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The Role of Capital Projects in A.I.D. Assistance: Executive Summary/Highlights

The purpose of this paper is to provide background for further discussion of whether A.I.D. should be directing more resources toward capital projects.

Donor Support for Capital Projects. Over the past thirty years, A.I.D. assistance has moved from a relatively heavy emphasis on infrastructure and industry projects (1960s), to a shift toward smaller-scale projects in nutrition, health, and education (1970s), to a relative focus on resource efficiency and non-project funding (1980s). A.I.D. has proposed a \$100 million Capital Projects Fund for FY 1993, and some are now advocating a stronger Agency push in this direction. Other donors continue to devote a much larger proportion of their aid to capital projects, particularly Germany and Japan which provide over 40% of their aid in this form compared to 10% from the U.S.

Economic Rationale for Capital Projects. Economic theory supports the need for a certain minimum of infrastructure to facilitate developmental transformation, that external economies from infrastructure projects stimulate production in other sectors, and that large-scale investments are needed to capture economies of scale in infrastructure. Well-conceived, properly designed capital projects unquestionably contribute to economic development, through poverty alleviation, technology transfer and other mechanisms. However, capital projects encounter pitfalls in that: they are often capital intensive, failing to take advantage of the greater relative abundance of labor in developing countries and thereby also skewing the distribution of benefits; they are often inadequately maintained after completion, and inappropriately low pricing of resulting services fails to recover costs; and their success depends critically on related capital infrastructure investments as well as progress in institution building, human resource development and policy reform.

Tied Aid and Capital Projects. While virtually all donor aid is tied to procurement in the donor country, the appeal of capital projects for many lies in the scope for tying them to capital-intensive donor exports. Mixed credits (a type of tied-aid credit mixing aid grants with export credits to lower the financing cost) have been a popular form of tying which the U.S. has resisted in international negotiations, most recently persuading other donors to agree to new restrictions on mixed credits under the Helsinki V agreement.

Studies show that tying aid has only a very limited impact on donor country exports overall, although it can affect exports in a particular industry or sector. Supporters suggest that the U.S. can boost its competitive edge in high technology by this means. In addition, they believe the visibility of specific exports will help boost constituency support for foreign aid and assert that follow-on exports will help develop long-term U.S. export markets.

The Trade-Aid Link. A study by the Export-Import Bank in 1989 attempted to determine whether U.S. industry was appreciably damaged by the tied-aid credit practices of other donors. It concluded that U.S. companies have lost \$400-800 million in export sales annually due to such practices (U.S. exports in 1990 amounted to \$390 billion), that high-technology sectors were not significantly affected, and that although production in certain sectors might be affected there was no "clear case of need for a priority call on public expenditure."

Even accepting the premise that the U.S. aid program should be used to promote U.S. export competitiveness, the question remains whether boosting capital projects assistance is the most effective means of doing so. Two things make this difficult: U.S. exports tend not to be in the "leading-edge" sectors associated with enhanced competitiveness, and U.S. foreign assistance has declined over the past forty years from 35% of U.S. exports to less than 1% of exports. There also exists a danger, frequently cited by Treasury and Exim, that without offsetting pressure from the U.S., other donors will step up their tied-aid competition and the U.S. will run out of the resources to wage such "aid warfare" before our competitors do. In contrast to this scenario, evidence increasingly suggests that supporting policy reform in developing countries is having a favorable payoff in terms of U.S. exports.

Is it possible to pursue commercial and development objectives at the same time? Ernie Preeg, a strong capital projects proponent, nevertheless points to their dangers: because they are often not subjected to sound development criteria, they can be costly and inefficient; commercial considerations of exporters tend to dominate; and aid is likely to become skewed in favor of middle-income relative to low-income developing countries. These are all dangers which an A.I.D. program would have to struggle to resist.

Conclusions. Capital projects can contribute to economic development in the right circumstances and with the proper accompanying investments and environment. However, projects motivated primarily by commercial interests are more likely to be subjected to pressures which make it hard for development concerns to receive proper consideration. To ensure that capital projects are developmentally rather than commercially driven, project proposals should originate in the mission and be justified according to their consistency with the agency's strategy for that country. A further screening to determine such projects' U.S. commercial potential in order to boost them with additional funding may be out of line with U.S. leadership in discouraging the use of aid resources for commercial purposes. Evidence also indicates that even if it were possible to identify projects which meet both development and commercial criteria while remaining within the Helsinki guidelines, the impact of such a program would be marginal at best.

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THE ROLE OF CAPITAL PROJECTS IN A.I.D. ASSISTANCE

1. Introduction

Increased attention has focused in recent years on the role of capital projects in the U.S. foreign assistance program. At present, the U.S. allocates a much smaller portion of its total aid resources toward capital assistance projects than do most other DAC countries. There is, however, support among some in Congress, the private sector, and the Administration (including A.I.D.) for an expanded role for capital projects in the U.S. foreign assistance program.

Arguments for an expanded A.I.D. role in capital projects. Advocates of this position argue that directing more resources into capital projects can accomplish the dual objective of promoting economic development *and* U.S. export competitiveness. They contend that U.S. trade competitiveness is being eroded, in part due to the tied-aid credit practices of other donors which effectively exclude U.S. exporters from certain sectors in developing country markets, especially high technology sectors. Trade interests and aid policies, it is argued, can and should be linked in the U.S. just as they are in virtually all the other major donor countries. Proponents of this position further argue that integrating trade and aid interests would help garner domestic support for U.S. foreign assistance at a time when such support is dwindling. Finally, those in favor of expanding capital project assistance maintain that there is a strong justification for such assistance in terms of the contribution it can make to economic development.

Concerns about an expanded A.I.D. role in capital projects. Opponents of the capital projects movement argue that the use of aid resources to promote commercial interests distorts both aid and trade. They argue that interventions directed at policy and institutional reform and human resource development are of higher priority given scarce U.S. aid resources, and that without adequate progress in these areas returns to capital projects are likely to be low or negative. Opponents object in general to tied-aid practices, arguing that the tying of aid substantially reduces the real value of assistance. More generally, they argue that the evidence suggests that other donors have not successfully married both development and commercial concerns. From the standpoint of U.S. competitiveness, opponents argue that a focus on capital projects does not address the real sources of competitiveness, and cannot have much impact in any case since the exports generated in this way would be minuscule in comparison to relevant U.S. exports. They also argue that strategies aimed at encouraging policy reform and the opening of markets in developing countries are much more effective in promoting U.S. trade interests than tied aid.

Needless to say, the above characterization of the debate over capital projects is highly simplified. The purpose of this paper is to try to clarify the issues surrounding the debate and to provide some background for further discussion. The paper is organized as follows: **Section 2** gives an overview of A.I.D.'s historical and current involvement in capital assistance projects and compares it with that of the other major donor countries. **Section**

3 examines the economic rationale for channeling aid resources into capital projects independently of its tied-aid aspect. The relationship between capital projects and tied aid is investigated in Section 4. Section 5 focuses on the aid-trade link. Three questions are addressed here: first, is there evidence to support the claim that other donors' participation in the area of capital projects has served to crowd out U.S. private sector involvement? Second, if it is deemed desirable to use aid resources to promote U.S. export competitiveness, is the financing of capital projects the best way to accomplish this objective? Third, are the pursuit of economic development and the promotion of U.S. exports fully compatible objectives? Concluding comments are made in Section 6.

2. Overview of Donor Countries' Involvement with Capital Projects

2.1 A.I.D.'s Experience with Capital Project Assistance

1960s. A.I.D. has gone through several policy phases. In the first phase, which lasted through the sixties, foreign assistance was used largely to finance capital projects and technical assistance. Consistent with the dominant theories of development at the time, this approach attributed critical importance to the role of investment in triggering sustained economic growth.¹ It was thought that countries trapped in a vicious circle of poverty, unable to mobilize domestic savings and investment, could greatly benefit from large infusions of foreign capital, presumably in the form of aid and private capital flows from developed countries. There were several variants of these capital-oriented models. Supporters of the "Big Push" doctrine promoted infrastructure investments, arguing that the presence of indivisibilities and scale economies made them particularly worthy candidates for funding. Others argued in favor of a "balanced growth" strategy which involved a broad thrust of investment across a wide range of sectors.² A.I.D.'s projects included funds for infrastructure (e.g., hydro and thermal power, railways, roads, telecommunications, water and sewerage, and port construction) and industry (e.g., fertilizer, cement, mining, and shipyards).

¹Perhaps the most popular work which celebrated the role of investment in the development process was that by W.W. Rostow. See Stages of Economic Growth, Cambridge: Cambridge University Press, 1961. For a review of Rostow's theory and other development models of the 50s and 60s and their implications for foreign assistance, see Raymond F. Mikesell, "The Economics of Foreign Aid and Self-Sustaining Development," prepared for the Departments of Treasury and State and the Agency for International Development, Feb., 1982.

²The big push school of development is most closely associated with Paul Rosenstein-Rodan. See, e.g., "International Aid for Developing Countries," Review of Economics and Statistics, February 1961, 107-138. Probably the first proponent of balanced growth was Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries, 1953, pp., 13-15.

1970s. In the late 60s, the wisdom of concentrating aid resources on capital project assistance began to be questioned by some within A.I.D., Congress, and the larger development community. It was increasingly recognized that the methods used to restore Europe under the Marshall Plan were not being applied with the same success in the developing world. A country's ability to effectively absorb capital transfers appeared to be severely limited by a lack of human resource development, weak institutions, and an inappropriate policy framework. In addition, there was concern among some in Congress that U.S. aid primarily served U.S. private business interests and those of foreign elitist governments, and that very few benefits trickled down to the poor.³ Discouraged by the lack of progress in reducing poverty, the new thinking emphasized the fulfillment of basic human needs as a prerequisite to sustainable economic growth. Revision of the Foreign Assistance Act in 1973 reflected the new attitude toward the role of foreign assistance in promoting development. As a result, A.I.D. redirected its resources toward smaller-scale activities, rural-based projects, and projects designed to increase agricultural productivity, nutrition, health, and education.

1980s. The third major policy refocusing of the U.S. bilateral aid program occurred in 1981 with the introduction of the "four pillars" of economic development. Not intended to supplant basic human needs objectives, but rather to better achieve them, the four pillars encompassed private sector development, policy dialogue, institution building, and technology transfer. The underlying reasoning in each case was that the U.S. could achieve a greater development impact by deemphasizing resource transfers and instead improving the efficiency with which developing countries used available resources. Greater importance was attached to the leveraging of aid resources, and cash grants were increasingly relied upon to effect market-based reforms. The need for balance of payments assistance as a result of the debt crisis also contributed to the shift toward program funding.

Accompanying these changes over the last thirty years, A.I.D. shifted its program emphasis from large and medium-scale capital projects to projects of relatively modest size designed to enhance the role of the private sector, encourage institution-building and human resource development, and promote the maintenance of an appropriate policy framework. As a consequence of these policy shifts, the proportion of A.I.D. resources allocated to capital project assistance gradually diminished. According to data given in a recent Export-Import Bank Report, by 1982, capital project assistance in such areas as industry, energy, and transportation, among others, had fallen to 6.5 percent of total U.S. bilateral official development assistance, compared with 11 percent for 1972, and about 25 percent in the early 1960s.⁴

³See for example the objections of Senator Frank Church quoted in Stephen Hellinger et al., Aid for Just Development: Report on the Future of Foreign Assistance, Lynne Rienner Publishers: Boulder, Colorado, p. 20.

⁴Export-Import Bank of the United States, Report to the U.S. Congress on Tied Aid Credit Practices, Washington, D.C., 1989, p.15.

Late 1980s to the present. In the late 1980s, some began to criticize the agency's drift away from capital projects, especially in light of other donors' continued active participation in this area. Among the five new initiatives launched by A.I.D in 1990, the Business & Development Partnership aims "to engage the American private sector in efforts to develop and sustain free-market principles and broad-based economic growth."⁵ One of the activities planned under this initiative is to provide "[s]upport for developmentally sound capital projects of direct strategic relevance to U.S. trade competitiveness."⁶ In FY 1992, the agency plans to spend \$400-450 million from various A.I.D. program accounts for capital projects, and \$500-550 million in FY 1993, including a new \$100 million Capital Projects Fund.

2.2 Other Donors' Bilateral Support for Capital Projects

Data compiled by the DAC on the use of bilateral aid resources across countries show that the U.S. sectoral allocation of resources differs considerably from that of the other major donors. Table 1 indicates that the U.S. devotes a substantially larger portion

Table 1: MAJOR AID USES BY DAC DONORS
(percentage of total commitments, 1988-89)

	<u>United States</u>	<u>France</u>	<u>Germany</u>	<u>Japan</u>	<u>United Kingdom</u>	<u>Canada</u>
Economic Infrastructure	3.7	20.8	28.6	36.4	23.4	14.7
Industry and Other Production	5.3	3.4	13.2	8.9	6.2	4.7
Social and Administrative Infrastructure	21.0	39.6	27.6	16.6	24.4	18.8
Agriculture	9.0	8.4	8.6	9.5	8.5	11.9
Food Aid	16.2	.6	2.8	.6	1.7	9.6
Program Assistance	24.6	4.9	5.4	17.8	14.7	4.8
Other	20.2	22.3	13.6	10.2	21.2	35.5

Source: DAC, 1991 Report. Note: "Other" includes administrative costs and items n.e.c.

of its resources toward social and administrative infrastructure (which includes health and education), food aid, and program assistance than do most of the other donors. Compared with the U.S., most other donors devote a considerably larger share of their aid to "Economic Infrastructure" and somewhat more to "Industry and Other Production." The U.S. allocates less than 10 percent of its aid to these two categories combined, which

⁵Congressional Presentation, Fiscal Year 1992.

⁶Agency for International Development, The Business and Development Partnership, December 1990.

encompass transportation, communications, energy, industry, mining, and construction, whereas Japan and Germany allocate over 40 percent of their resources toward these uses.

There is no doubt that the promotion of commercial interests and the perceived need to amass constituency support for foreign assistance partly explains the heavier emphasis of other donors, especially the German and Japanese, on the financing of capital projects. In addition, because many of these countries have a long history of close cooperation between government and industry, the linkage of trade and aid is seen as natural. In contrast, the U.S. traditionally has maintained a greater degree of independence between the private sector and government, and has shunned the adoption of an industrial policy. With the exception of agriculture and the military, subsidization of the export sector has been in general contrary to U.S. government policy.⁷ The sectoral distribution of U.S. aid giving appears to have been dominated largely by development considerations. This is not to imply that other donors, even those with a heavy emphasis on capital projects, wholly sacrifice development objectives in their pursuit of export markets. Nonetheless, the skewed sectoral distribution of aid resources across countries has led some to suggest that the U.S. is carrying "a disproportionate burden" in certain fields.⁸

3. The Economic Rationale for Capital Projects

No one denies that well-conceived, properly designed capital projects can contribute to economic development. What is essentially at issue in the current debate is whether or not *commercially-motivated* projects can best serve recipient needs. Before turning to this issue, it is necessary first to investigate the economic rationale for capital projects apart from donors' motives for financing them. This section describes the theoretical justification for capital project assistance, focusing on infrastructure investment, and then discusses what lessons have been learned from past experience with such projects.

3.1 Economic Justification for Infrastructure Assistance

As mentioned in the previous section, the earlier emphasis on capital project assistance in part derived from theoretical views of the development process formulated in the 50s and 60s. The theoretical justification for infrastructure project assistance is essentially threefold: 1) A certain minimum of infrastructure is a precondition to the transformation of subsistence economies to market economies; 2) infrastructure generates external economies, providing a stimulus to production in other sectors; and 3) the presence of indivisibilities and scale economies associated with many infrastructure activities implies that they require large-scale investments to be economically viable. Due to the limited availability of host

⁷Export-Import Bank, *op. cit.*, p. 38.

⁸U.S. Department of Commerce, International Financing Programs and U.S. International Economic Competitiveness, Washington, D.C., September 1990.

country investment resources, such projects are natural candidates for financial assistance from abroad.⁹

There is considerable evidence that infrastructure investments, when properly designed and implemented, can help expand markets and stimulate development in other sectors. To cite but one representative example, an A.I.D. evaluation of rural road projects showed that new roads greatly reduced hauling prices, improved farmers' incomes, enabled crop diversification, and lowered farmers' input prices.¹⁰

Aside from their linkages to productive activities, certain types of infrastructure, e.g., water and sewage treatment plants, facilitate the direct provision of basic human needs. Clearly this is also true in the case of roads as they increase the accessibility of many types of social services, e.g., schooling and health. Investment in physical infrastructure may indirectly improve the standard of living through its employment-generating effects. Expansion of port facilities, for example, might enable the development of new, labor-intensive export industries that would provide employment opportunities for poor people and a chance to increase their productivity and wages.

Another argument made in support of capital project assistance is that it is a vehicle through which technology can be transferred to developing countries. Some of these technologies, e.g., telecommunications, are considered crucial to private sector development. Project assistance can, in principle, help build technical expertise in project evaluation, monitoring, and implementation. Other types of capital projects, e.g., pollution abatement technologies, can respond to local and global environmental concerns.

3.2 Potential Pitfalls of Capital Projects

Capital intensity. Ironically, one feature of infrastructure projects that has made them attractive to commercially oriented donors is their high import and capital intensity. To the extent that such projects use "off the shelf" designs based on the technical requirements and capital/labor costs of the industrialized countries, they may fail to take advantage of the greater relative abundance of labor typically found in developing countries. The attractiveness of capital projects to commercially oriented donors is often reinforced by the distorted factor prices in many developing countries, which favor the use of capital over labor. This results in larger, more capital-intensive projects geared toward the factor proportions of developed countries rather than the more labor-abundant endowments of the developing countries. These biases tend to limit the direct and indirect employment-generating benefits of infrastructure investment. Moreover, using distorted factor prices in the calculation of the costs and benefits of a project gives an exaggerated estimate of the social rate of return to the project. While some donors, most notably the World Bank, have

⁹Constantine Michalopoulos, "Assistance for Infrastructure Projects," in Anne Krueger *et. al.*, Aid and Development, Johns Hopkins University Press: Baltimore, 1989.

¹⁰William Anderson and Charles Vandervoort, Rural Roads Evaluation Summary Report, A.I.D., Washington, D.C., 1982.

attempted to compensate for these biases and shift to more labor-intensive technologies, the problem points to the danger of relying primarily on donor country technology, engineering, and consulting services in the design and implementation of infrastructure projects. It also indicates how critical is the need to continue making progress in the areas of policy reform, institution-building, and human capital development.

Pricing, maintenance and distribution of benefits. Another set of problems often arises after the completion of infrastructure projects. These are associated with the pricing and maintenance of the services provided, and with the distribution of benefits to recipients. Inappropriate rates charged for services provided by the capital investments, often arbitrarily low, have in many cases prevented cost recovery of capital and service provision. Subsidization of services contributes to public sector budget deficits and produces an inefficient allocation of resources. Many developing countries have not yet heeded the urging of the World Bank and other donors to adhere to financial discipline in the operations of their public enterprises.

Another problem that has yet to be adequately addressed relates to the maintenance of infrastructure. For a variety of reasons, donors are loath to provide financing for maintenance or recurrent costs. The lack of donor support combined with inappropriate recipient policies has had disastrous consequences for the condition of many infrastructure facilities. One proposed solution is for donors to make financing contingent on the country's maintenance of the project. This solution is not viable, however, when the recipient overcommits itself to many donors, a problem exacerbated by the lack of donor coordination in the financing of infrastructure projects.

Inter-linked capital projects. As discussed in the previous section, most infrastructure projects are intended to stimulate development via their linkages to other productive activities. In certain cases, however, fully capturing these benefits may require the design and implementation of several interlinked capital projects: e.g., the new port requires improved electric power supply and an enhanced transportation system to link it with markets elsewhere in the country. Similarly, the rural roads project referred to in the previous section would not have been successful in the absence of complementary investment in agricultural research and extension, the development of credit institutions, and the improved use of water resources. At one time, many development thinkers took this point to the extreme, arguing that maximization of the returns to infrastructure investment requires detailed planning of a broad range of infrastructure and related sectoral economic activities. Donors have been increasingly reluctant to engage in this kind of integrated development planning. Michalopoulos explains:

Over time the high expectations about the contributions of detailed planning to development have been tempered by two factors: (1) the realization that human resource limitations in developing countries place severe constraints on effective planning and (2) a greater appreciation of the importance of market signals in informing decisions about investment allocation.¹¹

¹¹Constantine Michalopoulos, *op. cit.*, p.127.

Distribution of benefits and impact on poverty. Finally, over the years, concerns have been raised over the distribution of recipient benefits and the perception that many of the benefits do not reach the poor. For example, the analysis of A.I.D. rural road projects done by Anderson and Vandervoort noted that the distributional impact of these projects depended on several factors, e.g., land tenure arrangements and government efforts to spread new agricultural technologies. However, selecting developmental interventions purely on the basis of their direct impact on the poor may not be a very effective way to advance the alleviation of poverty. To the extent that the project has passed a careful cost-benefit test and can be realistically projected to earn a high economic rate of return, its impact on the growth of related sectors should generate increased demand for labor, to the benefit of the poor. The main stumbling block in this process is likely to arise from policies that favor the use of capital and discourage demand for labor -- policies that are unfortunately very common in the developing world. Where such policies are in place, the most effective use of donor resources is likely to involve policy dialogue aimed at achieving a policy environment more consistent with broad-based growth.

4. Tied Aid and Capital Projects

Capital project assistance would not be so appealing to many of its proponents were it not tied in some fashion to procurement of donor country goods and services. Since virtually all project assistance (of the U.S. and other donors) is tied to procurement in the donor country, an interesting issue is why capital projects are deemed an especially valuable means of promoting U.S. exports. This section begins by giving some background on the general practice of tying aid and then discusses why using tied aid and mixed credits to finance capital projects is believed by some to be a particularly effective means of promoting U.S. export competitiveness.

4.1 Aid Tying

Because there are so many forms of tying, there are considerable difficulties in assessing its extent. The DAC classifies assistance into three categories: tied, untied, and partially untied. Table 2 shows that the U.S., with 31 percent of its aid funds reported as untied, lies somewhere in the middle range of the countries considered.

The prevalence of informal aid-tying implies that the above data probably understate the true magnitude of tied aid. On the other hand, some have argued that the DAC estimates may overstate the extent of aid-tying, at least in the case of the U.S. Preeg alleges that the numbers do not account for that portion of aid resources tied to local procurement. Nor does it account for the discretionary authority U.S.A.I.D. mission directors have to waive U.S. procurement when it is not feasible or if the cost of U.S. procurement is excessive.¹²

¹²Ernest H. Preeg, "Trade, Aid, and Capital Projects," The Washington Quarterly, 1989 Winter.

Table 2: TYING STATUS OF ODA COMMITMENTS
(1989-90 average, in percent of total ODA)

	<u>Untied</u>	<u>Partially Untied</u>	<u>Tied</u>
United States	30.9%	17.5%	40.2%
France	40.2	3.1	40.8
Germany	39.4	-.	32.5
Japan	59.6	3.0	13.8
United Kingdom	13.9	17.5	40.2
Canada	27.9	2.9	36.5

Source: DAC, 1991 Report. Note: percentages do not add up to 100% due to countries' contributions to multilateral institutions.

Economists have long been critical of tied-aid practices on grounds that they significantly reduce the real value of assistance by preventing recipients from seeking out the most cost-effective alternative source. A number of studies have been done which estimate the cost of aid tying to the recipient.¹³ These studies indicate that the excess cost margin associated with tying typically ranges between 15 and 30 percent.

4.2 Mixed Credits

Another type of tying of particular relevance to capital projects is called "associated financing" or "mixed credits." Mixed credits combine concessional assistance with commercial trade credits in order to reduce the financing costs of an export transaction. As noted by Jepma, "[b]ecause associated financing offers an excellent opportunity for the donor to serve its own export interests with the help of a domestic subsidy, it can easily develop into a protectionist device."¹⁴ As discussed below, the U.S. traditionally has not embraced the practice, an exception being the Ex-Im Bank War Chest, used primarily as a defensive strategy to limit other countries' use of mixed credits and to increase the bargaining position of the U.S. in multilateral talks. One investigator's draft report noted that an obvious danger of mixed credits is that they could encourage the diversion of foreign assistance allocations to projects where national exporters in the donor country were able to sell their product.

4.3 Helsinki Agreement on Tied Aid and Mixed Credits

As pointed out above, the U.S. traditionally has tried to lower trade- and aid-distorting practices and level the playing field on which all exporters compete. In the 1980s, the U.S. tried to get other OECD donors to end tied aid altogether. That effort failed, but the U.S.

¹³For a description of these studies, see Catrinus J. Jepma, The Tying of Aid, OECD Development Centre, 1991.

¹⁴Jepma, *op. cit.*, p. 29.

continued use of the War Chest while continuing to press others to agree to restrictions on the use of tied aid. In 1991, the U.S. and other donors concluded the "Helsinki V" agreement which, for projects above SDR 2 million: prohibits aid tying for upper middle-income countries; prohibits tied aid credits for commercially viable projects; and requires OECD consultation on all projects above SDR 50 million. With these terms in effect, the U.S. strategy will be to use the War Chest to enforce adherence to these new rules, which are seen as an important victory for the U.S. position and as consistent with Administration efforts in the Uruguay Round and other trade negotiations.

4.4 Tied Aid and Donor Export Promotion

Clearly, the primary motive for tying assistance to procurement in the donor country is to promote that country's exports. A subsidiary argument is that the promotion of donor countries' commercial interests helps to elicit domestic support for foreign assistance and that without this constituency support, funds available for assistance would likely be much smaller. The economic recession in the early 1980s caused some to focus on the donor country employment-generating impact of tied aid.

According to Jepma, one of the main findings of studies done on the subject is that tied aid accounts for a small percentage of donor countries' exports, the implication being that tied aid can only have a very limited impact on macroeconomic variables. Tying can, however, have a sizable impact on the exports of a particular industry or sector. This leads naturally to the question of which sectors should be singled out for favorable treatment. If it is weak industries that receive protection, resource allocation will be distorted from that based on international competition and comparative advantage. Supporting these industries essentially slows down the reallocation of resources toward more productive uses. If instead, strong industries are selected, one naturally is led to question why strong industries require government support. Evidence indicates that the selection of industries to which aid is channeled by donor countries is not much different from those in which the countries have a traditional comparative advantage.¹⁵

4.5 Capital Projects and U.S. Competitiveness

Finally, we turn to the question posed in the beginning of this section, *viz.*, why capital projects are believed by some to be a particularly effective means of promoting U.S. export competitiveness. One reason capital projects are favored as a means of promoting exports is that, in contrast to other forms of assistance, e.g., balance of payments support, capital project assistance offers much greater scope for tying. Even within the area of project assistance, the scope for tying appears to be greatest for capital project assistance, since capital projects tend to be capital-intensive and to embody sophisticated technology often not available from local sources. The visibility and direct linkage of U.S. assistance to exports of U.S. capital goods is viewed as a valuable boost to foreign aid. Moreover, there is a presumption, discussed in greater detail below, that capital projects tied to use of U.S.

¹⁵See studies cited in Jepma, *op. cit.*, p. 43. Also see Chapter V of the 1989 Export-Import Bank Report to the U.S. Congress on Tied Aid Credit Practices, *op. cit.*

equipment and services will lead to follow-on contracts for maintenance and spare parts and will more generally help U.S. exporters develop long-term markets.

Another reason capital projects are favored as a target of export promotion relates to the perception that the U.S. is losing its competitive edge in high-technology sectors, and that these sectors are of critical strategic importance in a world economy characterized by a "geographic broadening of the industrialization process beyond the advanced industrialized countries to the developing countries, particularly of Asia and Latin America."¹⁶ The next section examines the evidence supporting this perception.

5. The Trade-Aid Link

5.1 Impact of Foreign Aid Practices on U.S. Exports

In response to a legislative mandate contained in the Omnibus Trade and Competitiveness Act of 1988, the Export-Import Bank conducted an analysis of the impact on U.S. trade competitiveness of the tied-aid credit practices of major DAC donors, the conclusions of which are cited below.¹⁷ The intent of the Report was to determine whether the facts available on the issue warranted the implementation of a definite policy action to address the problems associated with tied aid credits (hereafter, TACs). The analysis was conducted on two levels: the macroeconomic analysis examined the effects of TACs on aggregate U.S. trading patterns and market share while the micro-analytic approach focused on the industry-specific impact of foreign aid practices.

The analysis concentrated on production and trade in four sectors to be most affected by TACs: telecommunications, railroad equipment, electric power generating equipment and mining equipment. Based on an examination of aid and trade patterns, the study concluded that there was no discernible impact of tied aid practices on interregional trade flows or market share. As summarized in the Report:

Aid and credit patterns...in the selected sectors correspond closely to traditional regional trade patterns. If anything, the patterns of Development Assistance Committee aid and OECD notifications mimic the traditional trade patterns in an exaggerated fashion; the only divergences seem to be in the direction of a much heavier focus on aid than trade in traditional market areas.

Evidence on the industry-specific impact of TACs was based primarily on interviews with U.S. company officials who were knowledgeable about company activities in international markets. An additional sector, the computer industry, was included in the case-study analysis. Among other questions, officials were asked to cite instances of sales bid but lost due to the use of TACs by foreign competitors and sales lost because the company did not

¹⁶Ernest Preeg, *op. cit.*, p. 3.

¹⁷Export-Import Bank of the United States, *op. cit.*, pp. 221-223.

bid knowing it could not match a TAC offer by a foreign competitor. Based on these responses, the Report estimated that U.S. companies have been losing \$400-800 million in export sales per year due to foreign competitors' tied-aid credit practices. (This compares with U.S. merchandise exports of \$390 billion in 1990, of which \$154 billion were non-automotive capital goods.) In some of the industries examined, e.g. telecommunications, sales to developing countries comprise a small share of domestic output and hence, overall domestic capacity was likely to be only marginally affected. In other industries, e.g., satellite earth stations, turbines, locomotives and signalling equipment, the loss of exports to developing countries was believed to have a significant negative impact on domestic U.S. production levels.

The authors of the Exim report conclude that, while unequal access to TACs may carry a potential risk for certain U.S. industrial sectors, the evidence fails to "establish a clear case of need for a priority call on public expenditure." High-technology sectors, they found, were not significantly affected by TACs. They also noted the high cost of promoting U.S. exports via mixed-credit financing. The 1987 OECD agreement on mixed credits, for example, required 35 percent concessionality which implies spending 35 cents of taxpayer money for every dollar of "reclaimed" exports.

5.2 Capital Projects and Export Competitiveness

Even if one accepts the premise that our aid program should be used to promote U.S. export competitiveness, the question which naturally follows is whether or not the financing of capital projects is the most effective means of accomplishing this objective. As discussed in the previous section, capital projects appear to provide greater scope for the tying of assistance than do other types of project and non-project assistance. Another argument in favor of using capital projects to promote U.S. exports is that such projects can generate substantial follow-on exports required to service or expand the initial facility. Preeg makes this case, while admitting the difficulty of quantifying these potential benefits.¹⁸

While tying assistance to capital projects sourced from the U.S. provides the U.S. Congress (and American taxpayers) with tangible evidence of how U.S. foreign assistance benefits the U.S., it is not necessarily the most cost-effective means of promoting U.S. export competitiveness via our aid program. For example, as borne out in the Exim study cited above, U.S. exports to developing countries tend not to be in the "leading-edge," high-technology sectors normally associated with U.S. competitiveness. Moreover, in terms of scale, direct U.S. foreign assistance has fallen over the past forty years from nearly 35% of U.S. exports to less than 1% of exports, so that the ability to have a measurable impact on U.S. export competitiveness through the aid program is debatable.

Evidence suggests that assistance directed toward policy reform has a lasting impact on U.S. export growth potential. Policy reforms designed to liberalize foreign exchange and trade

¹⁸Ernest H. Preeg, "The Tied Aid Credit Issue: U.S. Export Competitiveness in Developing Countries," The Center for Strategic and International Studies, Washington, D.C., 1989.

regimes benefit U.S. exporters by opening up markets in developing countries to foreign competition. Equally important is the effect of well-designed policy reforms on productivity and overall growth in developing countries. Growth in reforming economies generates increased demand for imports from abroad, including the U.S. A recent analysis done within A.I.D. showed that the rate of growth of U.S. exports to reforming economies was over twice the rate of growth of U.S. exports to nonreforming economies.

Relying heavily on the financing of capital projects to promote U.S. exports could have unforeseen negative effects on U.S. export competitiveness. It is widely acknowledged that the renewed interest in directing assistance toward capital projects is largely in response to the perception that other donors' activities in this area have thwarted U.S. exporters' ability to compete in certain sectors. In the past, the U.S. government has aggressively sought to limit countries' financing of capital projects via multilateral negotiations. The recent OECD agreement on mixed credits was an outcome of these efforts. If the U.S. now decides to embrace the financing of capital projects (albeit within the OECD framework), other donors are likely to react competitively by stepping up their own activities in this area. Certain developing countries might benefit if the end result is an expansion of appropriate types of aid, but the impact on developing countries as a whole is much more doubtful. The loss of widely recognized U.S. leadership and pressure in favor of serious development efforts could also dramatically impair the quality of worldwide development assistance.

Even from the perspective of U.S. exports, the outcome might well be negative. As a result of such tied-aid competition, some donors may find their ability to compete in certain sectors diminished. To some, this sort of retaliatory "aid warfare" is far-fetched, but it is largely analogous to what occurred in the "beggar-thy-neighbor" tariff wars of the 1930s. In support of U.S. use of the War Chest on a defensive basis only, Eximbank and Treasury have repeatedly cited the likelihood that the U.S. would run out of aid resources to wage such commercial battles before our competitors would.

5.3 Economic Development and Promoting U.S. Exports

A fundamental question, then, is whether it is in fact possible to pursue specific U.S. commercial interests and development objectives at one and the same time. In his Washington Quarterly article, Preeg himself points up the dangers of commercially-motivated capital projects: (1) because they are often not subjected to sound development criteria, they are often inefficient and costly in their development impact; (2) because of strong export interests, commercial considerations tend to become dominant; and (3) aid is likely to become skewed in favor of middle-income relative to low-income developing countries.

In principle, by developing and hewing to strict guidelines A.I.D. could avoid the first danger cited above. However, the second danger is closely related to the first one, in the sense that commercial pressures could at times be too powerful to resist. By claiming to be able to marry both concerns in the same project A.I.D. could in fact be inviting the sorts of irresistible pressures which would undo its development objectives. On the third point, if the objective of developing commercially-oriented capital projects were to take on a life of

its own, instead of arising from specific country-centered needs, a bias away from low-income countries might indeed result.

6. Conclusions

Unquestionably, properly designed capital projects can contribute to economic development. For some countries, in some circumstances, they address a key bottleneck to the development process. Care must be taken, however, that the policy environment in which they are undertaken does not undermine their success, that the projects are economically sound, that infrastructure can be maintained after its construction, and that other conditions are in place in order for the investment to be successful from the development standpoint.

Motivation is the primary issue with respect to capital projects. Projects undertaken because they are deemed to address a high-priority development problem, which fortunately also have a favorable impact on U.S. exports, are clearly a win-win situation. However, projects identified and undertaken primarily for their commercial advantage, and then "screened" for their development impact, are more likely to be subjected to pressures which make it difficult for development concerns to be the foremost consideration in deciding whether to go forward.

What this implies for A.I.D. is that to ensure capital projects are developmentally rather than commercially driven, project proposals should originate in the mission and be justified according to their consistency with the agency's strategy for that country. This need not be inconsistent with having a central locus of expertise in the agency on the engineering and other technical aspects of capital projects to provide advice in project design and implementation.

A further question concerns whether A.I.D. should then do a further screening on these projects to determine their commercial potential, and provide additional funding in cases where such potential exists. In light of past U.S. leadership in discouraging use of aid resources for commercial purposes, and given the Helsinki agreement which has resulted from those efforts, very little scope appears to exist for such an A.I.D. initiative. Moreover, even if it were theoretically possible for A.I.D. to identify projects which meet, first, the development criterion and, secondly, the commercial criterion, while remaining within the terms of the Helsinki agreement, evidence suggests that the impact which such a limited program might have on U.S. competitiveness would be marginal at best.

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