Bernard R. Bell Files

Research + Sector Papers 1973-1975
1 of 2

DOCUMENT OF

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

NOT FOR PUBLIC USE

FOR EXECUTIVE DIRECTORS' MEETING

For Consideration on December 9, 1975 or December 18, 1975 (see para. 2 below)

R75-229

FROM: The Secretary

November 24, 1975

Capital Market Prospects and IBRD Borrowing Program

1. Attached is a President's Memorandum, dated November 21, 1975, entitled "Capital Market Prospects and IBRD Borrowing Program".

2. Attention is drawn to paragraph 2 of the Secretary's Memorandum, "Notice of Board Meetings - December 1975" (SecM75-807) which states:

> "More than one Executive Director have expressed the wish that the paper "Capital Market Prospects and Bank Borrowing Program" be discussed along with the paper "Review of IBRD Capital Structure" (R75-215). Every endeavour is therefore being made to advance the date of issue of the "Capital Market Prospects" paper so that, if Directors desire, it may be discussed on December 9 along with the "Capital Structure" paper."

3. After consultation with Executive Directors on the desired scheduling of the Memorandum, a further notice, finalizing the date of Board consideration, will be distributed as soon as possible.

4. Questions on this document should be referred to Mr. Wood (extension 6264).

Distribution:

Executive Directors and Alternates
President
Senior Vice President, Operations
Executive Vice President and Vice President, IFC
President's Council
Directors and Department Heads, Bank and IFC

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

Office of the President

November 21, 1975

MEMORANDUM TO THE EXECUTIVE DIRECTORS

SUBJECT: Capital Market Prospects and the IBRD Borrowing Program

SECTION I: Introduction and Principal Conclusions

1. The Bank's future borrowing program is normally reviewed at least once each year in connection with the review of the Bank's lending program. When a five-year lending program for FY74-78 was first proposed,1/ it was accompanied by a detailed survey of the capital markets from which the Bank was expected to raise the funds needed to finance that program. In May 1974 the survey of capital market prospects was brought up to date as part of an effort to establish that the higher levels of borrowing then proposed would be feasible.2/ Since that time the borrowing program has been revised further as summarized in the table below.

IBRD Borrowing Program: FY74-80
(current $ million)

	FY74	FY75	FY76	FY77	FY78	FY79	FY80	Total FY74-78	Total FY76-80
Gross									
Original Program	1800	2100	2500	2800	2900			11,900	
May '74 Revision/a	1966/b	2550	3400	3850	4200			15,996	
Dec. '74 Revision	1966	3550	3200	3500	3900	4800		16,166	
June '75 Revision	1966	3550	3750	4000	4300	4650	5050	17,566	21,750
Latest Estimate	1966	3510/b	3800	4300	4800	5400	6200	18,376	24,500/c
Net									
June '75 Revision	1103/b	2522	2469	2713	3312	3343	3290	12,119	15,127
Latest Estimate	1103	2483/b	2526	2957	3465	3757	4036	12,534	16,741

/a As approved after decision to retain 40% liquidity target.
/b Actual borrowing. A drawing of $113 million on the Bank of Japan line of credit made in FY73 is charged to the FY74 borrowing program.
/c Approximately two-thirds of the increase between the June 1975 revision and the latest estimate is due to a shift in the maturities of borrowings resulting from greater reliance on 2-year Central Bank issues and other medium-term borrowings. A further $400 million reflects provision for the financing of Third Window operations.

1/ The Scale of IBRD Financial Operations, FY74-78 (R71-256, dated December 15, 1971).
2/ Review of IBRD/IDA Program, FY74-78 (R74-115, dated June 4, 1974).

2. A reconsideration of capital market prospects in relation to the Bank's future borrowing program appears timely now for several reasons. First, the latest estimate of gross borrowings for FY74-78 ($18.4 billion) is nearly 15% higher than the program adopted for planning purposes after the May 1974 review. In addition, there have been important changes in capital market prospects in the 18 months since the last review. It now appears that the financial surpluses of the major oil-exporting countries will not be so large as had been expected earlier. Also there has been a notable increase in concern about the ability of capital markets to meet the enormous financing requirements projected for the next several years for investments in such areas as energy development, housing, environmental improvements and additions to productive capacity. The likelihood of a "capital shortage" and the implications it could have for particular types of borrowers, including the Bank, are subjects on which no clear consensus has yet emerged.

3. This memorandum is intended to bring up to date our assessment of capital market prospects in light of these developments over the past 18 months. Against this background it tries to answer the basic question about the Bank's borrowing program:

> Is it reasonable to expect that, apart from year-to-year fluctuations, the Bank's borrowing program can in fact be achieved?

The answer given to this question must necessarily be based upon certain assumptions about likely conditions in the capital markets over the next few years and about the willingness of authorities to grant the Bank access to these capital markets. Since there can be no assurance in advance that the assumptions made will prove to be correct, this memorandum also examines the Bank's capacity to take corrective action if, contrary to our expectations, there should be a substantial shortfall in the borrowing program due to disorder in the capital markets or denial of access to the markets.

4. The principal conclusions to emerge from the review are the following:

a. Availability of finance. The rate of growth over the next five years in capital markets and other traditional sources of finance for the Bank is likely to equal or exceed the rate of growth in the Bank's own borrowing program.

b. Distribution of IBRD borrowing. It is impossible to forecast accurately the distribution of future IBRD borrowing by source of finance. Confidence in the

Bank's ability to meet its borrowing objectives must be based essentially on the Bank's proven capacity to respond flexibly to special borrowing opportunities as they arise. Even without allowing for the sort of special opportunities which have been helpful in the past, borrowing on a reasonable scale from traditional sources should be sufficient to enable the borrowing program to be achieved.

c. Access to borrowing. Two key assumptions underlie the judgment that the borrowing program can be achieved. One is that the Bank's high standing in financial markets as discussed in the Review of IBRD Capital Structure,1/ will be retained. The second is that governments and regulatory bodies will give the Bank access to borrowing. The competition for available financing which is implicit in the notion of a "capital shortage" poses a risk to the Bank mainly in so far as it could adversely affect this willingness to accord market access.

d. Supplementary sources of finance. In the past the Bank has not exploited all the borrowing opportunities available to it, because the borrowing program could be achieved at lower cost or with a more desirable maturity structure by declining the less attractive opportunities which were available. If availability of finance should be more restrictive in the future than in the past, this would be likely to result in the first instance not in lower Bank borrowing, but rather in a somewhat higher cost of borrowing and/or a higher proportion of short-term finance.

e. Capacity to deal with a shortfall in borrowing. If, contrary to our expectations, the Bank were not able to achieve its borrowing program because of disorder in the capital markets or refusal by authorities to grant the Bank access, there would be adequate time after a shortfall appeared for the Bank to adjust its commitments to the level of financing available.

1/ R75-215 dated November 4, 1975.

SECTION II: Developments in Major Capital Markets

5. Projections of capital market developments are always highly uncertain, and depend as much or more on judgment as on quantitative analysis. Critical assumptions must be made about the savings and investment relationships that are likely to prevail in particular national economies and the way in which savings flows are likely to be channelled to investors by the various financial institutions and capital markets. In each case the pattern of financial intermediation is determined by a complex interaction of demand for and the supply of particular types of financing. Moreover, the increasing integration of national capital markets requires that projections for individual countries take into account the pattern of international financial flows resulting from payments imbalances, exchange rate movements and interest rate differentials.

6. While these considerations make the forecasting of capital market developments difficult at any time, there are three additional factors which compound the problem at present. First, the timing and character of economic recovery in the developed industrial countries is uncertain. While most observers agree that the bottom of the recession has been reached in most of these countries, the hesitancy with which these economies are responding to successive injections of fiscal and monetary stimulus is still causing concern among national economic policy makers, and there is still some question as to whether or not the advanced countries as a group are now firmly on the path to recovery.

7. Secondly, the longer-term impact of government fiscal and monetary stimuli on the financial markets in the industrial countries is uncertain. In particular, the unusually large government deficits in some of the major industrial countries could, if they persist into the period of economic recovery, generate pressure on interest rates or on the availability of funds for borrowers other than the governments. Third, it is not yet clear how the international monetary system will evolve over the next few years. The decisions taken on this issue could have important implications for the growth of international reserves, the development of intermediation mechanisms such as the Euromarkets and the pace at which integration of national capital markets proceeds.

8. The number and importance of these major sources of uncertainty concerning capital market prospects should not prevent us from looking ahead and trying to project likely developments. But they do suggest that such projections should be interpreted very carefully and that they should seek to establish general orders of magnitude rather than precise figures for particular markets in

specific years. Moreover, it is especially important that the assumptions underlying the projections be clearly stated. The implications for the Bank of competitive pressures in the capital markets--an issue in which government deficits could play an important part--are discussed in Section IV (Access to Borrowing). Also the potential impact of modifications in the international monetary system is noted both in relation to prospective growth in international reserves (para. 22) and to the incentive authorities have to encourage Bank borrowings in their currencies (para. 32).

9. On the understanding that projections of capital market developments at this time can do no more than establish general trends, the remainder of this Section indicates the broad prospects for future growth in the capital markets or other sources of finance which have traditionally supported the Bank's borrowing program.1/ The aim of this review is to establish whether or not it is likely that the rate of growth in availability of finance from these sources will equal or exceed the rate of growth projected in the Bank's own borrowing program over the next few years--i.e. about 12% per annum.

10. The major traditional sources of IBRD borrowing are discussed in four separate groupings: (1) the United States capital market, which because of its size and its highly developed character, is exceptionally important to the Bank; (2) the capital markets of the other major OECD countries, particularly Germany and Japan; (3) the financial surpluses of the major oil-exporting countries; and (4) the reserves held by Central Banks, which constitute a source of finance which the Bank has tapped in the past by means of two-year bond issues and occasionally by the sale of other securities. The possibility that the Bank might supplement its borrowing from these traditional sources by borrowing from additional sources of finance is examined in Section V.

The U.S. Capital Market 2/

11. A number of detailed projections have been made of the growth of the U.S. economy over the next five years and of the way in which this growth might be financed. Most of the projections indicate that the U.S. economy will experience 4-6% real growth with a slowing of the rate of inflation and that supply of investment capital will be sufficient in aggregate terms, though sectoral bottlenecks (e.g. in housing) could develop. Within this overall perspective, two financial market

---

1/ More detailed discussions focussing on the segments of these markets which have been particularly important for the Bank in the past are presented in Annexes 1-4.

2/ See Annex 1 for additional information.

developments are worth mentioning. First, there is a tendency on the part of the main suppliers of long-term corporate finance--pension funds and insurance companies--to modify their investment strategies in an attempt to offset the effects of inflation on securities' yields and portfolio values. Some observers feel this could lead to an overall shortening of maturities in the bond markets and maintenance of a somewhat steeper yield curve than has prevailed in the last few years. Secondly, the volume of funds that these traditional long-term investors seem likely to supply may well fall short of the amounts being sought for the fixed investment needs of corporations. This imbalance could reinforce the upward pressure on long-term interest rates and/or lead to a drop in the size of the bond market relative to short-term forms of finance, such as commercial bank loans. However, expansion in commercial bank lending could itself be inhibited by the limited size and growth prospects of the capital base for these banks.

12. To give an order of magnitude of potential growth in the U.S. capital market, the following table shows the past growth of gross bond issues (i.e. debt instruments with final maturity of more than one year) and projects the total size of the market in two different ways: (1) by using staff estimates based on a review of several public and private forecasts for the next few years; and (2) by projecting growth at the same rate as GNP.1/ The difference between these projections reflects alternative ways in which the demands for long-term financing and their prospective supply may be reconciled. As the table shows, the growth rate of total bond issues would in these two cases be between 10.3% and 12.6%, compared with a growth in the Bank's own borrowing of 12% per annum.

United States Capital Market: Gross Bond Issues
(annual averages in $ billions)

	1962 & 1963	1964 & 1965	1966 & 1967	1968 & 1969	1970 & 1971	1972 & 1973	(Est.) 1974 & 1975	Projected 1980 IBRD Staff Estimate /a	Projected 1980 At GNP Growth Rate /b
Public Sector	15.7	18.3	29.1	28.6	47.3	53.1	89.3		
Private Non-Financial	7.2	8.0	16.1	14.6	25.3	17.2	29.4		
Financial Institutions	2.1	3.6	2.0	2.4	5.2	7.1	5.6		
Foreign Issues	1.4	1.4	1.7	1.9	1.9	1.8	4.1		
Other	.2	.2	.2	.1	.2	.4	.2		
Total Gross	26.6	31.5	49.1	47.6	79.9	79.6	128.6	220	247
- As % of GNP	4.6	4.8	6.3	5.4	7.9	6.5	8.9	7.8	8.9
- Rate of Growth								10.3/c	12.6%/c

Source: OECD Financial Statistics and IBRD staff estimates.
/a Based on review of projections prepared by the Brookings Institute, Chase Econometrics, Data Resources and other academic and U.S. government sources.
/b Assumptions for nominal growth (with real growth in parenthesis) are: 1976, 15.9% (5.6%); 1977, 14.1% (5.2%); 1978, 13.8% (5.4%); 1979, 13.1% (5.2%); 1980, 12.6% (5.3%).
/c Annual percentage increase calculated on the basis of the 1974-75 average.

1/ The GNP growth rate projection is based on OECD forecasts for 1975 and 1976 and on IBRD staff estimates thereafter.

Other OECD Countries 1/

13. The recession in other OECD countries appears for the most part to have reached bottom, although the prospects for early recovery in some of these countries are not yet as firmly established as in the United States. The two countries in this group which have traditionally been the most important source of finance for the Bank are Germany and Japan. In neither case is there as much information available as for the United States either in regard to growth prospects or, more particularly, in regard to prospective patterns of investment financing. It is therefore necessary to be even more cautious in assessing the potential growth in long-term financing. The recent experience of investors in both Germany and Japan with high rates of inflation and exceptionally large financing requirements of the central government dominate current expectations of the changes to be anticipated in the next few years. Both of these factors could lead to reduced rates of growth in private bond issues compared to the recent past because of investor reluctance to make long-term commitments and the considerable overhang of public short-term debt which will need to be refinanced.

14. On the other hand, the very high savings rates in these two countries are likely to be maintained. Thus the major uncertainty is how these savings--which should grow about as fast as GNP--will be channelled to the final investors; that is, the likely pattern of financial intermediation. There is no doubt that commercial banks will continue to play a large role in the financing of corporate investment, with the result that the average maturity of financial obligations in these countries is unlikely to lengthen appreciably.

15. Given these considerations, it seems appropriate to project the growth of bond markets in these countries at a rate somewhat slower than in the past. Since gross bond issues in both countries have grown considerably faster than GNP in the past, a reasonable degree of conservatism can be achieved by projecting future growth of long-term issues at the same rate as GNP. The table below shows how the bond market has evolved over the past 10 years and sets out projected total bond issues for 1980.

1/ See Annexes 2, 3 and 4.

Japanese Capital Market: Gross Bond Issues /a
(annual averages in $ billion equivalent)

	1962 & 1963	1964 & 1965	1966 & 1967	1968 & 1969	1970 & 1971	1972 & 1973	1974	Projected 1980
Public Sector	1.0	1.9	5.4	5.0	7.6	18.7	21.5	
Private Non-financial	.6	.9	1.4	1.4	2.3	3.8	4.9	
Financial Institutions	2.5	3.5	5.3	6.8	9.8	18.2	21.5	
Foreign Issues	-	-	-	-	0.1	0.2		
Total Gross	4.1	6.3	12.1	13.2	19.8	40.9	47.9	100
- As % of GNP	6.6	7.5	10.9	8.5	9.2	11.5	10.6	10.0
- Rate of Growth								14.9/b

German Capital Market: Gross Bond Issues /a
(annual averages in $ billion equivalent)

	1962 & 1963	1964 & 1965	1966 & 1967	1968 & 1969	1970 & 1971	1972 & 1973	1974	Projected 1980
Public Sector	.9	.9	1.0	1.0	1.7	3.4	4.4	
Private Non-financial	.3	.2	.2	.1	.4	.2	.2	
Financial Institutions	2.2	2.5	2.0	3.9	5.0	12.2	14.8	
Foreign Issues	0	.3	.3	1.4	.2	.4	.1	
Total Gross	3.4	3.9	3.5	6.4	7.3	16.2	19.5	36
- As % of GNP	3.8	3.6	2.8	4.4	3.6	5.4	5.1	5.0
- Rate of Growth								10.9/b

Source: Past data - OECD Financial Statistics; Projections - IBRD staff estimates.

/a Gross bond issues include debt instruments with a final maturity of more than one year. Annexes 2 and 3 discuss the segments of these markets which are particularly relevant for Bank borrowing.

/b Annual percentage increase calculated on the 1973/74 base.

16. It is important to note that even if the growth of the bond market is at a slower pace in relation to GNP than has been typical in the past, the average annual growth projected for the bond market in both Germany (10.9%) and Japan (14.9%) is on the same order as the 12% annual growth rate implicit in the Bank's own borrowing program.

17. As regards the other OECD countries (which have traditionally been less important sources of finance), the same general conclusions apply as in the case of Germany and Japan. The domestic financial markets should experience growth over the next five years of the same order as the growth in GNP, but given the effects of inflation and possible structural shifts in the pattern of financial intermediation, this growth may not exceed the rate of growth in GNP to the degree that has been common in the past. Thus, it would seem appropriate to allow for growth in total gross bond issues in other European capital markets on the order of 11% to 14% per annum (See Annex 4 for statistics of past sales of Bank bond issues in these markets).

Oil-Exporting Countries

18. The review of the IBRD borrowing program completed in May 1974, a few months after the dramatic increases in the price of oil, discussed the potential for Bank borrowing in the oil-exporting countries.1/ It concluded that the Bank had reasonable prospects of raising a considerable fraction of its gross borrowing requirements in the near-term future by tapping the financial surpluses of these countries. These expectations were fulfilled in FY75 when 56% of gross borrowing came directly from oil-exporting countries. Unlike the situation in some of the developed industrial countries, the prospects for IBRD borrowings in the oil-exporting countries are not dependent on the way in which domestic savings are channelled into long-term investment but depend instead on the rate at which current account surpluses accumulate in those countries (since the counterpart of these surpluses is an increase in the holding of foreign assets) and on the decisions taken by various government instrumentalities in the management of the foreign assets portfolios.

19. The economic prospects for the major oil-exporting countries were reviewed in a recent Board paper.2/ The most important change in these countries' prospects from the standpoint of potential Bank borrowing is the decline in the expected total volume of current account

---

1/ "Revision of IBRD/IDA Program, FY74-78" R74-115 dated June 4, 1974.
2/ "Prospects for Developing Countries, 1976-1980" Report No. 802 dated July 8, 1975.

surpluses between now and 1980 and the increasing concentration of the surpluses in a small number of countries by 1980. Given a rate of economic recovery in the OECD countries similar to that which has occurred after other postwar recessions, the cumulative current account surpluses of the oil-exporting countries could amount to between $300 and $400 billion by 1980, compared to some $650 billion projected a year ago. As discussed in Report 802, one of the main reasons for this downward revision was the higher than expected volume and cost of oil-exporting countries' imports. According to the revised Bank projections, the current account position will turn negative for most of the oil-exporting countries before 1980 and only Kuwait, Qatar, Saudi Arabia and the United Arab Emirates are expected to remain net capital exporters by that time. The annual addition to holdings of foreign assets for these four countries is expected to be in excess of 10% per year over the period 1975-80. Moreover, as the permanent character of the surpluses in these countries becomes more firmly established, their willingness to lend for longer maturities may well increase. Indeed there is some evidence of this happening already. Hence, it is reasonable to expect that the growth of long-term foreign investment by these capital surplus countries could exceed 10% per year through 1980.

Central Bank Bonds

20. The two-year bonds issued to central banks are designed to tap a distinct and separate pool of financial resources that would not otherwise be available to the IBRD through its borrowing operations in private capital markets. There is some overlap, however, between the growth of current account surpluses of the OPEC countries (which may in part be held as central bank reserves) and the growth in the "market" for the Bank's two year bonds. For this reason, it is useful to distinguish between the growth in total international reserves and the growth in the reserves held by countries other than the major oil-exporters. (At present, the four capital surplus oil-exporting countries hold about 12% of the Bank's outstanding 2-year bonds.)

21. The likely growth in central bank reserves over the next five years is highly uncertain. In 1974, world reserves grew by 18%, most of which took the form of increased official holdings of reserve currencies (mainly U.S. dollars), but this growth was concentrated almost exclusively in the oil-exporting countries. The major industrial countries experienced no substantial growth in reserves (only about 2%) in 1974 and their reserves actually declined by a similar amount in 1973. As a group the reserves of the other developing countries also remained fairly stable in 1974.

22. Apart from the probable further increase in the international reserves of oil-exporting countries over the next few years, there is no agreement on how reserves are likely to develop, because the growth

in the demand for reserves will depend on the evolution of the international monetary system. If generalized floating were to continue and become accepted as a permanent part of the system, the need for reserves could be somewhat less than if countries were to return to a fixed exchange rate system. However, even this proposition could prove to be incorrect if countries were to seek actively to "manage" their exchange rates under a floating rate system. Whatever the final outcome--and some movement in the direction of more "managed" rates now seems likely--the demand for international reserves will probably continue to grow in absolute terms. The present mechanism governing annual increases in international liquidity appears to most observers to offer insufficient protection against excessive liquidity creation. Therefore, official policy may well be directed toward controlling the rate at which total international reserves increase and toward altering the composition and distribution of reserves among countries. It is virtually impossible to predict at this time what implications such reform of the international monetary system might have for the Bank. However, since less than 3% of net IBRD borrowing in FY76-80 is currently expected to come from this source, the uncertainty does not constitute a major threat to the achievement of the Bank's borrowing program. On the contrary, the recent experience with sales of two-year bonds suggests a growing acceptability of these investments among central banks, a trend which seems likely to be reinforced as the secondary market for these bonds develops further.

SECTION III: Sources of IBRD Borrowing

23. The prospective growth in overall availability of capital discussed in Section II is based on highly aggregated figures. The potential market for Bank obligations is of course much more dependent on the growth of certain components of these financial markets than on others. In the United States, for instance, growth prospects for state and local government retirement funds--traditionally major purchasers of long-term Bank bonds--are more important to the Bank than the expected growth in assets of institutions such as the savings and loan associations, which traditionally use most of their resources to finance housing. The fundamental constraint on Bank borrowing is the volume of assets held by those particular investors who are willing to invest in Bank obligations and the attitudes of those investors regarding the proportion of their investments to be held in the form of Bank obligations.

24. It is possible to refine the estimates of growth in availability of capital presented in Section II and to prepare separate projections for sub-components of the various financial markets. As part of a general effort to expand the "market" for Bank bonds, a program has been initiated within the Bank to identify the particular investors with the greatest potential for additional purchases of Bank obligations. However, as a basis for forecasting the probable content of the Bank's future borrowing program, such detailed studies are likely to be of limited usefulness for two reasons. First, the more detailed the projections are, the greater will be the uncertainty for any particular component of the projection. Second, and more important, any attempt to forecast the detailed distribution of future IBRD sources of finance could well give a misleading impression of the nature of the Bank's borrowing program. If the Bank's past experience is any guide, it is wrong to conceive of the borrowing program as made up of roughly stable shares of several financial markets with the growth in total borrowings determined by the pattern of growth in those markets.

Distribution of Past Borrowing

25. Far from being stable over time the distribution of past IBRD borrowing, as shown in the table below, has shifted dramatically from one period to the next in response to changing circumstances. In FY64-68 more than 60% of net borrowing took place in the United States and less than 10% in Germany and Japan. In FY69-73 the shares of Germany and Japan rose to 25% and 27%, respectively, while the share of the United States dropped to less than 20%. There has been a similarly pronounced shift in the last two years as the oil-exporting countries have emerged as a major source of finance.

IBRD BORROWING BY SOURCE: FY64-75

	Net Borrowing FY64-68		Net Borrowing FY69-73		Net Borrowing FY74-75		Outstanding End FY75 /a	
	($m)	(%)	($m)	(%)	($m)	(%)	($m)	(%)
United States	614	61	704	19	350	10	2984	24
Germany: Market /b	73	7	910	24	186	5	1838	15
Bundesbank	-	-	30	1	-	-	1020	8
Japan: Market	-	-	268	7	75	2	365	3
Bank of Japan	-	-	744	20	323	9	1136	9
Oil-Exporting Countries	15	1	372	10	2269	63	2706	22
Other Borrowings	80	9	382	10	321	9	1490	12
2-Year Central Bank	225	22	386	10	57	2	868	7

/a Includes exchange adjustments.
/b Includes private placements.

26. Neither of these major shifts in the distribution of Bank borrowing was fully predictable in advance. The rapid growth in borrowings from Japan and Germany was closely related to their balance of payments situations. Much of the German borrowing, for instance, was made up of sales to non-residents who were interested in acquiring remunerative investments denominated in deutsche marks. The substantial purchases of IBRD bonds by the oil-exporting countries in the past two years have also been related to the emergence of large financial surpluses in these countries. In neither case is it safe to assume that the circumstances which were conducive to exceptionally large Bank borrowings in the past will continue to apply--at least to the same extent--in the next few years.

Sources of Future Borrowing

27. Against this background it should be apparent that detailed projections of the markets in which future Bank borrowing may occur are likely to be of limited value. Confidence in the Bank's ability to achieve its borrowing targets should be based not on detailed projections, but rather on the Bank's proven capacity to respond flexibly to borrowing opportunities as they arise, thereby tapping funds when and where they become available. Nevertheless, it may be useful to consider in a general way the major prospective sources of future Bank borrowing if only to demonstrate that there are many reasonable scenarios under which the borrowing targets are likely to be achieved.

28. Rollover Prospects. The part of the future borrowing program about which it is possible to speak with the greatest degree of confidence is the renewal of maturing issues held by the German Bundesbank, the Bank of Japan and the 2-year issues held by central banks throughout the world. The amounts involved are shown in the table below. While there is no guarantee that the maturing issues will be rolled over, experience to date suggests that prospects for at least a rollover are very good. The figures shown for 2-year central bank bonds imply a certain amount of net borrowing in FY76 and FY77 arising from an increase in the average size of issue to a level of about $350-$375 million. In view of the fact that the September 1975 issue of $350 million was over-subscribed, the figures shown for central bank issues may be considered as conservative estimates of the financing potentially available from this source.

Prospective Renewal of Maturing Issues: FY76-80
($ million)

	FY76	FY77	FY78	FY79	FY80	Total FY76-80
Bundesbank	230	195	195	254	249	1123
Bank of Japan	193	7	11	267	433	911
2-Year Central Bank	725	750	725	750	725	3675 /a
Total	1148	952	931	1271	1407	5709
Memo Items:						
Latest Estimate of Gross Borrowings	3800	4300	4800	5400	6200	24,500
Balance from Other Sources	2652	3348	3869	4129	4793	18,791

/a In the June '75 revision of the borrowing program it was assumed that 2-year Central Bank borrowing in FY76-80 would total $2164 million.

29. Tapping Balance of Payment Surpluses. In recent years it has been traditional for the Bank to borrow most of its resources in the currencies of countries experiencing balance of payment surpluses and it is reasonable to expect that substantial borrowing of this sort will continue in future years. The largest and probably most persistent surplus position is likely to be experienced by some of the major oil-exporting countries. As noted in paragraph 19, the cumulative current account surpluses of Saudi Arabia, Kuwait, Qatar and the United Arab Emirates may exceed $300 billion by 1980. At the end of June 1975 approximately $1.4 billion of Bank bonds issued directly in these countries were still outstanding. There is reason to believe that these countries have purchased additional Bank bonds which were originally issued in other countries, so that their total holdings may be in the range of $1.5-$2.0 billion. At least $1 billion of this was acquired in the past two years, accounting for roughly 2% of the countries' current account surpluses in these years.

30. The proportion of foreign exchange available for investment which these countries or other oil-exporting countries with less permanent surpluses may choose to commit to IBRD bonds is obviously a matter for their discretion. If between 1% and 3% of annual current account surpluses were to be invested in Bank obligations, approximately $2-$6 billion would be raised over the FY76-80 period. This would be 10-30% of the net borrowing required from sources other than the rollover of maturing central bank issues and would leave an average of between $2.6 and $3.4 billion annually to be raised from other sources.

31. Balance of payments surpluses may also be expected to occur in some of the major OECD countries, though the significance of the surpluses may be somewhat different than in the past. Many observers believe that greater flexibility in exchange rates has now become a permanent feature of the international monetary system and will persist regardless of how the current debate between advocates of fixed and floating exchange rates may be resolved. If true, this would imply that the speculative demand for investments in particular currencies--which has facilitated Bank borrowings in the past--is unlikely to recur on the same scale in the future as in the past.

32. Tapping National Markets. Authorities in the major industrial countries may therefore not find sales of Bank bonds to non-residents a convenient way of dealing with speculative demand and so may not have the same incentive as in the past to encourage Bank borrowings in their currencies. On the contrary, the Bank could appear as but one of many potential claimants on the flow of national savings. Nevertheless, as indicated in Section II and Annexes 1-4, the prospects for growth in availability of capital are such as to permit accommodation of Bank borrowing without significantly increasing its relative importance as a borrower. Thus, for example, the Bank could raise funds on the order of $2 to $3 billion per annum over the next five years in the United States and the equivalent of $1 billion per annum in Germany, Japan and the other industrial countries without thereby exceeding reasonable estimates of absorptive capacity for Bank obligations.

33. The judgment that borrowings of these magnitudes could be achieved on average over the next five years without violating "market" constraints does not imply that this is how the borrowing program will in fact be carried out. It is far more likely that the proportions raised from different sources will fluctuate substantially from year to year, with additional sales of two-year central bank bonds substituting on occasion for recourse to national "markets". Moreover, temporary interruptions occasioned by short-term balance of

payments problems or an unusual bunching of domestic financing needs may result in sizeable fluctuations around the annual averages. This in itself need not be a cause of special concern, since it is for just such an eventuality that the Bank maintains substantial holdings of liquid assets. (See Section VI.)

Summary

34. The potential market for IBRD obligations is only a part of the aggregate projections of available capital discussed in Section II. No attempt has been made to distinguish in detail the growth prospects of those particular segments of the national financial markets which are especially important as potential sources of finance for the Bank. To attempt to build up a detailed forecast of Bank borrowing in this way would be to misconceive the essential nature of the Bank's borrowing program, which has been to adapt the pattern of financing to the special circumstances of the time. It is this proven capacity to respond flexibly to borrowing opportunities as they arise, rather than detailed projections of specific borrowing possibilities, which should be the basic sources of confidence that the borrowing program can be achieved. Nevertheless, a sense of confidence in the Bank's ability to meet its borrowing targets can perhaps be reinforced by considering in a general way the scale of borrowing from various sources which would be consistent with reasonable estimates of absorptive capacity for Bank obligations. This has been done and it demonstrates that, provided the Bank is successful in rolling over maturing issues held by central banks (especially the Bundesbank and the Bank of Japan) and that the major oil-exporting countries continue to invest a quite small percentage of the resources available for foreign investments in Bank bonds, new borrowings on the order of $2.6-3.4 billion annually will need to be raised on average over the next five years in the capital markets of the major industrial countries. It is neither possible nor necessary to forecast how this borrowing will be distributed. The Bank need not tap each of these markets to the full extent possible each year in order to attain its borrowing objectives. Thus, even without allowing for the type of special opportunities which experience has shown are likely to emerge, it appears reasonable to expect that the borrowing program can be achieved from these traditional sources.

SECTION IV: Access to Borrowing

Critical Assumptions

35. The judgment that there are reasonable prospects for attaining the Bank's borrowing targets rests upon two key assumptions. The first is that the Bank's financial position will remain strong and will be perceived as such by potential investors. This subject is discussed in the memorandum on the Review of IBRD Capital Structure which was recently distributed.1/ The crucial importance of the Bank retaining its high standing in financial markets is especially evident when considered in relation to its borrowing program. The Bank's Aaa rating in the United States, for example, is significant not only for the cost of funds borrowed in this country and elsewhere, but also--and perhaps most importantly--for the volume of funds which can be borrowed. In the past 12 months the Bank has had two issues of $500 million, and a further one of $750 million is now in process in the United States. Public borrowing by the Bank on such a scale would have been inconceivable without a prime quality credit rating. For purposes of this memorandum it is assumed that whatever steps may be necessary to preserve the Bank's high standing will be taken. In particular, approval of a Selective Capital Increase of approximately $10 billion has been assumed.

36. A second critical prerequisite is that the authorities--both public and private--whose permission and cooperation are essential to the successful sale of Bank obligations will support a Bank borrowing program on the scale proposed. Reference has already been made (paras. 31 and 32) to the prospect that speculative demands related to international monetary imbalances, which facilitated Bank borrowing in the past, may not be so important in the future. Moreover, the absence of such a positive incentive takes on greater significance when considered together with concerns about what has come to be called the "capital shortage" question.

Definition of "Capital Shortage"

37. The basic idea underlying the notion of a "capital shortage" is that there will not be sufficient capital available over the next few years to support the very large investment requirements which can now be foreseen. The list of "high priority" investment requirements typically cited includes investments in housing, energy development,

---

1/ R75-215 dated November 4, 1975.

pollution control as well as those additions to productive capacity needed to support a desirable expansion in employment. The ability of financial markets to sustain desired levels of investment is questioned in part because of the large claims of government at all levels on the volumes of finance which are projected to be available.

38. Viewed in narrow economic terms, there is nothing particularly unusual in the prospect of desirable investments exceeding the resources available to finance them. Were market forces allowed to operate, one would expect the cost of borrowed funds to rise sufficiently to discourage some of the planned investment and to encourage additional saving, thereby reconciling at least in aggregate terms investment demands and financial availabilities. But the problem of "capital shortage" is not normally posed as simply an economic matter; nor is it likely to be left to market forces to be resolved. Instead it appears to have an important political dimension. By implication at least, a choice among conflicting objectives is invited, with the consequences of that choice to be enforced by political means rather than through the operation of market forces. Thus, for example, prospective government deficits have been deplored as likely to divert financial resources and "crowd out" private borrowers once economic recovery gets underway. Or the protection of government guarantees may be sought for borrowings undertaken to finance energy development or other "high priority" investments which might not otherwise be able to raise the funds required at reasonable cost.

Implications for the Bank

39. The significance of this for the Bank should be obvious. To carry out its borrowing program, the Bank must under its Articles be given permission to borrow both in the currency and the market of issue. The risk to the Bank is that the competition for available financing--which the notion of "capital shortage" dramatizes--may adversely affect the willingness of governments or regulatory bodies to give the Bank the permission or cooperation it needs in order to borrow.

40. There is good reason to believe that this risk will not materialize into actual opposition to Bank borrowings. Even in the event controls on foreign borrowing were to be introduced at some point in the future, there are precedents for exempting borrowing by or--as in the case of the Bank--on behalf of the developing countries.1/ Moreover, governments of the major industrial countries

---

1/ One notable example of this is the program of controls introduced in the United States in the mid-1960s to limit capital exports.

have repeatedly stated their desire to avoid restrictions on access to capital markets. Indeed there is widespread interest in encouraging greater access by the developing countries to these major capital markets. Under these circumstances, there would appear to be little reason to expect that the Bank, which is only acting as an intermediary in channelling finance to high priority uses in the developing countries, would be denied access to borrowing.

SECTION V: Supplementary Sources of Finance

41. In the past the Bank has not exploited all the borrowing opportunities available to it. It has been possible to achieve the borrowing program even while being selective regarding the cost and maturity of potential borrowings. Substantial additional sums could have been raised in the past had the Bank been willing, for example, to pay the higher interest rates typically associated with private placements in the United States. Similarly, the past record of oversubscriptions to the Bank's 2-year central bank issues suggests that additional sums could have been raised from this source as well, if the Bank had been able to accommodate all subscribers. In addition there are certain major sources of finance which have not been utilized at all or at least not to their full extent. Perhaps the most notable of these are: (a) the money market in the United States and (b) the Euro-markets, including both syndicated bank loans (Eurocredits) and Euro-bond issues. If the volumes of capital available from traditional sources prove to be insufficient over the next few years, the probable impact in the first instance would be to prompt greater utilization of these supplementary sources of finance. It may therefore be useful to consider briefly the potential and the problems associated with some of these sources.

United States Money Market

42. The short-term money market in the United States is both large and complex. To cite only two important parts of the market which are especially relevant to the Bank, it may be noted that approximately $50 billion is currently outstanding in the form of high quality commercial paper and another $85 billion in the form of bank certificates of deposit. The Bank's credit standing is such that it could certainly enter the short-term market directly.

43. Were it to do so, the Bank would incur two types of risks. One is the risk to the Bank's net income arising from the fact that it makes long-term loans at fixed rates of interest. If rates on borrowing rise, the Bank's costs increase and yet it cannot, under present policies, offset this rise through an increase in lending

charges, except with a considerable lag. This problem will exist for the Bank whenever the maturity of new borrowing is less than the maturity of new loans or a substantial time period separates the two actions. But it obviously increases in severity the greater is the proportion of borrowings which is relatively short-term.

44. The second risk is that for some reason it would not be possible to roll-over maturing short-term issues. Again this risk is not unique to short-term borrowings, though it is obviously true that the shorter the maturity of borrowing, the more frequently the question of renewal must be faced. On the other hand, short-term borrowing poses the least risk to creditors. It would be possible to deal with the roll-over risk by arranging in advance a standby facility which can be drawn upon in case of need. The total cost of borrowing--including both the interest on the short-term borrowing and the commitment fee for the standby arrangement--could well be below the cost of medium or long-term borrowing over an extended period.

45. In considering the merits of short-term borrowing, the question of the relationship between the average maturity of loans and of borrowings is often raised. The underlying concern is apparently that, by relying too much on short-term borrowing, the Bank's liquidity position could be impaired. While this concern is understandable, it fails to take into account the way in which the Bank's present liquidity policy is formulated. The policy requires that we plan to hold cash and securities at any one time equal to 40% of the Bank's borrowing requirements over the following three years. Because the policy is formulated in this way, an increase in short-term borrowing will automatically raise the target for liquid holdings (to allow for the repayments of the short-term borrowings). Provided the revised target is achieved, the Bank will not be more "illiquid" as a result of the short-term borrowings. Its degree of "liquidity" will be the same; the difference will only be that holdings of cash and securities will be higher.1/ Thus, the adverse impact of greater reliance on short-term funds is not likely to be "illiquidity" but rather a concern about the scale of our liquid holdings and the cost of carrying these holdings.

1/ The three year period used in the present liquidity formula is designed to smooth out year-to-year fluctuations in borrowing requirements. If, however, a substantial fraction of the Bank's borrowings were to be rolled over more than once during the three year period--as would be the case with short-term borrowing--it would be necessary to reconsider how the liquidity formula should be applied.

Euromarkets

46. Some of the same considerations apply in relation to potential borrowings from the Euromarkets. There are three broad segments to this market. Their relative size is summarized in the table below. Far and away the largest is the Eurocurrency market which is almost exclusively a short-term money market. There are certain similarities between bank certificates of deposit in the United States and deposits with Eurobanks. Typically, rates paid on dollar deposits by the Eurobanks are somewhat higher than those paid by domestic US banks. All the risks to the Bank which would arise in borrowing directly in the United States money market would apply as well if it were to compete directly for Eurocurrency deposits.

Size of the Euromarket
($ billion)

	1970	1971	1972	1973	1974	(1st half) 1975
Eurocurrency/a	65.0	85.0	110.0	160.0	210.0	230.0
Eurocredits/b	4.7	4.0	6.9	22.0	28.6	7.8
Eurobonds	3.5	4.2	6.9	4.6	4.5	5.5

/a All foreign currency liabilities to residents and nonresidents, banks and nonbanks, excluding interbank redeposits.
/b Published data for credits made by syndicates of banks; the total volume of credits is greater than that shown to the extent that individual banks provide credits.

47. The Eurocredit market consists of medium-term loans extended by the Eurobanks. Typically a syndicate made up of a large group of banks from several countries is involved, with no single bank taking more than 10-15% of the total credit. Since the credits are extended for a fixed term--usually 5 to 7 years--the rollover risk would be less than with money market borrowings, though the cost for Eurodollar borrowings, for example, would be higher than for direct borrowings in the United States money market. Interest rates on Eurocredits are adjusted at fixed intervals--typically every 3 or 6 months--so the risk of rising interest rates remains.

48. Eurobonds have many of the same characteristics as domestically issued bonds. They are sold through underwriting syndicates, listed and traded on stock exchanges and interest rates are fixed.

However, unlike domestically issued bonds, Eurobonds are sold to an international clientele of investors across national boundaries through an underwriting syndicate comprising financial intermediaries from many countries. The Bank itself has had a few issues in Europe which were restricted to purchase by non-residents. To this extent it might be considered already to have tapped the Eurobond market. Nevertheless, in most circumstances, it is likely to be preferable for the Bank to tap domestic markets when that is feasible because of the generally lower underwriting costs, lower yields, and the prospect of a somewhat better secondary market for domestic issues.

Summary

49. This brief review of the Bank's borrowing potential from non-traditional sources is not intended to demonstrate that borrowing from any one of these sources would be appropriate for the Bank either now or in the next few years. The point it seeks to make is simply this: if the Bank is willing to pay a somewhat higher price for borrowed funds or to increase its dependence on short-term borrowings, it could add substantially to the volume of resources potentially available to finance the borrowing program.

SECTION VI: Dealing with a Shortfall in Borrowing

50. The conclusion that the Bank's borrowing program is likely to be achieved is based upon certain assumptions which appear reasonable. Nevertheless, the validity of two of these assumptions--namely, that the Bank will be granted regular access to capital markets and that conditions in these markets will remain orderly in the face of mounting financing needs--cannot be assured in advance. Therefore it is reasonable to ask what corrective action could be taken if, contrary to our expectations one or both of these assumptions prove to be incorrect.

51. To illustrate the Bank's capacity for corrective action, a rather extreme hypothetical scenario has been constructed in which actual borrowings fall about 20% short of our borrowing program over the next five years--equivalent to an annual shortfall of about $800 million. No corrective action is taken in the first year a shortfall occurs (i.e., FY76) or in the second year (i.e., FY77). However, beginning in the third year new commitments are reduced by the same amount as the original shortfall. In the subsequent year, there is a further reduction in the absolute level of commitments to $5,000 million per annum, a level which is then maintained in real terms after FY80. The consequences of this scenario for the Bank's liquid holdings are summarized in the table below. They show that year-end liquid holdings fall to a level of just under $5 billion and at that level they constitute over 30% of borrowing requirements for the following three years.

Impact of Reduced Borrowings and Commitments
($ million)

	FY76	FY77	FY78	FY79	FY80	FY81
Gross Borrowings						
Present Projections	3800	4300	4800	5400	6200	6640
Hypothetical	3000	3500	4000	4600	5400	5840
Difference	800	800	800	800	800	800
Commitments						
Present Projections	5200	5500	6100	6800	7700	8085
Hypothetical	5200	5500	5300	5000	5000	5250
Difference	-	-	800	1800	2700	2835
Liquid Holdings (end of year)	5170	4970	4970	4950	5180	5690
(% of 3 year borrowing requirements)	42.0%	36.0%	32.8%	31.1%	32.4%	36.8%

52. The significance of these results is that the Bank can adjust to disorder in the markets or a substantial interruption in its access to markets with a considerable lag without weakening its liquidity position to such an extent that further operations would be threatened. In practice, of course, the Bank's reaction both with respect to the timing and the scale of response would depend on the particular circumstances in which a borrowing shortfall occurred. The main point is that even if one were to question assumptions which have been made in reaching the conclusion that the Bank's borrowing program can be achieved, it would not be imprudent to withhold final judgment until there is firm evidence of a persistent shortfall in actual borrowings. Taken together with the case which has been presented concerning the favorable prospects for the Bank to achieve its borrowing objectives from traditional sources or, should that be necessary, from supplementary sources, this conclusion would appear to justify continued adherence to the Bank's current program of operations.

Robert S. McNamara

Annex 1

IBRD Borrowing in the United States Capital Market

Past IBRD Borrowing

1. The United States capital market is of central importance to the Bank. It was in that market that the Bank established its creditworthiness in competition with other borrowers in circumstances which were originally exceedingly difficult. Various state and federal laws had to be amended to permit purchase of Bank bonds by a broad range of institutional investors. These institutional and other investors had to be persuaded of the soundness of the obligations of what was then a unique financial intermediary. The campaign to establish creditworthiness led, in 1959, to the Bank receiving an Aaa rating.

2. The US capital market has been the largest single source of funds for the Bank since its inception. In terms of borrowings outstanding (at September 30, 1975), the US capital market with $3.5 billion, accounted for 28% of the total. Not only has the amount of money raised in the US market been large, but the maturity of issues has consistently exceeded that of most issues in other countries. Over 60% of the 29 issues in the US through June 30, 1975 had final maturities of 20 years or more, and 86% were for 10 years or more. By contrast only 28% of the 71 Bank borrowings in deutsche marks (both public and private) were for 10 years or more, and only one issue was for as long as 20 years. Numerous other lenders have supplied funds for as long as 15 years or more, in smaller total amounts. However, it is clear that in the past the US market has been the largest source of long-term money for the Bank, in addition to being the largest net supplier of funds.

3. All Bank bonds sold in the US have been public issues. The investors who bought these bonds, shown in the following table, have largely been institutions such as life insurance companies, banks and pension funds. It is known that institutional investors of this kind operate within limits as to the proportion of their portfolios they wish to hold in any one kind of asset. (These limits may be imposed by statute or regulation in the case of state funds and certain private institutions.)

Percentage Distribution of IBRD Bond Issues in The U.S, 1960-1975

Year of Issue:	1960	1962	1965	1966	Mar. 1967	Aug. 1967	Mar. 1968	Sept. 1968	1970	1971	1972	Jan. 1975	Jan. 1975
Maturity of Issue:	25 Years	20 Years	25 Years	25 Years	25 Years	26 Years	26 Years	26 Years	25 Years	25 Years	5 Years	5 Years	10 Years
Percentage Taken up by:													
Insurance Companies													
Life	24%	12%	9%	22%	18%	21%	12%	11%	9%	10%	1%	1%	2%
Other	1	2	2	4	3	3	-	3	2	2	2	-	1
Private Institutions a/	7	5	7	6	8	3	7	7	9	7	3	3	4
Savings Banks	7	5	4	2	20	14	26	17	4	8	12	2	3
Banks for Own Account or Account of Others	34	26	39	34	16	14	18	22	22	18	62	61	50
Pension Funds	13	26	32	27	25	37	28	30	36	29	3	4	3
Corporations	1	3	2	1	2	2	2	1	2	4	5	5	3
Investment Trusts	6	10	2	2	3	1	2	4	11	8	2	6	16
Individuals	5	3	2	1	2	2	2	3	3	7	4	2	1
Dealers	2	8	1	1	3	3	3	2	2	7	6	16	17
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Foreign Sales as % of Total	9%	23%	10%	12%	5%	7%	6%	5%	5%	-	3%	N.A.	N.A.

a/ Fraternal, Charitable, Education and other non-profit organization.

Source: IBRD Underwriters.

Relative Importance of IBRD Borrowings

4. The Bank is now one of the six largest borrowers in the US bond market, including government and government agency borrowers. If one compares the Bank to issuers in the corporate bond market in the most recent year, the size of the Bank's borrowings put it in the second place behind only one other issuer--the American telephone system, which consists of 10-15 different borrowers. The size of each Bank issue tends to be among the largest in the corporate bond market, but when compared with government agency issuers, such as the Federal Home Loan Bank, IBRD borrowings do not stand out so prominently. However, there are important differences between government agency bonds and Bank bonds that make the size of the potential market for agency bonds much larger.1/

1/ It should be noted that US government and agency securities are for the most part in the 2-7 year maturity range, which enables them to tap sources of funds not committed to long-term markets.

5. The following table shows the estimated size of the US bond market and Bank gross borrowings, as a percentage of the total, over the period 1960-1975. As the table indicates, the Bank did not borrow in this market at all in five of the last ten years with the consequence that it was a net repayer of debt in those years. In three of the five years the absence of the Bank from the market was due to permission to borrow being withheld. The Bank's share in total bond issues has been less than 1% in all years and has fluctuated substantially from year to year.

U. S. CAPITAL MARKET BOND ISSUES
(US $ million, Calendar Years)

		1960	1965	1970	1971	1972	1973	1974	Est. 1975
Federal State & Local Government	Gross	10,785	16,010	26,663	35,492	33,937	35,501	56,728	83,084
	Net	6,334	3,627	12,500	17,934	15,101	7,304	17,286	47,960
Government Agencies	Gross	1,672	2,731	16,180	16,283	12,825	23,884	23,773	15,000
	Net	-7	2,365	8,567	3,393	9,666	21,635	21,463	11,000
Non-Financial Enterprises	Gross	5,912	8,935	25,771	24,923	18,572	15,938	24,842	34,000
	Net	3,456	5,392	19,756	18,807	12,187	9,159	19,670	28,000
Financial Institutions	Gross	2,038	3,762	3,875	6,453	8,536	5,769	6,252	5,000
	Net	1,537	2,707	3,147	5,059	6,952	2,335	1,398	3,000
Foreign	Gross	705	1,683	1,455	2,388	1,804	1,704	3,140	5,000
	Net	674	1,618	486	305	308	194	-97	3,000
Other	Gross	77	228	159	314	449	323	400	400
	Net	-	-	-	-	-	-	-	-
Grand Total	Gross	21,189	33,349	74,103	85,853	76,123	83,119	114,735	142,500
	Net	12,494	15,709	44,456	45,498	44,214	40,627	55,333	123,000
IBRD Borrowings	Gross	125	200	200	375	250	-	500	1,250
	Net	-	169	147	325	173	-114	464	1,238
Gross IBRD Issues as a % of Gross Total		0.59	0.60	0.27	0.44	0.33	-	0.43	0.87

Data cover all new issues of securities offered for cash sale in the U.S., including private placements in amounts over $100,000 and with terms to maturity of more than one year. IBRD issues are included under "Foreign."

Source: Through 1974 - OECD Financial Statistics; 1975 - IBRD staff estimate.

Factors Affecting Future IBRD Borrowing

6. The small proportion of total US bond issues taken up by the Bank does not, by itself, indicate that there are major opportunities for expanding Bank borrowing as a proportion of the total. The limits to borrowing by any single borrower are difficult to identify, but in the case of the Bank have much to do with its credit rating and "image" in the market, the yield and trading characteristics of its obligations and its ability to compete effectively for funds with various types of borrowers.

7. Creditworthiness. Perhaps the most important single factor is the maintenance by the Bank of a very high quality image. Investment decisions, even when based on detailed analysis of financial statistics and operations, necessarily contain subjective judgments. These judgments pertain to the evaluation of such factors as future probabilities of favorable events and economic trends, and also, in the case of the Bank, to judgments about the soundness of lending policies, financial conditions, reserves and the like. Because of limited knowledge in the financial community concerning the exact nature of Bank operations and the peculiarities of its financial structure, these latter factors may represent a special source of uncertainty to US investors when considering Bank issues, especially since these investors have a wide diversity of more familiar investment media from which to choose. Thus maintenance of a quality image in conjunction with a growing volume of borrowing will require continuing efforts to educate potential bondbuyers to the prudence of the Bank's financial management. The key to the quality image is not only the possession of an Aaa rating, but also an image in the market place as a strong Aaa. A rating of the highest quality is believed to be invaluable in obtaining a positive reception with both current and additional bondholders, and also usually permits a lower interest cost to the Bank.

8. Interest Rate. An Aaa rating does not always mean the lowest possible interest rate, but it does insure that the rate will be in the lowest range. One of the uncertainties in selling a large issue compared to most offerings is the question whether the interest rate must be higher than would be necessary with a smaller issue in order to obtain market absorption. Were it necessary for the Bank to concede a higher than usual interest rate for given market conditions in order to effect a large sale, the "market image" of the Bank could be damaged. Thus it is advisable to protect the "market image" as well as the strong rating by proceeding cautiously with the expansion of the volume of issues.

Trading Characteristics

9. Another factor which would tend to make Bank securities attractive to a wider group of investors is the development of a secondary market, with greater depth of trading than is now the case. Broader secondary trading is dependent on a sufficient volume and frequency of issues of varying maturities, held by a sufficiently large number of investors for a market to develop. Thus, with more frequent and larger Bank offerings, development of a deeper secondary market will be facilitated. There are other possible inducements to more active trading, such as earlier sinking funds (although this would slightly shorten the average life of the bonds); efforts to gain a wider mix of original purchasers; and possibly the issuance of serial bonds.

10. Investor Preferences. Although it is asserted, from time to time, that the further expansion of Bank borrowing will come up against a market saturation limit originating in portfolio preferences of investors, it is not clear that this is imminent. Unfortunately no way has been identified of quantifying such a market saturation concept. Whether investors will actually be willing to take up any given volume of bonds from one issuer, at what interest rate and what maturity cannot be known for certain until such larger offerings are attempted, although the underwriters and the financial community would certainly be sensitive to indicators of market resistance, if such a limit on Bank borrowing seemed to be significant. In any case, such a limit is a moving frontier, moving outwards as the size of the bond market grows, and as the investable pools of funds of institutions increase, both in real terms, and as a result of inflation.

11. The share of the "market" which the Bank might command in future years depends on the rate of growth assumed for the bond market as a whole, the portion of the total market in which the Bank can compete effectively and, of course, the scale of IBRD issues. The summary of future IBRD sources of borrowing presented in Section III points to the desirability of establishing the capacity to borrow up to $2.5 or even $3 billion in the US market by 1980, though it may not be necessary to borrow this full amount in any given year.

12. A number of detailed projections have been made of the growth of the US economy over the next few years and of the way in which this growth might be financed. Because these projections normally focus on the total sources and uses of funds for any particular

category of investor (e.g. pension funds) or user (e.g. state and local governments), the implications for the bond market--that is, for debt instruments of more than one year--as distinct from the money market can only be assessed in crude terms. By 1980, net bond issues by corporations (non-financial enterprises) could increase by something like 50% over the level expected in 1975, i.e. to approximately $45 billion. Allowance for refinancing of maturing issues could raise the level of gross corporate issues to the $60-$70 billion range. Even greater uncertainty applies to the prospective growth of bond issues by government at various levels, government agencies and foreign institutions, so that a reasonable case could be made for projecting total bond issues in 1980 as low as $190 billion or as high as $240 billion. The IBRD staff estimate of $220 billion should therefore be considered as subject to a substantial margin of error.

13. At a level of $2.5 billion per annum, therefore, Bank borrowings would be likely to be a little over 1% of total bond issues in 1980, a higher proportion that has been experienced in the past. Attainment of borrowing on such a scale would be eased somewhat by the fact that repayment of prior Bank issues will average more than $200 million per annum in 1979 and 1980. Nevertheless, a substantial marketing effort will be required over the next few years to expand the scope for Bank borrowing from its traditional sources for long-term funds, namely, those institutions seeking sound fixed income securities. These are the sources which typically finance the bulk of corporate and foreign issues.

14. In addition, it will be necessary to broaden the market for Bank obligations by tapping the funds which traditionally support the government agency and municipal markets. This will be more difficult, though it is precisely in relation to these markets that the factors mentioned above--i.e. market "image", interest rate and trading characteristics--should have their greatest impact. Expansion of the potential market for Bank bonds will take time. To provide a focus for these continuing efforts we have adopted as a planning target a figure of $3 billion as the scale of borrowing in the US capital market which the Bank should have the capacity to achieve by the end of this decade. The idea is not that borrowing on this scale would be planned for any specific year, and certainly not as a regular feature of the Bank's borrowing program, but rather that the Bank should seek a degree of flexibility in its borrowing operations by building up a capacity to borrow from the US and other capital markets in excess of its projected needs.

15. At a level of borrowing approaching $3 billion per year, the size or frequency of public issues would need to be increased over the level of past years. Since the average size of bond issues generally can be expected to grow by 50-100% over the next few years, the Bank should be able to market issues of the size required without distorting its relative position in the bond markets.

16. Access to Borrowing. In judging the potential for future IBRD borrowing in the US capital market, a basic premise is that the Bank will be given permission to borrow in the United States. The US capital market operates more openly and freely than the markets in most other countries. There are stringent disclosure requirements, but there are no official restrictions on access to the market. The Bank is one of the few exceptions to this generalization, since under its Articles, it must seek permission from the US authorities to borrow in the United States (or to borrow in US dollars in other markets).

17. Access to the US capital market is especially important to the Bank because it is the largest market of its kind and offers a range and flexibility in financial assets that fits the Bank's borrowing requirements. The ultimate impact of Bank borrowing on the US economy has generally been favorable in the past. The proceeds have typically been invested initially in US short term obligations and when disbursed a significant proportion has been spent upon United States goods and services. Nevertheless, Bank borrowing does represent a real transfer of goods and services abroad as a counterpart to the financial assets held by savers in the US capital market (as is true of all foreign borrowing in the US market). It is understandable, therefore, that the authorities have, from time to time, showed concern about Bank access to the market and the possible effect of such borrowing upon the balance of payments situation.

18. In practice the net impact of the total operations of the Bank, a more appropriate measure than just considering Bank borrowings, has not had a deleterious effect upon the US balance of payments. Looking forward to a level of gross borrowing in the US capital market of up to $3 billion a year, it is unlikely that such an amount would be a significant item in either the balance of payments or national savings flows in the early 1980's.

19. Impact of Possible "Capital Shortage". Section IV briefly discusses the notion of a "capital shortage" and its potential implications for the Bank. As applied in the US context, there are two aspects of this topic that concern the capital market. The first is the possibility that government borrowing will so increase, as a result of deficit finance, that other borrowers will be "crowded out", in the sense that yields will rise, or other borrowers will not be able to enter the market at the times they wish to do so. The second aspect relates to the possibility that increased demands for capital may raise rates in the market, in order to insure that savings will respond.

20. Whatever the amount of strain that develops in the capital markets, limits on credit availability are likely to apply most stringently to less creditworthy institutions. The market place is an efficient allocator of capital such that in times of "tight money" the least creditworthy, riskiest projects are the ones that will not be financed. The increased competition for funds in future years could cause the Bank some discomfort in that the general level of interest rates may rise, but there is no reason to believe that Aaa borrowers will be those who suffer most in the competition, or will be those "crowded out" by market forces.

Annex 2

IBRD Borrowing In The German Capital Market

1. The Bank has raised more money by borrowing in DM-denominated obligations than in any currency other than U.S. dollars. The bulk of these borrowings occurred after 1965. At Sept. 30, 1975, outstanding borrowings in DM of $2513.9 million of U.S. dollar equivalent totaled 20% of the Bank's funded debt. Of this amount approximately 35% is accounted for by private placements with the Bundesbank, 20% by private placements with other financial institutions and the remaining 45% by public offerings. The Bundesbank borrowings have carried a maturity of 4 to 7 years, with the other private issues and the public offerings having a longer maturity, normally about ten years. New net borrowing from the Bundesbank ceased in 1960 but the level of debt placed with the Bundesbank was maintained through the rollover of maturing note issues.

2. The table below summarizes data on the public and private issues made in deutsche mark or in dollar offerings placed with the Bundesbank (the latter of which have all been refinanced over time through DM notes). The public issues have all been underwritten by a syndicate headed jointly by the two largest commercial banks. The private issues have been placed with specialized financial institutions as listed.

Issues Placed In DM And In $ With The Bundesbank

	FY 1963-1975				FY 1973-1975			
	# Of Issues	Gross Borrowing ($ m)	Weighted Average Life (yrs)	Weighted Average Cost To The Bank	# Of Issues	Gross Borrowing ($ m)	Weighted Average Life (yrs)	Weighted Average Cost To IBRD
Public Issues	14	$917.3	10.2	7.21%	4	$334.5	9.5	7.21%
Private Issues								
West Deutsche Landesbank Girozentrale	4	200.1	11.5	6.63	-	-	-	-
Deutsche Girozentrale - Deutche Kommunalbank	5	77.9	3.2	6.98	1	7.8	2.0	6.40
Deutsche Genossenschaft Kasse	2	101.8	7.2	7.73	1	64.3	7.0	8.23
Deutsche Bank A.C.	1	63.8	7.0	8.39	1	63.8	7.0	8.39
Total	12	443.6	8.4	7.20	3	135.9	6.7	8.28
Bundesbank Issues	40	1640.8	4.4	6.99	6	633.5	4.3	8.24
Total Issue	66	$3001.7			13	$1103.9		

3. The cost of borrowing in DM and from the Bundesbank has been in line with the Bank's overall cost of borrowings, and in recent years has been less costly than the Bank's average cost of borrowing. These DM and Bundesbank borrowings have, however, been of shorter duration than average, due primarily to the 4 year maturities of many Bundesbank issues and the private placements.

4. To discuss Bank borrowings made in the "German bond market" is misleading, since there are indications that the largest purchases of recent public and non-Bundesbank private issues have been by non-residents. These borrowings have not really tapped German savings flows directly except to the extent that DMs held abroad indirectly originated in domestic incomes. Nevertheless, these issues have been sold by German syndicates and have conformed to German regulations, although placed with nonresidents.

5. The bond market has experienced very rapid growth, whether measured in gross or net terms. However, these figures are a deceptive guide to the potential of the market. The gross market size is dominated by the obligations of financial institutions, averaging over 70% of the total in the last three years. A significant proportion of these obligations reflect the methods used to finance the operations of the German banking system and are normally in maturities of less than 5 years. Thus the size of the medium and long-term bond market relevant to the Bank's borrowings may be much smaller than the commonly accepted statistics show.

6. It can also be seen that there has been considerable year-to-year variation in the different segments of the market, both as to volume and yields. This variation can be partly explained by the thinness of the long and medium-term market and the relative unimportance of institutional investors as compared with, say, the U.S. market. There were also capital controls which largely isolated the market from foreign participation in domestic issues.

7. A feature of the bond market is the method of coordination employed. While foreign and domestic issues are nominally on the same basis, as far as access to the market is concerned, a central capital market committee, composed of representatives of the banks and advised by the Deutsche Bundesbank periodically reviews prospective amounts and timing of issues, to insure an orderly market. No foreign offering can reach the market except through a syndicate led by a German bank. This insures that issues satisfy the quality requirements of the market, and will be eligible for listing on the exchanges.

8. The variation of the market, the inclusion in market statistics of debt of considerable volumes of short-term obligations, and the de facto regulation of access for foreign borrowers make it difficult to

relate the growth of the bond market to an estimate of potential borrowings that the Bank could hope to undertake. Furthermore, many Bank borrowings in the past have been either outside the normal market framework, as in the case of private placements, or irrelevant to it, as with public issues taken up by nonresidents. The Bank's share of the market has been determined in the short run by such factors as government financing needs, the willingness of investors to lend medium or long-term maturities, nonresident demand for DMs, and balance of payment considerations.

Annex 3

Borrowing in the Japanese Capital Market

1. Japan has been an important source of borrowed funds for the Bank in the last five years, not simply because of the size of the sums involved, but because it is a case of a former borrower becoming a supplier of funds on a large scale. Beginning in 1970, the Bank's gross borrowings in Japan total $1.9 billion, of which the greater part ($1.6 billion) has been lent by the Bank of Japan. The balance of $323 million was in the form of six separate public issues and one private placement with 13 financial institutions.

2. The Japanese central bank borrowings (to be distinguished from the 2 year bonds offered to other central banks) were medium term lines of credit, the earlier tranches being for a term of five years and the later ones usually for a final maturity of seven years. The net amount of the Bank of Japan borrowings outstanding at September 30, 1975 was $1.1 billion. Although net borrowing may not substantially increase from this source, it is expected that it will be possible to at least roll over the outstanding amount. The offering yield on these borrowings has been set at the rate for government guaranteed bonds; these rates have risen from just over 7% in 1970 to 8.25% currently in response to tight money and inflation. The origin of these central bank lines of credit lay in the balance of payments situation of Japan in the early 1970's and the government's willingness to channel substantial amounts of these surpluses into development assistance by lending to the Bank. At that time there were substantial surpluses on external account and a rapid growth in foreign exchange reserves.

3. The public issues in Japan were of different significance since they were the first foreign issues to be sold on the Japanese market and thus were part of the evolution of a more open capital market. Control is maintained over access to the market by the authorities. Apart from controlling the manner and timing of foreign issues they also influence the distribution of bond holdings. The market is normally dominated by banks and other financial institutions, many of them with semi-official status. Nevertheless there is a substantial individual demand for bonds, and a relatively high percentage of the subscribers to Bank public issues in Japan have been individuals, as the following table shows.

Percentage Distribution of Subscribers to IBRD Bond Issues

Issue Date	Banks	Other Financial Institutions	Individuals	Other Institutions
6/30/71	35	27	33	5
10/20/71	35	24	38	3
2/18/72	34	20	42	4
8/ 4/72	34	25	37	4
12/ 2/72	33	22	42	3
7/14/73	34	10	54	2

4. Control over access to the market by the authorities ultimately determines the possibilities for borrowing, and such considerations as the balance of payments, government financing, and corporate business requirements are among the factors which influence the authorities' decision to grant access. Historically, the Japanese market has been supported by a relatively high savings rate, averaging 36% of GNP over the last three years. Over the short-term, however, projected government financing requirements and capital investment plans of businesses are likely to absorb most of the available funds. Moreover, the long-term bond market has been affected by investors' fears of continuing inflation. Despite these considerations, it is still possible to assume that over the longer term the Bank will be able to borrow in satisfactory maturities in Japan through public issues and private placements, in addition to the Bank of Japan borrowings.

Annex 4

IBRD Borrowing in Other Capital Markets

1. The Bank has been able to borrow in a variety of other capital markets in the past, mostly in Europe, but also including Canada. Excluding the United States, Germany and Japan and the oil-producing countries, $1.1 billion has been borrowed (as of September 30, 1975), in 48 public borrowings, of which $0.8 billion is outstanding. In addition to the public borrowings a further $869 million has been raised by private placements in these countries. The greater part of that amount ($544 million) was borrowed in Switzerland. The rest was in relatively small amounts which were, nevertheless, valuable additions to the funds available to the Bank. The tables attached to this Annex show the amounts borrowed through both public offerings and private placements by country of borrowing and currency borrowed.

2. In many of these smaller markets it will be difficult to increase the amount of gross borrowing. The smaller the size of the bond market the more quickly the limits of borrowing by any one large borrower are reached. In addition some markets present special problems which limit borrowing possibilities. For example, in the case of the United Kingdom market, which is a sophisticated and a relatively large long-term market, the recent rate of growth has been low. In the past few years, it has not been possible for the Bank to borrow in this market because of the wish of the authorities to limit possible pressures on the exchange rate, and because interest rates have been high. Generally speaking, however, the markets are not large (with the exception of the United Kingdom) and longer term borrowing, where it has been possible, has cost more in recent years than the Bank has been prepared to pay.

3. The one market that deserves particular mention is Switzerland, because it has been a reliable source of longer term borrowing in times when such maturities were not easy to place elsewhere. However, the Swiss market is relatively small and the rate of growth low, compared with other major markets. (In 1974 total Swiss bond issues were equal to nearly 2% of the United States issues, 11% of German issues and 4% of Japanese market issues.) To some extent this is the result of the authorities' desire to isolate the domestic monetary situation from outside pressures. While the market operates freely it does so in a context of official guidance aimed at limiting foreign borrowing to a relatively small share of the total market. The authorities also act to discourage the use of the franc as a means of payment among third countries through

controls on foreign issues and a requirement that the proceeds be converted into foreign currencies immediately.

4. In these circumstances it is not possible to expand Bank borrowing at a faster rate than the authorities will permit. Over the last decade this has amounted to some 3% of the bond market per year, on average, although year to year variations in this percentage have been quite marked.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

BORROWINGS

By Country of Borrowing

September 30, 1975
(Amounts Expressed in Millions of U.S. Dollar Equivalents
Based on Book Rates of Exchange)

	Public Borrowings		Private Borrowings		Total Borrowings	
Country	No.	Amount	No.	Amount	No.	Amount
United States	31	$ 4,685.00	-	$ -	31	$ 4,685.0
Abu Dhabi	-	-	1	76.0	1	76.0
Austria	1	5.0[1]	3	41.6[1]	4	46.6
Belgium	3	56.3	1	27.5	4	83.8
Canada	8	156.0	1	48.8	9	204.8
France	1	33.1	-	-	1	33.1
Germany	15	1,266.2	57	2,972.4		
	-	-	21	1,046.1[1]	93	5,284.7
Iran	-	-	2	350.0[1]	2	350.0
Italy	2	58.2	1	29.1	3	87.3
Japan	6	323.8	11	1,603.5	17	1,927.3
Yougoslavia	-	-	1	50.0[1]	1	50.0
Kuwait	6	439.8	-	-	6	439.8
Lebanon	-	-	1	33.2	1	33.2
Libyan Arab Republic	-	-	2	135.1	2	135.1
Netherlands	7	120.6	2	95.0	9	215.6
Nigeria	-	-	1	240.0[1]	1	240.0
Oman	-	-	1	30.0[1]	1	30.0
United Kingdom	4	61.2	-	-	4	61.2
Saudi Arabia	-	-	-[4]	15.0[1]		
	-	-	2	765.0[1]		
	-	-	1	141.6	3	921.6
Sweden	2	33.3	-	-	2	33.3
Switzerland	20	561.8	11	543.7	31	1,105.5
Trinidad & Tobago	-	-	1	5.0[1]	1	5.0
Venezuela	1	23.3	-	-		
	-	-	1	100.4		
	-	-	1	400.0[1]	3	523.7
B.I.S.	-	-	4	36.2[2]	4	36.2
E.I.B.	-	-	2	6.3[3]	2	6.3
Central Banks	-	-	30	4,515.2[1]	30	4,515.2
Totals	107	$ 7,823.6	159	$13,306.7	266	$ 21,130.3

1/ In U.S. $
2/ U.S. $ 30.0; Swiss francs 17 = $ 6.2
3/ U.S. $ 2.5; Deutsche Mark 10 = $ 3.8
4/ Portion privately placed of an issue counted under "United States - Public Borrowings"

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

BORROWINGS

by Currency of Borrowing

September 30, 1975

(Amounts Expressed in Millions of U.S. Dollar Equivalents Based on Book Rates of Exchange)

	Public Borrowings		Private Borrowings		Total Borrowings	
Currency	No.	Amount	No.	Amount	No.	Amount
United States dollars	32	$ 4,690.0	67	$ 7,490.4	99	$ 12,180.4
Belgian francs	3	56.3	1	27.5	4	83.8
Canadian dollars	8	156.0	1	48.8	9	204.8
Deutsche mark	15	1,266.2	58	2,976.2 1/	73	4,242.4
French francs	1	33.1	-	-	1	33.1
Italian lire	2	58.2	1	29.1	3	87.3
Japanese yen	6	323.8	11	1,603.5	17	1,927.3
Kuwaiti dinars	6	439.8	-	-	6	439.8
Lebanese pounds	-	-	1	33.2	1	33.2
Libyan dinars	-	-	2	135.1	2	135.1
Netherlands guilders	7	120.6	2	95.0	9	215.6
Pounds sterling	4	61.2	-	-	4	61.2
Saudi Arabian Riyals	-	-	1	141.6	1	141.6
Swedish kronor	2	33.3	-	-	2	33.3
Swiss francs	20	561.8	12	549.9 2/	32	1,111.7
United Arab Emirates dirhams	-	-	1	76.0	1	76.0
Venezuelan bolivares	1	23.3	-	-		
			1	100.4	2	123.7
Totals	107	$ 7,823.6	159	$ 13,306.7	266	$ 21,130.3

1/ Includes E.I.B.: Deutsche mark 10 = $ 3.8

2/ Includes B.I.S.: Swiss francs 17 = $ 6.2

MR. B. Bell
A613

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

DEC 4 REC'D

TO: Distribution Below

DATE: December 2, 1975

FROM: Mahbub ul Haq, Director, PP&PR

SUBJECT: Policy Work During FY76

A memorandum on the above subject was prepared by the Policy Planning and Program Review Department in consultation with all the concerned departments of the Bank and submitted to Mr. McNamara by Mr. Chenery on October 15. It was discussed in a meeting convened by Mr. McNamara on November 25. The policy work for FY76, as revised and approved by the President, is indicated in Annex I, with a brief description of the scope of the high-priority policy papers in Annex II, for your information.

Attachment

Distribution:

President's Council
Department Directors, IBRD and IFC
Regional Chief Economists
Mr. Burmester

MHaq:veb

Annex I

Policy and Issues Papers for FY76

	Subject	Responsibility	Schedule (Submission to the President)
I.	**High Priority Policy Papers for PRC Review**		
1.	Bank Lending for Foodgrains	DPS-EPR/CPS-AGP	June 30, 1976
2.	Non-Farm Rural Employment	DPS-ECD	November 17, 1976
3.	Land Settlement	CPS-AGP	March 31, 1976
4.	Action Program for Urban Poverty		
	(a) Small Scale Enterprise Development	SVP-DFC	April 15, 1976
	(b) Urban Employment and Poverty	DPS-ECD	May 3, 1976
5.	Debt Management	DPS-EPD/PAB	December 15, 1975
6.	Financial Measures for Promoting LDC Trade in Manufactures	IFC-FEA/DPS-EPR	June 30, 1976
7.	UNCTAD Action Program	DPS-VPD	April 1, 1976
8.	Population Planning and LDC Policies	CPS-VPS	April 1, 1976
II.	**Issues Papers mostly for Staff Level Review**		
1.	Farm Technology	CPS-AGP	June 30, 1976
2.	Public Works Programs	DPS-ECD	January 31, 1976
3.	Agricultural Subsidies and Prices in Agriculture	CPS-AGP/DPS-EPR	November 17, 1976
4.	Terms of Lending to Tourism	CPS-TMP	November 1976
5.	Urban Land Policy	CPS-TRU	June 1976
6.	Guidelines for Demographic Work in Economic Reports	DPS-ECD	April 30, 1976
III.	**Lending Review Papers for Management Information**		
1.	Education	CPS-EDP	November 1975
2.	Health	CPS-EH	December 1975
3.	Agriculture	CPS-AGP	December 1975
4.	Population	CPS-PNP	December 1975
5.	Policy Codification in Rural Poverty	DPS-EPR	June 1976

Policy Planning Division
Policy Planning & Program Review Dept.
December 2, 1975

Brief Description of Policy and Issues Papers for FY76

Bank Lending for Foodgrains (DPS-EPR/CPS-AGP)

This paper carries forward into an area of great operational significance the discussion initiated in the Rural Development Paper. It will provide a plan for alleviating rural poverty by improving the productivity of a large number of small farmers engaged in food production. The paper will be concerned with the following issues:

- appropriate food output targets for 1975-1985 for the major food deficit countries and estimation of investment requirements;
- given the requirements of food deficit countries, estimation of the role that can be played by the Bank Group;
- identification of the countries of concentration for the Bank's food plan for FY1977-81, and assessment of its impact on food supplies;
- assessment of income distribution impact of the plan.

Non-Farm Rural Employment (DPS-ECD)

This will be a companion to the foodgrains paper in that it will explore the appropriate use of another instrument for alleviating rural poverty. The paper will cover an "in-between" sector that has received only peripheral attention in the previous studies. The paper will address the following issues:

- estimation of the size of the target group in the non-farm rural sector;
- identification of the most appropriate means for reaching this group. Estimation of the employment impact of increasing economic activity in both forward (processing, transport) and backward (manufacture of tools, input supply) linkages;
- assessment of the usefulness of public works;
- ways in which these activities can be incorporated in rural development programs;
- impact of employment generating schemes on the incomes of the target group.

Land Settlement (CPS-AGP)

Land settlement schemes have been financed by the Bank Group in a number of countries with a view to relieving pressure on land as well as increasing agricultural output. This experience has led to the identification of the following issues:

- the potential for new land development and constraints to the development of new land and how they can be overcome;

- the relative merits of development of new land versus the intensification of lands already cropped;

- criteria by which incomes of beneficiaries in settlement projects are to be assessed;

- the most appropriate level of agricultural and social supporting services to be provided to settlers.

Action Program for Urban Poverty

The policy and research prospects in the area of urban poverty are included in the "Action Program in Urban Poverty" that has been prepared by the Urban Development Task Group. Small Scale Enterprise Development and Employment are the two areas that have been assigned high priority to follow up the actions proposed in the Action Program.

(a) Use of Intermediaries to Promote Small Scale Enterprise Development (SVP-DFC)

This paper will deal with the following issues:

- assessment of the role that Small Scale Enterprises (SSE) can play in alleviating urban poverty;

- identification of the sources and deficiencies of the SSE finance;

- review of past Bank SSE operations and assessment of results; and

- identification of the role that Bank can play in developing SSEs.

(b) Urban Employment and Poverty (DPS-ECD)

This paper will deal with the following:

- estimation of the extent of the problem and the nature of the relationship between employment and urban poverty;

- relationship between the major activities in which the urban poor are concentrated and the rest of the economy;

- estimation of the role of "trickle down" on urban employment;

- estimation of the role of direct measures (supply of credit, human capital interventions, etc.) on urban employment; and

- review of Bank's sector strategy, regional strategy, project design, project appraisal and project monitoring and evaluation in the framework of the foregoing analysis.

Debt Management (DPS-EPD/PAB)

While the burden of debt in developing countries has been increasing in conjunction with the deterioration of the terms of trade, this has been partially offset by inflation. The conventional indicators therefore need to be reassessed. In a policy paper on the implication of debt management for creditworthiness of developing countries, the following will be dealt with:

- assessment of the impact of debt burden on the development potential of Bank member countries with special attention to the most affected countries;

- assessment of the debt management policies of countries with large debt burdens;

- development of guidelines for improving the analysis behind Bank Group's judgements on creditworthiness of countries faced with high debt burdens;

- assessment of the risks that the Bank runs on its own portfolio because of increase in debt burden of developing countries;

- consideration of Bank's own role in debt negotiations.

Financial Measures for Promoting LDC Trade in Manufactures (IFC-FEA/DPS-EPR)

This policy paper will deal with the ways that the Bank Group can help LDCs increase their exports of manufactured goods. While the Bank has lent for industries with high export potential, the question is whether the Bank should give direct or indirect financial assistance for promoting manufactured exports. Since this question has been addressed before in several papers, the study being undertaken in the IFC will deal with the following issues:

- Establishment of a regional or international facility to guarantee the export credit paper of developing countries, thereby making it readily marketable in international capital markets.

- Possible Bank involvement in financing directly the export credits granted by LDCs. In determining this scope, the paper will determine the cost of refinancing envisaged, the criteria for making particular transactions eligible in refinancing, the proportion of export credits to be refinanced and the distribution of potential risks resulting from the granting of export financing.

UNCTAD Action Program (DPS-VPD)

The debate at the Seventh Session of the UN General Assembly and the formulation of the UNCTAD Integrated Programme for Commodities have helped crystallize the major issues of trade policy that are likely to dominate the discussion between the developing and developed countries at the Nairobi meeting of UNCTAD IV. A paper on World Bank and Commodity Stabilization (August 1975) recommended the approach the Bank should adopt in the fields of (a) Investment in Commodity Production and (b) Commodity Price Stabilization. Another paper, to be ready by April 1, 1976 will identify the role the international community can play in organizing a multi-dimensional approach to the problem of the weakest commodities produced in the poorest regions. The paper will examine the need for and the feasibility of preparing a comprehensive action plan, addressed simultaneously to the issues of price stabilization, income support, productivity improvement in the traditional occupations and a systematic shift of resources to other occupations. It will also identify the areas where the support of the Bank Group would be desirable and effective.

Population Planning and LDC Policies (CPS-VPS)

The assembly of the "population community" at Bucharest for the world's first official international conference on population provided some new signals on how to attack the problem of rapid population growth. The central message to come from Bucharest was to rely more on the indirect influence of general socio-economic development and less on the direct provision of family planning services. This paper will address the following issues:

- lessons that can be derived from the Bank's experience in lending for population projects;
- identification of the specific measures that might be taken to reflect the LDC population policies in the design of Bank projects; and
- identification of the areas of concentration for Bank's lending for population in FY76-81.

Policy Planning Division
Policy Planning and Program Review Department
December 2, 1975

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

JAN 24 REC'D

OFFICE MEMORANDUM

TO: See Distribution

DATE: January 21, 1977

FROM: B. Balassa, DRC and L. Westphal, ECD

SUBJECT: Seminars on Export Incentives and Performance

1. The attached papers will be presented in two seminars at the end of this month. Balassa's paper draws lessons for incentive policy formulation out of the experience of eleven semi-industrial countries which account for more than two thirds of LDC exports of manufactures. In turn, Westphal's paper focuses on one of these countries, Korea, to investigate its export incentives and performance in depth. These papers report on the results of the Development Strategies in Semi-Industrial Countries research project. They were initially prepared for the ECLA/IBRD Seminar on Export Promotion Policies that was recently held in Santiago.

2. The seminars will be held as follows, in Room C1006:

Friday, January 28 at 4:00 p.m.
Chairman: Mr. Hollis B. Chenery
Paper: Mr. Balassa, "Export Incentives and Export Performance in Developing Countries: A Comparative Analysis"
Lead
Discussant: Mr. Dragoslav Avramovic

Monday, January 31 at 4:00 p.m.
Chairman: Mr. Benjamin B. King
Paper: Mr. Westphal, "Korea's Experience with Export-Led Industrial Development"
Lead
Discussant: Mr. Frederick Moore

Attachments

Distribution: Chief Economists, Senior Economists
Messrs. Krieger, Lerdau, E. Stern
B.R.Bell, Votaw, Gilmartin, Please, Glaessner
J.H. Adler, Gabriel, D.J.Wood, de Vries

Messrs. van der Tak, Fuchs, Kalmanoff, Moore, Thadani
Gordon, Hyde, Qureshi, Kuczynski

Messrs. Villarzu, Bergsman, Levy, Agarwal
Jaspersen, Wogart, Earwaker
Schrenk, Moon, D.C. Rao

DPS Directors, DRC Senior Staff, ECDND Staff,
Mr. Pursell

EXPORT INCENTIVES AND EXPORT PERFORMANCE IN DEVELOPING COUNTRIES: A COMPARATIVE ANALYSIS

Bela Balassa*

January 18, 1977

* The author is Professor of Political Economy at the Johns Hopkins University and Consultant at the World Bank. This paper was prepared in the framework of the Development Strategies in Semi-industrial Countries research project undertaken at the World Bank and directed by the author.

Preliminary results of the research underlying this paper were presented at the ECLA/IBRD Seminar on Export Promotion held in Santiago, Chile on November 5-7, 1976. The author acknowledges useful comments by participants at the Seminar and especially by Donald Keesing, Jivat Thadani and Larry Westphal. Special thanks are due to Kishore Nadkarni who collected the data and performed the computations efficiently and with great care.

EXPORT INCENTIVES AND EXPORT PERFORMANCE IN DEVELOPING COUNTRIES: A COMPARATIVE ANALYSIS

Bela Balassa

Introduction

The purpose of this paper is to provide a comparative evaluation of export incentives and their effects on export performance and economic growth in eleven major developing countries, with further attention given to optimal policies as regards exports and resource allocation in general. The discussion will concentrate largely on the experience of the 1966-73 period when the export incentive schemes of the individual countries were generally in full operation. 1973 was chosen as the terminal year because of the effects of the oil crisis in subsequent years.

The countries under consideration include Argentina, Brazil, Chile, Colombia, Mexico, Israel, Yugoslavia, India, Korea, Singapore, and Taiwan. They have been classified in four groups, depending on the timing and the extent of their export promotion efforts. In 1973, these countries accounted for 68 percent of the exports of manufactured goods by the developing countries. Another 16 percent came from Hong Kong that started exporting manufactures at an earlier date; no other developing country accounted for more than three percent of the total.

The countries of the first group, consisting of Korea, Singapore, and Taiwan, adopted export-oriented policies following the completion of the first stage of import substitution that had entailed replacing the imports of non-durable consumer goods and their principal direct inputs by domestic production. These countries provided a free trade regime for exports, with some additional subsidies.

The second group of countries, comprising Argentina, Brazil, Colombia, and Mexico, began export promotion efforts after continued import substitution in the framework of national markets had run into increasing difficulties. They provided various subsidies to exports, but by-and-large precluded the use of imported inputs in export production whenever domestic substitutes were available.

In turn, countries in the third group (Israel and Yugoslavia) had started export promotion at an early date but their efforts slackened somewhat afterwards. Finally, India and Chile, classified in the fourth group, continued to pursue import substitution-oriented policies during the period under consideration.

In carrying out the comparative analysis, the author has relied on the results of studies prepared for the ECLA/IBRD Seminar on Export Promotion on Argentina, Brazil, Colombia, Mexico, Israel, Yugoslavia, India, and Korea. He has also utilized the findings of studies prepared under the auspices of the World Bank on Brazil, Chile, and Mexico[1/] as well as on Argentina, Colombia, Israel, Korea, Singapore, and Taiwan,[2/] and the results of some other researchers.

Section I of the paper briefly describes the export promotion efforts of the individual countries, the resulting changes in their incentive system, and the situation existing in 1973. In turn, Section II evaluates the effects of these efforts on exports, sectoral growth, and the growth of the national economy. Next, Section III makes recommendations for an "ideal"

1/ Bela Balassa and Associates, The Structure of Protection in Developing Countries, Baltimore, Md., Johns Hopkins University Press, 1971.

2/ Development Strategies of Semi-Industrial Countries, research project of the World Bank, directed by Bela Balassa (in preparation).

system of incentives to exports and for resource allocation in general. Finally, in drawing the conclusions of the paper, attention is given to future possibilities for the exports of manufactured goods by the developing countries.

I. Export Incentives in Developing Countries

Apart from the city-state of Hong Kong where industrialization began in the framework of an open economy, export promotion policies generally followed some degree of import substitution in the protected domestic market. The sequencing of import substitution and export promotion varied among countries, depending on objective conditions and on the subjective evaluation of alternative possibilities by the policy makers. While *ex post facto* there is often a tendency to explain differences in policies by reference to objective conditions, as it will be seen below governmental decision making has played an important role in the cases studied.

It has been repeatedly claimed that objective conditions forced the two city-states, Hong Kong and Singapore, to orient their manufacturing industries towards export markets. In support of this proposition, it has been stated that "Hong Kong and Singapore are almost totally lacking in natural resources. Unlike the developing nation-states of Asia, Africa, and Latin America, the two city-states do not have their own rural hinterlands. Nor do they have domestic markets large enough to serve as the initial base for industrialization."1/

Indeed, the lack of natural resources and of an agricultural base make it necessary for Hong Kong to rely on exports of manufactured goods to earn foreign exchange. However, with its population of two million in 1950 and four million in 1970, and relatively high per capita incomes, Hong Kong had a larger domestic market for manufactured goods than the majority of

1/ Theodore Geiger, Tales of Two City-States: The Development Program of Hong Kong and Singapore, Washington, National Planning Association, 1973, p. 8.

the developing countries, many of which nevertheless embarked on industrialization behind high protective barriers. In this connection, mention may be made of the experience of Tunisia which, with a home market smaller than that of Hong Kong, attempted to provide for domestic needs in scaled-down local plants that were ensured continued protection.1/

Hong Kong, too, could have chosen a policy of covering minimum foreign exchange needs by manufactured exports and relying on domestic markets for the establishment of a wide range of industries. The policy makers should thus be given their due for the choice of the policies applied, which led to export and income growth rates that were matched by few developing countries.

Also, it should be recognized that Singapore went through an import-substitution phase aimed at establishing domestic industries serving the home market. According to an official report, "In pursuance of the policy of providing protection to industries in Singapore, the import of a number of goods which were in various stages of manufacturing locally or which were likely to be manufactured in the near future, was made subject to quota restrictions."2/ In contradistinction with most other developing countries, however, protection was considered temporary, with quota to be superseded by tariffs that, in turn, were to be lowered and eventually eliminated.3/

In fact, the number of commodities subject to quotas and tariffs was reduced to a considerable extent following the import-substitution phase which covered the second half of the sixties; by 1972, only three items remained under quota while tariffs were eliminated on a number of commodities and reduced on others. In turn, exports were subject to a free-trade regime as imported

1/ Phillipe Aydalot, Essai sur les problèmes de la stratègie de l'industrialisation ég en économie sous-développée: l'example tunisie, Tunis, 1968.

2/ Department of Trade, Ministry of Finance, Annual Report, 1968, p. 38.

3/ Ibid., p. 40.

inputs used in export production were admitted duty free without any limitations. Exports have received additional incentives in the form of tax allowances on marketing expenditures abroad since 1965 and tax concessions on profits, royalties, and interest on foreign loans since 1967.

Import substitution was selective in Singapore and rates of protection were much lower than in the other industrializing countries.[1/] Taiwan and Korea completed the first "easy" stage of import substitution, entailing the replacement of the imports of non-durable consumer goods and their inputs, behind higher protective barriers. Following this stage, around 1960, the decision was reached in both countries to adopt outward-looking policies, oriented towards the exportation of labor-intensive products.[2/]

The decision on policy changes in Korea and Taiwan was taken with a view to accelerate economic growth in a situation where continued import substitution in the framework of national markets would have been increasingly costly. Nevertheless, the element of conscious decision should be emphasized as Korea, with a population of 25 million and Taiwan with a population of 10 million, had domestic markets for manufactured goods larger than most developing countries, including several countries which continued with policies of import substitution beyond the first "easy" stage. Also, while the availability of a well-educated labor force is said to have eased the transition to export orientation, educational levels were higher in countries such as Argentina, Chile, and Uruguay that went further with import substitution than Taiwan and Korea.

1/ In 1966, effective protection rates on domestic sales averaged 8.6 percent (Augustine Tan and Ow Chin Hock, "Singapore" in Development Strategies in Semi-Industrial Countries).

2/ Bela Balassa, "Industrial Policies in Taiwan and Korea," Weltwirtschaftliches Archiv, 1971 (1), pp. 55-76.

In Taiwan, an overhaul of the system of incentives took place in the years 1958-61 when the multiple exchange rate structure was replaced by a single exchange rate and the import quota system was liberalized. In Korea, the changeover occurred in two stages, in 1961 and in 1964, of which the second was by far the more important. As in Singapore, a free-trade regime was applied to the exports of the two countries, supplemented with some additional incentives.

In both Taiwan and Korea, exporters had complete freedom to choose between domestic and imported inputs, they were exempted from indirect taxes on their output and inputs, and paid no duty on imported inputs. The same privileges were extended to the producers of domestic inputs used in export production. These rules, entailing the adoption of a free-trade regime for exports, assured the equality of treatment to all export commodities in the two countries. Nor did the additional incentives provided to non-traditional exports introduce much differentiation among industries as far as the treatment of exports is concerned. At the same time, the automatic application of the regulations and the favorable attitude taken by the two governments towards exports enhanced the effectiveness of the incentive measures.

In Korea, the subsidy equivalent of the export incentive measures, including generous wastage allowances, reductions in indirect taxes, credit preferences, and preferential electricity and railroad rates, averaged 12.4 percent of value added in manufactured exports in 1968. On the average, exports were favored over domestic sales that were subject to negative effective protection.[1/] Unlike other industrializing countries, there was no

---

1/ Larry E. Westphal and Kwang Suk Kim, "Korea" in Development Strategies in Semi-Industrial Countries and Larry E. Westphal, "Korea's Experience with Export-led Industrial Development," paper prepared for the ECLA/IBRD Seminar on Export Promotion Policies, November 1976 --Wastage allowances provided for the free importation of inputs in excess of the needs of export production.

discrimination against primary activities either. Finally, while the export incentive scheme underwent few modifications between 1968 and 1973, successive changes in currency values exceeding in magnitude the relative increases in Korean prices improved the profitability of exports.[1/]

In Taiwan, reductions in direct taxes, preferential credits, facilities for the rapid collection of export proceeds, and direct subsidies to the exports of several commodities provided a net subsidy on value added in manufactured exports in 1968 slightly exceeding in magnitude protection on value added in import substitution.[2/] Also, the incentive system was stable and the extent of discrimination against primary production was small in Taiwan.

The second group of countries, comprising Argentina, Brazil, Colombia, and Mexico, continued with import substitution beyond the completion of its first, easy, stage. However, import substitution became increasingly costly as it came to encompass industries that were highly capital-intensive and could not produce at an efficient scale and/or use capacity fully because of the limited size of domestic markets.

At the same time, given the need for imported raw materials, intermediate products, and machinery, net import substitution was rather small. The adverse effects on exports of the policies followed further aggravated

---

1/ Bela Balassa, "Incentives for Economic Growth in Korea," Policy Reform in Developing Countries, Ch. 9 (forthcoming)

2/ T. H. Lee and Kuo-shu Liang, "Taiwan" in Development Strategies in Developing Countries.

the balance-of-payments situation in these countries. The resulting foreign exchange bottleneck limited the possibilities for economic growth and led in some cases to the application of stop-and-go policies.[1/]

Exports offered a way to break the foreign exchange bottleneck while leading to the increased use of existing capacity, the application of large-scale production methods, and resource allocation according to comparative advantage. The desire to accelerate economic growth thus explains the adoption of export promotion policies in the countries in question. And, as foreign exchange receipts from exports increased, the need for the depreciation of the currency diminished, thereby reducing the protective effects of existing tariffs. Import protection decreased further as tariffs were reduced and import quotas liberalized following the increase of foreign exchange earnings.

Among the countries of the second group, the shift to export promotion started in Colombia in 1959 with the introduction of the Plan Vallejo that provided duty-free entry for imported inputs used in export production on a selective basis. The Plan Vallejo came into general application for manufactured exports in the mid-sixties, but it continued to be largely limited to inputs that were not available domestically. In turn, beginning in 1960, non-traditional exports (excluding coffee and petroleum) were exempted from taxes on profits presumed to equal 40 percent of export value. In 1967, this exemption was replaced by a transferable tax certificate equal to 15 percent

---

1/ According to Angel Monti, "the four countries studied showed that there was instability, and in some cases, a chronic deficit in the balance of payments. This caused many adverse consequences. In Argentina, it was an important factor in causing the pattern of growth to show a typical "stop-go" behaviour. In Brazil it has already influenced the rate of growth. In columbia, effects have been felt, including political effects. In Mexico it has caused a strong need for an inflow of foreign capital, thus aggravating the medium-term problem" (Latin American Exports of Manufacture: Experiences and Problems," paper prepared for the ECLA/ IBRD Seminar on Export Promotion Policies, November 1976).

of the value of non-traditional exports. Adjusted for the tax free value of the certificates and the discount at which they were traded, the subsidy on export value was 18 percent. Exporters also had access to credits at preferential rates. Moreover, starting in 1967 the exchange rate was adjusted in small steps in accordance with the rate of domestic inflation, thereby maintaining the real exchange rate constant.1/

However, exporters had to pay high prices for domestically-produced inputs. Given further the protection provided to sales in the domestic market, in 1969 a bias against exports and in favor of import substitution was obtained for intermediate products at higher levels of fabrication, consumer goods, machinery, and transport equipment, although this was not the case for processed foods and lower level intermediate products. Also, export subsidies expressed in relation to value added varied to a considerable extent among industries.2/

In Colombia, the reforms undertaken in the mid-sixties represented an extension of the export promotion scheme introduced around 1960. In turn, in Brazil and Argentina, major changes in the incentive system did not occur until the mid-sixties. Apart from the introduction of export incentives, both countries also instituted frequent exchange rate adjustments *pari passu* with inflation that reduced uncertainty in foreign sales by keeping the real exchange rate constant.

In the period 1965-67, Brazil generalized exemptions from indirect taxes on processed exports (processed foods and minerals and manufactured

---

1/ Thomas Hutcheson and Daniel M. Schydlowsky "Colombia" Development Strategies in Semi-Industrial Countries and Ricardo Ffrench-Davis and Jose Pinera Echenique, "Colombia Export Promotion Policy," paper presented for the ECLA/IBRD Seminar on Export Promotion Policies, November 1976.

2/ Hutcheson and Schydlowsky, "Colombia", Development strategies in Semi-Industrial Countries.

products) and their inputs and duty drawbacks on imported inputs used in export production, which had been provided on a partial basis in the first half of the sixties. Exemptions from indirect taxes do not represent "genuine" subsidies since they only reestablish the equal tax treatment of production for foreign and for domestic markets. Nevertheless, these measures increased incentives to exports vis-à-vis import substitution compared to the situation when tax exemptions were not provided.

In the late sixties, generous export subsidies were also granted in the form of tax credits, reductions in income taxes, and preferential export financing. Excluding duty drawbacks and rebates of indirect taxes, in 1971 the subsidy equivalent of tax benefits averaged 20 percent on Brazilian exports of processed goods, to which three percent for the subsidy equivalent of preferential financing should be added.[1/] Some additional incentives were introduced in 1972 and 1973.

However, in contradistinction with the countries of the first group, Brazilian exporters generally did not have the choice between domestic and imported inputs; apart from some exceptions introduced in the early seventies, they had access to duty free imports only if a domestic "similar" was not available. In the absence of data on the input composition of exports and on the protection of domestic industries, then, net incentives to exports on a value added basis cannot be estimated; nor can we gauge the relative incentives provided to exports and to import substitution .[2/]

1/ Hector A. Garcia, "Brazil's Development Policy for Exports of Manufactures," paper prepared for the ECLA/IBRD Seminar on Export Promotion Policies, November 1976, pp. 105-8.

2/ In this connection, it should be emphasized that the use of tariffs for this purpose (Garcia, p. 105) will not be appropriate, in part because of the existence of a considerable degree of tariff redundancy and in part because of the application of quantitative restrictions in Brazil. And, the calculations made for 1966 and 1967 in the study on Brazil by Joel Bergsman and Pedro S. Malan (The Structure of Protection in Developing Countries) are not comparable with later estimates of export incentives.

At the same time, given the great variability of subsidies on export value, ranging from 6 percent on petroleum products to 38 percent on beverages, wood products and furniture, and "miscellaneous" manufactures,[1/] it can be surmised that export subsidies exceeded import protection in some industries and fell short in others. And, although from the late sixties Brazil promoted some agricultural exports, on the whole discrimination against primary activites continued.

In Argentina a 12 percent subsidy was granted to non-traditional exports in 1967 while the export tax on grains, livestock, and their derivatives was maintained at 10 percent. The 12 percent subsidy was provided in the form of a tax reimbursement and was not subject to income taxes, thereby raising its value to 17 percent on a pre-tax basis. An additional subsidy of 3 percent was provided in the form of income tax deductions. Furthermore, exporters received subsidies theoretically representing drawbacks for tariffs paid on imported inputs that were set on an industry-by-industry basis. Finally, exporters had access to preferential credits.

However, in the case of most major industries, these subsidies did not suffice to offset the high cost of domestic inputs used in export production. Discrimination against exports was further augmented by the high protection accorded to import substitution, leading to a considerable bias against exports. This bias was especially strong in the case of primary products. At the same time, similar to the case of Brazil, there were large interindustry variations in the extent of export subsidies and import protection on a value added basis.[2/]

1/ Garcia, "Brazil's Development Policy for Exports of Manufactures," p.108. The figures exclude the subsidy value of credit preferences

2/ Julio Berlinski and Daniel M. Schydlowsky, "Argentina," Development Strategies in Semi-Industrial Countries.

And, in both countries, and with regard to the Plan Vallejo in Colombia as well, discretionary decision-making on export incentives had a much greater role than in countries of the first group.

In Mexico, border industries processing imported materials for re-export, principally to the United States, were accorded duty free treatment beginning in the mid-sixties. In turn, there were few subsidies to domestic export industries until 1971 when a tax rebate scheme was introduced, together with a system of preferential export credits. In 1973, tax rebates amounted to 8.5 percent of the value of manufactured exports but, to a large extent, they represented rebates of indirect taxes paid at earlier stages of fabrication. In turn, the subsidy equivalent of preferential export credit amounted to 1.5 percent of export value.[1/] On a selective basis, exporters also could import inputs duty free, but this was in practice administratively difficult and did not apply to inputs that were produced domestically. Nor did the benefits provided extend to primary commodities.

Israel and Yugoslavia were among the first to introduce export incentives. In Israel, the system of export incentives was unified in 1956 when a uniform subsidy was applied on value added in exports, excluding the traditional export commodities (citrus and diamonds). Nevertheless, some additional subsidies remained, including the so-called branch funds for the textile industry, preferential credits, and tax refunds on promotional expenditures.

In 1962, the across-the-board subsidies were transformed into a higher exchange rate, the effects of which wore off by 1965 so that there

1/ Bela Balassa, "Foreign Trade and Industrial Policy in Mexico," Policy Reform in Developing Countries, Ch. 2.

was a considerable degree of discrimination against exports and in favor of import substitution in that year.[1/] In 1966, explicit export subsidies were introduced again at rates exceeding average tariffs. In subsequent years, however, tariffs were generally higher than export subsidies and the protection of import substitution was raised further by the continued existence of import licensing on a variety of commodities. And, exporters in Israel had to pay duties on their inputs and did not receive preference in the granting of import licenses. [2/]

In Yugoslavia, retention quotas on foreign exchange earned through exporting, and multiple exchange rates were used to provide incentives to exports until 1961; in 1957, the average exchange rate for exports was about 40 percent higher than that for imports. The multiple rate system was transformed into a system of subsidies and tariffs in 1961 and export subsidies were abolished in 1965. Subsequently, benefits to exports were limited to foreign exchange retention quotas on exports and to preferential export credits. However, the retention quotas amounted to only 1.8 percent of exports and, with the liberalization of import restrictions, their value decreased greatly. In turn, imports continued to benefit from tariff protection albeit at a reduced extent.[3/]

The fourth group of countries continued to follow policies of import substitution, entailing a considerable degree of discrimination against exports, during the period under consideration. In India,

---

1/ Zvi Sussman, "Israel," in Development Strategies in Semi-Industrial Countries.

2/ Ibid. and Michael Michaely, "Export Promotion in Israel," paper prepared for the ECLA/IBRD Seminar on Export Promotion Policies, November 1976.

3/ Vinod Dubey, "Yugoslavia: Commodity Exports and Export Policies," paper prepared for the ECLA/IBRD Seminar on Export Promotion Policies, November 1976.

the 1966 devaluation of the rupee was supposed to benefit exports but, with reductions in export subsidies and increases in export taxes accompanying the devaluation, discrimination in favor of import substitution and against exports increased as a result.[1/] The incentive measures introduced subsequently, including cash subsidy, duty drawbacks, and import replenishment licenses, and preferential licensing for capacity expansion were in general subject to complex procedures and considerable uncertainty as to their extent and availability. Also, the cash subsidy was apparently related to the excess variable costs of domestic production over export prices, so that high-cost exports received above-average subsidies while the lowest rates applied to exports that had relatively low domestic costs.[2/]

The situation was aggravated by restrictions on the transferability of the import replenishment licenses and the virtual exclusion of imports that had domestic substitutes. The limitations imposed on firm size and on the expansion of large firms also militated against the development of manufactured exports. In turn, major primary exports and some processed goods were subject to export taxes.

Considering further the continued protection of manufacturing industries by the use of import prohibitions and restrictions, it would appear that India largely maintained its import-substitution orientation during the period under consideration. The same conclusion applies to Chile that traditionally had the highest level of import protection in Latin America.[3/]

1/ Bhagwati, J.N. and Srinivasan, T.N., Foreign Trade Regimes and Economic Development: India, New York, National Bureau of Economic Research, 1975, ch. 6.

2/ Martin Wolf, "Indian Exports", paper presented at the IBRD/ECLA Seminar on Export Promotion Policies, November 1976.

3/ Teresa Jeanneret, "Chile," in The Structure of Protection in Developing Countries.

The high level of protection entailed considerable discrimination against exports and penalized the processing of domestic materials for exports in which Chile has a comparative advantage. The introduction of tax rebates on non-traditional exports and import liberalization in the late sixties reduced this bias to some extent. However, the measures applied were largely reversed after 1970 when severe import restrictions and a greatly over-valued exchange rate had adversely affected exports.

II. Export Performance and Economic Growth

Export Incentives and Performance

Following a description of the system of incentives applied in the eleven countries under consideration, the effects of export incentives on export performance will next be examined. We will report on the results of econometric investigations and provide a comparative analysis of export trends in the four groups of countries covered in this paper.

There are few econometric studies of the effects of export incentives on export performance. This fact reflects the difficulties of establishing a statistical relationship between the two variables. In a time-series framework, the shortness of the time series, the lack of observations on changes in incentives to import substitution that provides an alternative to exports, and the difficulties involved in quantifying the effects of other influences on exports make estimation difficult. In turn, in a cross-section framework, the lack of stability of the incentive system and lags in adjustment to incentives create problems in statistical estimation.

Nevertheless, studies available for three of the countries under consideration show the existence of a positive relationship between export incentives and export growth. In a cross-section investigation of 92 sectors in Korea, Westphal and Kim obtained correlation coefficients of .29 and .26 between export incentives in 1968 on the one hand, and the share of exports in output in 1968 and the growth contribution of exports between 1960 and 1968 on the other; the coefficients are significant at the one percent level.[1/]

1/ "Korea," Development Strategies in Semi-Industrial Countries,

In turn, Ffrench-Davis and Pinera cite several time-series estimates for Colombia, which indicate an elasticity of non-traditional exports with respect to incentives of 9.7 to 1.3, although the statistical significance of the results is low. 1/ Finally, an elasticity of 1.3 was obtained in time series studies on Israel by Halevi 2/ and on Brazil by Tyler 3/ and in pooling time series and cross-section data for eight countries by Krueger. 4/

In analyzing export trends in the eleven countries classified in four groups, distinction will be made between primary and manufactured exports and, within the former category, between traditional and non-traditional exports. Primary exports are defined to include SITC classes 0 to 4 as well as diamonds and unwrought non-ferrous metals. In turn, primary commodities that accounted for at least two percent of total exports in 1953 have been classified among traditional export products (cf. Appendix Table 1). For subsequent comparisons with data on agricultural production, the exports of agricultural goods, including livestock, fishery, and forestry products, will further be distinguished.

Data on the dollar value of exports and on the rate of growth of exports for the above groups of commodities and for total exports are shown in Appendix Table 2 and Table 1, respectively. The export data refer to the

---

1/ "Colombia Export Promotion Policy," pp. 88-90.

2/ The study, published in Hebrew, is cited in Michaely, "Export Promotion Policies in Israel," p.30.

3/ W.G. Tyler, Manufactured Export Expansion and Industrialization in Brazil, Tubingen, J.C.B. Mohr 1976, Ch. 8.

4/ Anne O. Krueger, Foreign Trade Regimes and Economic Development--Liberalization Attempts and Consequences, New York, National Bureau of Economic Research, 1977, Ch.9.—In these studies, incentives to exports have been expressed by combining export exchange rates and export subsidies; using export exchange rates alone generally did not provide statistically significant results. Cf. J.B. Donges and J. Riedel, "The Expansion of Manufactured Exports in Developing Countries: An Empirical Assessment of Supply and Demand Issues," Kiel Working Papers No. 49, Kiel, Institut fur Weltwirtschaft, June 1976.

TABLE 1

GROWTH OF EXPORTS & IMPORTS IN SELECTED DEVELOPING COUNTRIES
(Average Annual Growth Rates)

	Argentina	Brazil	Chile	Colombia	India	Israel	Korea	Mexico	Singapore	Taiwan	Yugoslavi
Traditional Primary products											
1953-60	0.7	-5.3	4.3	-4.5	2.4	16.8	-17.5	-0.3	-	-3.2	3.6
1960-66	6.7	2.0	9.5	-0.5	0.3	15.2	26.5	3.8	-	8.0	11.6
1966-73	6.9	7.6	5.1	6.5	0.2	16.7	16.9	1.7	-	1.2	12.5
Nontraditional Primary products											
1953-60	-3.4	5.4	-5.6	11.9	5.6	47.0	7.1	12.2	n.a.	12.7	19.6
1960-66	3.6	9.6	11.3	5.9	9.2	16.8	22.5	10.3	29.5	36.5	2,3
1966-73	14.0	26.5	7.6	25.5	10.4	16.9	35.5	6.3	19.5	25.0	11.1
Primary products together											
1953-60	0.2	-3.1	2.5	-3.5	3.7	20.5	-5.4	3.8	n.a.	-1.2	12.4
1960-66	6.3	4.7	9.7	0.3	4.5	15.5	24.0	6.9	29.5	17.3	5.7
1966-73	7.8	17.0	5.5	10.7	6.5	16.8	26.0	4.3	19.5	17.0	9.8
Agricultural goods											
1953-60	0.2	-3.5	-9.0	-4.8	3.9	18.3	-3.2	5.4	n.a.	-2.1	14.5
1960-66	6.2	4.5	22.5	1.0	3.7	9.5	25.2	7.7	2.9	15.6	6.7
1966-73	7.9	16.7	2.7	11.1	9.5	11.7	29.5	5.7	19.2	16.3	9.8
Manufactured goods											
1953-60	-11.7	9.9	3.2	0.0	1.3	18.0	14.0	5.6	n.a.	29.5	28.0
1960-66	14.6	27.5	15.6	35.0	6.7	15.3	80.0	12.7	24.5	36.5	21.5
1966-73	33.5	38.5	0.0	27.5	7.7	17.5	50.0	20.0	42.0	47.0	14.9
Total Exports											
1953-60	-0.6	-2.8	2.6	-3.4	2.6	19.6	-3.2	3.9	n.a.	2.2	17.2
1960-66	6.7	5.4	10.1	1.5	5.5	15.3	40.0	7.8	28.5	23.5	13.6
1966-73	10.8	19.9	5.3	12.7	7.0	17.0	44.0	8.1	28.5	35.5	13.8
Total Imports											
1953-60	6.7	1.5	5.9	-3.6	9.8	8.5	0.0	5.6	n.a.	6.2	11.1
1960-66	-1.8	0.4	6.9	3.7	5.4	8.8	13.0	6.9	8.0	13.1	11.3
1966-73	10.3	24.5	5.7	6.7	-0.3	20.0	29.0	14.5	25.5	29.5	17.2
Purchasing power of Exports (a)											
1960-66	4.0	4.0	8.8	0.2	4.2	13.0	38.0	6.5	26.5	22.5	12.9
1966-73	4.9	13.5	-0.6	6.7	1.2	10.2	36.5	2.3	21.5	28.5	7.7

Source: National and International Trade Statistics
Note: (a) Export values deflated by the unit value index for the manufactured goods exports of developed countries.

years 1953, 1960, 1966, and 1973; growth rates have been calculated for changes between these benchmark years. In the discussion, emphasis will be given to the experience of the period 1966-73, when the export incentive schemes of most of the countries concerned were in full operation. Attention will also be paid to the 1960-66 period as several countries began their export production efforts in the early sixties.

Export growth rates are affected by the absolute value of exports in the base year. This is of particular importance for manufactured goods in the 1960-66 period since the countries in question generally started from a low base. Correspondingly, we also calculated the share of exports in manufactured output for the benchmark years, as well as incremental export-output ratios, defined as the ratio of the increment in manufactured exports to that in manufactured output (Table 2). For comparability with the trade figures, manufactured output has been defined by deducting processed food (ISIC 311,312), Beverages (313), Tobacco manufactures (314), refined petroleum (353), coal and petroleum products (354), unwrought nonferrous basic metals (ex 372), and diamonds (ex 390) from the output figures reported according to the International Standard Industrial Classification.

Data expressed in the form of ratios have the further advantage in that they have been calculated using the prices of the same year. By contrast, in estimating export growth rates, current price data have been used. In the absence of national price indices for the relevant product groups in most developing countries, we had to forego the use of constant price values.

To begin with, the unit value index for the manufactured exports of the developed countries was not considered appropriate to deflate export values, since this index is heavily weighted with machinery and equipment, the prices of which rose more rapidly than those of developing country exports. In turn, price indices for the miscellaneous group of non-traditional primary exports are not available. Finally, our analysis only tangentially affects the exports

TABLE 2

EXPORTS, IMPORTS, MANUFACTURED OUTPUT AND GNP IN SELECTED DEVELOPING COUNTRIES
(Percent)

	Argentina	Brazil	Chile	Colombia	India	Israel	Korea	Mexico	Singapore	Taiwan	Yugosla.
Share of manufactured exports in manufactured output											
1960	0.8	0.4	3.0	0.7	9.7	7.9	0.9	2.6	11.2	8.6	10.8
1966	0.9	1.3	4.1	3.0	9.4	12.8	13.9	2.9	20.1	19.2	13.8
1973	3.6	4.4	2.5	7.5	8.6	14.1	40.5	4.4	42.6	49.9	16.9
Incremental ratio of manufactured exports to manufactured output											
1960-66	1.0	3.6	5.5	7.7	8.9	23.9	24.8	3.2	28.4	24.8	15.8
1966-73	6.5	5.6	0.0	11.4	7.7	14.9	45.7	5.5	47.5	56.4	19.5
Share of manufactured imports in total utilization of manufactured goods											
1960	14.6	10.8	26.3	30.8	19.3	28.5	25.2	19.6	56.2	28.5	22.0
1966	6.3	7.5	21.6	28.0	16.5	32.8	31.5	16.2	53.2	29.3	17.3
1973	5.4	13.0	17.5	21.5	9.5	41.2	37.3	16.3	64.3	38.9	24.0
Incremental ratio of manufactured imports to utilization of manufactured goods											
1960-66	-3.9	-3.0	14.1	20.5	10.4	42.5	37.5	11.7	49.2	30.5	13.6
1966-73	4.4	15.7	10.8	14.2	-0.4	45.1	38.9	16.3	67.0	42.2	29.4
Share of manufactured exports in total exports											
1953	9.2	1.0	6.1	1.2	49.2	36.7	5.0	11.6	n.a.	4.7	23.1
1960	4.0	2.3	6.3	1.5	45.1	32.7	15.6	13.1	32.4	24.8	42.4
1966	6.2	7.2	8.5	8.3	48.0	31.8	60.4	17.1	27.0	45.4	62.7
1973	22.5	19.8	6.0	19.4	49.6	32.8	84.1	35.7	55.6	80.5	67.2
Incremental ratio of manufactured exports to total exports											
1960-66	10.7	20.3	11.2	81.4	55.8	31.2	67.0	24.1	25.4	53.4	80.3
1966-73	38.1	24.8	0.0	27.9	52.2	33.3	86.0	40.9	61.7	85.2	70.3
Ratio of total exports to GNP											
1960	8.9	6.1	12.6	11.3	4.2	8.4	1.5	6.4	9.9	9.5	22.4
1966	7.3	7.1	15.7	9.5	4.2	12.8	6.5	5.4	26.6	17.1	14.2
1973	8.1	9.8	7.6	11.8	4.3	15.5	26.1	4.3	44.6	47.8	14.5
Incremental ratio of total exports to GNP											
1960-66	5.3	12.3	23.0	3.4	4.1	20.4	13.0	4.3	52.0	24.7	10.7
1966-73	9.0	11.5	3.3	14.5	4.3	17.4	34.8	3.3	52.0	63.3	14.8
Ratio of total imports to GNP											
1960	10.3	7.1	12.9	12.6	7.5	20.1	16.0	9.0	65.4	18.9	32.8
1966	5.2	6.1	13.5	12.6	7.4	21.2	18.7	7.2	62.5	19.9	18.3
1973	5.5	11.1	6.8	10.6	4.5	30.8	34.3	8.6	91.5	40.5	22.0
Incremental ratio of imports to GNP											
1960-66	-1.3	0.9	14.9	12.4	7.3	23.0	22.2	5.1	57.9	20.8	12.3
1966-73	6.0	14.2	2.4	8.4	-0.3	37.3	41.3	9.7	103.6	50.8	26.4

Sources: See Table 1 and Appendix Table 2.

of traditional primary products where price fluctuations have been the largest.

At any rate, for evaluating the influences affecting economic growth in the developing countries, changes in the purchasing power of exports (i.e., export values deflated by an import price index) rather than in export volumes are relevant. Changes in the purchasing power of exports have been calculated by deflating export values by the unit value index for the manufactured exports of the developed countries. The results, shown in Table 1, will be utilized below.

We have seen that the first group of countries, comprising Korea, Singapore, and Taiwan, adopted export-oriented policies following the completion of the first stage of import substitution. These policies entailed applying a free-trade regime for non-traditional exports, with additional incentives provided to manufactured exports largely on an across-the-board basis and with considerable stability assured over time. Also, on the average, incentives to exports were at the least comparable in magnitude to the incentives accorded to import substitution in manufacturing and there was little discrimination against primary activities.

The early application of export-oriented policies by the countries of the first group may explain that they had the highest incremental export-output ratios in manufacturing during the period 1960-66. With the subsequent intensification of their export promotion efforts, all three countries further increased their incremental export-output ratios in the 1966-73 period and experienced the highest rates of growth in manufactured exports among the eleven countries under study.

The data also show an acceleration of the growth of manufactured exports in Singapore and in Taiwan after 1966. And although in Korea the rate of growth of manufactured exports had been even higher during the 1960-66 period, this had been attained starting from a base year figure of $5 million as compared to manufactured exports of $151 million in 1966 that exceeded exports by any country in South America in that year. Correspondingly, the share of exports in manufactured output tripled in Korea; it was 13.9 percent in 1966 and 40.5 percent in 1973. In the same period, Singapore raised the share of exports in manufactured output from 20.1 to 42.6 percent and Taiwan from 19.2 to 49.9 percent.

The high, and increasing, share of manufactured exports in total exports did not adversely affect the exports of primary commodities in the three countries. In 1966-73, Korea showed the best performance in regard to traditional as well as non-traditional primary exports among the eleven countries under study. And, while shifts to higher-valued crops led to a decline in its traditional exports of rice and bananas, Taiwan placed among the countries with the highest rate of growth of non-traditional primary exports. In the case of both countries, the relatively favorable treatment of primary activities helped exports; in turn, the rapid expansion of petroleum refineries led to the high rate of growth of primary exports from Singapore.

In contradistinction to the first group, the second group of countries began export-promoting activities after import substitution had been extended to capital-intensive intermediate products, durable consumer goods and machinery. They also differ from the first group in that, with some exceptions, the use of imported inputs was limited to cases when comparable domestic inputs were not available. Correspondingly, substantial inter-industry differences were observed in regard to subsidies to value added in exports and, on the whole, the bias against exports and in favor of import

substitution was reduced but not eliminated. Apart from Colombia and, in the case of a few products, Argentina and Brazil, the second group of countries also continued to discriminate against primary activities.

Within this group of Latin American countries, in the 1966-73 period manufactured export growth rates were the highest in Argentina and Brazil that introduced considerable export incentives at the beginning of the period. As a result, between 1966 and 1973, the share of exports in manufactured output rose from 0.9 percent to 3.6 percent in Argentina and from 1.3 percent to 4.4 percent in Brazil. However, in terms of both average and incremental export-output ratios in manufacturing, Argentina and Brazil were surpassed by Colombia that started export promotion at an earlier date; exports from Colombia accounted for 3.0 percent of manufacturing output in 1966 and 7.5 percent in 1973.

In Mexico's case, the proximity of the United States rather than incentives to exports was responsible for the 2.9 percent share of exports in manufactured output in 1966. With the late introduction of export incentives and their relatively low level, however, the rate of growth of manufactured exports as well as the incremental export-output ratio in manufacturing were lower in Mexico than in the other three countries of the group during the period 1966-73. As a result of these changes, Mexico exported 4.4 percent of its manufactured output in 1973.

These figures include only "domestic" manufactured exports. In turn, Mexico's exports from the border area, which enjoyed a free trade regime, rose from practically nil in the mid-sixties to $651 million in 1973, of which $286 million was value added in Mexico. This compares with domestic manufactured exports of $740 million in 1973. At the same time, taking account of

the use of direct and indirect imported inputs in machinery exports, the use of exportable inputs in textiles and chemicals, and the relatively high cost of domestic operations (e.g. in the case of automobiles where export obligations were imposed), 1/ value added in world market prices (net foreign exchange earnings) in domestic manufactured exports may not have been higher -- and may have actually been smaller -- than in exports from the border zone.

Apart from Colombia, the manufacturing sector is considerably larger in countries of the second group than in the first. Nevertheless, with the exception of the Brazil -Singapore comparison, they have a substantially smaller volume of manufactured exports. The relevant figures for 1973 are Taiwan, $3606 million; Korea, $2711 million; Brazil, $1229 million; Singapore, $1001 million; Mexico, $740 million; Argentina, $736 million; and Colombia, $228 million. 2/

It has been suggested that these figures overstate the relative importance of exports in the countries of the first group that rely to a considerable extent on imported inputs in their export industries. However, as noted in the case of Mexico, due to the use of direct and indirect imported inputs, that of exportable inputs, and the relatively high cost of domestic operations, the share of value added in world market prices or net foreign exchange earnings in the manufacturing exports of the second group of countries may not exceed the 50-55 percent share observed in the countries of the first group.

1/ It has been reported that in the automobile industry a value added share of 60 percent in domestic prices corresponds to a value added share of 36 percent in world market prices.

2/ In a few instances, the figures include exports from duty free zones but in no country do these exports exceed 10 percent of the total.

At the same time, in Mexico where the incentive system continued to discriminate against primary activities, traditional as well as non-traditional exports, this generally represented a loss in market shares while non-traditional exports failed to develop as rapidly as in the countries of the first group. The same conclusion applies to traditional exports and their derivatives in Argentina while a variety of non-traditional exports expanded in response to an export subsidy.

Among the other countries of the group, the course of traditional exports in Brazil and Colombia was determined largely by world market trends in coffee. However, the selective policy of expansion concentrating on meat, sugar, and soybeans in Brazil and the extension of export incentives to all products other than coffee and petroleum in Colombia led to a rapid increase of non-traditional primary exports in the two countries.

The countries of the third group, Israel and Yugoslavia, started their export promotion efforts at an early date but they did not accord free trade status to manufactured exports. Correspondingly, in 1966, in terms of the share of exports in manufactured output, the two countries surpassed the second group of countries while falling behind the first. In turn, with some slackening in their export promotion efforts after the mix-sixties, the share of exports in manufactured output increased only from 12.8 percent to 14.1 percent in Israel and from 13.8 percent to 16.9 percent in Yugoslavia during the period 1966-73,

As a result, in 1973, Israel's manufactured exports ($495 million) were exceeded by Argentina, Brazil, and Singapore, while Yugoslavia ($2031 million) was overtaken by Korea and Taiwan. Nevertheless, the average and the incremental shares of exports in manufactured output continued to be higher in the two countries than in the countries of the second group. Also,

in the absence of substantial discrimination against primary exports, Israel was able to expand rapidly its exports of citrus fruit and diamonds and Yugoslavia its exports of meat and lumber.

Finally, as noted above, policies of import substitution continued in India and in Chile. Thus, while India traditionally exported textile products, the share of exports in its manufactured output fell from 9.7 percent in 1960 to 9.4 percent in 1966 and 8.6 percent in 1973. And, following earlier increases in the exports of woodpulp,paper,and fabricated copper products, manufactured exports remained at the 1966 level in 1973 in Chile where the situation was aggravated under the Allende regime.

As a result, while India provided 50.7 percent of the manufactured exports of the eleven countries under consideration in 1960, its share declined to 31.2 percent in 1966 and to 10.2 percent in 1973; the corresponding figures for Chile are 2.6, 2.6 and 0.5 percent. Given the continued discrimination against primary activities, the expansion of non-traditional primary exports was also relatively slow in the two countries. In turn, changes in world tea and copper exports determined to a large extent the results shown for their traditional primary exports.

Exports and the Growth of the Manufacturing Sector

The expansion of exports affects the growth of the manufacturing sector both directly and indirectly via input-output relationships and increased consumer demand. At the same time, the exports of manufactured goods provide advantages over import substitution by permitting increased capacity utilization, the exploitation of economies of scale, and improvements in technology stimulated by competition in foreign markets.

We cannot, however, expect to find a close correlation between exports and output growth since other factors, such as investment activity and the political climate, also influence the results. At the same time, the lack of data did not permit including additional variables in th analysis and some of the relevant variables are not even quantifiable.

Nevertheless, the data for the eleven countries under consideration tend to bear out our expectations as regards the existence of a positive correlation between exports and output growth in the manufacturing sector. Thus, in the 1960-66 period, Korea, Singapore, Taiwan, Israel, and Yugoslavia had the highest incremental export-output ratios as well as the highest growth rates in manufacturing[1/] while Argentina and Brazil placed at the bottom in regard to both variables. In the eleven country group, the Spearman rank correlation coefficient between incremental export-output ratios and the rate of growth of value added in manufacturing was .87 (For data, see Tables 2 and 3).[2/]

In examining the data for the 1960-66 period, emphasis has been given to incremental ratios since, as noted above, growth rates of manufactured exports were affected to a considerable extent by absolute values in the initial year. This may explain the low correlation between the growth of exports and value added in manufacturing (.40).

Growth rates of manufactured exports are more meaningful indicators of export performance in the 1966-73 period, when the volume of exports in the initial year was already substantial. The Spearman rank correlation coefficient between the growth of exports and that of value added in manu-

---

1/ Mexico, however, had a lower incremental ratio and a higher manufacturing growth rate than Israel.

2/ For eleven observations, levels of significance are .1 percent for a Spearman rank correlation of .82 or higher; .5 percent for coefficient values of .73 or higher, and 1 percent for coefficient values of .41 or higher.

TABLE 3

ECONOMIC GROWTH OF SELECTED DEVELOPING COUNTRIES
(Average Annual Growth Rates)

		Argentina	Brazil	Chile	Colombia	India	Israel	Korea	Mexico	Singapore	Taiwan	Yugoslavi
Value Added in Agriculture												
	1953-60	0.5	4.0	-0.3	3.3	2.5	10.0	2.3	5.7	n.a.	3.9	3.5
	1960-66	3.2	3.8	2.7	2.7	-0.5	2.6	5.8	4.7	2.5	5.3	3.2
	1966-73	0.7	5.9	-0.7	4.7	3.0	5.6	3.2	2.4	3.1	3.8	2.0
Manufacturing												
	1953-60	5.8	10.1	2.8	6.6	4.8	10.3	13.6	8.5	n.a.	10.1	13.2
	1960-66	5.3	4.5	7.2	5.7	6.2	8.0	13.0	9.7	10.3	12.3	9.9
	1966-73	7.3	11.8	3.7	7.6	4.7	10.9	21.0	7.6	15.0	22.0	8.4
Gross National Product												
	1953-60	3.2	6.3	2.8	4.3	3.5	10.0	5.6	6.5	n.a.	6.9	5.6
	1960-66	3.6	4.1	5.1	4.7	2.8	8.4	7.3	7.1	7.3	9.4	5.8
	1966-73	4.8	9.3	2.4	6.1	3.8	9.8	10.7	6.4	12.7	10.7	7.1
Per Capita GNP												
	1953-60	1.2	3.4	0.4	1.3	1.6	4.8	3.0	2.8	n.a.	3.2	4.4
	1960-66	2.1	1.1	2.6	1.5	0.5	4.5	4.5	3.7	4.5	6.2	4.8
	1966-73	3.3	6.4	0.2	2.9	1.5	7.0	8.8	2.9	10.9	7.9	6.0
Population												
	1953-60	2.0	2.9	2.4	3.0	1.9	5.3	2.7	2.9	4.8	3.6	1.2
	1960-66	1.5	2.9	2.6	3.3	2.3	3.9	2.7	3.4	2.8	3.2	1.0
	1966-73	1.5	2.9	2.2	3.2	2.3	2.8	1.9	3.4	1.8	2.8	1.0

Sources: United Nations - Yearbook of National Accounts Statistics, various issues
OECD - National Accounts of Less-Developed Countries, 1950-66
World Bank - World Tables, 1976

facturing was .85 in this period; the coefficient was .68 between incremental export-output ratios and growth of the manufacturing sector.[1/]

The data for the individual countries also show the effects of policy changes after 1966. With increased export orientation, the rate of growth of value added in manufacturing rose further in Korea, Singapore, and Taiwan. In turn, with the slackening of export promotion efforts, Yugoslavia dropped out from the lead group. Yugoslavia, as well as the countries continuing with import substitution, India and Chile, also experienced a decline in the rate of growth of the manufacturing sector. Finally, the acceleration in the growth of this sector was particularly marked in Brazil where the shift to export promotion was the most pronounced.

Apart from the direct effects of exports, and their indirect effects operating via input-output relationships and increased incomes, rapid export expansion favorably affected the growth of the manufacturing sector through the greater availability of foreign exchange. This allowed purchases of intermediate products for increased capacity utilization and purchases of machinery for additions to capacity.

Even allowing for the import requirements of exports, the impact of the greater availability of foreign exchange through higher exports is apparent in the continued rise of the share of imports in the domestic utilization of manufactured goods in Korea, Singapore, Taiwan, and Israel and in the reversal of the fall in these shares in Brazil and Mexico. By contrast, import shares declined to a considerable extent in both India

---

1/ On the statistical problem of identification, see below.

and Chile between 1966 and 1973; in fact, in India manufactured imports remained practically unchanged.

An export-oriented strategy also permits exploiting the comparative advantage of developing countries which tends to lie in labor-intensive industries within the manufacturing sector. By contrast, pursuing a strategy of import substitution increasingly leads to the establishment of capital-intensive industries. Export orientation, then, will increase employment while reducing capital needs. The same conclusion follows if we consider the favorable effects of exports on capacity utilization.

Savings in capital resulting from the expansion of exports are indicated in Westphal's study on Korea. According to the estimates cited in this study, the average capacity utilization rate in the manufacturing sector, defined in terms of electricity usage and by taking three-shift operations as the norm, rose from 17.7 percent in 1962 to 31.8 percent in 1971. Westphal also finds that in the manufacturing sector labor-capital ratios are much higher for exports than for import substitution, with ratios for the direct use of labor and capital in the manufacturing process estimated at 3.55 for exports, 2.33 for imports, and 2.64 for domestic manufacturing output in 1968.[1/] And while differences declined after 1968, labor-capital ratios for imports appear to be understated since the data used refer only to import substitutes actually produced in Korea and do not include presumably highly-capital intensive machinery and intermediate products imported from developed countries, which are not produced in Korea.

1/ Larry E. Westphal, "Korea's Experience with Export-led Industrial Development".

Colombian exports of manufactures also tend to be labor-intensive[1/] while labor requirements were about 40 percent higher for manufactured exports than for imports in Brazil.[2/] Although comparable data for capital are not available for these countries, in case of equal profitability we would expect capital coefficients to be higher for imports than for exports.

Employment figures are difficult to come by for most countries. However, the increased demand for labor generated through rapid increases in manufacturing exports and output found expression in increases in real wages. This explains that, among the countries under consideration, real wages in manufacturing rose the most rapidly in Korea (11.1 percent) during the 1966-73 period. Increases in real wages were relatively rapid also in Brazil (4.7 percent); at the other extreme, a decline is shown in Chile.[3/]

Export Expansion and Growth Performance

The influences described in regard to the manufacturing sector operate on the national economy level as well. To begin with, the direct effects of exports on output are observed in primary activities also. This is apparent from the high degree of correlation between the growth of agricultural exports and that of value added in agriculture: for the eleven country group, the Spearman rank correlation coefficient between the two variables was .57 in 1960-66 and .71 in 1966-73.

Note also that indirect effects operate in intersectoral relationships, too. For one thing, manufacturing industries use raw materials as

---

1/ Ffrench-Davis and Pinera, "Colombia Export Promotion Policy," p. 94.

2/ Tyler, Manufactured Export Expansion and Industrialization in Brazil, Ch. 6.

3/ International Labour Office, Yearbook of Labour Statistics and International Monetary Fund, International Financial Statistics, various issues. Data for Taiwan and for several other countries are not available.

inputs while primary producers purchase manufactured inputs and machinery; for another, higher incomes due to the expansion of exports, whether primary or manufactured, increase demand for the output of all sectors.

Increased foreign exchange earnings can further contribute to the growth of the national economy by easing the foreign exchange bottleneck that has often been an obstacle to economic growth in the developing countries, and has in some cases led to the application of stop-and-go policies. Finally, apart from increased capacity, utilization in manufacturing and lesser discrimination against labor-intensive manufactured exports, export orientation may lead to savings in capital and increased employment by reducing the bias against primary exports.

The direct and indirect effects of exports, the exploitation of large scale economies, technological change, increased earnings of foreign exchange, greater use of capacity, and increased employment thus tend to raise the rate of economic growth in developing countries. The joint effects of these factors are expected to lead to a positive relationship between export growth and the growth of GNP.

The results for the countries under study conform to our expectations. During the 1966-73 period, growth performance among the eleven developing countries was closely linked with export growth, except that the inflow of foreign private capital enabled Mexico to reach a higher rate of growth of GNP than expected on the basis of export figures. The relationship was somewhat weaker during the 1960-66 period, when several of the countries concerned started out with a low absolute export figure. For the entire sample of countries, the Spearman rank correlation coefficient between the growth of exports and of GNP was .82 for the 1960-66 period and .93 for the 1966-73 period.

The method of relating export growth to the growth of GNP was criticized by Michaely, according to whom "since exports are themselves part of the national product, an auto-correlation is present; and a positive correlation of the two variables is almost inevitable whatever their true relationship to each other[1/]. The relevance of this objection to a cross-section investigation is open to doubt, however. This is because inter-country differences in export growth can be taken to represent different degrees of export as against import-substitution orientation, so that a positive correlation between exports and GNP gives evidence of the success of an export promotion strategy.

At any rate, the estimated results are hardly affected if the rate of growth of exports is replaced by the incremental export-GNP ratio. For the eleven-country group, the Spearman rank correlation coefficient between incremental export-GNP ratios and the rate of growth of GNP was .71 in 1960-66 and .86 in 1966-73.

In turn, in a 41 country sample, a rank correlation coefficient of .38 was obtained by Michaely between changes in the export-GNP ratio and the growth rate of GNP per head for the period 1950-73. The differences between the two sets of growth are explained by the fact that our sample includes only developing countries that have established an industrial base while Michaely combined data for countries at different levels of development. He obtained a rank correlation coefficient of .52 for a subsample of 18 countries having per capita incomes exceeding $300 in 1972. At the same

---

1/ Michael Michaely, "Exports and Growth: An Empirical Investigation", Washington, D. C., World Bank, 1976, mimeo.

time, this group, too, is somewhat heterogeneous as it includes Greece and Spain. Moreover, it is preferable to use incremental export - GNP ratios rather than changes in export - GNP ratios in the calculations since the former, but not the latter, will indicate differences in the relative importance of exports in an intercountry context.

Attempting to explain GNP growth in terms of export growth has the disadvantage of omitting other relevant variables. Michalopoulos and Jay attempted to remedy this deficiency by including domestic and foreign capital as well as labor in the regression equation. Using data for 39 developing countries in the period 1960-68, they found that these variables explained 53 percent of the intercountry variation of GNP growth rates. Adding an export variable raised the coefficient of determination to .71, thus indicating the contribution of exports to economic growth.[1/] The statistical results are reproduced in equations (1) and (2) in Table 4.[2/]

1/ Constantine Michalopoulos and Keith Jay, "Growth of Exports and Income in the Developing World: A Neoclassical View", AID Discussion Paper No. 28, Washington, D.C., November 1973. -- Exports, labor and the gross national product have been expressed as a ratio of the absolute change between the initial and the terminal year divided by initial year values; for exports, current price dollar values, for GNP, constant price domestic values have been used. Foreign investment has been defined as the average current account balance for the period in question, expressed as a proportion of initial year GNP while domestic investment has been obtained as the average difference between gross fixed capital formation and foreign investment expressed as a proportion of initial year GNP.

2/ Using a different methodology, Chenery and Carter reached the conclusion that, during the sixties, exports and domestic savings each accounted for one-half of the growth of output in Taiwan while in Korea the contributions of the individual factors were: exports, 40 percent, capital inflow, 20 percent, savings, 20 percent, and increased use of capacity, 20 percent, when the latter was also influenced by export growth (H.B. Chenery and N.G. Carter, "Foreign Assistance and Development Performance, 1960-1970"; American Economic Review, May 1973, p. 464).

Table 4

Regression Equations on the Relationship of Growth of GNP to Growth of Domestic and Foreign Capital, Labor, and Exports

Equation No.	Dependent Variable	Coefficients of independent variables						R^2
		K_D	K_F	L	X	PPX	IXR	
1	Y	.25	.20	.66				.53
		(7.81)	(3.35)	(2.44)				
2	Y	.24	.12	.60	.04			.71
		(9.62)	(2.33)	(2.81)	(4.82)			
3	Y	.18	.30	1.09				.58
		(3.23)	(2.42)	(1.74)				
4	Y	.15	.23	.97	.04			.77
		(3.33)	(2.40)	(1.99)	(3.57)			
5	Y	.16	.24	.92		.05		.75
		(3.59)	(2.44)	(1.82)		(3.34)		
6	Y	.14	.26	.98			.006	.65
		(2.32)	(2.32)	(1.66)			(1.86)	

Note: Equations (1) and (2) have been taken from Michalopoulos and Jay (op. cit); equations (3) to (6) have been estimated for the pooled data of ten countries for 1960-66 and 1966-73. The gross national product (Y), and labor (L) have been expressed as the ratio of the absolute change between the initial and the terminal year divided by initial year values. The same procedure has been followed for exports, which have alternatively been expressed in terms of current dollar values (X) and in terms of their purchasing power (PPX), derived by deflating dollar values by the index of unit values of manufactured exports of the developed countries. IXR is the incremental ratio of exports to GNP, K_F is the average current account balance during the period in question, expressed as a proportion of initial year GNP, and K_D the average difference between gross fixed capital formation and current account balance, expressed as a proportion of initial year GNP.

We have applied the method utilized by Michalopoulos and Jay to the pooled data of ten out of the eleven countries under study for the periods 1960-66 and 1966-73.[1/] The results shown in equations (3) and (4) indicate that the inclusion of the export variable in the regression equation raise the coefficient of determination from .58 to .77.

All the regression coefficients are significant at the 5 percent level.[2/] The coefficient of the export variable has the same value as in the Michalopoulos-Jay equation; in turn, the coefficients of the foreign capital and the labor variables are higher and the coefficient of domestic capital is lower than in the earlier study. The latter result may be explained by the fact that domestic investment was rising rapidly in the countries concerned during the period under consideration and its effects were not yet fully absorbed in the national economy.

As shown in equations (5) and (6), the results are hardly affected if the current dollar value of exports is replaced by the purchasing power of exports or by the incremental export-GNP ratio. The results indicate that a 1 percent increment in exports is associated with a .04 to .05 of 1 percent increment in GNP.

This estimate may be compared to that obtained in the cross-section investigation cited above by Anne Krueger who concluded that an increase in the rate of growth of exports of 1 percent tends to increase the rate of growth of GNP by .06 of 1 percent. However, Krueger has also found that on the

---

1/ For lack of some of the relevant data, Singapore had to be excluded from the empirical investigation. Note further that a dummy variable representing the second period has been tried but was not statistically significant.

2/ Regression equations estimated by the inclusion of a constant are not shown because of the lack of statistical significance of the constant.

average, countries with liberalized regimes had a GNP growth rate .7 percent higher than others even after differences in export performance are taken into account. In turn, she has not adjusted for changes in capital and labor.[1/]

Given the large intercountry differences shown in export growth and in the incremental ratio of exports to GNP, the effects of exports on the rate of economic growth appear substantial. This conclusion is supported by comparisons of predicted values derived from equation (6) by the use of actual incremental export - GNP ratios and of average ratios for the sample countries. Thus, it would appear that between 1966 and 1973 the increase in Taiwan's GNP would have been 31 percent smaller if its incremental export - GNP ratio equalled the average for the countries concerned. The corresponding proportion is 16 percent for Korea that had a lower incremental export - GNP ratio than Taiwan. At the other extreme, in India, Chile, and Mexico, respectively, the increase in GNP would have been 21, 12, and 10 percent higher if these countries had average ratios of the increment of exports to that of GNP. Results for all other countries in the group fall in the -5 to +5 percent range (Israel and Yugoslavia, -3 percent; Colombia, -2 percent; Brazil, +1 percent; and Argentina +5 percent).

These differences are accentuated if the results are expressed in per capita terms. Thus, according to the calculations, the increase in per capita incomes in Taiwan would have been 40 percent smaller, and in Korea

---

1/ Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences, Cl. XI. -- Regressing the GNP variable on the export variable only, we obtained elasticity values of .06 to .07.

2/ It should be added that the observed differences cannot be attributed to differences in country size. Thus, the bottom group of countries includes Chile that has the smallest population after Israel. In turn, apart from Israel, the group that experienced the least deviations between the two sets of calculated values includes countries with greatly different population size, such as Argentina, Brazil, Colombia, and Yugoslavia. Finally, among countries in the first group, Korea had the third largest poulation in our country sample.

18 percent smaller, if incremental export-output ratios in these countries had been identical to the average ratio for the sample as a whole. Conversely, increases in per capita incomes in India, Chile, and Mexico would have been 37, 18 and 21 percent higher in this eventuality.

It would appear, then, that trade orientation has been an important factor contributing to the intercountry differences in the growth of per capita incomes (Cf. Table 3). At the same time, income increments have been achieved at a much lower cost in terms of investment in countries that have followed a consistent policy of outward-orientation. Thus, taking the 1960-73 period as a whole, incremental capital-output ratios were 1.76 in Singapore, 2.10 in Korea, and 2.44 in Taiwan. At the other extreme, these ratios were 5.49 in Chile and 5.72 in India.

In the same period, incremental capital-output ratios were between 3 and 5 in the countries of the second and the third group, with improvements shown over time in line with their increased outward orientation. While figures for subperiods are subject to considerable error, it appears that the greatest improvement was experienced in Brazil following its pronounced policy change. Brazil's incremental capital-output ratio declined from 3.84 in 1960-66 to 2.06 in 1966-73 when the low figure for the second period presumably also reflects increased capacity utilization at higher export levels.

The statistical results indicate that export growth favorably affects the rate of economic growth over and above the contributions of domestic and foreign capital and labor. These favorable effects may be attributed to improved resource allocation, the exploitation of economies of each,

technological change, and the increased availability of foreign exchange.

At the same time, the method applied under-estimates the effects of exports on economic growth, since it does not take account of the implications of export growth for the other variables included in the equation. Yet as noted earlier, through its effects on capacity utilization and on capital-labor ratios, export orientation tends to increase employment. Also the improved balance-of-payments situation attendant on the expansion of exports increases the attractiveness of the country concerned for foreign capital.

In turn, it has been suggested that the first group of countries might have derived advantages from foreign direct investment as foreign-owned firms are more "export-oriented" than domestically-owned enterprises. The second part of the proposition has been confirmed as far as Latin America is concerned.[1/] However, the entire proposition lacks factual basis as, having followed the example of Japan, the countries of the first group have a much lower share of foreign-owned firms than those of the second group.

The discussion so far has been based on evidence provided by cross-section analysis. Data on changes over time in export values and in the GNP of the individual countries tends to confirm these conclusions. Thus, we find that, with one exception, countries where the rate of

---

1/ Fernando Fajnzybler and Trinidad Martinez Tarrago, Los Empresos Transnacionales, Mexico, Fondo de Cultura Economica, 1976.

growth of exports increased between the 1960-66 and 1966-73 periods also experienced an acceleration in their economic growth. In turn, the decline in the rate of growth of exports in Chile was accompanied by a slowdown in the growth of the Chilean economy.

These conclusions are slightly modified if changes in the purchasing power of exports rather than in export values are considered. But, from the point-of-view of improved resource allocation, the increased use of capacity, the exploitation of large-scale economies, and technological change, no importance can be attached to change in import prices that were used to calculate changes in the purchasing power of exports. Furthermore, on the basis of the evidence provided by Anne Krueger, it may be suggested that the policy change itself may have had effects on GNP that are not captured by the export variable.

The Effectiveness of Export Incentives

We have examined available evidence regarding the effects of export incentives on export expansion and the effects of export expansion on the growth of the national economy. The results indicate that export orientation in the system of incentives had beneficial effects on economic growth in the countries concerned. For one thing, in an intercountry framework, greater export orientation tends to be correlated with better growth performance. For another, in the individual countries, growth performance generally improved following the introduction of export incentive schemes.

Export incentives include all measures that increase the profitability of exports by reducing costs or increasing revenue. In Section I, note has been taken of measures that directly affect individual exporters, such as subsidies to export value, tax and duty concessions, foreign exchange

retention schemes, and preferential credits. It has been noted that automaticity in providing subsidies and governmental attitudes towards export promotion are further influences affecting exports. More generally, importance attaches to the general "climate" in which the incentive scheme is applied and the readiness of the government to help exporters that encounter difficulties, e.g. in obtaining credit. Finally, exporters may obtain benefits from direct government action in the form of government-sponsored market research and information services.

While export incentives provide inducement for increasing exports in a market economy, the question arises what role government interventions in the form of planning or programming may have played in inducing firms to export. A few of the successful exporting countries did prepare medium-term plans. However, the influence of these plans on resource allocation and on the composition of exports appears to have been minimal. At any rate, the plans were prepared on an aggregate level so that there was no direct link to the exports of specific commodities.

And, while Korea used export targets in a disaggregated framework, the application of a free trade regime to all exports was in no way related to the fulfilment or the non-fulfilment of these targets. Furthermore, preferential export credits were provided according to predetermined rules while wastage allowances were set on a product-by-product rather than on a firm-by-firm basis. Thus, by-and-large, the fulfilment of export targets did not modify the firm's access to incentives, although it has been reported that successful exporters enjoyed advantageous treatment in pending tax cases. Note further that although the existence of export targets may have exerted

pressure on some firms, most firms were exceeding their targets. A recent instance is the increase of Korean exports by two-thirds between the second quarter of 1975 and the second quarter of 1976 that exceeded expectations by a substantial margin.

In turn, there were no export targets in Hong Kong, Singapore and Taiwan that had an export performance comparable to that of Korea. And while in a few cases export obligations were imposed on firms in Latin America (e.g. automobiles in Mexico), programming or export targets hardly played a role in the expansion of exports in the countries of the second group. Thus, success in exporting and the acceleration of the rate of economic growth can in large part be ascribed to the incentives applied.

We come finally to the question of whether an import substitution phase is necessary for the subsequent expansion of exports and, if so, for how long and at what cost. The experience of Hong Kong indicates that exports may expand rapidly without a previous import substitution phase. And while in Korea and Taiwan and, to a lesser extent Singapore, export expansion followed a phase of import substitution, a number of important export products, including wigs, synthetic textiles, and electronics, did not go through this phase. In Israel and Yugoslavia, too, there was considerable parallelism between import substitution and export promotion.

In turn, Argentina, Brazil, Colombia, and Mexico continued with import substitution beyond the first "easy" stage and adopted export promotion measures only when this policy ran into increased difficulties. It has been suggested that, without the preceding import substitution phase, export expansion in Latin America would not have occurred at the rates observed. At the same time, as we have seen, the expansion of exports took place from a small base, and the absolute value of manufactured exports

and share of exports in manufactured output remained relatively low in the countries concerned. This, in turn, may be explained by the establishment of inefficient, small-scale firms and by the lack of sufficient vertical specialization in the production of parts, components, and accessories behind high protection. It would also appear that the expectation of continued protection provided little inducement to technological improvements and cost reductions that are necessary for success in foreign markets.

This is not to say that the manufacturing industries of developing countries would not need preferential treatment vis-à-vis primary activities. But such treatment should be provided irrespective of whether sales take place in domestic or in export markets, and its extent would need to decrease with the development of manufacturing industries. This, in turn, brings us to the consideration of optimal policies for exports and resource allocation in general in the developing countries.

III. "Ideal" Trade Policies for Developing Countries

Incentives to Exports and to Import Substitution

An "ideal" scheme of export incentives should aim at assuring that the expansion of exports, and resource allocation in general, conforms to the requirements of social profitability. Also, it should aim at minimizing the chances of retaliation on the part of the importing countries. Finally, the export promotion scheme should have an across-the-board character and it should provide certainty and stability to exporters. These questions will be taken up in turn.

Social profitability considerations call for providing equal incentives to exports and to import substitution since, from the point-of-view of the national economy, a dollar earned in exporting is equivalent to a dollar saved through import substitution. This observation underlies the recommendations made by Ffrench-Davis and Pinera for equalizing-compensation; i.e. for offsetting the discrimination against exports inherent in the protection of domestic markets by equivalent export subsidies.[1/] Next, possible exceptions from this rule will be discussed, followed by an examination of the need for differential treatment among sectors.

Ffrench-Davis and Pinera suggest that "considering the fiscal restrictions with which the governments of developing countries are usually faced, it would seem advisable for the average level of /_export subsidies_/ to be somewhat lower /_than that of tariffs_/."[2/] Fiscal limitations will not

---

1/ Ricardo Ffrench-Davis and Jose Pinera Echenique, "Export Promotion Policies in Developing Countries," paper prepared for the ECLA/IBRD Seminar on Export Promotion, Santiago, November 1976.

2/ Ibid., p. 23.

make, however, such exceptions necessary in most countries that have established an industrial base.[1/] Thus, as we have seen, the eleven countries under study were able to provide substantial subsidies. And, even if the levying and the collection of income taxes encounter difficulties, indirect taxes may be used to finance export subsidies. Nevertheless, in any particular case, the fiscal implications of the proposed scheme would need to be carefully examined, and the differentiation between tariffs and export subsidies may be warranted in the case of some countries at lower levels of industrial development.

It has also been suggested that tariffs should be set higher than export subsidies because of the danger of foreign dumping. However, in view of the paucity of cases of dumping, this argument cannot be used to countenance levying higher tariffs on imports in general. Considering further the need to avoid disincentives to exports, it would be desirable if, instead of tariffs, one relied on anti-dumping measures whenever the existence of dumping has been established.

Nor is the higher protection of luxury goods warranted on income distributional grounds. While luxury taxes are an appropriate device in most developing countries where income and profit taxation encounters difficulties such taxes should also be levied on domestically produced luxury goods since otherwise their home production would be encouraged as it has happened in a number of developing countries. Accordingly, an excise tax on luxury goods will be an appropriate measure; in the case of imports, this may be levied at a point of entry.

1/ but, budgetary considerations generally preclude the use of production subsidying in the place of tariffs and export subsidies in the developing countries.

The application of tariffs at higher rates may be warranted, however, in cases when consumers have an irrational preference for foreign goods that involves a cost to the national economy as consumer goods are imported at a higher cost than they can be produced domestically. Such exceptions should be made sparingly, however, so as to avoid excessive protection of consumer goods industries leading to high cost, inefficient production.

It has also been suggested that higher tariffs should be applied to protect infant industries. But infant industry protection should apply to exports as well; i.e., providing additional incentives to new industries should not be limited to production for domestic markets since the effects on the country's industrial development and balance-of-payments will be identical in the two cases.

In fact, it may be desirable to grant additional incentives to new export activities. For one thing, there are additional costs of entering foreign markets, including the cost of the collection of information and marketing; for another the risk to individual exporters tends to be greater than to the national economy that has a diversified export structure. Nevertheless, just like infant industry protection, additional incentives aimed at new exports should be given on a temporary basis until new markets have been established.

Differential Treatment of Particular Sectors

Setting tariffs and export subsidies at equal rates on all products would be equivalent to free trade. As noted earlier, this would not be the appropriate policy in developing countries. For one thing, in the case of exports facing less than infinitely elastic foreign demand, the optimum tariff argument applies. This entails equating the marginal revenue derived from the exportation of the commodity in question to marginal costs.[1/]

1/ For the relevant forulas, cf. Harry G. Johnson, "Alternative Maximization Policies for Developing Country Exports of Primary Industry", Journal of Political Economy, May-June 1968. -- One should avoid, however, underestimating the long-term elasticity of foreign demand which is the relevant consideration.

For another, the existence of externalities in the manufacturing sector warrant the preferential treatment of this sector in developing countries. This is because manufacturing activities provide social benefits in the form of the "production" of skilled labor and technological change that are not fully captured in the entrepreneur's profit calculation. There is a difference in this regard between manufacturing and agricultural activities as the latter generally use less skilled labor, and technological change is promoted chiefly by agricultural stations rather than by individual producers. At the same time, preferential treatment should be commensurate with the external economies manufacturing activities generate, which do not justify the high protection often observed in developing countries.

We have considered so far preferential treatment for the manufacturing sector, taken as a whole. Ffrench-Davis and Pinera suggest that "it is necessary to discriminate deliberately between different items, since in practice the divergences between the social and private returns related with the nature of the production processes are not uniform in all activities".1/ In practice, however, it has not been possible to establish the extent to which social benefits vary among individual industries. For example, while at one time textile production was considered a vegetative industry in Latin America, it has had one of the best records of productivity improvement in recent years.

Given our ignorance as regards interindustry differences in social gains, it is suggested here, that infant industries apart, as a first approximation one should provide equal incentives to all manufacturing activities. This amounts to the application of the "market principle" that will ensure that efficient activities will expand at the expense of inefficient ones.

As the author has elsewhere noted, exceptions from this rule should be made only in cases when it is well established that an industry generates substantially greater (lesser) external economies than the average. In so doing, one should avoid the use of "tailor-made" tariffs benefiting a particular firm in response to pressures by special interest groups. In general,

1/ "Export Promotion Policies in Developing Countries" p. 73.

the burden of proof should be on those requesting special treatment.[1/]

At the same time, to the extent possible, exceptions should be made, and considerations other than economic efficiency introduced, in the form of direct measures rather than higher rates of protection.[2/] Thus, in industries that show exceptional promise for technological improvements, the direct subsidization of research and development is preferable to additional protection that may lead to the establishment of high-cost firms. Also, measures taken to reduce the cost of labor will be a more appropriate way to encourage employment than the protection of labor-intensive industries that promote the use of both labor and capital in these industries.[3/]

Alternative Incentive Schemes

We have suggested that the optimal tariff argument applies to exports facing less than infinitely elastic demand while preferential treatment may be provided to manufacturing activities. Externalities in the manufacturing sector do not, however, warrant the high protection of this sector. And, certain exceptions apart, for any given product sales on domestic and foreign markets should receive equal incentives.

The proposed system of incentives may be implemented in various

---

1/ Bela Balassa, "Reforming the System of Incentives in Developing Countries," World Development, June 1975. Reprinted in Policy Reform in Developing Countries, ch. 1. -- This paper also provides a further discussion of the issues related to protection as well as references to the principal contributions in the economic literature.

2/ This conclusion also applies if differences exist between the shadow and the marked prices of productive factors.

3/ For a discussion of the technological and employment arguments for protection, see Bela Balassa, "Guidelines for the Common External Tariff of the Andean Common Market," Policy Reform in Developing Countries, ch. 5.

ways.[1/] Under Alternative A, differential incentives are provided by applying the official exchange rate to exports facing less than infinitely elastic foreign demand (e.g. copper) and imposing import tariffs and export subsidies on other primary products[2/] as well as on manufactured goods, with higher rates applying in the latter case.[3/]

Assume next that, in the case described, optimum tariff considerations and external economies in manufacturing warrant setting rates of import tariffs and export subsidies at 25 percent for primary products other than copper and at 40 percent for manufactured goods. Domestic prices and relative incentives as well as the allocation of resources and the effects on the government budget will be the same but the official exchange rate will be 25 percent higher if this rate is applied to primary products other than copper, a 20 percent export tax is levied on copper, and manufactured goods are subject to tariffs and export subsidies of 12 percent (Alternative B).

Again, the economic effects will be the same but the official exchange rate will be 40 percent higher than under Alternative A if this rate is applied to manufactured goods, a 28.6 percent export tax is levied on copper, and a 10.7 percent export tax cum export subsidy on other primary products (Alternative C).

1/ These alternatives are discussed in Bela Balassa and Michael Sharpston, "Export Subsidies by Developing Countries: Issues of Policy," Commercial Policy Issues No. 3 (forthcoming)--The paper also describes actions taken by developed nations as regards export subsidization by developing countries.

2/ The example excludes the case when some manufactured exports may be face to less than infinitely elastic foreign demand. This possibility can be easily accommodated, however, in the proposed incentive scheme.

3/ Trade in intermediate goods is not considered here; their introduction necessitates relating incentives to value added rather than output value. On practical difficulties and possible solutions, see Bela Balassa and D. M. Schydlowsky, "Indicators and Protection and Other Incentive Measures" in The Role of the Computer in Economic and Social Research in Latin America (Nancy D. Ruggles, ed.). New York, National Bureau of Economic Research, 1974.

The three alternatives have identical effects on trade, resource allocation and the government budget in the country concerned as well as on the trade of other countries. They differ, however, as to the chances of retaliation on the part of the importing countries, in particular the developed nations. This is because, while tariffs and taxes are generally considered to be within the purview of every country, foreign nations may employ retaliatory measures in cases when export subsidies have been granted. Indeed, in the United States, countervailing duties have been levied on several export products from developing countries and their application threatens all exporters who receive explicit subsidies.

The objective of avoiding retaliation then favors Alternative B over Alternative A, while Alternative C will be superior to the other two since it does not involve explicit subsidies to exports.[2/] Internal political considerations may, however, hinder the application of the third alternative. Primary producers may object to the use of (explicit) export taxes and a large devaluation may meet with general disapproval. Should this be the case, the use of explicit export subsidies could not be foregone. Developing countries could then, minimize the chances of retaliation on the part of the developed nations by relying on measures that have not been traditionally considered export subsidies or have been used by the developed nations themselves.

As noted in the paper referred to above, duty rebates on imported inputs used in export production are admissible under GATT.[1/] Also,

1/ Rebates of indirect taxes are also admissible and should be applied under all circumstances but, as noted above, they are not genuine export subsidies.

2/ These alternatives may be interpreted as variants of compensated devaluation that has been first suggested in Bela Balassa, "Integration and Resource Allocation in Latin America," paper prepared for the Conference "The Next Decade of Latin American Development, held in April 1966 at Cornell University and published in Spanish under the title "Integracion regional y asignacion de recursos en America Latina" in Comercio Exterior September 1966 and D. M. Schydlowsky, "From Import Substitution to export Promotion for Semi-grown-up Industries: A Policy Proposal" Journal of Development Studies, July 1957.

there are various institutional measures of export promotion that have been widely employed without inviting retaliation. They include services to exporters provided by governmental or quasi-governmental bodies in the form of the collection of information on export markets, the organization of trade fairs, export marketing institutions, quality control, labor training, etc.

Finally, the danger of retaliation is reduced if the developing countries utilize subsidy measures which have been employed by the developed nations, such as preferential export credits, credit insurance schemes, and income tax deferrals. The application of such measures could not be recommended, however, on exports to the United States which has countervailed preferential export financing and schemes involving a delay of taxes payable on incomes derived from exports, although they are provided to U.S. exports.[1/]

Additional Considerations on an "Ideal" Export Incentive Scheme

We have indicated the need for providing equal incentives to individual activities within the manufacturing sector. Uniformity should be understood in terms of effective rates of protection which express the margin of protection on value added rather than in terms of nominal rates of protection which relate to product price. The implications of these conclusions for export subsidization will next be indicated.

Value added in exporting equals net foreign exchange earnings that is the difference between the f.o.b. export price and the foreign exchange value of tradeable inputs. Providing equal subsidies on a value added basis will thus ensure the expansion of efficient export activities; i.e. those where

---

1/ "Export Subsidies by Developing Countries: Issues of Policy" pp. 41-42.

exports can be obtained at least domestic cost. Conversely, selectivity in export incentives based on differences in the international competitiveness of individual industries as suggested in the ECLA study on Mexico[1/] will tend to encourage high-cost, and discourage low-cost, exports.

Nor is the proper objective of export policies to "maximize their selective efficiency, in terms of sufficiently precise variable goals..."[2/] To the extent that these goals are considered desirable, they would be more effectively served by measures that directly bear on the particular objective rather than by export subsidies that could not be appropriately used to pursue multiple objectives. Moreover, selectivity would impose a heavy administrative burden on the government bureaucracy and invite corruption.

Similar objections pertain to related proposals made for the planning and programming of exports.[3/] Apart from the fact that firms are better able to discover export opportunities than a government bureaucracy, the responsibility for exports cannot be divided as firms have to take the risks involved in exporting and reap the rewards.

1/ ECLA, "The Export of Manufactures in Mexico and its Promotion Policy," paper presented at the ECLA/IBRD Seminar on Export Promotion Policies, November 1976.

2/ Angel Monti, "Latin American Exports of Manufactures: Experiences and Problems," pp. 61-62. --The stated goals are said to include "value added, employment, distribution in general, net balance of foreign currency, technology-effect, structure of the power of decision, type of insertion in world trade, structure of trade by destination, induced structure of production by regional origin, etc."

3/ According to Monti, "'promotion' policies as such should be abandoned in favor of designing selective 'conduction' policies, with planning and participation, by activities, integrating production/substitution/exports in a single context in design and in operation." "Latin American Exports of Manufacture: Experiences and Problems" p. 25.

These conclusions are substantiated by the experience of the eleven countries that was reviewed above. They are also supported by the experience of Hungary, the country with the largest share of exports in GNP among the socialist states, which chose to decentralize decision-making in the export sector, with firms responding to market signals. In fact, the Hungarian economic reform was to a large extent motivated by the difficulties encountered in planning an economy that relies to a considerable extent on foreign trade.[1/] By contrast, India provides an example where investment, production, and import controls applied in the process of planning compromised the effectiveness of export incentives and constrained the growth of the national economy.

To have the desired effects, the export incentive scheme--and the system of incentives in general--should also have the characteristics of stability and certainty. Frequent changes in the incentives tend to reduce their effectiveness. And while changes in the incentive system cannot be foregone, these should be carried out according to a predetermined timetable.

In this connection, it should be emphasized that the proposed incentive scheme could not be adopted overnight. Rather, it should be approached in steps generally involving the lowering and equalization of protection rates and the reduction of discrimination against exports over time. In this way, disruptions in production could be minimized.

In order to prepare firms for the prospective changes in incentives, these should be made known in advance. Infant industry protection, too, should be provided on a declining scale determined in advance. This would

---

1/ Bela Balassa, "The Economic Reform in Hungary," Economica, February, 1970, pp. 1-22.

permit firms to take the necessary steps to reduce costs which was not the case in countries where protection was regarded as permanent.

Finally, exchange rate policy should aim at avoiding large shifts in export incentives that occur if devaluation takes place only intermittently. Thus, in the event that domestic prices rise at a higher rate than abroad, the example of countries, such as Brazil and Colombia, should be followed in devaluing pari passu with inflation.

Conclusion

In this paper, we have provided evidence concerning the favorable effects of export incentives on the growth of exports and that of the national economy. It has been shown that in an intercountry framework, greater export orientation tends to be associated with better growth performance. Also, in the individual countries, economic growth generally accelerated following the introduction of export promotion schemes.

It further appears that growth has been the most rapid in countries, such as Korea, Singapore, and Taiwan, which most nearly conform to the "ideal" system of incentives described in Section III of the paper. The three countries provided a free trade regime for exports and ensured stability in the incentive system over time. They also granted comparable incentive to exports and to import substitution in manufacturing while there was little discrimination against primary activities.

The application of the proposed incentive scheme has been objected to on the grounds that the primary exports of developing countries encounter market limitations while their manufactured exports face high protection in

the importing countries, in particular the developed nations. Experience shows that these objections have been much exaggerated.

Apart from tropical beverages, for most primary exports by the developing countries the main limitations appear to have been on the supply rather than on the demand side. Thus, until recently, the developing countries were losing ground to the developed nations in the world market for cereals and oil seeds.

Also, notwithstanding the application of tariffs and other restrictions in the developed nations, manufactured exports from the developing countries rose much more rapidly than it had been foreseen. Between 1960 and 1966, these exports increased at an average annual rate of 12 percent; they rose 25 percent a year between 1966 and 1973 as against an annual rate of increase of 17 percent for the manufactured exports of the developed nations.

In turn, the possibilities for the further expansion of manufactured exports from the developing countries are indicated by the fact that these countries account for less than seven percent of the imports of manufactured goods by the developed nations and for not quite one percent of their domestic sales of manufactured goods. If the domestic market for manufactured goods in the developed nations were to increase by one-half during a decade and the developing countries were to supply one-tenth of this increment, they could increase their exports of manufactured goods to the developed nations from $16 billion in 1973 to over $100 billion (in 1973 prices) ten years later.

An increase of such a magnitude would, however, necessitate a considerable degree of diversification in the manufactured exports of the developing countries. Such a diversification is under way in Korea, Singapore, and Taiwan with the upgrading of their existing exports and increased reliance on the exports of machinery and equipment. For other developing countries, such as Brazil, the exports of automobiles and steel may provide promise. Finally, developing countries may increase their participation in the international division of the production process by manufacturing parts, components and accessories of durable goods.

In a number of products, the developing countries could take over markets from countries which have recently become developed, such as Japan, whose comparative advantage is shifting to more advanced products. At the same time, the acceptability of manufactured imports from developing countries is greater if these replace imports from other developed countries rather than domestic production.

Nevertheless, possibilities exist for further expansion even in the exportation of textiles and clothing which is the single largest product group in developing country exports to the developed nations, amounting to 37 percent of the total. In this connection, note that the developing countries account for less than one-fourth of the imports and less than four percent of domestic sales of textiles and clothing in the developed nations.

Rather than market limitations the main danger appears to be that, in response to adverse changes during the world recession of 1974-75, developing countries may again turn to import substitution. Yet, the particularly severe recession reflects a confluence of circumstances -- the quadrupling of oil prices together with the after effects of the superboom of 1972-73 --

that cannot be expected to recur.

Apart from the resulting misallocation of resources, adopting an inward-looking policy would compromise chances for participation in the renewed growth of world trade. In fact, it appears that the policies followed have affected the success of the individual countries in resuming export growth following the recession. Thus, the exports of manufactured goods increased by two-thirds between the second quarter of 1975 and that of 1976 in Korea that maintained a policy of export orientation. In turn, increases were considerably smaller in Brazil, Colombia, and Mexico that have adopted measures entailing increased discrimination against exports.

Apart from exporting to the developed countries, Korea and Taiwan have also been successful in the rapidly-growing markets of the oil-exporting countries, particularly in the Middle East. The total imports of the oil-exporting countries rose from $20 billion in 1973 to $55 billion in 1975, exceeding two-fifths of the imports of the oil-importing developing countries.

With the continuing rapid expansion of the imports of the oil countries, the oil-importing developing countries could derive considerable benefit from efforts aimed at these markets. By comparison, the prospects for trade among the oil-importing developing countries appear modest, as countries that have established an industrial base have similar product specialization while countries at lower levels of industrialization tend to protect the products of those industries in which the more advanced developing countries have export potential. This conclusion applies a fortiori if comparisons are made with export possibilities to the developed countries where the annual increment in the imports of manufactured goods between 1972 and 1973, and again between 1973 and

1974, was greater than the manufactured imports of all the oil-importing developed countries combined.

APPENDIX TABLE 1

TRADITIONAL EXPORTS OF SELECTED DEVELOPINC COUNTRIES

ARGENTINA	1953		1960		1966		1973	
SITC Code	$ mn	%	$ mn	%	$ mn	%	$ mn	%
011 Meat, fresh etc.	76.6	(6.8)	158.2	(14.7)	307.7	(19.3)	639.9	(19.6)
013 Meat, canned	124.9	(11.1)	61.8	(5.7)	85.3	(5.4)	149.1	(4.6)
041 Wheat, unmilled	190.6	(16.9)	142.7	(13.2)	279.6	(17.5)	273.8	(8.4)
044 Maize, unmilled	58.9	(5.2)	124.2	(11.5)	200.7	(12.6)	365.3	(11.2)
045 Cereals, unmilled	22.5	(2.0)	34.2	(3.2)	51.4	(3.2)	200.5	(6.1)
051 Fruit, fresh & nuts	53.0	(4.7)	24.9	(2.3)	39.3	(2.5)	50.1	(1.5)
081 Fodder, nes.	62.4	(5.5)	73.7	(6.8)	97.6	(6.1)	165.5	(5.0)
211 Hides & skins	60.6	(5.4)	70.0	(6.5)	75.2	(4.7)	23.3	(0.7)
262 Wool	179.0	(15.9)	146.2	(13.5)	132.9	(8.3)	188.2	(5.8)
412 Vegetable oils & fats	34.7	(3.1)	72.5	(6.3)	71.1	(4.5)	85.5	(2.6)
Total	863.2	(76.7)	908.4	(84.2)	1340.8	(84.2)	2141.2	(65.6)

BRAZIL	1953		1960		1966		1973	
SITC Code	$ mn	%	$ mn	%	$ mn	%	$ mn	%
0711 Coffee, green, roasted	1042.1	(67.7)	712.7	(56.2)	764.0	(43.9)	1244.3	(20.1)
0721 Cocoa beans, raw, roasted	73.6	(4.8)	69.2	(5.4)	50.7	(2.9)	88.5	(14.3)
2432 wood , shaped, coniterous	45.5	(2.9)	42.7	(3.4)	56.2	(3.2)	80.7	(1.3)
2631 Raw cotton	107.5	(7.0)	45.6	(3.6)	111.0	(6.4)	218.1	(3.5)
Total	1268.7	(82.4)	870.2	(68.6)	981.9	(56.4)	1631.6	(26.3)

CHILE	1953		1960		1966		1973	
SITC Code	$ mn	%	$ mn	%	$ mn	%	$ mn	%
281 Iron ore & concentrates	12.8	(3.1)	35.2	(7.2)	78.0	(8.9)	55.6	(4.5)
2712 Natural sodium nitrate(saltpetre)	54.4	(13.3)	25.9	(5.3)	24.2	(2.8)	16.9	(1.4)
68212 Copper, refined	127.8	(31.2)	150.5	(30.7)	355.4	(40.6)	575.2	(46.7)
68211 Copper, unrefined	100.9	(24.6)	187.0	(34.7)	229.2	(26.2)	326.4	(26.5)
Total	295.9	(72.2)	398.6	(81.3)	686.8	(78.4)	974.1	(79.1)

COLOMBIA	1953		1960		1966		1973	
SITC Code	$ mn	%	$ mn	%	$ mn	%	$ mn	%
0711 Coffee, green roasted	492.2	(82.6)	332.2	(71.4)	328.3	(64.6)	597.9	(50.9)
331 Crude Petroleum	76.3	(12.8)	80.0	(17.2)	71.7	(14.1)	26.8	(2.3)
Total	568.5	(95.4)	412.2	(88.6)	401.0	(78.9)	624.7	(53.2)

INDIA	1953		1960		1966		1973	
SITC Code	$ mn	%	$ mn	%	$ mn	%	$ mn	%
0517 Nuts, edible, fresh or dry	23.7	(2.1)	39.8	(3.0)	73.2	(4.0)	102.0	(3.4)
0741 Tea	218.7	(19.4)	260.0	(19.5)	252.2	(13.7)	186.3	(6.3)
075 Spices	36.3	(3.2)	60.6	(4.6)	46.4	(2.5)	54.6	(1.8)
121 Tobacco, unmanufactured	23.7	(2.1)	30.7	(2.3)	34.3	(1.9)	80.8	(2.7)
2837 Manganese ore and concentrates	52.2	(4.6)	29.5	(2.2)	22.9	(1.2)	10.3	(0.3)
Total	354.6	(31.4)	420.8	(31.6)	429.0	(23.4)	434.0	(14.7)

ISRAEL		1953		1960		1966		1973	
SITC Code		$ mn	%	$ mn	%	$ mn	%	$ mn	%
0511	Oranges, tangarines	18.7	(31.2)	38.5	((18.2)	57.6	(11.4)	70.0	(4.6)
0512	Lemons, grapefuit etc.	3.8	(6.3)	6.7	(31.7)	na		40.0	(2.7)
6672	Diamonds, non-industrial, unset	13.3	(22.2)	60.9	(28.9)	189.5	(37.6)	617.1	(40.1)
	Total	35.8	(59.7)	106.0	(50.2)	247.1	(49.1)	727.1	(47.4)

KOREA		1953		1960		1966		1973	
SITC Code		$ mn	%	$ mn	%	$ mn	%	$ mn	%
ex-0548	Edible vegetables n.e.s.(seaweeds)	0.8	(2.0)	1.3	(4.0)	8.7	(3.5)	7.6	(0.2)
2613	Raw silk	6.3	(15.7)	1.0	(3.0)	11.6	(4.6)	72.8	(2.3)
2839	Tungsten ores & concentrates	15.8	(39.5)	4.7	(14.2)	9.5	(3.8)	10.3	(0.3)
ex-2924	Vegetables used in pharmacy (agar-agar)	2.3	(5.8)	0.9	(2.7)	2.9	(1.2)	7.2	(0.2)
	Total	25.0	(63.0)	7.9	(23.9)	32.8	(13.1)	97.9	(3.0)

TAIWAN		1953		1960		1966		1973	
SITC Code		$ mn	%	$ mn	%	$ mn	%	$ mn	%
042	Rice	13.4	(10.5)	5.1	(3.4)	29.7	(5.6)	14.4	(0.3)
051	Fruit, fresh & nuts	3.1	(2.4)	6.1	(4.1)	48.4	(9.0)	29.3	(0.7)
061	Sugar & honey	85.8	(67.5)	72.2	(48.5)	52.7	(9.9)	90.2	(1.9)
0741	Tea	6.8	(5.3)	6.1	(4.1)	9.9	(1.8)	19.4	(0.4)
	Total	109.1	(85.8)	89.4	(60.1)	140.8	(26.3)	153.2	(3.4)

MEXICO		1953	1960	1966	1973
SITC Code		$ mn %	$ mn %	$ mn %	$ mn %
031	Fish, fresh etc.	35.1 (6.0)	36.5 (4.8)	56.9 (4.8)	111.0 (5.4)
0711	Coffee, green, roasted	72.1(12.3)	71.9 (9.4)	86.1 (7.2)	167.7 (8.1)
2631	Raw cotton	140.4(24.0)	157.9(20.7)	221.9(18.5)	166.0 (8.0)
283	Non-ferrous metals ores & concentrates	18.7 (3.2)	23.0 (3.0)	37.9 (3.2)	23.9 (1.1)
6711	Silver, un-worked or partly worked	27.4 (4.7)	24.5 (3.2)	35.4 (2.9)	11.3 (0.5)
6821	Copper unwrought	36.0 (6.1)	24.9 (3.3)	7.6 (0.6)	31.8 (1.5)
6851	Lead unwrought	56.7 (9.7)	31.0 (4.1)	27.6 (2.3)	22.8 (1.1)
	Total	386.3(66.0)	378.0(49.5)	473.5(39.5)	534.3(25.8)

YUGOSLAVIA		1953	1960	1966	1973
SITC Code		$ mn %	$ mn %	$ mn %	$ mn %
011	Meat, fresh, etc.	8.2(4.4)	28.3(5.0)	105.4(8.6)	170.9(5.7)
121	Tobacco, un-manufactured	5.6(3.0)	19.8(3.5)	32.2(2.6)	32.5(1.1)
243	Wood, shaped	40.6(21.8)	41.2(7.3)	45.2(3.7)	140.7(4.6)
6821	Copper, unwrought	10.0(5.4)	0.0(0.0)	0.1(0.0)	94.2(3.1)
6851	Lead, unwrought	15.4(8.3)	13.8(2.4)	16.7(1.4)	16.5(0.5)
	Total	79.8(42.9)	103.1(18.2)	199.5(16.4)	454.8(15.0)

Source: See Table 1

Note: Figures in parentheses are percent shares in total exports.

APPENDIX TABLE 2

EXPORTS BY SELECTED DEVELOPING COUNTRIES
(million U.S. dollars)

	Argentina	Brazil	Chile	Colombia	India	Israel	Korea	Mexico	Singapore	Taiwan	Yugoslavia
Export Values											
1953											
Traditional primary	863	1269	295	568	355	36	25	386	n.a.	112	80
Nontraditional primary	159	255	90	21	212	2	13	131	n.a.	10	63
Primary exports, together	1022	1524	385	589	567	38	38	517	n.a.	122	143
Manufactured goods	103	15	25	7	549	22	2	68	n.a.	6	43
Total exports	1125	1539	410	596	1116	60	40	585	n.a.	128	186
1960											
Traditional primary	908	870	399	412	421	106	8	378	-	89	103
Nontraditional primary	128	370	60	46	310	36	19	285	48	23	223
Primary exports, together	1036	1240	459	458	731	142	27	663	48	112	326
Manufactured goods	43	29	31	7	600	69	5	100	23	37	240
Total exports	1079	1269	490	465	1331	211	32	763	71	149	566
1966											
Traditional primary	1341	982	687	401	429	247	33	474	-	141	199
Nontraditional primary	154	634	114	65	525	96	66	520	230	151	256
Primary exports, together	1495	1616	801	466	954	343	99	994	230	292	455
Manufactured goods	98	125	74	42	882	160	151	205	85	243	765
Total exports	1593	1741	875	508	1836	503	250	1199	315	535	1220
1973											
Traditional primary	2141	1632	974	625	434	727	98	534	-	153	455
Nontraditional primary	389	3338	183	322	1048	287	416	796	799	722	534
Primary exports, together	2530	4970	1157	947	1482	1014	514	1330	799	875	989
Manufactured goods	736	1229	74	228	1469	495	2711	740	1001	3606	2031
Total exports	3266	6199	1231	1175	2961	1509	3225	2070	1800	4481	3020
Manufactured Output											
1960	5483	7260	1030	961	6178	873	501	3831	205	432	2219
1966	10890	9947	1812	1415	9336	1254	1089	7115	423	1263	5541
1973	20706	27851	3002	3041	16893	3504	6687	16781	2350	7225	12024
Gross National Product											
1960	12097	20666	3890	4109	31343	2504	2142	11949	717	1571	2519
1966	21716	24512	5563	5361	43535	3937	3824	22189	1186	3132	8607
1973	40283	63119	16299	9972	69460	9708	12367	48436	4038	9367	20747

Sources: Exports: National and International Trade Statistics.
Manufactured Output: United Nations - The Growth of World Industry, various issues, and national statistics.
Gross National Product: World Bank - World Tables, 1976

Note: The dollar values of manufactured output and GNP have been derived by converting data expressed in terms of national currencies by the use of exchange rates shown in the World Bank Tables, 1976. An exception has been made in the case of Korea where the 1960 official exchange rate was adjusted for the devaluation undertaken in early 1961 and for wholesale price changes.

In the absence of manufactured output figures for 1960, these have been derived from the 1966 figures by utilizing growth rates of value added in manufacturing and inflation in prices of manufactured goods for the period 1960-66.

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

B

OFFICE MEMORANDUM

APR 27 REC'D

TO: Operating Vice Presidents, Projects and Programs Directors

DATE: April 26, 1976

FROM: James M. Kearns and Herman G. van der Tak

SUBJECT: Revised Project Documentation Procedures

During the next two months, we intend to watch closely and evaluate experience with the revised project documentation procedures.

After a "revised procedures" project goes to the Board, we will send the attached memorandum and questionnaire to the mission members, loan officer, most directly affected CPS adviser, assistant projects director, and the programs and projects division chiefs associated with it. After summarizing their replies as a basis for discussion, we will hold a meeting of those involved in the project to evaluate the experience and discuss any practices which seemed to impair or might improve effectiveness.

After reviewing between ten and fifteen projects in this manner, we will summarize the results, prepare recommendations if necessary, and then meet with you in a group to discuss the evaluation. Between now and then we will welcome any views you have on our approach or on the substance of the problem.

We intend to refrain from evaluating the first three projects as these can be expected to have involved an atypically high degree of improvisation.

Attachment
cc: Messrs. Knapp
Alter
Dosik
Gue

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: DATE:

FROM: James M. Kearns and Herman G. van der Tak

SUBJECT: Revised Project Documentation Procedures

In order to determine whether the objectives of recent revisions in project documentation procedures are being met and what further adjustments may be sensible, we are evaluating experience with the new procedures as it accumulates.

As you were recently involved in a "revised procedures" project that went to the Board, could you kindly complete the attached questionnaire and return it to OPD (Room D-1102)? Once we have the completed questionnaires from those who were involved with this project, we will hold a short meeting to discuss the major problems that were encountered or benefits that became evident.

Then, after reviewing several new procedures projects in this manner and discussing our findings with senior managers, we will try to consolidate experience and suggestions and reflect them in the guidelines and final procedures that are issued.

Attachment

Name: _____ Project Title: _____

Position: _____ Country: _____

QUESTIONS RELATED TO THE NEW PROJECT DOCUMENTATION PROCEDURES

A. Guidance

1. Did you read the October 14, 1975, memorandum from Mr. Knapp entitled "Changes in Loan/Credit Documentation Procedures" just before the drafting (or your involvement) began?

☐ Yes ☐ No

2. Essentially what additional guidance, if any, did you receive (or furnish) about the new procedures? Please indicate briefly when, from whom and of what nature.

B. Process

1. How did the amount of <u>your</u> time required by this report writing exercise compare with what you think it would have been under traditional procedures?

Much less time	Somewhat less time	About the same	Somewhat more time	Much more time	No opinion
☐	☐	☐	☐	☐	☐

Why? Comment, if any:

B. Process (Cont'd.)

2. How did the amount of stylistic, non-substantive, editorial polishing and debate that you could observe (or participate in) compare with what you think it would have been under traditional procedures?

Much less	Somewhat less	About the same	Somewhat more	Much more	No opinion
☐	☐	☐	☐	☐	☐

Why? Comment, if any:

3. With respect to your portion, if any, of the report writing task, was it -- compared to what you think it would have been under the traditional procedure --

(a) Delegated:

More fully	To about the same degree	Less fully	No opinion
☐	☐	☐	☐

(b) In difficulty:

Easier to do	About the same	Harder to do	No opinion
☐	☐	☐	☐

(c) To produce:

More satisfying	About the same	Less satisfying	No opinion
☐	☐	☐	☐

3. (Cont'd.)

Why? Comment, if any:

☐ No role in report writing

4. After the mission's return, how did the programs/projects interaction compare with what it might have been under the traditional procedure?

(a)

Easier	About the same	More difficult	No opinion
☐	☐	☐	☐

(b)

Less useful	About the same utility	More useful	No opinion
☐	☐	☐	☐

Why? Comment, if any (especially regarding the sections common to the President's and Staff Project Reports):

☐ Not in a position to observe.

5. After the mission's return, how did the Regional/CPS interaction compare with what it might have been under the traditional procedure?

(a)

Easier	About the same	More difficult	No opinion
☐	☐	☐	☐

5. (Cont'd.)

(b)

Less useful	About the same utility	More useful	No opinion
☐	☐	☐	☐

Why? Comment, if any:

☐ Not in a position to observe.

C. The Reports

1. Did this President's Report go further towards highlighting major problems, special features and policy issues than has traditionally been done?

No	Yes, slightly	Yes, significantly	No opinion
☐	☐	☐	☐

Why? Comment, if any:

2. Did the Staff Project Report display its assumptions, judgments and analyses better than would have been done under the traditional procedure?

No	Yes, slightly	Yes, significantly	No opinion
☐	☐	☐	☐

Why? Comment, if any:

C. The Reports (Cont'd.)

3. Compared to the traditional model, did the Staff Project Report's use of formatted, self-contained chapters make the package:

(a) For Borrowers:

More useful	Same	Less useful	No opinion
☐	☐	☐	☐

Why? Comment, if any:

(b) To review:

Much harder	Somewhat harder	About the same	Somewhat easier	Much easier	No opinion
☐	☐	☐	☐	☐	☐

Why? Comment, if any:

4. What are your views, if any, on the formalization and published listing of selected contents of the project file?

5. What are your views, if any, on the listing in the President's Report of special conditions and Bank implementation actions?

C. The Reports (Cont'd.)

6. General comments, if any, on the reports:

D. Other Comments

Record Removal Notice

The World Bank Group Archives & Records Management

File Title	Barcode No.
Research and sector papers 02	1851118

Document Date	Document Type
15 April, 1976	Board Record

Correspondents / Participants

Subject / Title

R76-86

Operations Evaluation Department Program of Work and Future Work Plans, a report of the Chairman, Joint Audit Committee

Exception(s)

Information Restricted Under Separate Disclosure Regimes and Other Investigative Information (IEG)

Additional Comments

The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.

Withdrawn by	Date
Sherrne M. Thompson	March 23, 2018

Record Removal Notice

The World Bank Group Archives & Records Management

File Title	Barcode No.
Research and sector papers 02	1851118

Document Date	Document Type	
16 April, 1976	Board Paper	

Correspondents / Participants

Subject / Title
SecM76-262
Report on the Diffusion of Innovations from Bank-supported Projects

Exception(s)
Information Restricted Under Separate Disclosure Regimes and Other Investigative Information (IEG)

Additional Comments

The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.

Withdrawn by	Date
Sherrne M. Thompson	March 23, 2018

FORM NO. 759
(11-73)

WORLD BANK GROUP

ROUTING SLIP	DATE APR 23 1976

FROM THE VICE PRESIDENT, PROJECTS STAFF

NAME	ROOM NO.
Mr. Bell	A613

	APPROPRIATE DISPOSITION		NOTE AND RETURN
	APPROVAL		NOTE AND SEND ON
	COMMENT		PER OUR CONVERSATION
	FOR ACTION		PER YOUR REQUEST
✓	INFORMATION		PREPARE REPLY
	INITIAL		RECOMMENDATION
	NOTE AND FILE		SIGNATURE

REMARKS

INTERNATIONAL DEVELOPMENT ASSOCIATION | INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT | INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

TO: Chief Economists

DATE: April 20, 1976

FROM: Warren C. Baum, Vice President, Central Projects Staff

SUBJECT: Improving the Definition and Measurement of Poverty Income Levels

1. The emphasis being placed in Bank project design and policy statements, on broadening the impact of development projects, increases the need to expand our currently limited knowledge of the nature and extent of poverty in our client countries. Last year you carried out an exercise to estimate poverty levels of income for rural people and the rural populations living below these levels. There is now a need to develop improved estimates of both rural and urban poverty income levels 1/ and, to the degree possible, to utilize definitions and methodology which provide an element of consistency between the rural and urban estimates.

2. The data base from which to prepare these estimates is poor and will not be quickly improved. Hopefully, one result of increased emphasis by the Bank and other agencies on consumption and income distribution data will be to induce more governments to attempt to collect such data or to speed up analysis and tabulation of information they already have.

3. What is needed now is a quick inventory of poverty under the proposed definition in order to obtain a better feel for the magnitude and distribution of the problem. These results will assist in guiding the overall Bank strategy towards poverty and in identifying areas in which additional data are required. Given the known weakness of the data base in many instances, some emphasis should be given to an assessment of the credibility that can be attached to the various country estimates so as to identify particular gaps in knowledge.

4. In the first exercise the Agriculture and Rural Development Department asked country economists to estimate directly both absolute and relative poverty levels. While information being requested now will enable relative levels to be estimated, principal emphasis is being given to data providing absolute measures of poverty. This focus is adopted in order to provide initially an improved foundation for developing comparable and consistent country estimates of rural and urban target populations. 2/

1/ Preliminary urban estimates were obtained last year by utilizing the rural figures which you prepared. See, Interim Report of Urban Poverty Task Group, March 29, 1976.

2/ These target populations are likely to exceed (and will include) the populations estimated as being below the absolute poverty level of income.

Proposed Task

5. It is proposed that revised estimates of levels of poverty, distinguishing between rural and urban areas, be made for each country by July 1, 1976. The interim report of the Urban Poverty Task Group accepted that the definition of absolute (as opposed to relative) poverty should be based primarily on the cost of a nutritionally adequate diet. 1/ The proposed method may be summarized:

(a) Nutritional Cost. As far as possible this estimate should be based on the typical food basket of lower-income groups. In many countries food consumption at these income levels falls below the recommended FAO calorie intake. However, the composition of the diet generally provides an adequate balance of carbohydrates, proteins, and other nutrients. It is therefore proposed that the cost of a nutritionally adequate food intake of this composition be determined, by inflating the typical food basket.

In a significant number of countries, household budget or other survey data will not be available. In this situation, it is recommended that rural and urban estimates be based on the cost of an adequate staple-based diet. Using "typical diet" data from another country of similar income level and characteristics, the cost of an adequate intake should be based on the relative costs of the staple-based diets in the two countries.

(b) Non-food Cost. This should be the actual expenditure on non-food items by the lower-income group, adjusted in the same proportion as food expenditures.

Work sheets outlining the estimates requested, together with explanatory notes, are attached. Further enquiries should be directed to the Urban or Rural Operations Review & Support Units.

6. It is recognized that this method is less than ideal. In the longer term it will be desirable to move towards a methodology based upon a clearly defined basket of needs. However, the difficulties of determining and costing minimally adequate diets 2/ and standards for non-food consumption are considered to be too great at this time to warrant an attempt to determine poverty income levels on that basis. The proposed approach will assist in beginning to build up a data-base from which definition of target populations for rural and urban projects in individual countries can be improved.

1/ The many and difficult problems related to such a definition are discussed at length in Working Paper No. 227, On the Statistical Mapping of Urban Poverty and Employment, January 1976.

2/ In addition, it is not clear that a definitive "minimal nutritionally adequate diet" could be determined; see Attachment 1.

7. Related work will also be proceeding on: the concept and measurement of relative poverty; the refinement of the country estimates, e.g., for size of place and by major region within a country; and the relationships between income levels and employment opportunities or the deprivation of particular services (e.g., water supply, education) and "packages" of goods and services (e.g., housing) in defining target groups for Bank lending. This work will proceed initially only for a selection of countries, and generally subsequent to this task. Country economists will not be assigned the major burden of this work, though their advice will have to be sought. We will begin to pull together the various strands of this work only at a later date when we are better satisfied with our definition and measurement of both the poverty income levels and the minimal service standards which should be applied in particular contexts.

Attachments (4)

cc: Mr. Chenery
Regional Vice Presidents
Programs and Projects Directors
Urban Poverty Task Group

DKeare/JEnglish/EVKJaycox:ncp

NOTES ON WORK SHEET 'A'

"Total Personal Income" would probably be derived by using as a proxy, "Households Income, including private unincorporated non-financial enterprises" which is defined by the United Nations. 1/

Households Income is derived by:

(a) subtracting from National Income the following items:

(i) Savings of corporations.

(ii) Direct taxes on corporations.

(iii) Government income from property and entrepreneurship.

(b) adding in the following items:

(i) Interest on public debt.

(ii) Interest on consumers' debt.

Assistance on these National Accounting matters may be obtained from the Economic and Social Data Division of the Economic Analysis and Projections Department of DPS.

1/ UN. ECOSOC. A System of National Accounts, 1968.

Urban and Rural Poverty Levels. Work Sheet A

1. Country

2. Year for which data provided.

3. Income level (a) Total Personal Income (see Notes) = per capita (use local currency)

(b) Absolute Poverty Line 1975 (from Work Sheet B)

(i) Per capita per year. Rural =

Urban =

(ii) Per household per year. Rural =

Urban =

4. Average household size Rural

Urban

5. Population - Country Total in 1975 =

Rural Population = = %

Urban Population = = %

6. Population in or near Poverty:

	Urban		Rural	
	Percent	Number (millions)	Percent	Number (millions)
(a) Population below absolute poverty line				
(b) Sensitivity Analysis - Population below:				
(i) absolute poverty level x 0.75				
(ii) " " " x 1.25				
(iii) " " " x 1.50				
(iv) " " " x 2.00				

Country Economist. Date.

URBAN AND RURAL POVERTY LEVELS

Work Sheet B

Date for which basic data obtained.

	Urban	Rural
	Cost/expenditure in local currency	
(1) Food Expenditure of 20th Percentile (per person per month)		
(2) Adjusted Expenditure to meet nutritional requirements.		
(3) Cost of nutritionally adequate cereal-based diet (per person/month)		
(4) Non-Food Expenditures of 20th Percentile (per person/month)		
(5) Adjusted Non-Food Expenditure.		
(6) Absolute Poverty Line. (2) + (5) (per person/month)		
(7) Absolute Poverty Line - 1975 prices		
(i) Per person per month		
(ii) Per person per year		
(iii) Per household per month		
(iv) Per household per year		

Data Reliability Rank on scale from 1 to 4 (see notes)

Personal Income

Income Distribution

Food Expenditure

Food Prices

Non-Food Expenditure

NOTES ON WORK SHEET 'B'

The problems of defining "minimum" needs or "typical" food baskets are well known. It is recommended that, for Bank purposes, we should estimate the poverty level for the cost of a nutritionally adequate diet, based upon a typical low-income food basket. It is recommended that the 20th percentile of the household income distribution be taken as representative of the lower-income groups. 1/ Where household budget surveys are available this should be possible. In many countries food consumption at this income level will fall below the recommended FAO calorie intake, but the composition of this diet generally provides a satisfactory balance of carbohydrates, proteins and other nutrients. 2/ It is therefore proposed that the cost of an adequate diet be obtained by adjusting actual expenditure by the 20th percentile group upwards (or downwards) to meet the recommended calorie intake.

I. Household Budget Data Available

Line (1). Obtain from household budget surveys or other source, separate estimates of the expenditures on food of households at approximately the 20th percentile of the income distribution in both urban and rural areas. This should be converted to a per person basis, using the numbers of persons per household in the corresponding income group.

Line (2). (a) Where the data source contains data on quantities of different foods eaten, the caloric content of the daily intake per person for this typical low-income food basket can be estimated directly. (Calorie contents of a range of common foods are summarized in Table 3, Attachment 1.)

(b) When this information is not directly available, estimate the quantities consumed and the daily calorie intake from expenditure data, utilizing price data for the period of the survey.

(c) Estimate the proportionate change in intake of this typical diet to obtain the minimum nutritional needs for the country based on FAO estimates. (Table 2, Attachment 1, contains estimates of per capita requirements by region. If these appear inaccurate for a particular country, a specific estimate can be prepared utilizing estimates of need based on age and sex distribution of population, average body weight, summarized in Table 1, Attachment 1.)

1/ Since income groupings in household surveys do not conform to decile or quintile ranges, it is recommended that the group within which the 20th percentile falls be used. Judgment will be required in executing this procedure.

2/ In the few instances where this is not the case, which will most likely occur with diets based on starchy roots, it is recommended that an estimate be made of the cost of an appropriate protein supplement.

(d) Adjust the per capita expenditure of the 20th percentile up or down by this factor to obtain the daily cost of a nutritionally adequate intake.

For example: The food basket of the 20th percentile yields 2,000 calories per day and costs $1,000 per day. If the minimum "need" is 2,250 calories per day, then the cost of a nutritionally adequate intake = $\frac{2250}{2000} \times \$1.00 = \$1.125$ per person per day.

Line (3). Estimate, separately for rural and urban areas, the daily cost per person of a staple-based diet adequate to meet minimum calorie and protein needs. This diet should be based on the local cereal or other staple, supplemented, where necessary, with legumes or other protein source (e.g., for rice and cassava). This cost estimate should be based, where possible, on 1975 prices representative of the year as a whole, and upon the nutritional content of the form of the staple(s) normally used.

Line (4). Estimate the actual household expenditures (per capita) for non-food items by households at the 20th percentile, separately for rural and urban areas.

Line (5). Adjust this non-food expenditure upwards or downwards in line with the adjustment of food expenditure in (2).

For example:

If unadjusted food expenditure = $1.00 = 60%

" " non-food expenditure = $\frac{\$0.67}{\$1.67} = 40\%$

" adjusted food expenditure = $\$1.00 \times \frac{2250}{2000} = \$1.125 = 60\%$

" " non-food expenditure = $\$0.67 \times 1.125 = \frac{\$0.75}{\$1.875} = 40\%$

This maintains the ratio of food/non-food expenditure as at the 20th percentile. 1/

Line (6). The "Absolute Poverty Level" of income is equal to the sum of adjusted food and non-food expenditures.

Line (7). Convert this "Absolute Poverty Level" to 1975 prices on a per person and per household basis, using an appropriate price index for the country.

1/ This method implicitly assumes that income elasticities for food and non-food expenditures are equal to unity. This is a heroic assumption but may be reasonable as long as the required adjustment is relatively small.

II. Household Budget Data Not Available

Even if household budget or other data are not available to provide data on the typical food basket, it should still be possible to obtain an estimate of the cost of a staple-based diet. It is then recommended that this cost be used, together with data for a country of similar income level and characteristics, for which expenditure data is available, as a basis for a poverty level estimate.

For example: Expenditure data are available for Country A but not for Country B.

(1) For Country A, determine the ratio of the costs of the adjusted typical diet (Line 2 in Work Sheet B) to the staple diet (Line 3).

For:

Country A		Urban	Rural
Cost of Staple-Based Diet - 1975 prices		$5.00/person/mth	$3.50
Adjusted Typical Diet - 1975 prices		$12.50	$7.00
Typical Diet/Staple Diet		2.5	2.0
Adjusted Non-Food Cost - 1975 prices		$10.00	$4.00
Non-Food Expenditure/ Food Expenditure	=	$\frac{10}{12.5} = .80$	$\frac{4}{5} = .57$

(2) These ratios can then be used as numeraires for the second country to estimate the cost of an adequate typical diet; and subsequently for non-food expenditure.

For:

Country B	Urban	Rural
Cost of Staple-Based Diet - 1975 prices	= $ 6.00	= $ 5.00
Estimate of Typical Food Cost	= $ 6.00 x 2.5	= $ 5.00 x 2.0
	= $15.00	= $10.00
Estimate of Typical Non-Food Cost	= $15.00 x .8	= $10.00 x .57
	= $12.00	= $5.70
Absolute Poverty Level	= $27.00	= $15.70

III. Data Reliability

Much of the data upon which this exercise will be based is recognized as being somewhat unreliable. In addition to the estimates themselves, judgment on their reliability would be useful in assessing the overall data position for this work and indicating future study needs.

It is recommended that the major items of data required in the exercise be assessed on a scale as follows:

1. Normal reliability.
2. Uncertain reliability.
3. Doubtful reliability.
4. Data based on "in-house" estimates--need field verification.

Nutritional Needs and Standards

Estimates have been prepared by FAO of "minimum" caloric requirement by age, sex and body weight (see Table 1). On this basis, general regional estimates of requirements have been made (see Table 2). Differences between regions are apparently mainly a result of differences in age distribution of population, body weight and environmental temperature. More accurate estimates could be made for individual countries, broken down by urban and rural areas, etc., if data were available on population characteristics.

Several things should be noted about these requirements:

(1) Some hold that they could theoretically be met by an all cereal diet (except for rice and millet). Arguing that wheat, maize and sorghum have approximately 350 calories per 100 grs, plus nine or more grams of protein, it is then held that this ratio provides adequate protein, as well as caloric, intake. Thus for Asia and the Far East, basic diets, according to this view, could be:

	Items	Amount (grams)	Calories	Proteins
(a)	Wheat	632	2,212	73.9
(b)	Rice	475	1,710	31.8
	Chick peas, or equiv. legume	140	501	28.1
			2,211	59.9
	Need		2,210	59

(2) Others argue, more persuasively it would seem, that a "nutritionally adequate" diet is not so easily defined, except perhaps in caloric terms; that a diet of wheat or maize is not theoretically adequately balanced nutritionally; and that there are therefore fundamental deficiencies in an all cereal diet. For example, not all protein is utilizable and some amino acids in particular can have serious effects if not adequately supplied. The above levels are below the joint FAO/WHO recommendations of 1971. However, a diet with 8 percent of the total energy derived from protein may be considered safe.

(3) Acting in the opposite direction, but not so strongly, there is now some suggestion that these "minimum" standards referred to above are in fact generous, at least on the calorie side. Groups are known to be living at levels more than 10 percent below these standards without obvious indications of malnutrition.

(4) In many countries there are marked variations in the staple used. For example, in Indonesia the staple is rice for most of Java, but cassava around Yogyakarta and maize in parts of East Java; sago is the staple in Irian Barat. The non-grain staples, such as cassava, yams, sago and bananas, and variations in the protein source (e.g., in areas where fish are plentiful) greatly complicate the problem of attempting to create a "universal" methodology.

(5) Finally, whichever standard is used, there are the formidable problems of measurement. Food consumption tables must be used with care, as there are wide variations. For example, the high-yielding hybrid maize SR52, widely used in Zambia, has a protein content varying between 5.7 and 6.3 grams per 100 grams; whereas the traditional flint variety grown in the lower Shire Valley of Malawi has a protein content of 12 percent. Even these figures can be misleading. The traditional, home method of processing maize in Tanzania results in 60 percent extraction and a loss of nearly half the protein content of the grain; and if estimates are to be made from production data or expenditure data, realistic allowance must be made for refuse and wastage. Furthermore, there are the problems of determining appropriate prices, and the several additional problems of costing diets in the subsistence sector, where the family itself produces or gathers all or most of what the family eats.

Table 1: AVERAGE DAILY CALORIE REQUIREMENT

Category	Age	Body Weight (Kg)	Standard Calorie Requirement (units)
Men	16-19	63	3,070
	20-39	65	3,000
	40+	65	2,750
Women	18-19	55	2,300
	20-39	55	2,200
	40+	55	2,000
Children	4	13	1,350
	4-9	24	2,000
	10-15	44	2,550

Note: Standards are for moderately active adults; for very active adults add 17% to standard requirements. Also add or subtract 200 calories for each 5 Kg of body weight.

For greater detail see FAO Calorie Requirements: Report of the Second Committee on Calorie Requirements, Rome. Reprinted 1972.

Table 2: STANDARD CALORIE REQUIREMENTS BY MAJOR REGIONS

Region	Requirement/Day/Head of Population
Latin America	2,390
Asia and Far East	2,210
Near East	2,450
Africa	2,350

Table 3: Calorie and Protein Composition for Selected Foods

(per 100 grams)

		1/ East Asia		2/ Africa		3/ Latin America	
		Calories	Grams of Protein	Calories	Grams of Protein	Calories	Grams of Protein
Cereals and Grain Products							
Maize	Whole-kernel, dried, white	349	9.1	357	9.4	361	9.4
	Meal, whole-ground yellow	355	9.2	353	9.3	363	7.9
Ragi millet	Whole grain	332	6.2	329	7.4	-	-
Rice	Milled, polished	366	6.4	363	7.0	364	7.2
	Parboiled	364	6.7	364	7.0	367	6.9
	Flour	366	6.4	-	-	364	7.2
	(Glutinous) milled	359	8.4	-	-	-	-
Sorghum	Whole-grain	342	10.0	347	11.1	342	8.8
Wheat	Soft, red winter	329	8.9	330	13.9	330	12.3
	Flour, white, nearly whole grain, 93% extraction	341	8.9	351	10.5	365	12.0
	White (flour)	360	9.0	-	-	-	-
	White (flour) 70% extraction	364	8.6	364	10.3	365	11.8
Starchy Roots and Tubers							
Cassava	Bitter, common, raw: A.P./4, refuse, brown-skin, thin inner layer	98	0.7	149	1.2	148	0.8
	Flour or meal	363	1.1	344	1.6	320	1.7
	Sweet, raw, A.P., refuse, scrapings	101	0.7	-	-	132	1.0
Potato	White, A.P., refuse, scrapings	71	1.7	82	1.7	79	2.8
Sweet Potato	Raw, A.P., refuse, parings	95	0.9	121	1.6	116	1.3
Yam	Goa, raw, A.P., refuse, skins	81	1.3	118	3.0	100	2.0
	Luzon, raw, A.P., refuse, skins	75	1.9	-	-	-	-

Table 3 (Continued)

		East Asia		Africa		Latin America	
		Calories	Grams of Protein	Calories	Grams of Protein	Calories	Grams of Protein
Grain Legumes							
Broad bean	Horse bean, whole seeds, dried, E.P.	328	25.0	344	26.2	334	24.0
Chickpea	Bengal gram, whole seeds, dried, E.P.	362	19.4	357	19.6	364	18.2
Lentil	dhal, splitpea, whole seeds, dried E.P.	340	20.2	345	24.9	340	23.7
Peanut	Groundnut, raw, E.P.	303	15.0	549	23.2	543	25.5
	A.P., refuse, shell	197	9.8	-	-	-	-
Peas	Garden or field, E.P. whole seed, dried	333	22.2	339	22.3	343	22.5
Soybean	Whole, mature seeds, dried, E.P., yellow	400	35.1	405	33.7	398	33.4
Nuts and Seeds							
Coconut	Mature kernel, raw, A.P., refuse, hard shells	150	1.5	388	3.6	296	3.5
Vegetables							
Cabbage	Common, white, raw, A.P., refuse, outer leaves, core	19	1.4	26	1.7	28	1.7
Eggplant	Garden, brinjal, aubergine, raw, purple and white varieties, A.P., calyx only	25	1.5	32	1.0	27	1.0
Plantain	Rippleseed, leaves, raw, A.P., stems and rootlets	49	2.0	-	-	-	-
Turnip	Roots, raw, A.P., without tops, refuse, parings	17	0.8	21	1.0	27	0.8

		East Asia		Africa		Latin America	
		Calories	Grams of Protein	Calories	Grams of Protein	Calories	Grams of Protein
Fruits							
Banana	Common, fruit, raw, A.P., refuse, skins	63	0.8	88	1.5	97	1.2
Mango	Common, indian mango, raw, A.P., refuse, skins and seeds	44	0.4	60	0.6	59	0.5
Sugars and Syrups							
Molasses	From sugarcane, medium	232	-	-	-	276	0
Sugar	Crude, brown	389	1.1	344	-	356	0.4
	Granulated	351	1.7	-	-	384	0
Meat and Poultry							
Beef	Carcass fresh, A.P., refuse, bones and trimmings	218	13.8	237	18.2	244	18.7
Chicken	Young birds: raw, A.P., dressed, refuse, head, feet, inedible viscera, and bones	122	12.3	146	20.5	170	18.2
	Mature birds: A.P., live, refuse, blood, feathers, head, feet, inedible viscera and bones	175	10.4	-	-	246	18.1
	A.P., dressed, refuse, head, feet, inedible viscera and bones	193	11.5	-	-	-	-
Duck	Domesticated: meat, raw, A.P., dressed, refuse, bones, head, inedible viscera	209	10.2	287	18.6	326	16.0
Goat	Medium fat, A.P., bones and trimmings	289	12.3	-	-	165	18.7
Pork	Carcass, fresh, A.P., bones, refuse and some fat trimmed	406	10.5	418	12.4	376	12.4

Table 3 (Continued)

		East Asia		Africa		Latin America	
		Calories	Grams of Protein	Calories	Grams of Protein	Calories	Grams of Protein
Eggs							
Eggs	Duck, raw, A.P., refuse, shell	166	11.6	-	-	195	13.0
	Hen, raw, whole, A.P., refuse, shell	145	11.5	140	11.8	148	11.3
Fish							
Fish	Unclassifed, raw, high fat	166	15.9	103	18.8	-	-
	Raw, low fat	75	16.6	-	-	99	19.6
	Salted, dried	193	40.2	269	42.3	223	46.0
Milk and Milk Products							
Milk	Cow, fluid 3.5% fat	63	3.1	79	3.8	65	3.3
	Cow, fluid 3% fat	61	3.6	39	3.5	61	3.5
	Cow, canned, sweetened, whole	325	7.9	-	-	321	8.1
Yoghurt	Made from partially skimmed milk	90	3.6	85	4.2	-	-
Fats and Oils							
Butter	(Imported from USA) Unsalted	729	0.9	875 (buffalo milk)	0	743	1.0
Margarine	Fortified (Japan)	723	0.5	-	-	720	0.6
Oils	Pure, cooking	884	0	875	0	884	0
	Coconut oil	883	tr.	-	-	-	-
	Sesame oil	881	0.2	-	-	-	-

1/ Food Composition Table for Use in East Asia, Woot-Tsuen Wu Leung and others (HEW-FAO) Bethesda: 1972.

2/ Food Composition Table for use in Africa, Woot-Tsuen Wu Leung and Felix Busson, Claude Jardin. (HEW-FAO) Bethesda: 1968.

3/ Food Composition Table for Use in Latin America, Woot-Tsuen Wu Leung and Marina Flores (INCAP-ICNND) National Institutes of Health, Bethesda: 1961.

4/ A.P. = as purchased. E.P. = eating portion.

Calorie Requirements FAO (Rome 1972).

An Example Based on Data from Pakistan

1. Actual Expenditures of Low-Income Groups

Urban

The household income group PRs 150-199 per month represents the 13-28th percentiles (see Table 1), and was taken as typical of the low-income groups in urban areas. On the basis of the reported per capita monthly consumption of food items and the FAO food composition data, it is estimated that the purchased food basket for this group provided 1,744 calories per day. The percentage distribution of expenditure and calorie intake by item is shown in Table 2.

Rural

For the 20th percentile group in rural areas, i.e., PRs 100-149 according to Table 1, average daily calorie intake was 1,815.

2. Adjusted Food Expenditures

Actual expenditure on food was PRs 22.4 per person per month. This provided 1,744 calories per day. Therefore, assuming the same composition, a diet providing 2,210 calories per day would cost PRs 28.4 per person.

Rural

Monthly expenditure per person was PRs 19.5. 2,210 calories per day would cost PRs 23.57 per person.

3. Staple-based Diet

Dietary Need

The estimated daily calorie requirement per head of 2,210 could be met by: (1) 632 grams wheat
or (2) 450 grams rice and
150 grams lentils.

Cost of Cereals Requirement in Major Cities, 1971/72

	Food	
	Wheat/1	Rice
	PRs/day/hd	
Karachi	.399	.517
Hyderabad	.378	.568
Lahore	.365	.561
Rawalpindi	.406	n.a.
Approx.	.39	.56
Cost per person per month	11.9	17.0
Weighted Average /2	12.5	

/1 This assumes an extraction percentage in the range 80-93. If lower rates are expected the calorific value per kilogram should be correspondingly reduced.

/2 Since approximately 90 percent of expenditure on cereals is for wheat, a weighted average of the wheat and rice dietary costs will provide a reasonable estimate of basic food cost.

Cost of Cereal Requirement in Rural Areas

Direct price data for small towns or rural areas were not available for this exercise. From data in the 1971/72 Household Budget Survey on expenditure and consumption by item the apparent cost per unit could be calculated. This indicated that the average of wheat and rice prices weighted as above, was 11.5 percent lower in rural than urban areas. This differential may be low and is used here purely for illustrative purposes.

On this basis the cost of daily basic calorie requirement per person in rural areas was PRs 11.1 per month.

4. Unadjusted Non-Food Expenditure

From the 1971-72 household budget survey, monthly non-food expenditures of the income group containing the 20th percentile were:

Urban: PRs 17.0 per person.

Rural: PRs 12.0 per person.

5. Adjusted Non-Food Expenditure

Adjusting these proportionately with the food expenditures:

$$\text{Urban} = \text{PRs } 17.0 \times \frac{2210}{1744} = \text{PRs } 21.5$$

$$\text{Rural} = \text{PRs } 12.0 \times \frac{2210}{1815} = \text{PRs } 14.6$$

6. Absolute Poverty Line

Urban:
Food needs = PRs 28.4 per person/month
Non-food needs = PRs 21.5 per person/month
Total needs = PRs 49.9 per person/month
Average household size at 20th percentile = 4.4
Total needs = PRs 219.9 per household/month

Rural:
Food needs = PRs 23.6 per person/month
Non-food needs = PRs 14.6 per person/month
Total needs = PRs 38.2 per person/month
Average household size at 20th percentile = 4.3
Total needs = PRs 164.3 per household/month

Table 1: Monthly per capita Food Expenditure by Income Groups below PRs 300 per month

Income Group	Urban Areas		Rural Areas	
(Rupees per. Month)	(Percent of Households)	(PRs/cap/month food expenditure)	(Percent of Households)	(PRs/cap/month) food expenditure)
< 50	0.2	20.9	0.4	17.1
50-99	2.7	19.1	8.3	18.7
100-149	10.0	20.5	19.8	19.4
150-199	15.5	22.8	23.9	20.9
200-249	16.5	24.6	16.6	22.9
250-299	12.6	25.3	11.0	24.0

Table 2: Dietary Composition and Food Expenditure. Urban and Rural Low Income Households

Item	Urban		Rural	
	% of Expenditure	% of Calories	% of Expenditure	% of Calories
Wheat	27.8	66.2	39.9	68.7
Rice	3.9	6.4	5.3	8.3
Pulses	3.4	1.8	4.9	2.1
Milk and Products	16.1	3.8	25.3	3.6
Edible Oil	9.1	11.5	6.0	5.5
Meat, Fish, Poultry	6.5	2.5	5.6	3.6
Vegetables	8.6	.5	8.9	1.6
Spices	3.1	-	3.7	
Gur, Sugar	6.1	6.2	8.0	7.2
Tobacco	4.6	-	4.2	
Tea	2.6	-	2.4	-
Miscellaneous	8.0	-	2.5	-
Total Calories		1,744		1,815

Urban and Rural Poverty Levels. Work Sheet A

1. Country PAKISTAN

2. Year for which consumption data available. 1971/72

3. Income level (a) Total Personal Income- 1974/75 (see Notes) =PRs 1420 per capita (use local currency)

(b) Absolute Poverty Line 1974/75 (from Work Sheet B)

(i) Per capita per year. Rural = PRs 825

Urban = 1078

(ii) Per household per year. Rural = 2878

Urban = 4745

4. Average household size Rural 5.8

Urban 5.9

5. Population - Country Total in 1975 = 69.2 million

Rural Population = 49.0 mil. = 70.8 %

Urban Population = 20.2 mil. = 29.2 %

6. Population in or near Poverty:

	Urban		Rural	
	Percent	Number (millions)	Percent	Number (millions)
(a) Population below absolute poverty line	30.6	6.2	30.8	15.1
(b) Sensitivity Analysis - Population below:				
(i) absolute poverty level x 0.75	14.5	2.9	15.0	7.4
(ii) " " " x 1.25	47.0	9.5	49.3	24.2
(iii) " " " x 1.50	59.3	12.0	63.1	30.9
(iv) " " " x 2.00	76.4	15.4	81.0	39.7

Country Economist. Date.

URBAN AND RURAL POVERTY LEVELS

Work Sheet B

Date for which basic data obtained.

	Urban	Rural
	Cost/expenditure in local currency	
(1) Food Expenditure of 20th Percentile (per person per month)	PRs 22.4	PRs 19.5
(2) Adjusted Expenditure to meet nutritional requirements.	28.4	23.6
(3) Cost of nutritionally adequate cereal-based diet (per person/month)	12.5	11.1
(4) Non-Food Expenditures of 20th Percentile (per person/month)	17.0	12.0
(5) Adjusted Non-Food Expenditure.	21.5	14.6
(6) Absolute Poverty Line. (2) + (5) (per person/month)	49.9	38.2
(7) Absolute Poverty Line - 1974/75 prices		
(i) Per person per month	89.8	68.8
(ii) Per person per year	1078.2	825.1
(iii) Per household per month	395.4	295.9
(iv) Per household per year	4744.9	2878.5

Data Reliability Rank on scale from 1 to 4 (see notes)

Personal Income	2
Income Distribution	2
Food Expenditure	2
Food Prices	3
Non-Food Expenditure	2

Mr. Bernard Bell

Room A-613

Mr Bell
MAY 6 RECD

The "Effects Method" of Project Evaluation

Please Be sure Kumari Virgin Howell have a copy 9/

World Bank Staff Working Paper No. 231

March 1976

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

Bank Staff Working Paper No. 231

March 1976

THE "EFFECTS METHOD" OF PROJECT EVALUATION

This paper critically evaluates the so-called effects method of project appraisal, originated by Charles Prou and Marc Chervel and widely used in French-speaking African countries. It is shown that under the effects method the benefits of the project are defined in terms of the net gain in foreign exchange. This involves valuing the product itself, as well as its direct and indirect imported inputs, at their shadow prices which are equated to world market (border) prices.

In turn, the principal criterion of project evaluation under the effects method defines costs in terms of capital investment. This involves assigning a zero opportunity cost to primary factors other than capital and introduces a bias in favor of projects which intensively utilize these factors. Also, in view of the assumption that the project will use domestically-produced inputs irrespective of cost, the effects method may lead to the rejection of industries that suit the country's resource endowment.

The paper makes recommendations for modifying the effects method by shadow pricing all primary factors and tradeable inputs. With these modifications, the effects method will become equivalent to the domestic resource cost and the internal rate of return methods which provide alternative expressions of the general economic profitability criterion.

This paper was written by Bela Balassa, Professor of Political Economy at the Johns Hopkins University, in the framework of the research project on Western Africa he directs in his capacity as Consultant to the World Bank.

The "Effects Method" of Project Evaluation

Bela Balassa

Introduction

In recent years, much attention has focused on the project evaluation manuals prepared for the OECD Development Center[1/] and for UNIDO[2/], respectively.[3/] The two manuals have also had several practical applications. In terms of the frequency of applications, however, they are much outnumbered by the applications of the so-called "effects method" (méthode des effets) that is widely used in French-speaking African countries from Algeria to Upper Volta. Yet, the effects method has not been considered in the discussions on project evaluation and it is probably not known to many of the protagonists of the debate.[4/]

1/ I.M.D. Little and J.A. Mirrlees, *Project Appraisal and Planning for Developing Countries, Volume II, Social Cost-Benefit Analysis,* Paris, OECD Development Center, 1968. A revised edition was published under the title, *Project Appraisal and Planning for Developing Countries,* London, Heinemann, 1974.

2/ Partha Dasgupta, Stephen Marglin, and Amartya Sen, *Guidelines for Project Evaluation,* New York, UNIDO, 1972.

3/ Cf. e.g. the "Symposium on the Little-Mirrlees Manual of Industrial Project Analysis in Developing Countries" in *Bulletin Oxford University of Economics and Statistics,* February 1972 and several articles on the concept and estimation of the shadow price of foreign exchange in *Oxford Economic Papers,* July 1974.

4/ The latter statement does not apply to Ian Little who has indicated to me in private conversation that the Little-Mirrlees method had been developed in part as a response to the effects method. However, an analysis of the effects method is not provided either in the original or in the revised version of the Little-Mirrlees manual.

At the same time, the originators of the effects method, Charles Prou and Marc Chervel claim that, by reason of its simplicity and the attention given to the indirect effects of the project, this method is superior to other methods of project evaluation. Also, the work of Prou and Chervel dominates the economic literature on project evaluation in France.[1/]

The purpose of this paper is to examine the main features of the effects method and to compare it with alternative methods of project evaluation.[2/] This will be done by the use of mathematical formulas, the absence of which has made the interpretation of the effects method difficult. In the discussion, reference will be made to the book by Prou and Chervel as well as to the articles in *Industrialization and Productivity* cited above.[3/] The discussion will proceed by considering the benefits and the costs of a project under the effects method, the criteria of project selection, the use of shadow prices, the treatment of intermediate goods, and the introduction of income distributional considerations.

1/ Cf. Charles Prou and Marc Chervel, *Etablissement des programmes en économie sous-développée, tome 3, l'étude des grappes de projets*, Paris, Dunod, 1970 -- For a brief summary of the method and practical examples, see M. Chervel, "Project Evaluation of the 'Effects' Method in Developing Countries", M. Chervel "Exercise in the Application of the Effects Method", and M. Chervel, M.-T. Courel, and D. Perreau, "Case Study; Industrial Fishing Complex in an African Port" in *Industrialization and Productivity*, Bulletin No. 20, New York, United Nations, 1974.

2/ A new entrant is the proposed method for project evaluation in the World Bank described in Herman G. van der Tak and Lyn Squire, *"Economic Analysis of Projects"*, Bank Staff Working Paper No. 194, Washington, D.C., February 1975.

3/ All these authors rely on description and on arithmetical examples. Also, alternative methods of project evaluation are compared in purely verbal terms in André Bussery, *Methods of Project Appraisal in Developing Countries*, Paris, Organisation for Economic Cooperation and Development, 1973.

The Benefits of the Project

Under the effects method, the benefits of a project are defined in terms of the increment in domestic value added in the processing activity itself and in the domestic production of its inputs. This involves a comparison of the "with project" and the "without project" situation, when the increment in domestic value added is taken to equal changes in domestic incomes (wages, profits, rent and government revenue) associated with the project's implementation and it is further identified with net gains in foreign exchange, expressed in terms of domestic currency at the actual exchange rate.[1/] In the case of import substitution projects, the increment in domestic value added is said to equal the difference between domestic value added in the project and in the production of its inputs, on the one hand, and the net loss in tariff revenue, on the other. For export projects, it is taken to equal domestic value added, with adjustment made for export subsidies or taxes.

The calculation of the benefits of a project involves decomposing the price of the final product into domestic value added and imported inputs used directly in the processing activity and indirectly in the manufacture of domestically-produced inputs. Full decomposition can be done by the use of an input-output table; if such a table has not been prepared, approximations need to be made on the basis of available data on the breakdown of domestically produced inputs into their value added and imported input components (Prou-Chervel, p. 140 ff).

1/ According to Chervel, the "total effect /of a project/ is equal, in all cases, to the extra value added brought into the economy by the implementation of the project; this extra value added (primary effect) is equal to the gain in foreign exchange" (op.cit, p. 8). It is further suggested "to adopt a 'national' rather than a 'domestic' approach and to try to measure the extra value added going to nationals: this can be done simply by subtracting from domestic extra value added the income going to foreigners in the form of wages and profits (which amounts to considering these jobs as imports)" (*Ibid*, p. 8). And, finally, it is said that "the extra income created, broken down by recipients (employee, State, entrepreneur) enables a better appraisal to be made of the project" (*Ibid*, p. 20).

Equation (1) expresses the domestic price of the product (p_i^d) in

$$(1) \qquad p_i^d = \sum_j a_{ji} p_j^d + \sum_m a_{mi} p_m^d + \sum_f a_{fi} p_f^d$$

terms of its direct input components, when p_j^d, p_m^d, and p_f^d refer to the price of domestically-produced inputs, imported inputs, and primary factors, respectively, and a_{ji}, a_{mi}, and a_{fi} indicate the amounts of these inputs used per unit of output.

The price of domestically-produced inputs is further broken down as in (1) and the process of decomposition continues by going back in the product chain until imported inputs or primary factors are reached. Denoting the total requirements of product j per unit of output of product i by r_{ji}, the full decomposition of the price of the product can be represented by equation (2).

$$(2) \qquad p_i^d = \sum_j \sum_m a_{mj} p_m^d r_{ji} + \sum_j \sum_f a_{fj} p_f^d r_{ji}$$

Equation (2) shows the domestic value of direct and indirect imported inputs and primary factors. The second term of the equation will thus indicate the remuneration of primary factors used directly and indirectly in the production of the commodity in question and equals direct plus indirect domestic value added per unit of output.

Under the effects method, it is further assumed that the domestic price of the product and of its imported inputs equals the sum of the world market or border price, expressed in domestic currency, plus the tariff or export subsidy (tax). Denoting world market prices expressed in terms of foreign currency by superscript w, the ad valorem tariff (subsidy) by t, and the actual exchange rate in terms of units of domestic currency per foreign currency by c, equation (2) can be transformed into (2a). Further re-arranging terms,

$$(2a) \qquad p_i^w c(1+t_i) = \sum_j \sum_m a_{mj} p_m^w c(1+t_m) r_{ji} + \sum_j \sum_f a_{fj} p_f^d r_{ji}$$

equation (3) will express the benefits of an import-substitution or export

$$(3) \qquad \sum_j \sum_f a_{fj} p_f^d r_{ji} - (p_i^w ct_i - \sum_j \sum_m a_{mj} p_m^w ct_m r_{ji}) = p_i^w c - \sum_j \sum_m a_{mj} p_m^w cr_{ji}$$

project as defined under the effects method.

The left-hand side of equation (3) shows the increment in domestic value added, defined as the difference between direct plus indirect domestic value added and the net loss in tariff revenue (i.e. the difference between tariff revenue foregone on the product and the tariff levied on imported inputs used directly and indirectly in its domestic manufacture). In turn, the right-hand side of the equation shows the net gain in foreign exchange (i.e., the difference between the world market price of the product and the world market cost of direct and indirect inputs) in terms of domestic currency. Thus, the benefits of the project, defined in terms of the increment in domestic value added, will necessarily equal the net gain in foreign exchange expressed in domestic currency.

In calculating the net gain in foreign exchange, export products are valued at fob prices and import-substituting products as well as imported inputs at cif prices. In turn, the net loss in tariff revenue is calculated under the assumption that an import-substituting project replaces foreign merchandise imported under tariff protection; export subsidies, too, will involve a revenue loss while export taxes represent a gain in revenue. In the following, we will consider an import-substituting project.

The calculation of a project's benefits under the effects method can be illustrated by an example. Assume that the domestic price of an import-substituting product is 540 CFAF, its world market price 8.00 French francs and the exchange rate 50 CFAF to the French franc, the tariff rate being 35 percent. In turn, the domestic value of direct plus indirect imported inputs per unit of output is 300 CFAF and their world market cost 5.00 French franc, the average rate of tariff on the inputs being 20 percent. Domestic value added per unit of output will now equal 240 CFAF and the net loss in tariff proceeds due to the replacement of imports by domestic production (the difference between tariff revenue foregone of 140 CFAF and the tariff derived on imported inputs used directly and indirectly in domestic manufacture of 50 CFAF) 90 CFAF. The increment in domestic value added as defined under the effects method (150 CFAF) will thus equal the net gain in foreign exchange expressed in terms of domestic currency (the difference between the domestic currency equivalent of the world market price of the product of 400 CFAF and that of imported inputs of 250 CFAF).

These results follow since the net loss in tariff revenue has been equated to the difference between domestic value added and the domestic currency equivalent of net foreign exchange savings. Such will not be the

case if the imports were subject to quantitative restrictions rather than tariffs before their domestic production is undertaken. This is because quantitative import restrictions affect domestic prices, and hence domestic value added, but the substitution of imports for domestic production does not entail a loss of tariff revenue as the scarcity premium under the quota accrued to the recipient of the licenses rather than to the government.

The preceding results can be reestablished, if the loss of quota profits following the replacement of imports by domestic production is treated in the same way as tariff revenue. This can be considered as the logical extension of the effects method since, in allowing for the income loss to the original beneficiaries of quota protection, various income recipients are treated in a consistent manner and equality between the increment in domestic value added and the domestic currency value of net foreign exchange savings is assured.

With adjustment made for quota profits, the increment in domestic value added and the domestic currency equivalent of net foreign exchange savings will be equal unless the introduction of domestic production entailed higher protection. This is the exception rather than the rule in most developing countries, however. Developing countries tend to keep tariffs low on products which are not manufactured domestically and raise tariffs or impose quantitative restrictions when their domestic production is undertaken. It is usually claimed that higher protection is required in order to offset the cost disadvantages of domestic production.

In the event of increased protection at the time domestic manufacturing is undertaken, the equality of the increment in domestic value added and the domestic currency equivalent of foreign exchange savings will no longer hold,

since domestic prices will rise as a result. In order to reestablish this equality, one would have to take account in the calculations of the hypothetical tariff proceeds lost under the assumption that the new, higher tariff (or quota) was applied. This would entail modifying the comparison of the "with project" and the "without project" situation to allow for the higher level of protection under the "without project" alternative. In this way, adjustment is made for the income loss to the consumer in the form of higher prices due to increased protection that entails a transfer from the consumer to the producer.

The Cost of the Project; The Loss in Tariff Revenue

In identifying the increment in domestic value added with net gains in foreign exchange expressed in terms of domestic prices, the method of project evaluation proposed by Prou and Chervel in fact values the project's benefits in terms of foreign exchange saved through import substitution or earned through exporting. This result is shown in all the examples provided in writings on the effects method, including the case when traditional production methods are replaced by manufacturing that involves the use of modern techniques (Prou and Chervel, pp. 201-04, Chervel, pp. 17-20). Correspondingly, the benefits of the project will be identified below in terms of the net gain in foreign exchange.

The next question is how costs are to be defined, and measured, for the purpose of making benefit-cost calculations on the basis of which decisions can be taken to accept or reject the project. Prou and Chervel consider three possible alternatives: identifying costs with the domestic cost of investment in the project, with the value of imports embodied in the investment, or with the loss in budgetary revenue. They further suggest that

the choice among these measures be based on the relative scarcity of domestic resources, foreign exchange, and budgetary receipts. (Prou-Chervel, pp. 222-23, 234-35).

The ratio of the domestic currency value of the net gain in foreign exchange to the net loss in tariff revenue will be the reciprocal of the effective rate of protection, defined as the percentage excess of domestic value added (W) over world market value added (V), if this is interpreted to relate to direct plus indirect value added.[1/] This is shown in equation (4) where the

$$(4) \qquad ERP = \frac{W}{V} - 1 = \frac{W-V}{V} = \frac{\overline{/(p_i^w c(1+t_i) - \sum_j \sum_m a_{mj} p_m^w c(1+t_m) r_{ji}/} - \overline{(p_i^w c - \sum_j \sum_m a_{mj} p_m^w c r_{ji})}}{(p_i^w - \sum_j \sum_m a_{mj} p_m^w c r_{ji})} =$$

$$= \frac{p_i^w c t_i - \sum_j \sum_m a_{mj} p_m^w c t_m r_{ji}}{p_i^w c - \sum_j \sum_m a_{mj} p_m^w c r_{ji}}$$

denominator of the formula for the effective rate of protection is the domestic currency equivalent of the net gain in foreign exchange and the numerator is the net loss in tariff revenue. Now, as domestic value added increases or the gain in foreign exchange declines, the effective rate of protection will rise and the ratio of the domestic currency equivalent of the net gain in foreign exchange to the net loss in tariff revenue decline, so that the project

---

1/ I am indebted to M. Gérard Rebois, formerly with the Ministry of Planning in the Ivory Coast and now with the French Ministry of Cooperation, on this point.

will be considered less desirable, irrespective of whether one or the other measure is used.[1/]

In the example cited, the effective rate of protection is 0.60 (240/150 - 1) and the ratio of the domestic currency value of net foreign earnings to the net loss in tariff revenue 1.67 (150/ 90). Were domestic value added to rise to 300 CFAF *or* the domestic currency value of net foreign exchange savings decline to 120 CFAF, both the effective rate of protection and the ratio of the domestic currency value of the net gain in foreign exchange to the net loss in tariff revenue would become 1.00, making the project less desirable[2/].

The ratio of the increment in domestic value added to tariff revenue will not provide an appropriate ranking of alternative projects, however, unless market and shadow prices of primary factors coincide. In that event, the effective rate of protection will equal the domestic resource cost of earning (saving) foreign exchange (DRC) which can be used as a criterion of project selection as noted below.

1/ The ranking of the projects will not change if we use the ratio of domestic value added (W) to the net loss in tariff revenue (W-V) as the criterion of project evaluation that is done in some French-speaking African countries. It can be easily shown that this ratio will equal the ratio of the effective rate of protection plus one to the effective rate of protection itself. Thus,

$$\frac{W}{W - V} = \frac{W}{V} \cdot \frac{V}{W - V}$$

2/ In turn, the ratio of domestic value added to the net loss in tariff revenue, 2.67 (240/240-150), will decline to 2.00, making the project less desirable.

The DRC measure will be discussed in the following in relation to the principal measure of project evaluation proposed by Prou and Chervel: the ratio of net gain in foreign exchange expressed in terms of domestic currency to the domestic cost of investment[1/] (Chervel, p. 9). This ratio will also be compared to the rate of return to capital (internal rate of return).[2/]

The Cost of the Project: The Domestic Cost of Investment

The domestic resource cost of earning foreign exchange and the rate of return on capital criteria represent alternative expressions of the general economic profitability criterion.[3/] Under the latter criterion, shown in equation (5), the project will be accepted if the discounted value

$$(5) \qquad R_i = p_i^w c^s - \sum_j \sum_m a_{mj} p_m^w c^s r_{ji} - \sum_j \sum_f a_{fj} p_f^s r_{ji} \gtreqless 0$$

of profits (R_i) exceeds or is equal to zero, and it will be rejected if this value is negative. The evaluation is made in terms of shadow prices: the domestic currency equivalent of world market prices for imports and exports, their opportunity cost in terms of output foregone (denoted by superscript s) for primary factors, and the marginal social valuation of foreign exchange (c^s) for the exchange rate.

1/ This necessitates reinterpreting the above formulas in terms of discounted values. If the flow of revenues and costs are constant over time, their present values can be approximated in dividing annual flows by the discount rate (Cf. Richard Layard, *Cost-Benefit Analysis*, Harmondsworth, Middlesex, Penguin, 1974, pp. 45, 66).

2/ We will not consider here the case when costs are defined in terms of the import content of investment as this alternative is given little emphasis in writings on the effects method.

3/ We exclude here cases when the internal rate of return is not uniquely defined because of the existence of more than one crossovers over time from profits to losses and vice versa.

Separating the contribution of capital from that of the other primary factors and rearranging terms in equation (5), we express in equation (6a)

$$(6a) \qquad r^s = \frac{p_i{}^w c^s - \sum_j \sum_m a_{mj} p_m{}^w c^s r_{ji} - \sum_j \sum_{f \neq k} a_{fj} p_f{}^s r_{ji} - R_i}{\sum_j \sum_k a_{kj} p_k{}^s r_{ji}}$$

and (6b) the shadow price of capital or shadow discount rate (r^s) and the rate

$$(6b) \qquad r_i = \frac{p_i{}^w c^s - \sum_j \sum_m a_{mj} p_m{}^w c^s r_{ji} - \sum_j \sum_{f \neq k} a_{fj} p_f{}^s r_{ji}}{\sum_j \sum_k a_{kj} p_k{}^s r_{ji}}$$

of return to capital in the project (r_i) respectively. It is apparent that, if the general economic profitability condition is fulfilled, the rate of return to capital in the project will be no less than the shadow discount rate, so that the project is accepted.[1/]

In equation (7a), the shadow exchange rate (c^s) has been expressed

$$(7a) \qquad c^s = \frac{\sum_j \sum_f a_{fj} p_f{}^s r_{ji} + R_i}{p_i{}^w - \sum_j \sum_m a_{mj} p_m{}^w r_{ji}}$$

from the general economic profitability condition while equation (7b) provides

$$(7b) \qquad c_i = \frac{\sum_j \sum_f a_{fj} p_f{}^s r_{ji}}{p_i{}^w - \sum_j \sum_m a_{mj} p_m{}^w r_{ji}}$$

the formula for the domestic resource cost of earning foreign exchange in the project (c_i). Again, if the general economic profitability condition is

---

1/ In the formulas, no account has been taken of the fact that capital may be embodied in imported goods.

fulfilled, the domestic resource cost of earning foreign exchange in the project will be equal or less than the shadow exchange rate, and hence the project will be accepted.

In comparing the principal project evaluation criterion under the effects method with the domestic resource cost method, we find that both define the project's benefit in terms of the net gain in foreign exchange but they differ in their evaluation of the costs: the DRC method defines costs in terms of the shadow value of domestic resources utilized in the project while under the effects method these are identified with the domestic cost of capital investment.[1/] In turn, while both the effects method and the internal rate of return method relate the project's benefits to capital investment, the former identifies these benefits with the net gain in foreign exchange whereas the latter deducts the domestic resource cost of other factors of production expressed in shadow prices from the gain in foreign exchange.

It follows that the principal difference between the effects method and the other two criteria of project appraisal lies in the fact that the effects method makes no allowance for the opportunity cost to the national economy of productive factors other than capital, such as labor and land. In the absence of an adjustment for the opportunity cost of these factors, the effects method will not provide an appropriate criterion for project evaluation. Thus, while the shadow price of foreign exchange and the shadow

---

1/ The reader will also note that the project's benefits are in the numerator of the formula under the effects method and in the denominator of the domestic resource cost formula. And, the former but not the latter expresses the gain in foreign exchange in terms of domestic currency.

discount rate serve as a benchmark for accepting or rejecting projects by the use of the domestic resource cost of foreign exchange and the internal rate of return criteria, respectively, there is no suitable benchmark for making decisions on projects under the effects method; nor will this method rank projects according to their economic profitability.

The use of the discount rate as a benchmark will be inappropriate because of the neglect of the domestic resource costs of labor and land under the effects method. Accordingly, it is incorrect to argue that subsidies would be warranted in the case when low private profitability is associated with a high ratio of the gain in foreign exchange, expressed in domestic currency, to the cost of investment (Chervel, Courel, Perreau, p. 35). Also, the ranking of projects by this ratio will give rise to a bias, inasmuch as the degree of overestimation of the project's benefits is positively correlated with the labor and land intensity of the project.

One may allow for the opportunity cost of labor and land in two possible ways. Under the first alternative, the project's benefits are continued to be identified with net gains in foreign exchange while the opportunity cost of labor and land is added to the cost of capital. In this way, the effects method would be transformed into the domestic resource cost criterion as expressed in equation (7b). Under the second alternative, the opportunity cost of labor and land is deducted from the project's benefits. This adjustment would create a difference between the increment in domestic value added and net gains in foreign exchange, and transform the effects method into the internal rate of return criterion represented in equation (6b).

In either case, adjustment needs further be made for the capital embodied in domestically produced inputs used by the project. This can be done by adding the opportunity cost of capital used indirectly to that used directly under the DRC method and adding the capital involved in manufacturing inputs to that used in processing under the internal rate of return method.

According to Prou and Chervel, such adjustment is not necessary in cases of underutilization of capacity in the domestic production of inputs (pp. 176, 196). However, it should be recognized that this will be in general a temporary situation as the same products may be eventually demanded by other branches of industry and, ultimately, capital will need to be replaced. In turn, if the new capacity created for the domestic production of a particular input exceeds the needs of the project, one would have to take account of the alternative uses of the input in question.

The Use of Shadow Prices

In identifying the project's benefits with the net gain in foreign exchange, the product itself as well as its direct and indirect imported inputs are effectively valued at their shadow prices (i.e. world market or border prices). However, Prou and Chervel decry the use of shadow prices for primary factors. They claim that the obstacles to the calculation of these shadow prices are so great that they are in practice not surmountable (p. 3). These obstacles include the problems encountered in calculating shadow prices, the difficulties of explaining their meaning to the decision-makers in developing countries, and the fiscal implications of the use of shadow prices (p. 2).

As a practical example, Prou and Chervel take the case when the shadow price of labor is 30 units and the market wage 100 units, implying a subsidy of 70 units per employee (p. 2). In criticizing the assumption of

zero opportunity cost of labor originating in agriculture, they further note that there is a production loss involved because agricultural labor tends to be fully utilized in peak periods (p. 127).

But, as we have seen, the opportunity cost of labor (and land) is in fact taken to be nil under the effects method. This choice is defended on the grounds that there is general underemployment in all labor categories (p. 191). And, while it is noted that one could take account of the loss of output elsewhere in the economy that results from employment in the project, Prou and Chervel claim that "all things considered, one would soon find, exceptions aside, that this would complicate the reasoning and lead to the loss of objectivity, without appreciably modifying the general aspect of the results or the ranking of the solutions" (p. 192). No evidence is offered in support of this proposition, however, and all calculations are made on the assumption of zero shadow price of labor (and land).

It appears, then, that despite their claims to the contrary, Prou and Chervel are in fact assigning shadow prices to labor and land (since cost is identified with capital, there is no need to use a shadow discount rate for ranking projects). And, the choice of zero shadow prices for labor and land is wholly arbitrary and it is open to the same objections the authors raised against the use of shadow prices in general. At the same time, it involves introducing shadow prices so to speak through the back door as with the project's benefits being defined in terms of the increment in domestic value added, the policy makers are not apprised that the shadow prices of labor and land have been taken to be nil.

Nor can this assumption be considered realistic in developing countries. Thus, the use of land will involve a cost to the national economy

unless it has no alternative uses or there is unutilized cultivable land in the country in question. Skilled, technical, and managerial labor are also in scarce supply in most developing countries. Furthermore, the preliminary results of a study of Ghana, the Ivory Coast, Mali, and Senegal, directed by the present author, show that in these countries unskilled labor, too, has an opportunity cost which in some instances equals its market price.

Nor can the cost of capital be appropriately valued in domestic prices as it is done under the effects method. This is because tariffs, or the tariff-equivalent of quotas, represent an income transfer rather than a real cost. Thus, imported capital goods should be valued at their world market (border) prices.

The use of shadow prices would also have to extend to foreign exchange, the scarcity value of which is not correctly represented by the exchange rate because of the existence of distortions in product and factor markets.[1/] While the use of a shadow exchange rate can be avoided if the project's benefits and costs are both expressed in foreign exchange, introducing the opportunity cost of primary factors will make its use necessary in order to convert values expressed in foreign prices into domestic currency (or vice versa).

Nor can the introduction of indirect effects in project appraisal be taken as a substitute for the use of shadow prices as claimed by Prou and Chervel (pp. 1-3), since indirect effects can be considered in project

---

1/ On the estimation of the shadow exchange rate see Bela Balassa, "Estimating the Shadow Price of Foreign Exchange in Project Appraisal; *Oxford Economic Papers*, July 1974.

evaluation, irrespective of whether shadow prices are used or not.[1/] At the same time, questions arise about the appropriateness of allowing for the backward linkages of a project by valuing inputs -- tradeables as well as nontradeables -- at their domestic cost of production. This question will be taken up in the following.

The Treatment of Domestically Produced Inputs

The application of input-output tables for estimating prospective input use in the project assumes that historically-observed relationships between the use of domestically-produced and imported inputs will continue. Expressed differently, the assumption is made that the marginal or incremental input-output coefficients equal the average coefficients observed in input-output statistics.

The same procedure is followed under the effects method in cases when, in the absence of an input-output table, industry data are used to determine the origin of inputs. Thus, it is noted that "in general, and very exceptional circumstances aside, additional needs are satisfied by domestic production..." (Prou-Chervel, p. 177). This conclusion is said to apply even though new investments may be needed to increase the capacity of the domestic production of inputs.

In this connection, distinction needs to be made between tradeable inputs, which can be exported or imported, and nontradeable inputs, including various services such as commerce, internal transport, electricity, gas, etc., which have to be procured domestically. While the choice between importation

---

1/ For a discussion, see Bela Balassa and D. M. Schydlowsky, "Effective Tariffs, Domestic Cost of Foreign Exchange and the Equilibrium Exchange Rate", *Journal of Political Economy* May-June 1968.

and domestic production, or between exportation and domestic use, does not arise in regard to nontradeables, it must be considered for tradeable inputs.

To begin with, even if tradeable inputs are produced at internationally competitive costs, a spurious gain is shown under the effects method in the event that domestically produced rather than imported inputs are used. This is because foreign exchange savings are augmented thereby, without however making allowance for the opportunity cost of primary factors involved in the domestic manufacture of the inputs.

Making allowance for the opportunity cost of primary factors, as suggested above, would eliminate this spurious gain in cases when tradeable inputs are produced domestically at internationally competitive costs. However, if domestic costs exceed international prices, the method proposed by Prou and Chervel may lead to incorrect decisions on projects. This can be illustrated by an example.

Let us compare two investment projects designed to manufacture precision equipment and clothing, respectively, when steel, the principal input of precision equipment, is produced under protection at costs exceeding the cif import price while the textile fabrics used in clothing manufacture are imported or are produced domestically at internationally competitive costs.[1/] Assume further that the clothing project appears preferable to the precision-equipment project in terms of economic profitability as defined under (5), when we combine the cost of processing the product and its domestically-produced inputs, but the ranking is reversed if domestically-

---

1/ This example has been taken from the article referred to in the preceding footnote.

produced inputs are valued at world market prices.

In the example, the inversion of the ranking is due to the fact that the high cost of domestically-produced steel penalizes the production of precision-equipment while the clothing project benefits from the availability of competitively priced inputs. In taking an historical accident as regards the domestic availability of inputs as given, this procedure may lead to rejecting new industries which suit a country's resource endowment. Thus, the country may not engage in the manufacture of labor-intensive precision equipment which is economically profitable *per se*, because it has earlier established a high-cost steel industry.

Rather than expanding high-cost steel production to provide for the needs of the precision equipment industry, a more appropriate solution would be to import steel. And while this conclusion may be modified in the presence of excess capacity, account would need to be taken of the eventual cost of replacement of the plant.

These considerations indicate the need to make a choice among alternative sources of inputs on the basis of their relative costs. Exceptions to this rule may be made only in cases when the importation of additional inputs is not politically feasible. But, even in this case, calculations should be made to indicate the excess costs involved in using domestically-produced inputs that could be obtained cheaper abroad.

Domestically produced tradeable inputs would thus need to be valued at world market (border) prices in project appraisal to reflect the fact that importation is an alternative to the use of domestically-produced

inputs in the project. The same considerations apply to inputs for which exportation provides the relevant alternative.[1/]

With tradeable inputs valued at their world market prices, only nontradeable inputs will be decomposed into tradeable inputs and primary factors. This involves replacing full decomposition by the use of an input-output table with partial decomposition by the so-called "semi-input-output" method.[2/] Tradeable goods which need to be produced domestically for reasons of political feasibility, although their costs exceed the cif import price, may be treated as nontradeables under this method.

Social vs Economic Profitability

Thus far, we have used economic profitability as the criterion of project evaluation under the assumption that increases in national income resulting from the implementation of a project are given equal weights, irrespective of the income recipient (wages, profits, rents and government revenue) and the use to which the income is put. The project evaluation manuals prepared for the OECD Development Center, UNIDO and the World Bank call for making adjustments in the calculations on the basis of income

---

1/ We abstract here from differences between cif and fob prices and assume that the country is a "price taker" in international markets. Should the country affect world market prices through its trading, which may be the case for some export products, the export alternative needs to be evaluated in terms of marginal revenue from exports.

2/ The use of this method was proposed independently by Jan Tinbergen, I.M.D. Little, and Bela Balassa and D. M. Schydlowsky. For references see the article of the latter authors referred to above (p. 354).

distributional considerations and the effects of the project on government income and savings. With these adjustments, a social profitability criterion is derived, the use of which is recommended for reaching decisions on projects.

Prou and Chervel suggest introducing income distributional considerations by assigning weights to various income recipients, private as well as public, which involves measuring the project's benefits in terms of a weighted sum of the increment in domestic value added. This method is incorrect, however, because it identifies benefits to income recipients with the incomes they derive from the project without considering alternative possibilities open to them.

Correctly defined, the benefits accruing to the income recipients should include only the excess of their remuneration over earnings in alternative occupations. At the same time, the net remuneration of primary factors so defined will not equal their contribution to the increment in domestic value added adjusted for the opportunity cost of factors, unless shadow and market prices coincide.

But even if income distributional effects are correctly defined, introducing these in project evaluation without allowing for their possible impact on savings would bias the results. This is because redistributing incomes will tend to reduce savings, with adverse effects on economic growth. Correspondingly, should one introduce income distributional considerations in project appraisal, savings effects would also need to be considered.

It is a different question whether project appraisal should be used in the place of general economic policies to pursue income distributional, savings, government revenue etc. objectives. This issue transcends the scope of

this paper and will not be considered here.[1/]

Conclusion

The purpose of this paper has been to critically evaluate the so-called effects method of project appraisal, originated by Charles Prou and Marc Chervel and widely used in French-speaking African countries. It has been shown that, with adjustments made for quota profits and increased protection imposed at the time of the project's implementation, the benefits of a project will be defined in terms of the net gain in foreign exchange under the effects method. This involves valuing the product itself, as well as its direct and indirect imported inputs, at their shadow prices which are equated to world market (border) prices.

In turn, defining the projects costs in terms of the net loss in tariff revenue entails valuing primary factors at their market rather than at their shadow prices. And, if costs are identified with the cost of investment, as is the case for the principal criterion of project evaluation under the effects method, zero opportunity cost is assigned to primary factors other than capital. As a result, a bias is introduced in favor of projects that intensively utilize these factors of production.

A further objection to the effects method concerns the assumption that the historically-observed relationship between the use of domestically-produced and imported inputs would continue, so that the possible choice among these sources of tradeable inputs is disregarded and one may be induced to reject industries that suit the country's resource endowment. Finally, the

---

1/ For a discussion, see Bela Balassa, *The Income Distributional Parameter in Project Appraisal*, Washington, D.C., World Bank, March 1976.

income distributional effects of a project are incorrectly estimated by neglecting earnings in alternative occupations.

In this paper, recommendations have been made for modifying the effects method by shadow pricing all primary factors and tradeable inputs. With these modifications, the effects method will become equivalent to the domestic resource cost and the internal rate of return methods which provide alternative expressions of the general economic profitability criterion.