but also, to a degree, are typical of other types of infrastructure investment.

Highways. The basic highway network linking the three major cities -- Hodeidah, Sanaa, and Taiz -- has been indispensable to the development of Yemen. This network of 736 kilometers was completed in 1970, and paving was completed in 1977. An inspection of a population density map and a map showing the basic highway network indicates that some 90 percent of the population lives within 60 kilometers (as the crow flies) of one of these highways. By 1977, an additional 313 kilometers had been added to the hard-surfaced highway network. Highways have been completed, or are nearing completion, extending the system to Sadaa in the north, Marib in the east, Al Bayda in the southeast, and Rahida on the South Yemen border.

(In addition, there is in being and planned an extensive system of secondary and feeder roads. These totaled 675 kilometers at the beginning of the Plan period and an additional 7,760 kilometers is included in the Plan. These are relatively inexpensive with an average cost of only about 7 percent as much per kilometer as the planned new highways. As noted above, financing and construction of these feeder roads is carried out largely through the Local Development Associations. These roads would serve large numbers of people at low cost and would thus appear to have a very high priority in the development effort.)

Some problems are developing with the main highway system. A significant portion of the paved network is deteriorating. It is hoped, however, that limiting axle loads to 13 tons and a higher priority for the maintenance program will solve this problem.

Another aspect of both the existing and planned highway system merits consideration. This is to charge tolls. Given the high costs of highways in the generally mountainous terrain of Yemen, user costs would appear to be appropriate. Although it might be difficult to institute tolls after years without them, the difficulties will increase as time goes by. With the fiscal stringencies that may be expected to beset Yemen in the years ahead, this important potential source of revenue should not be overlooked. It would appear to be best to start the system as soon as possible with relatively low tolls and to build on this base as needed.

As noted above, highway construction is a major element in the Five Year Plan investment budget. Completion of 772 kilometers of main highways is costed at YR 554 million (1975-76 prices) and an additional 1,571 kilometers of new highways is planned at a cost of YR 1,634 million. Completion of all of these highways would bring the total network to 3,388 kilometers, more than four times the original network and over three times as many kilometers as at the beginning of the Plan. Main highways are described in the plan as making "connections between major cities" (in contrast to feeder roads which primarily "branch from the main roads"). But the "major cities" referred to above are all small. In the 1975 census there were only five cities with a population of more than 20,000 and all of these were already linked by the original basic network. It thus appears that new highways, with some exceptions such as a link to the Saudi Arabian system, will have a very much

lower rate of return than the basic highway network did and the feeder road program will and could be deferred for a time without any serious effect on the rate of economic growth. Similar considerations would appear to apply to some other large infrastructure projects as well.

Electric power. In Yemen, as in most developing countries, the demand for electricity is increasing at a much faster rate than the overall growth rate of the economy. From 1971 through 1975 generation of public power in the three main cities grew by an annual average of 25 percent. In addition, many large users had their own generating facilities. In 1976 these were more than a third of total installed capacity, although their share of total peak demand was considerably less than that.

In 1975, total generating capacity of the public company was 13,500 KW. Two years later it was 39,000 KW, an increase of nearly 200 percent. Recommendations by a group of consultants to the Electricity General Establishment called for an additional 25,000 KW by 1979 for a total increase in capacity of 375 percent between 1975 and 1979. All units would use diesel fuel. The estimated cost for the recommended expansion in the period 1976-80 was YR 288 million. Financing had been arranged for 30 percent of the cost, additional financing was being sought, and 25 percent of the cost was planned for government contributions.

The program recommended by the consultants was not accepted. Instead the Five Year Plan calls for a 75,000 KW central steam-turbine station in Hodeidah with interconnections to the main load centers and extensive rural electrification at an estimated cost (1975/76 prices) of YR 860 million. This, with the additional capacity already constructed in 1976 and 1977, would provide an increase of nearly 750 percent, or an annual average of more than 50 percent, over the installed capacity of the public company in 1975.

Given the very substantial economies of scale in electric power generation, some increase in capacity in advance of demand is economically warranted. But the 750 percent increase in five years in the Plan program seems on the face of it to go considerably beyond this. (There is not enough information in the Plan to judge this except in general terms.) The capital costs on excess capacity would be substantial. And the existence of excess capacity would doubtless provide pressure for low rates to increase the load factor when in fact rate policy should be for frequent increase to match the rate of inflation in the economy.

It would appear, on the basis of the limited information available, that (unless implementation of the Plan proposal has already passed the point of no return) the more conservative scheme for an increase of only 375 percent in generating capacity should be followed with the more comprehensive proposal postponed to a later date. Although this would require the

eventual replacement of diesel capacity by steam capacity, the investment in the former would not be wasted since it would be useful in the total system as standby capacity. The overall savings both in capital costs and in making non-inflationary financing available for higher priority uses would seem to be compelling reasons for the deferral of the 750 percent expansion.

V. THE COMMODITY PRODUCING SECTORS - AGRICULTURE AND INDUSTRY

Investments in these sectors are less related to fiscal policy than those considered above since the bulk of agricultural and industrial (or at least manufacturing) investment will be in the private sector. Additionally, desirable investments in these areas are likely to be limited by the scarcity of good large-scale investments in agriculture and the fact that at present there is no need for import substitution to save foreign exchange or for investment to create additional employment. Investments to be financed largely from private savings will not have a major inflationary impact and will have met at least one important test of economic feasibility -- the investors willingness to risk his own money.

(The sections above have dealt primarily with short-run considerations. In this section on agriculture and industry some attention is also given to longer-run consideration. The short-term assumption that remittances will continue at present levels is therefore modified to include the possibility that in the medium term remittances may well decline -- a possibility that is explored further in the concluding section of this study.)

A. Agriculture

Possibly the most important single area for progress in the continued economic well being of the Yemeni population over the next two decades will be the amount of increase in agricultural productivity per hectare.

Under any likely future of remittances, agriculture will continue to be by far the largest single source of domestic employment and output. At present about 65 percent of domestic employment is in agriculture and, despite the recent phenomenal growth in trade and other services, agriculture still produces about 40 percent of GDP. With the prospects for industry inherently limited, and with growth of services being largely an induced growth, the largest source for a satisfactory rate of future domestic growth will have to be agriculture. Moreover, since virtually all available land is already under cultivation, this growth must come primarily from increased yields.

The prospects for productive investments in agriculture are limited. Because of the limited availability of ground water supplies in many areas, pump irrigation should be undertaken cautiously. Some mechanization in agriculture may be beneficial, but a considerable degree of adaptation will be necessary before the full benefits can be realized. A major part of the planned public investment is for large-scale irrigation works to capture runoff that would otherwise be wasted. The rate of return on such investment, however, is often unclear. For example, the Plan allocates YR 105 million for starting the Marib dam while noting that "the project cost is not yet estimated." Since the need for increased agricultural production is not an immediate one, investments in agriculture -- particularly large-scale ones -- should be fully and carefully appraised before they are undertaken.

Fortunately increased productivity in agriculture without massive new investments is a practical possibility. Present yields are low in comparison to many similarly situated countries. The potential from improved seeds and the use of fertilizer and pesticides is still largely to be realized. For example, a World Bank project for the southern part of Yemen estimated increased yields of sorghum, the main crop, of 50 to 90 percent. (Test plot experiments under ideal circumstances have produced much higher increases.) Achieving this potential at a satisfactory rate will call for an active role for government. Research, seed development, extension services, and possibly agricultural credit will be important elements.

There have been major changes in Yemeni agriculture in the last five years. Reduced labor availability, competition from imports, and changing patterns of demand have all contributed. Although these changes will not set the pattern for future development, they do need to be understood for the formulation of effective long-range agricultural policies and priorities.

The availability of adult males for farm labor may well have declined by 25 percent or more since 1974. Since much farm work has traditionally been done by women and children, the decline in total farm labor availability has been somewhat less than that, but it has clearly been substantial.

Reduced labor availability and the concomitant increase in wages has had an effect on grain production and even more on the output of coffee and cotton.

Import competition has displaced some domestic production. This has been particularly true in the case of cereals, where there is a consumer preference for wheat compared to the principal domestic grains, sorghum and millet. With rapidly rising incomes, the demand for, and imports of, animal products, fruits, and vegetables have also increased sharply. For these products, however, consumer tastes prefer the local product so that any increases in domestic production that have been possible have found a ready market.

There has been a substantial decline in both acreage and output of grain. Official estimates -- which are to be considered at best as rough magnitudes -- show a decline in grain production of 17 percent in 1976 and a decline in acreage of 26 percent. (The 1977 data are from a different source and are not comparable.) Such changes in output are frequent in Yemen as a result of changes in rainfall; in years of low rainfall marginal land is not planted. But this change was not due to low rainfall; yields actually rose by 11 percent. The decrease in acreage planted was due to a combination of reduced labor availability and increased competition from imports, with the latter playing an important role. The volume of wheat imports in 1976 increased by 177,000 tons, almost exactly equal to the decline in domestic cereal production, bringing total imports to 492,000 tons, equal to 56 percent of domestic output. It is clear that by 1976 low-priced imports had resulted in a substantial amount of land lying fallow that would otherwise have been in production.

In addition to the withdrawal of land from production, there has been undermaintenance of terracing. Over the centuries the hillsides have been terraced with rock walls to control erosion and to hold the available water. General observation has been that there has been deterioration of these terraces, but the degree and seriousness is not always agreed to.

The increased demand for fruits, vegetables, and animal products arising from the increased incomes from remittances has induced an important supply response from Yemeni agriculture. Production of vegetables increased 70 percent in the three years ending in 1976/77 (latest year available) but still used only about 3 percent of total cultivated area. Qat is reported to be using an estimated 2 percent. In the case of animal products, the limited possibilities for increasing forage have kept production down except for poultry, where the use of imported feed is profitable.

The withdrawal of land from production suggests the desirability of some immediate governmental action. This action probably need not be extensive. Reduced acreage does not appear to be a cause for major concern; it is basically a result of the more productive use of resources in labor emigration with the use of remittances for imports. There is one area, however, where immediate government action might well be productive. With land now lying fallow that under traditional conditions would be growing grain, there may be alternative uses that would provide some output. Since these uses would not be known from local experience, investigation by the government or the international agencies of land use in other countries -- perhaps some kinds of forage crops -- that have low labor and rainfall requirements might speed the return of this presently idle resource to some productive use.

The deterioration of terraces may be a more serious problem because, unlike the withdrawal of land from cultivation, it may not be easily reversible. However, there is no clear measure of just how extensive this phenomenon is or how difficult it will be to repair the damages when labor availability becomes more nearly normal. Present reliance on varying general impressions should be replaced as soon as possible by a careful, systematic study of how extensive the deterioration of terraces actually is and how much labor would be required to bring them back to normal at different stages of deterioration. If the deferred maintenance can safely be left to the future, then the decisions on what maintenance work is profitable now should be left to the individual owners. If, however, a good study showed that, for illustration, 50 man days of work now would save 500 man days five years from now, careful consideration should be given to devising a system of special incentives for maintenance now.

In addition to the actions just noted for dealing with immediate problems, it is important to start now on planning for the medium-term future. The future of migration and remittances is inherently uncertain. If five to ten years from now the present surplus of foreign exchange and shortage of labor has reversed sharply, it will be important to have taken the time-consuming steps needed to prepare for it. Agricultural research,

adaptation, and pilot testing should all be pointed toward the possible eventuality when the economy may not be able to afford food imports at present levels. Most specifically, a much greater reliance than at present on sorghum and millet may be necessary to meet basic nutrition requirements. A maximum degree of research and testing on the best varieties, means of seed multiplication, and the optimum use of fertilizer and pesticides under those circumstances should have been completed by the time it may become necessary.

Research for other purposes, both present and future, will of course also be needed. It is important to develop the most efficient means of meeting the present growing demand for fruits and vegetables. In addition, there may be scope for moving toward exports at some time in the future. With growing experience and a shift in labor availability, Yemen may be able to export fruits and vegetables to Saudi Arabia. There is of course intense competition for this lucrative market. But Yemen's geographic position may give it a competitive advantage for at least some items. The possibilities should be fully explored.

In terms of extension services, future needs may be considerably different than at present. With present high labor costs and cheap grain imports, the cash outlays needed to use known techniques of improved seeds, more fertilizer, and pesticides may not be profitable. But these circumstances could change considerably. The extension system, as well as research, should be geared toward exploring these possibilities and being prepared to give sound advice and effective demonstrations quickly if relative prices and other circumstances do change.

At least one other area in Yemen agriculture calls for careful investigation if the longer-term prospects for increased productivity are to be realized. This is owner-tenant relationships. There is little systematic information on this subject but tenancy is clearly important, particularly in certain parts of the country. The usual pattern appears to be for the tenant to provide all of the inputs and receive a fixed fraction (often one third or one half) of the output. While this system is not likely to affect productivity much in a traditional agricultural environment, it can have a very adverse effect in a dynamic agricultural situation where new and more productive techniques require additional cash inputs. The incentive to the tenant to buy the additional inputs is obviously less than the additional output would warrant. Some change in the traditional relationship between landlord and tenant is thus essential if optimum use is to be made of new techniques. Since some changes could be to the advantage of both landlords and tenants, it should be possible to work them out. The government might be able to play a useful role in bringing such changes about.

B. Industry

Present industrial policy in Yemen should be pointed toward the future. Under today's circumstances, with large foreign exchange reserves and labor

shortages, there is no present need for stimulating additional manufacturing industry either to provide employment or to save and earn foreign exchange.

The medium-term goal should be to develop a potential for efficient import substitution, with some export potential, when and if changing relative prices make that profitable. This goal calls for steps today to develop those industrial possibilities that can be carried out efficiently now, even though the number is admittedly limited. Such manufacturing firms should of course meet present needs. Equally important, however, is to gain additional experience in the entrepreneurial, managerial, technical, and worker skills needed as a base for future industrial growth.

A long-run goal should be to develop manufacturing for export. (Specializing in products complementary to industrial production in Saudi Arabia might be one possibility.) In Yemen, as in all relatively small economies, the possibilities for efficient import substitution are severely limited; the economies of scale are simply too important in too many industries to permit a wide range of efficient domestic production for local markets alone. Exports of manufactured goods in such economies are therefore essential (unless the country has oil or other special natural advantages). Appropriate approaches must be taken now in Yemen if this long-term goal is to be achieved. It is important -- from the outset -- to encourage industrial expansion only in areas that can come reasonably close to meeting international competitive standards without subsidies and without undue dependence on tariff protection. If an inefficient, high-cost pattern is allowed to develop, it becomes particularly difficult to achieve the international competitiveness that is necessary for exports.

Today's industrial base, from which the process must start, is still a very narrow one. Although industry (including mining and electricity) nearly doubled between 1970 and 1976, it still accounted for only 6 percent of GDP, and much of this was in very small, predominantly traditional industries. There were (1975) 10,587 manufacturing establishments employing 23,000 workers, about 2 percent of the domestic labor force. Only about 5,000 of these workers were employed by the 56 enterprises with 10 or more workers. These are predominantly new firms the bulk of which are in the private sector; of the 15 largest enterprises in 1975, 10 had been established since 1969 and of these eight are privately owned.

In addition to the usual questions in deciding on appropriate industrial development, Yemen must make allowance for the extensive changes in relative factor prices in the recent past and the further, but different, changes that may be expected in the future. Before proceeding to what appear to be the most appropriate criteria, an examination of the Sana textile company will provide some useful insights.

The Yemen Textile Company, which was built for the government by the Chinese in 1967, has its principal plant in Sana. With more than 1,500 workers it has, until recently, been the largest manufacturing enterprise in Yemen. (It has now been surpassed by the privately owned Yemen Company

for Industry and Trade whose principal products are biscuits, sweets and plastic products.) The Chinese technology used in the Sana cotton textile plant is labor intensive, as was appropriate at the time of its construction.

The company operated at near capacity with a modest level of profits by 1974. Beginning at that time, and reflecting changes throughout the economy, wages began to skyrocket. Wages for production workers went from $0.32 per hour in 1973 to $1.22 per hour in 1977, exclusive of fringe benefits of 40 percent. (Salaries for top management, however, were actually reduced in 1977.) Despite these large increases, labor turnover was high and absenteeism is reported to have been 20 percent. (The wage levels noted compare with ILO reported wages in Egypt (1976) and India (1973) of $0.17 per hour and for Korea and Syria in 1975 of $0.32 and $0.44.) The total wage bill rose from 27 percent of sales in 1973 to 73 percent of sales in 1977. Profit and loss went from a peak profit of $0.8 million in 1974 to a loss of $1.5 million in 1977. Although the principal problem was plainly labor costs, the departure of the Chinese technicians was a contributory factor, as was poor management. (The Board of Directors in this publicly owned enterprise was completely replaced in 1978.)

This Government textile company is now being rehabilitated at an estimated cost of $25 million to take into account the changed circumstances since it was started. Given the sunk cost -- of the order of $40 million at present prices -- and the fact that without rehabilitation the plant would have to be shut down, this may well be the best course. But it does point up the risks of making major investments at a time of rapidly changing circumstances -- a risk that could not have been readily foreseen at the time the textile project was undertaken but which, given the inherent uncertainty of remittances over the longer run, is clearly apparent for the years ahead. It may also illustrate some of the problems of government ownership in areas that in most of the fastest growing economies are in the private sector. These problems -- at least when government ownership is undertaken on a large scale -- are abundantly illustrated in such economies as those of Egypt and Syria.

The criteria that appear to be appropriate under present circumstances for guiding investment decisions in manufacturing include the following.

Probably most important is the criterion that investments should be profitable under present circumstances. They should not be dependent on additional tariff protection or on government subsidies. This is a good criterion for any economy that plans eventually to be able to export. It applies with particular force to Yemen in today's circumstances since there is no special need for industrialization now.

Present circumstances already include elements that will give domestic production some advantages. Transportation costs are in general greater for imports than for domestic production, particularly for items like many construction materials where the weight is great relative to the value. Present

tariffs, although designed for revenue, average 20-25 percent and thereby provide a considerable degree of protection. In addition, the Investment Law of 1970 provides certain exemptions on import duties and business taxes, generally for a period of five years. These exemptions seem reasonable, but the cut-off date of five years should be firmly adhered to. (The private enterprise system is a profit and loss system. Given the probability of major changes in the years ahead, profits and losses may turn out to be great at both ends of the scale. Private investors should, from the outset, accept the risks along with the potential profits and should not expect special government help in cases where the investment judgments have turned out to be wrong.) In short, although present incentives to industrialization seem reasonable, further protection would not be warranted.

A second criterion should be that manufacturing enterprises should generally not have imported materials as a major part of the value of the product. Packaging and assembly operations do not make a large contribution to GDP. On the other hand they do cause a loss of flexibility in foreign exchange management. In times of foreign exchange stringency, imports of manufactured products can generally be reduced as necessary by devaluation or other appropriate means. But the pressure for importing raw materials, where the alternative is to close down plants, can be very great leading to distortions in the allocation of a scarce resource. Or, in some cases, the plant may actually have to shut down with a greater shock to the economy than just the shortage of the product it produced. This loss of flexibility is not to say that there should be no investments for the processing of imported raw materials, but the emphasis should be on those cases where domestic value added is substantial.

A final criterion relates to the degree of capital intensity. Obviously there can be no firm rule. In principle, the objective would be the degree of capital intensity that would be optimal for the life of the investment, but this cannot be determined in advance. Given the possibility that in the future wages will decline relative to other costs in the economy, the optimum might well be more labor intensive than would be the most profitable today. Another consideration is that many developing countries have found that the use of the most sophisticated and capital intensive equipment poses serious problems of keeping that equipment operating satisfactorily. Perhaps the most that can be said is that the use of highly labor-saving technology should be approached with great caution and with a clear realization that relative prices in the economy are not likely to be the same in the future as they are today. This approach may suggest a postponement of investment decisions in many cases.

The application of these criteria would probably mean relatively low levels of investment in industry (or at least manufacturing) in both the private and public sectors in the immediate future. This need not be a cause for concern. The purpose of such investments is to combine labor and capital to increase output. But with labor scarce and capital -- to the degree it must come from inflationary sources -- also in short supply,

much of the increased output would probably be at the expense of output elsewhere with only a minimal effect on increased GNP. Moreover, the reason for forced-draft industrialization in many developing countries is to help solve a chronic balance-of-payments problem, a consideration that does not apply in Yemen at the present time. Under these circumstances, Yemen can well afford to take a long-term view.

The Government should apply the above criteria to its own investments. Public investments in the Plan include both public corporations and the so-called "mixed sector" to be made up of joint ventures with the private sector.

The two largest manufacturing projects in the public sector are the Sana textile plant and a new cement plant at Omran. The former has already been discussed. With respect to cement, additional capacity appears to be desirable and the capital requirements are such that, at this stage, public financing is needed to meet them. In general, however, the emphasis should be as heavily as possible on the private sector to maintain the advantages of flexibility and managerial incentives that normally make private enterprises more efficient than public ones. (The 1977 25 percent cut in salaries for top management in the Sana textile company to a maximum of YR 2,000 ($450) per month is illustrative of the problem.) Other public enterprises include electricity, the petroleum company, and the airline.

Large investments in public corporations were called for in the Plan, and it appears that much of this investment has taken place. This is evidently financed through the "capital transfer" (direct transfers from the Central Bank) section of the capital budget. Although detailed information is not available, it would appear that financing of these enterprises as a group has proceeded rapidly enough that many of the remaining ones could be reduced in size or deferred to a later date.

For the private sector, the Government should encourage investments that meet the criteria discussed above. Although for the private sector the final decisions should be left to the investor, the Government can play a useful role. The industrial estate at Sana and those being planned for Taiz and Hodeidah are a clear case in point. The Government may also find it useful to use its facilities for contracting foreign expertise to develop feasibility studies and to undertake project reviews for the private sector; advice from such sources as foreign machinery suppliers may not always be objective. The Industrial Bank of Yemen may also play an important role. Although the World Bank estimates that there are numerous private individuals or families that can raise as much as YR 5 million ($1.1 million), there will be cases of desirable industrial investments requiring more than that. Additionally, the Government should compile and provide to potential investors all possible information on trends in the economy that would be relevant to investment decisions.

Some areas in the economy clearly meet the suggested criteria. Building materials is probably the most important. There is a large demand,

transportation costs will often make domestic production cheaper than imports, and the raw materials needed are generally domestic ones. Some other products such as bottling works have, because of transportation costs, an advantage over competing imports and some, such as ice, could scarcely be imported at all. Another possible area is for products, such as certain types of clothing, where there are special requirements in Yemen. And some quasi-manufacturing operations such as large-scale truck overhaul facilities and tire recapping should prove to be both economic and profitable.

Many of the manufacturing projects for the private sector suggested in the Five Year Plan appear to be appropriate. They are heavily concentrated in such areas as building materials, vehicle maintenance, and food processing.

Of those manufacturing plants proposed in the Five Year Plan, the greatest doubts arise from those in the "mixed sector." It is not clear from the Plan documents just how the financing is to be arranged and whether control will rest with the public or private stockholders. More fundamentally, the economic desirability of many of the investments seems doubtful at best. In the case of the proposed $38 million steel mill, although there is not enough information in the Plan documents to make any kind of direct appraisal, experience elsewhere raises serious questions about the desirability of this investment. Inability to deal with the complexities of steel technology and loss of the economies of scale have required high levels of tariff protection and large subsidies for steel mills in many developing countries. This is particularly true where most of the raw materials must be imported. Similar considerations would appear to apply to the proposed paper plant and others. Investment plans should not go forward without detailed and very realistic feasibility studies.

In summary, high labor costs, the present adequate availability of foreign exchange, and various uncertainties do not make this a good time for a major industrialization drive in Yemen. There are, however, important cases that can be developed economically even under present circumstances. If industrial investments are chosen with care, Yemen can develop a growing experience with efficient, economic manufacturing while avoiding slipping into the high-cost pattern that has been a major obstacle to sound industrialization in many of the low-income countries.

VI. PRIORITIES AND THE URGENCY OF NON-INFLATIONARY BUDGETING

In Section III it was stressed that: Yemen is now in a position where controlling inflation is a practical possibility; grasping this opportunity now is important for Yemen's future economic development; and a non-inflationary budget is the key to achieving this objective. Setting stricter priorities -- making some hard choices -- will be an essential part of this process.

A number of observations on general priorities seem useful even though in many areas a project-by-project approach will also be needed.

As discussed in Section IV, expenditures on education, health and similar social services are important for two reasons. Investment in people, Yemen's most valuable resource, is an essential element of rapid and sustained economic development. Additionally, improved education and health are of obvious importance in their own right. It is precisely in these areas that Yemen lags the farthest behind in comparison with other countries at similar income levels. Increasing expenditures for education and health should thus continue to receive a very high budgetary priority to the extent that these activities can use additional funds effectively. Here, as elsewhere, however, priorities even within a priority category should be selective.

For infrastructure, the position is considerably different. Capital expenditures in the budget have been growing more rapidly than current expenditures. This suggests that, as a practical matter, reductions in the rate of increase will need to be concentrated here. Fortunately, priority considerations point in the same direction.

Most of the direct government investment is in infrastructure. (Capital transfers for government entities will be considered separately later.) Of the infrastructure, highways are by far the largest single category. They were scheduled to receive about 40 percent of total government investment in the First Five-Year Plan. (Although the overly-ambitious Plan has been scaled down considerably, the relationships have not necessarily changed.) Given their large amount and the fact that similar characteristics apply to some other infrastructure, highways may be taken as being reasonably illustrative of the infrastructure sector as a whole.

As discussed in Section IV, it seems clear that many highways now under consideration could be deferred without a major loss to development. This is not to say that they are not important but, rather, that many of them are not urgent. With the main population centers already interconnected, low-cost feeder roads -- inadequate though they may be -- can go a long way towards meeting the most urgent remaining transportation needs. The more comprehensive highway system can then follow at a later date without major loss to the rate of development in the interim.

Observations similar to those on highways would apply to at least some other infrastructure projects as well. The relatively low return on many

types of infrastructure -- important though they are in the long run -- is indicated by the low incremental capital-output ratio (ICOR) of 6.4:1 for the Five-Year Plan with its heavy emphasis on infrastructure. The ratio for development plans in many developing countries is often as low as 3:1. Clearly some of the lower-yielding projects could be deferred without seriously affecting the rate of growth.

In the case of some large infrastructure projects, the availability of concessional financing through foreign assistance must be taken into account in setting priorities. Other things being equal, projects with foreign financing would have a higher priority. These projects, however, can also have an inflationary impact where local costs are large relative to the import component. (In FY 1977/78, the latestyear for which data are available, total capital project expenditures were YR 871 million of which only 31 percent was financed by foreign loans.) The availability of foreign aid should thus not in itself be considered adequate justification for going ahead with a project, particularly if the aid is only a part of the total cost. And obviously donors should be urged to concentrate on the highest priority projects and activities even if they are not the easiest to implement.

As discussed in Section V, investments in agriculture and industry are less important in the government budget than infrastructure since they are predominantly in the private sector. The main exception in agriculture is for major irrigation projects. While an area to be given attention, these must be considered on a project-by-project basis. Only those where a careful feasibility study demonstrates a high rate of return should be given high priority at this time.

In the case of industry, most government projects are financed through the capital transfer section of the budget, i.e., by direct transfers from the Central Bank. This section was budgeted for YR 184 million in FY 1977/78 (the preliminary actual was YR 268 million), and is budgeted for YR 685 million for FY 1979/80. While most of these investments may well be desirable in the long run (even though they have not been subjected to the test of private-investor determination of profitability), their urgency is not clear. For example, even in the case of increased capacity for cement production, which appears definitely to be economically sound, a continued major reliance on imports for an additional period would have at most a negligible deterrent effect on economic growth. It would thus appear that the "capital transfer" item in the budget might at least be levelled off, and possibly even reduced, for the time being.

The observations above deal with priorities only by general categories. A part of the setting of priorities, however, will need to be carried out on a project-by-project basis. Doing this successfully will require a strengthening of the project-appraisal capability in the Central Planning Organization and in the planning units of the Ministries. It may also be possible to make greater use of consulting firms and advisors, but even this will require a strengthened capability in the Government; the validity of contracted feasibility studies depends to a large degree on posing the right questions for the contractor to answer.

Much of the project appraisal work will of course be pointed toward the formulation of the Second Plan. This Plan should be on a much more realistic scale than the First Plan and the priorities should be much firmer. It would seem desirable that only projects whose feasibility, including a high rate of return, has been established should be given first priority status. Other projects may well be included as "under investigation" or "of uncertain priority" -- the process of project appraisal needs to be a continuous one, and a "shelf" of projects under investigation is desirable. But the core of the Plan should be made up of projects that truly are high priority.

Ideally, the process of project selection for inclusion in the Budget should be accomplished through a careful assessment of all individual projects, ranking them in priority, and initiating only the highest priority projects for which non-inflationary financing is available. This may not, however, be practicable for the immediate future since project evaluations generally take a considerable amount of time, and there may not be that much time available. Moreover, it may well be that, for a time, there will not be any non-inflationary financing available for new projects.

A practical problem in deferring investment expenditures arises from projects that are already well into the implementation stage. It seems sensible that in most cases these should be continued, but, even with such projects, it may sometimes be preferable to slow the rate of expenditures. In the absence of detailed information, one cannot be sure of the effect of these projects on future budgets. It seems likely that a significant part of the investment budget for at least the next year will be determined by projects already started. This may be true even if maximum efforts are made to slow down the rate of implementation where possible, and to postpone further action where implementation is still in the very early stages.

Given these considerations, it may well be desirable -- and perhaps even essential -- to adopt a rule of no new starts of capital projects for the next year or two while the rate of increase in expenditures is reduced, and the individual project appraisals are being carried forward. Moreover, a moratorium on starting new projects might well have advantages other than budgetary ones. With the rapid recent growth in investment expenditures, both the supervisory capabilities of the Government and the physical capacity of the economy to implement projects must already be strained. The initiation of additional projects might go beyond the number that can be implemented satisfactorily and thus result in delays in the implementation of all. This could be very costly in development terms. Development is furthered by completed projects, not by projects under construction.

As a practical matter, bringing the budget deficit -- and hence inflation -- under control must start with what the budgetary movements have been and where the Budget is now, thus giving some indication of what is in fact possible. The main elements of the Budget are summarized in table 10.

The desirable immediate target would appear to be to hold the increase in total expenditures in FY 1980/81 to a level somewhat below the expected increase in revenues and thus to achieve some reduction in the deficit.

For FY 1981/82, by which time there will have been more time to make necessary adjustments, it should be possible to hold the increase in expenditures to a level enough below the expected increase in revenues to eliminate inflationary financing. This will require a levelling off of expenditures for some activities, and an actual decrease for some, but should permit modest increases in many areas.

Suggested approaches to the three main expenditure categories are recapitulated as follows:

The current budget, although its upward trend has not been as marked as that of the capital budget, is still the larger part of the total. A reduced rate of increase here will probably be required. Fortunately, this appears to be a realistic possibility. Roughly two thirds of the current budget is for salary payments. This component of the budget increased threefold between FY 1976/77 and 1978/79, which may have been enough to offset the effects of past inflation and to bring government salaries into a reasonable relationship with salaries elsewhere. If so, and if inflation can be slowed, it should be possible to hold increases in this component of the current budget to modest levels for at least the next year or two.

For the regular capital budget, much will depend on how much has been committed in advance for projects already being implemented, and how much flexibility there is in their rate of implementation. Probably very little funding will be available for new projects, which may require that a firm rule be established against beginning implementation of any new projects, despite the inconveniences that such a rule would entail. Even with such a rule, some increases in the capital project budget for FY 1980/81 might still be required. But by FY 1981/82 it should be possible to bring this section of the budget back to the present (FY 1979/80) level if necessary.

The capital transfer section of the budget has had very rapid increases in the past three years, increases that have brought it to more than a third of the total capital budget . These rapid increases suggest that the most urgent needs for the government entities may already have been met. Considerable retrenchment here may well be essential to the success of the overall effort.

The various suggestions for deferral of some investment programs do not imply investment at too low a level to achieve a satisfactory rate of growth. The levels of investment are already high. Government capital expenditures, including both those in the Budget and those financed from foreign loans, appear to have been at least YR 2 billion in FY 1978/79. To this must be added the large amount of private investment financed from remittances and profits from importing and distribution. The most recent estimates are for FY 1976/77 when private investment (exclusive of inventory increases) stood at YR 829 million, nearly three-fifths of total investment. There have

Table 10

SUMMARY OF GOVERNMENT FINANCE*
(amounts in millions of Yemeni rials)

	Actual					Budget		Percent of expenditures	
	1973/74	1974/75	1975/76	1976/77	1977/78 (prelim)	1978/79	1979/80	1974/75	1979/80 budget
REVENUES									
Customs and investment earnings	171	260	458	1,086	1,580	1,715	2,400[e]		
Other	106	121	147	207	344	483	612		
Total revenues	277	381	605	1,293	1,925	2,198	3,012		
EXPENDITURES									
Current expenditures	322	472	616	841	1,235	1,676	2,426	84%	55%
Education		(25)	(52)	(63)	(117)	(265)	(410)[e]	(4)	(9)
Health		(15)	(22)	(30)	(64)	(83)	(120)[e]	(3)	(3)
Capital expenditures									
Budgeted expenditures	14	69	131	274	599	1,007	1,272	12	29
Capital transfers	0	21	39	141	268	454	685	4	16
Total capital expenditures	14	90	170	415	867	1,461	1,957	16	45
Total expenditures	336	562	786	1,256	2,102	3,137	4,383	100	100
OVERALL SURPLUS OR DEFICIT	-59	-181	-181	+37	-177	-939	-1,371		
Cash grants for budget support	128	389	458	418	400	496	400[e]		
CHANGE IN NET POSITION WITH THE CENTRAL BANK**	+47	+207	+258	+485	+66	-443	-971		

Table 10

SUMMARY OF GOVERNMENT FINANCE*
(amounts in millions of Yemeni rials)

	Actual					Budget		Percent of expenditures	
	1973/74	1974/75	1975/76	1976/77	1977/78 (prelim)	1978/79	1979/80	1974/75	1979/80 budget
Ratio to expenditures:									
Overall deficit								-32%	-31%
Change in net position with the Central Bank								+37%	-22%
MEMO ITEM:									
Proceeds from foreign loans		115	191	188	271	675***	n.a.		

FOOTNOTES TO TABLE 10 :

e/ Estimate by writer

*In conformity with the Yemeni formal budget, neither receipts nor expenditures from foreign loans are included in the figures for total revenues and expenditures. The proceeds from foreign loans (which tend to be equal to the outlays financed by them, even within the same time frame) are shown here as a "memo item."

**The change in net position does not equal the difference between overall surplus (or deficit) and cash grants for budget support. The discrepancy represents a "statistical adjustment" reflecting, in part, various lags in reporting. The adjustments are small for all of the years except FY 1977/78, presumably attributable to the fact that the revenue and expenditures data for the year are still preliminary.

***Preliminary balance-of-payments data indicate an actual level of YR 575 million.

doubtless been major increases in private investment since then. Total investment in FY 1978/79 has thus probably been in the neighborhood of YR 3½-4 billion. This would be on the order of 30 percent of GDP (or around 20 percent of GNP), a high level for a developing country. There is clearly no overriding need for still further increases in government investment to achieve a satisfactory rate of economic growth.

Achieving a non-inflationary budget by FY 1981/82 should be a firm target. It will not be easy. But it should be possible. And if this target is met, it should bring an end to the high rates of inflation that have characterized the Yemeni economy for at least a decade. Some prices will continue to rise, no doubt including those for petroleum products and perhaps construction costs, but widespread, general inflation will have been brought under a reasonable degree of control. This accomplishment will eliminate the economic distortions and inequities -- particularly to savers -- that rapid inflation always brings. It will establish a sound basis for continuing growth and development in the period ahead, a basis that will be especially needed since available resources will not be increasing as rapidly as they have been in the boom period of the recent past.

VII. THE FUTURE OF REMITTANCES

Most of the analysis above assumes that worker remittances will continue for a time at roughly present levels. This prospect seems the most likely one on the basis of recent performance. As already noted, the increase in remittances in 1978/79 was 6 percent -- a moderate increase in current prices and a moderate decrease in real terms.* A more detailed picture is given by the quarterly data. For seven consecutive quarters, starting with April-June 1977, the remittance figures followed a nearly horizontal trend. For two of the three most recent quarters (through July-September 1979), remittances were up an average of about 10 percent above the average for the previous seven quarters. No marked change is suggested by these data.

The assumption of worker remittances continuing for a time at about present levels, however, may well turn out to be overly optimistic. There are several reasons.

It seems clear that in Saudi Arabia (which employs at least 90 percent of the Yemeni migrant workers) the rate of increase in investment is declining. Increases during the Third Development Plan, 1980-84, will be much less than during the early years of the Second Plan. The big acceleration is over. Saudi Arabia has decided on a generally more conservative fiscal policy, in part to halt inflation. (The consumer price index is reported to have actually shown a slight decline in 1978.)

As the Saudi Arabian development program continues to progress, there will be a further gradual shift from construction to operation and maintenance. This may decrease the need for foreign workers somewhat and in any case will call for a different kind of worker. The bulk of Yemeni workers to date have been in construction.

The most striking recent change has been the rapid increase in the number of Asian workers in Saudi Arabia. There are no overall estimates of this increase, but the total number of Asian workers in 1975 was estimated at 38,000 and the Government of Pakistan estimates that by 1977/78 their workers alone numbered 90,000. There are also large numbers of Indians, Koreans, and Filipinos. In some respects Asian workers are more acceptable to the Saudi Arabians than Arab workers because they tend to live apart and are unlikely to have much effect on the fabric of Saudi society. There are also some indications that for equal work they are willing to work for less pay.

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*The remittance figures used are gross receipts rather than net since the "private transfer payments" in the data are believed to be made up to only a small degree of remittance payments from the limited number of foreign migrant workers in Yemen.

It is clear that the three developments noted above are taking place. What is not clear is their effect on the demand for Arab workers. For example, the rapid increase in Asian workers may have served merely to help meet the continuing growth in Saudi Arabian demand, or it may actually have started to displace some Arab, including Yemeni, workers. Some observers believe the latter to be the case. On the other hand, there is considerable evidence that Yemeni workers are highly regarded in Saudi Arabia both because of their cultural affinity and because they have a reputation for being hard workers.

Two close observers of worker migration in the Middle East conclude that "the number of Yemeni migrants abroad will fall from about 550,000 in 1977/78 to about 300,000 /the estimated number in 1975/ by 1980" and that "remittances will decline rapidly, reflecting the falling number of migrants and the decline in wage rates."* Most observers (including the writer) believe that this prediction is much too extreme, but its warning should not be disregarded, particularly if the time specified were to be extended by two or three years.

Since the changing forces in Saudi Arabia were already underway during the two and a half years, beginning in 1977, when Yemeni remittances were constant or increasing somewhat, no sharp, immediate decline in remittances seems probable. But if the competition from Asians were to increase substantially, as is clearly possible, at least a modest downturn, even in the short run, could be expected. (Some upturn in remittances is also possible, but this possibility does not require any advance planning.) Even if Asians do not actually displace Yemeni workers, they may exert a downward pressure on wages.

The relatively high probability of a modest decline (say up to 10 percent per year in real terms) in remittances in the near future is not a cause for immediate concern. (In fact, with some reduction in the labor shortages in Yemen, there might even be advantages.) The high levels of foreign exchange reserves and of household savings (although the latter will decline if they continue to be eroded by inflation) would cushion the impact for a long enough time for adjustments to be made. But adjustments would be necessary.

For many purposes, however, it is important to look beyond the immediate future. For the longer term, say 3 to 10 years and beyond, the likelihood of a substantial decline in remittances is much greater than in the short run. A reduction in the rate of increase in Saudi Arabian investment, a

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*The observers are Drs. Stace Birks and Clive Sinclair of the University of Durham who have been working on a study of Middle East labor migration for the International Labor Office since 1976. The quotation is from an unpublished report of May 1979, p. 127, prepared for the Agency for International Development.

The conclusions of Birks and Sinclair are based in part on what they believe will be a rapidly increasing use of the "work-camp" approach in the future. In the work-camp system, the contractor brings in all of
(Footnote continued on next page)

change in the kind of foreign labor needed, and increasing competition from Asian labor can potentially have a greater impact over a longer period of time. The possibility of a major reduction in worker earnings and remittances, say of the order of 50 percent or more in real terms, over the next 5 to 10 years must be considered a real one. Although the future course of remittances is at this time unknowable, it will be necessary to monitor their movement closely, and prudent planning should, of course, take the possibility into account.

A major decline in the level of migration and remittances would have a definite effect on the availability of labor and of foreign exchange and on their relative prices. Wages would tend to rise less rapidly, or even to fall. On the other hand, the price of imports would be greater. With remittances declining substantially, the availability of foreign exchange could be expected to decline and a devaluation of the exchange rate, or some other means of reducing imports, would eventually become necessary. The cost of imports, which includes nearly all machinery and equipment, would thus rise relative to the cost of labor. The cost of imported foodstuffs would also rise relative to domestic production costs.

This possible major change in relative prices would substantially affect what would be the most productive allocation of resources in the economy. To a considerable degree, market forces would bring about adjustments to this change in relative prices as it occurred. But some adjustments would not be possible except with a considerable time lag. For example, a capital-intensive manufacturing plant could not be replaced with a labor-intensive one without a major loss in capital, and such activities as agricultural research and adaptation often require considerable time. Even those adjustments that the market mechanism could make fairly quickly would sometimes be facilitated if they had been anticipated.

(Footnote from preceding page):
his own labor, (almost entirely men without their families), provides for their housing, food, medical care, etc., and returns them to their home country when the contract is completed. Work camps have been used in a number of major construction projects in the Gulf States, and they could presumably be adapted for the operation of industrial facilities as well as for construction. There is a growing concern in the oil-rich countries about having so many foreigners in their society, and isolating some of the workers from the rest of the society, as the work-camp system tends to do, would help to alleviate that concern. To date only Asian firms have used the work-camp approach, and its more extensive use might therefore be expected to lead to the displacement of Arabs by Asians. Just how this development will materialize is far from clear. But the fact that the two major industrial complexes in Saudi Arabia, Yenbo and Jubial, are both being constructed well away from major population centers at least keeps the possibility open.

For medium and longer-range planning -- particularly in the formulation of the Second Five-Year Plan, but for less formal planning within the Ministries as well -- the possibility of a major decline in remittances should definitely be taken into account, possibly even including the use of shadow prices. It would appear to be prudent to use as a planning assumption a level of remittances toward the lower end of the range of what seems probable. If remittances turn out to be more than assumed, not much would have been lost and that loss would be affordable. But if remittances turn out to be less than assumed, valuable time might be lost, in making adjustments, that could have been saved under more conservative planning assumptions.

A change in the relative prices of labor and imports would have a major effect on agriculture. Yemen would be increasingly dependent on domestically grown food -- a situation that will probably be true to a degree in any case because of population growth. As a result, agricultural research and the development of an extension service should be directed not only toward products and techniques that are presently profitable but also towards ones that may once again become profitable with changing relative prices. Given the prospect that food imports may become less affordable and the long time period often required for crop research to bear fruit, research on sorghum and millet, including varieties and techniques that are not profitable at present, should be continued. Potential exports should also receive major research attention. Coffee and cotton may once again become profitable export crops, and the possibilities of new agricultural exports should be pursued, particularly to the large and growing markets of neighboring Saudi Arabia and other Gulf States.

In the manufacturing sector, the main focus of medium-term and longer-range planning should be the development of industries that are internationally competitive both for import substitution and for eventual exports. This means that some investments should be deferred since the kinds of investment that would meet this test in the long run would often not be profitable today, when most manufacturing needs to be heavily capital intensive to be profitable. Two lines of action are indicated. Maximum efforts should be made to encourage those industries, such as some kinds of building materials, that can compete with imports under present circumstances. This would help to gain experience in the manufacturing field. Secondly, great care should be taken to avoid the kinds of policies, such as high levels of effective protection or subsidies, that would tend to create a high-cost industrial structure in Yemen. In the eventual development of export industry, it will doubtless be easier to start from even a narrow base of efficient industry than from a broader base where high costs have already been built into the system.

In infrastructure planning also, the possible greater availability and lower relative costs of labor will play a role. Those projects that are most labor intensive should, other things being equal, be among those that are to be deferred. Moreover, a "shelf of projects" that are labor intensive and that have already been developed up to the implementation stage would be useful were a surplus of labor ever to reappear.

These planning actions are important. Even more important for immediate Government action, however, the prospect of a substantial decline in remittances in the years ahead reinforces the urgency of changes in Government fiscal and budgetary policies that are already called for to bring inflation under control. Broadening the tax base and continuing to improve tax administration are already clearly needed; the need becomes even more compelling in the face of a potential sharp drop in remittances and, with them, customs revenues. The same is true for improving the efficiency of budgeting and government spending. The same considerations also hold for the need to postpone deferrable capital projects, and with even greater weight, since this is the only area in which it seems likely that large-scale anti-inflationary results can be achieved quickly.

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