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THE ECONOMIC USE OF INTERNATIONAL RESOURCES IN FINANCING DEVELOPMENT PROJECTS

By Leonard Rist
World Bank Special Representative for Africa

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I think I should begin with a warning: I am going to confine myself to a discussion of the appraisal techniques which we at the World Bank have, over the past fifteen years, learned to apply in our own lending for development projects. However, I believe that most of these techniques are applicable in virtually all development financing; certainly we have found they need very little modification to act as a satisfactory guide for putting the "soft loan" resources of the International Development Association to work. Three questions are involved: How much can a country borrow from abroad; what sector should it preferably invest in; and how can individual projects be justified, mainly from an economic standpoint.

I. The first question we have to consider is whether a particular country should borrow abroad at all. This is not quite the same question as whether a lender (or donor) should make money available to the country. We should be unrealistic if we failed to recognize that loans and grants are sometimes given for reasons which may not be exclusively economic. More respectably, however, they may have to be rationed out by the country or institution offering help, simply because the resources available are not adequate to meet all the demands upon them. The World Bank has not been subject to this limitation, but to our great regret,

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we have had to accept some such limitation on the amount of aid the International Development Association can offer to one or two of its largest underdeveloped member countries for the simple reason that its funds are provided by capital subscriptions of its participants and not as in the Bank both by subscriptions and by borrowings. But there are purely economic considerations as well, which must limit the amount which the developing country itself can prudently borrow abroad. And while not easy to define precisely, these limitations can be assessed in a reasonably detached way; the same approach used by the Bank, for instance, can be used by the borrowing country itself.

We sum up this assessment of the amount a country can safely borrow as its creditworthiness. The French would say "borrowing capacity." A country's creditworthiness, I would emphasize, is not at all the same thing as its trustworthiness. Several countries in whose probity the Bank has complete trust are, unfortunately, also countries which are hardly creditworthy at all. What we try to measure as creditworthiness -- a far from attractive word incidentally -- is the capacity of a country to service foreign borrowing without putting an undue strain upon either its internal finances or its balance of payments. The question is roughly how much a country can borrow abroad on conventional terms without serious risk of thereby involving itself in financial difficulties later on. Once the limits of creditworthiness are reached, further development assistance from abroad can safely be taken only in the form of soft loans (such as our IDA credits, which bear little or no interest, and are repayable over a very long period) or outright grants. And sadly, but not surprisingly, finance in this form is in general less freely available than conventional loans.

This question of creditworthiness comes up both when we look at the proposed development project, and when we examine the general economic situation of the borrowing

country. It is not enough that a project be sound in itself, making it possible to accumulate local funds for repaying the money borrowed or that the economy at large may be expected to grow at such a pace that its savings may increase. Most international loans must be repaid in foreign exchange. If a borrowing country runs into foreign exchange difficulties, it may be unable to keep up service of any part of its external debt, even though the projects for which it borrowed were essentially sound.

Sometimes, a project may itself earn foreign exchange directly. Examples might be projects for developing mineral resources for export: as you may know, the World Bank is currently financing two such projects (for the mining of iron and manganese ore) in Mauritania and Gabon. Here, provided sufficient foreign exchange earnings are set aside to service the international loan, the availability of the means to service foreign debts should be assured. But more often, even when a project leads to increased exports, it is not possible to set aside specific foreign exchange income in this way. When this is so, one can assess a country's ability to find the foreign exchange needed to service international debt only in terms of its foreign exchange earnings as a whole.

Of course, a project may save foreign exchange, rather than earn it. The favorable effect on the balance of payments is the same in either case. But experience has made us a bit suspicious of import saving projects. Quite often the project itself or its continued operation require substantial foreign exchange expenses. Too often also they entail some kind of subsidy or tariff protection, the cost of which falls on export industries, along with the rest of the economy. This can have distorting effects on the pattern of a country's investment, and inhibit the growth of exports, which in the long run are likely to provide one of the most effective stimulus for general economic development within a country.

The size and terms of existing external debt are obviously central in determining whether a country should undertake further

foreign borrowing. What matters is not so much the total amount of foreign debt as the proportion of it which is repayable at any given period. For instance, if too much short-term debt is taken on, perhaps in the form of export credits offered by foreign suppliers of capital goods, which are normally depreciated over long periods, the annual burden of repayments may increase much more quickly than foreign exchange income, forcing the borrower to impose severe import restrictions. This may lead to debt rearrangements or worse, to defaults. Some of the Latin American countries have run into this kind of trouble recently. On the other hand, if interest rates are low, and repayment schedules long, a large external debt can be carried with only a small annual charge to be met out of export earning.

Very often, development projects take a long time to pay for themselves. If they are financed by short-term borrowings, repayment can place serious strains on a country's foreign exchange income, and damage its ability to meet the difficulties of those almost inevitable years when export earnings are lower than expected. The difficulties will be increased if the slow-maturing project is government-financed and not directly revenue-producing, since the burden of debt service will fall directly on the government budget.

Finally, one must recognize that government policies do have a major influence on a country's balance of payments, and thus on its ability to carry additional external debt. Creditworthiness depends importantly upon the success with which a government keeps the over-all demand for foreign exchange within the limits set by exports, invisible earnings and the proceeds of external borrowing and foreign aid. It will find this very difficult, if it adopts inflationary policies, since these tend to stimulate imports, to hamper exports, and so to encourage running-down of reserves or accumulation of short-term foreign obligations. It will find this difficult, too, unless it is prepared to face the unpleasant adjustments which are sometimes made necessary by a sudden fall in export earnings -- a circumstance with which most of the primary producing countries have become only too familiar in recent years.

It would be only natural for the developing countries to regard the matter of creditworthiness as of concern only to the potential lender. Certainly the lender will give it a great deal of attention: he wants to get his money back eventually. But it concerns the borrower as well. It cannot be economic to borrow abroad for any project, if the strain of repayment is going to involve the entire country in financial disaster.

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II. Assuming that a country can afford to borrow, or even that the funds are available at no cost, what should foreign assistance be invested in? The difficulty is to decide which among the projects which may be available in a developing country deserve priority -- "priority" in this sense implying not that any one project can hold the key to national development (a dangerous delusion) but that a selected project deserves a place in the front rank, along with others chosen for their importance in different fields. The guiding rule must be to direct investment into those projects which will make the greatest possible contribution to the economic growth of the country concerned.

Ideally, this approach calls for a detailed appraisal of investment possibilities in each sector of a country's economy -- a slow and expensive business. As I shall argue later, an appraisal of this kind is of such value that the expense is justified. But fortunately, one usually need not wait for the conclusion of such a comprehensive analysis before making a start on the most urgent projects. All that is needed to bring these to light is a reasonably methodic examination of the broad requirements of each economic sector.

Such an examination tends to divide itself naturally between basic services on the one hand, and the needs of industry and agriculture on the other.

By basic services, I mean such things as roads, railways, electric power generating stations and transmission networks and ports. Without these services, which are often the re-

sponsibility of the government itself, other sectors of the economy cannot grow. If one basic service is failing to meet the demands upon it, the effects will be serious, and the urgent need for investment will usually be obvious. Bottlenecks arise or threaten to arise. Let me give two examples, both of which resulted this summer in a loan being made by the World Bank. In Colombia, the demand for electric power in the city of Medellin has been growing at the rate of about 11% a year, and has outstripped generating capacity. In consequence, power rationing has been in force for both private householders and industry, and manufacturers who want to keep their factories running have had to install their own power plant. We lent the local power authority $22 million to meet the foreign exchange cost of a hydroelectric scheme which should cover Medellin's power needs for the next seven years. In India, the Hooghly River has been silting up so badly that normal-sized seagoing ships have found it increasingly difficult to reach the Port of Calcutta, and the import and export trade of India's most important industrial region has been seriously handicapped. A loan of $21 million we signed in August will finance the purchase of dredges to keep the river clear, as well as a hydraulic study aimed at finding a long-term solution to the navigational difficulties.

Those were comparatively easy cases. It is less easy, however, to know if an investment in basic services deserves high priority when it is proposed as a means of stimulating investment elsewhere. One cannot assume that a new road, or new sources of power, will inevitably foster local agriculture or industry. Sometimes investments of this kind have conspiciously failed to justify themselves. This should keep us from financing the more difficult cases. It only tends to recommend serious probing in their economic justification.

A difficult problem in drawing up a public investment program is to keep a proper balance between economic, or directly productive, projects and social projects which, though highly desirable, make no direct contribution to increased production of goods or services. Most governments of poorer countries are aware of the unpleasant fact

that their resources are inadequate to provide the public welfare services now becoming commonplace among the industrialized nations. It is even more painful to recognize that their ability to finance urgently-needed education programs, water-supply projects and the like may also be limited. Even in the straightforward economic field, it is necessary to maintain a reasonable division of resources between directly revenue-earning projects, such as railways, harbors and power stations, and projects, such as flood control works and (sometimes) roads which, while they do add to national income, do not earn revenues directly for the government. If too little attention is given to the revenue-earning aspect of projects, a heavy strain may be placed on the government's current budget.

The risk of making the wrong investment choice is much reduced if the government concerned has a general idea of the way in which it expects the country to develop. For this reason, we at the World Bank strongly encourage our member governments to draw up development plans or programs, realistically based, which will provide guidelines for public investment in their countries over a period of five to ten years. We ourselves stand ready to give what help we can in drawing up these plans, by lending staff members of the Bank to governments to advise on development programming, by recruiting outside experts to serve in the same role, or by organizing survey missions which will spend a few months in a country examining all sectors of its economy before preparing a comprehensive report. The precise task assigned to the mission or representative varies from one country to another, but the general approach is usually the same: to quote from a representative example (the instructions given to a mission we sent to Nigeria some years ago) it is "to assess the resources available for future development, to study the possibilities for development in the major sectors of the economy and to make recommendations for practical steps to be taken, including the timing and coordination of developmental activities." So far we have organized more than twenty such missions, including six to African countries (Nigeria, Somalia, Libya, Tanganyika, Uganda and now Kenya).

Ultimately, of course, it must rest with the governments concerned to decide how they will invest the resources at their disposal. But their task can be made very much easier with the help of severely practical surveys of this kind, based on the one hand on an appraisal of opportunities over the whole field for government investment -- social as well as economic -- and on the other, on a realistic assessment of the resources available. The surveys have a further advantage. They are usually published. This means that not only the Bank but also other potential lenders are able to acquire an informed view of a country's plans and problems; the consequence is likely to be a better and more sympathetic understanding of its needs.

It is less easy to assist development in the industrial sector. Industrial investment is inherently more complex and risky: problems of technical obsolesence, of fluctuations in prices of raw materials, and of marketing (particularly if the product has to compete in export markets) increase the chances of loss, and demand managerial ability of a kind which, if available within the government, can rarely be spared for supervision of a single enterprise. For severely practical reasons, rather than those of capitalist prejudice, it seems that wherever possible, governments should reserve their scarce human and financial resources for investment in those essential basic projects to which private capital is unlikely to be attracted. A clear indication that the government does not intend to compete in the industrial field is in itself likely to act as an inducement to investment by privately owned companies. Here, incidentally it is worth noting that foreign private industry is potentially just as important a source of development capital as any government or international agency now lending to the poorer countries.

This leaves unsolved, however, the problem of encouraging medium-sized or small businesses. These may well encounter great difficulty in raising long-term capital, as they are normally too small to interest the overseas investor. One possible answer, we have found, lies in the establishment of national development banks, which often attract the support of both domestic and foreign investors, which offer a suitable means for the government to provide funds for small industry

without becoming involved in its management, and which can in turn bring to the problems of the small businessman the local and detailed knowledge and understanding that are needed in this field. The World Bank has given advice in setting up development banks in many countries and has made loans to support the work of a number of them.

The encouragement of agriculture is perhaps most difficult of all. There are, of course, straightforward occasions when projects exist that can be expected to make good use of large amounts of international resources -- for instance, major schemes for flood control, drainage, irrigation or land reclamation. Some of these schemes can be expected to pay for themselves directly out of their own revenues. This is the case with two big irrigation schemes which we are helping to finance in the Sudan. Other projects may set budgetary problems for the government, since their benefits tend often to flow only to the farmer, leaving it to the government to service any international borrowings involved out of its general tax revenues.

Further scope for direct agricultural lending may be found in credit schemes to help the cultivator buy implements (perhaps through the medium of an agricultural development bank) or in the finance of marketing cooperatives. And of course, many projects for basic services have a direct and very great impact on agriculture -- in particular, the provision of farm-to-market roads, water supplies and electricity.

But it is clear that money alone will never solve the agricultural problems of the underdeveloped countries. The availability of international funds is quite obviously only one factor: agricultural development depends much more on the adoption of new techniques, on extension work, on the reform of land tenure, on a whole revolution in social attitudes. All of these are needed before much money can be put to good use.

Nevertheless, the more I see of the underdeveloped world, and of Africa in particular, the more I am convinced that the most important challenge to all those concerned with economic development there lies in agriculture. There is a very real

danger that the comparative ease with which large industrial power and transportation projects can be formulated may lead us to neglect the problems of agriculture. Yet the vast majority of Africans earn their living from the soil, and this is likely to be so throughout our lifetimes. Agricultural development is a slow business, and seldom spectacular. But there is evidence on this continent that quite startling changes in living standards and productivity can be achieved by the ordinary farmer when money is put to work in intelligently-directed combination with legal or social reform, and with the provision of technical and other help designed to arouse the cultivator's enthusiasm and to provide him with the knowledge he needs to make good use of the seeds, fertilizer, water supplies, tools and communications that money *can* buy. I personally should be very sceptical of any development plan for an African country which did not put primary emphasis on the improvement of agriculture.

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III. So much for the general considerations that should influence us in deciding how to put available international resources to work in support of economic development. But how are we to decide whether a particular project deserves support?

Here again I must give a warning. I am not going to discuss the choice of social projects, although I am well aware that these -- particularly in the fields of education and public health -- can play an essential part in economic development and although IDA is not adverse to considering some of them, their problems call for assessment by persons having an *expertise* that I, for one, do not possess. And because my time is short, I am not going to consider the purely technical or commercial assessment of projects, or the difficulties of arranging appropriate financing terms for them, since all of these matters, although extremely important, fall somewhat outside my brief for today. I would, however, like to emphasize in passing that this kind of detailed investigation is indispensable. We find at the

Bank that in practice we must spend no less time in considering these matters than we do in studying the general economic aspects of projects. Today, though, I want to concentrate on the latter problem -- the question, that is, of whether a particular project will make a large enough contribution to the country's economic development to justify the investment it will require.

We can assume, following our earlier discussion, that the project belongs to an economic sector (say, power or agriculture) whose development is believed to be of the first importance. We can assume, too, that the international resources to be employed will be made available on terms which will not put an undue strain on the country's balance of payments or its budget. The task which remains is to decide whether a particular project will best meet the needs of the sector concerned.

This decision will normally involve some sort of market study, the extent of which will depend on the kind of project being considered. Plans to grow crops or to mine ores for export may require that we analyze demand and supply prospects on a world-wide scale for the commodity concerned. This would obviously be true of cocoa or coffee-growing projects. On the other hand, a project to expand power supplies to a small area should require only a comparatively limited market study.

Theoretically, it is easy to define a satisfactory development project as one which earns (directly or indirectly) a reasonable return on the capital invested in it. This definition does not distinguish very well between purely financial returns and overall economic returns to the country. Nor, unfortunately, does this definition specify what rate of return is to be considered "reasonable." In the perfectly competitive economy of classical economics, a reasonable return would have to be at least as great as could be obtained by investing in comparable enterprises in the same country. But the perfectly competitive economy does not exist, either in the developed or the underdeveloped world, nor sometimes do comparable enterprises. Rates of interest, in particular, may be artificially manipulated, thus losing their value as a measure. Projects in the "basic" sector,

such as power systems, railways, and irrigation schemes, generally have a monopoly position which makes it difficult to compare them with any others. Here assessment may have to be based on comparison not with alternatives within the country, but with costs and returns for similar schemes elsewhere.

Returns on projects which are not revenue-earning are also difficult to work out, although the techniques involved are fairly well known. For the most part, they involve calculating the value of what one might describe as a succession of detailed and informed guesses. A common example would be the method used to assess the value of rebuilding an existing road, where a series of calculations about reduced tire wear, lower fuel consumption, fewer repairs and so on is reduced to an overall figure showing the expected average reduction in costs per ton-mile.

An economic appraisal of this kind must not leave out the indirect returns provided by a project. These may be of crucial importance in choosing between two projects, each of which costs about the same amount and provides a similar direct return in goods or services. One of these projects may well establish itself as clearly the best choice, not because it provides a measurably higher financial return, but because it makes better use of idle resources, human or material, or because it is likely to encourage further development. An example might be a choice between two possible routes for a railway, both costing about the same to build, both providing satisfactory shipment for goods being sent from one end of the line to the other, but only one crossing territory where economic development was likely to be stimulated by the improvement of communications. A similar situation might arise between two factory projects, one of which would operate very much on its own, while the other could be expected to stimulate the growth of related firms, serving it with raw materials or providiing final processing for its products.

Account must be taken of indirect costs, as well as indirect returns. Many projects depend for their success on additional investment being undertaken elsewhere. This is obvious in some cases -- for instance in the iron mining operation in Mauritania, where the chief expense is not that of excavating the ore, but of building a railroad to carry it across 400 miles of desert to the sea. It is less evident, but still important, where a new factory will put a strain on local electricity supplies which can be met only by installing additional generating equipment.

Another important question in considering the economic merits of a particular project is the effect which it is likely to have on the country's balance of payments. On the credit side, will it generate increased exports, or provide an alternative source of goods or services which must at present be imported? On the debit side, how much is it likely to burden the balance of payments with the cost of spare parts, raw materials and, of course, debt service? One must not overlook the possibility of important indirect effects on the balance of payments as well. To mention only one example, the use of a large number of agricultural workers on a road building project may well make it necessary to increase imports of food.

Quite often, the selection of a project may involve a choice between two fundamentally different solutions to the same problem. This happens particularly with large transportation projects, when it may be necessary to weigh the advantages of a new road against those of a new railway, and both in turn against a project for improvement of river navigation. A similar choice may be needed between different ways of producing energy. A familiar problem is that of choosing between a hydroelectirc project (which usually has a high capital cost, but low running costs) and a thermoelectric plant (which is cheaper to build, but more expensive to run).

Yet another point of importance is whether the project's success is dependent on protection against competition. Commonly this protection may be given in the form

of tariffs or quotas limiting the opportunities given to foreign suppliers of goods or services: within the country, it may be given by discriminatory taxation, by limiting the freedom of the competitor (perhaps to favor rail transport at the expense of the road user). Protection can on occasion be justified, particularly in the familiar case of the "infant industry" which needs to be given some help for a limited period while it establishes itself. But we should recognize that its use represents a distortion or diversion of natural economic forces. Used to excess, or in the wrong situation, it can mislead us into diverting scarce resources away from useful development projects into schemes which have no real economic justification.

Finally, one cannot leave out of account any regulations which may make it difficult to execute and operate a project economically. These are most often of importance in the case of regulated monopolies such as public utilities, and in our experience may cause trouble when they unduly limit pricing policies or interfere with independent management. It would be invidious for me to give specific examples here, but the sort of thing I have in mind is a government-imposed railway fare structure that requires that a favored type of product be carried at a loss, an imposed ceiling on power rates that make it impossible to set aside profits for future expansion, or the appointment of persons to top management positions on the basis of political acceptability rather than expert knowledge. I should add that abuses of this kind are just as prevalent in the developed countries as in the underdeveloped world.

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For those with the responsibility of trying to encourage the development of their countries, the foregoing may seem a rather daunting list of requirements. But it is no good trying to hide from economic facts. I believe that all these conditions are indispensable -- you cannot make satisfactory use of international resources unless you are certain that your country can afford to borrow, unless you know that the sector

of the economy in which you want to invest is sufficiently important to deserve your attention at this stage, unless you have made sure that the particular project you select will provide an economic return justifying its cost. Scarce resources cannot be wasted, and capital, where it comes from, is a scarce resource. And in this respect international organizations whether they live on borrowed funds or on voluntary contributions have in this respect very heavy responsibilities.

On the other hand, I do recognize that some countries, in Africa, and elsewhere, may feel themselves ill-equipped to tackle the assessment of development possibilities in their territories. I trust that no country will on that account feel unable to embark on development projects. There are many people, including the World Bank, who are both qualified and anxious to help the developing countries in this task. In case of need their assistance should be requested.