



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D C 20548

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INTERNATIONAL DIVISION

MAR 5 1970

Dear Dr. Hannah.

We have made a review of selected aspects of AID's assistance to the transportation sector in Latin America. The primary purposes of the review were (1) to examine into, and make observations of, AID's management and administration as they related to its transportation sector assistance efforts in Latin America and (2) to ascertain how this assistance was coordinated with the specific and overall economic and social development goals of selected Latin American countries.

AID's assistance to the transportation sector in 17 Latin American countries from July 1, 1962, through June 30, 1968, amounted to over \$500 million, most of which was directed to highway construction and maintenance equipment projects. AID has provided about \$443 million of this assistance to nine Latin American countries without the benefit of countrywide transportation studies and plans.

We noted that, in the few Latin American countries where transportation studies had been completed or were in process at the time of our review, the results in most cases showed that too much emphasis had been placed on transportation as a whole or on a particular transport mode and thereby utilized funds that might have been made available to more desirable social and economic development projects.

We reviewed in some detail AID's assistance to the transportation sector in Bolivia, Brazil, and Chile. These three countries received about \$364 million, or approximately 68 percent of the total AID transportation assistance to Latin America, during the 6-year period ended June 30, 1968. These funds were programmed without the benefit of overall countrywide transportation studies and plans. Consequently, we were unable to evaluate the effectiveness of AID's assistance to the transportation sector in these three countries.

In addition to noting the programming of transportation funds without the benefit of countrywide transportation studies and plans, we noted the following matters in Bolivia and Brazil which, we believe, merit your attention and consideration.

--We found that local currency financing for road projects had been provided without adequate feasibility and engineering

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studies and financial plans. As a result, the projects cost considerably more than anticipated and did not meet their stated objectives timely.

For example, AID made a local currency loan--equivalent to \$650,000--for the construction of a gold mining road in Bolivia. Three months after the loan for the project was made, it was found that the loan funds were deficient. The project had been approved for AID financing on the basis of a cost estimate arrived at through the use of aerial photos. No instrument surveys had been made, nor had the location of the road been established. Since construction proved to be much costlier than estimated, the road was not completed to its entire planned length. (See p. 9 of the enclosure.)

--In Brazil, the Mission had been unable to implement a major portion of its transportation projects despite the authorization of funds for this purpose. We believe that project implementation difficulties resulted largely because AID loan funds were authorized before there was complete agreement as to how the projects were to be implemented. (See pp. 12 and 13 of the enclosure.)

--In Bolivia, we found that construction problems that should have been pointed out in the feasibility or design studies had been overlooked or ignored. For example, about 6 months after a \$7 million loan for a colonization road project was signed, the Mission found that a major portion of the area to be served was not suitable for agricultural development purposes due to poor soil and flooding conditions. Despite this knowledge, AID went ahead with the original construction plans.

Subsequently, because of severe flooding, the original design of the project was changed considerably. In addition, the engineering firm which made the economic justification study of the project in 1963 reversed its position in 1967 and stated that construction was not economically feasible because of severe flooding conditions and because the colonization factor originally used to justify the project had been overly optimistic. Additional financing was approved, and AID funds for this project now approximate \$11 million. (See pp. 7 and 8 of the enclosure.)

We believe that, before AID can make a meaningful allocation of its funds in the transportation sector, the adequacy of the transportation sector must be studied in relation to the total development needs of the country. Such studies would, in our opinion, provide some assurance as to whether projects being undertaken have the highest priority, are justified in view of overall needs and resources of developing countries, and will make maximum contribution to the overall economic and social development goals.

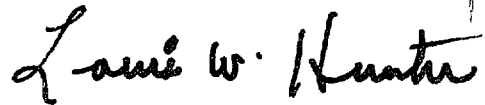
We believe that AID should condition the amount of future transportation assistance on whether recipient countries are giving increased emphasis to, and achieving specific performance in, developing overall countrywide transportation studies and plans. These studies and plans include the systematic identification of key problems hindering efficient economic transportation development, the development of a definite strategy for attacking these problems, and the establishment of priorities.

Our observations in Bolivia, Brazil, and Chile--the three countries selected for detail review--were made available to the respective Missions, and their comments have been considered in this letter and enclosure.

We shall appreciate being advised of your views on the matters presented herein and of any further action taken or contemplated by AID.

Copies of this letter and enclosure are being sent to the House Committee on Government Operations and to its Foreign Operations and Government Information Subcommittee.

Sincerely yours,



Louis W. Hunter
Associate Director

Enclosure

The Honorable John A. Hannah
Administrator, Agency for
International Development
Department of State

REVIEW OF
SELECTED ASPECTS OF ASSISTANCE TO THE
TRANSPORTATION SECTOR
IN LATIN AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

GENERAL INFORMATION

AID's assistance to the transportation sector in Latin America from July 1, 1962, through June 30, 1968, amounted to over \$500 million, most of which was directed to highway construction and maintenance equipment projects. This assistance, which was provided by loans or grants of dollars and United States owned or controlled local currencies, is summarized for 17 Latin American countries in the following schedule:

	<u>Dollars</u>	<u>Local currency</u> <u>(dollar equivalent)</u>	<u>Total</u>
	------(Millions)-----		
Argentina	\$ 37,937.0	\$ -	\$ 37,937.0
Bolivia	70,405.2	12,328.3	82,733.5
Brazil	112,247.2	73,577.2	185,824.4
Chile	20,466.0	74,303.0	94,769.0
Colombia	377.0	-	377.0
Costa Rica	2,100.0	44.4	2,144.4
Dominican Republic	685.0	12,894.0	13,579.0
Ecuador	16,012.0	9.1	16,021.1
El Salvador	2,000.0	-	2,000.0
Guatemala	783.0	2,513.0	3,296.0
Guyana	22,055.0	-	22,055.0
Honduras	5,772.0	-	5,772.0
Nicaragua	1,616.0	-	1,616.0
Panama	7,582.0	-	7,582.0
Paraguay	10,399.0	3,286.0	13,685.0
Peru	15,151.0	6,227.8	21,378.8
Uruguay	800.0	521.0	1,321.0
Regional projects (note a)	19,327.0	-	19,327.0
Total	<u>\$345,714.4</u>	<u>\$185,703.8</u>	<u>\$531,418.2</u>

a/ Projects that require regional administration. AID has determined that these projects can be managed on a regional basis more effectively and efficiently than through two or more field Missions.

In June 1967, the Brookings Institution issued a report based on an AID-sponsored 5-year examination of the role of transport in economic development. The principal conclusions reached in the report were.

- Transport is an essential ingredient of almost every aspect of development and should be an integral part of investment programs in agriculture, industry, and other sectors. Viewing transport as a separate problem has resulted in costly mistakes in the choice, timing, location, and design of projects. This has often reduced the potential contribution of transport to economic and social progress.
- Transport as an input to other sectors is part of a package of things that need to be done to improve living conditions. When these other contributing factors necessary to development are present, as they sometimes are, transport alone can have an effective impact, and when they are not already present, transport improvements may induce them. But very often measures to ensure the success of transport undertakings will have to be specifically provided for.
- The best general rule is always to tie transport projects or programs to specific development objectives and to use transport as a means to solving other problems. The fact that transport is poor is no reason to improve it. What counts is whether making it better will permit needed accomplishments in agriculture, industry, or elsewhere and whether the combination of transport and related investments will yield a net contribution to the economy as great as could be achieved by applying the same resources for other purposes.
- There are some transport requirements that follow obviously from decisions in other sectors. The problem under these circumstances is one of determining priorities and of making the right technological choices. Project analysis of transport alternatives in such cases involves a high degree of professionalism and the use of correct analytical techniques. Although AID has made improvements in its handling of these problems, much staff training is still required if AID's work is to provide a solid underpinning for decisions on loans and grants.

The Brookings Institution reported to AID in January 1967 that AID's project evaluation procedures had revealed several weaknesses. Brookings concluded that transport alternatives were seldom considered by AID, but stated that a specific project would be formulated and evaluated with such

evaluation consisting mainly of engineering estimates of costs and little economic analysis of benefits to be derived. Brookings further stated that the economic analyses contained in feasibility studies are often incorrect--benefits overstated and costs understated--and that incorrect decision criteria are being applied.

Since January 1967, AID has revised existing Manual Orders and issued new Manual Orders with a view toward improving project evaluation procedures.

NEED FOR DEVELOPMENT OF COUNTRYWIDE
TRANSPORTATION STUDIES AND PLANS

AID, during the 6-year period ended June 30, 1968, provided about \$443 million to the transportation sector in nine of the 17 Latin American countries, receiving transportation assistance, without the benefit of countrywide transportation plans. Furthermore, the adequacy or inadequacy of transportation facilities had not been studied in relation to the total development needs of the countries. Without such studies and plans, there is a lack of assurance that projects undertaken have the highest priority, are justified in view of the overall needs and resources of the developing countries, and will make maximum contribution to the overall economic and social development goals.

The lack of overall countrywide transportation studies and plans has limited AID's ability to establish project priorities. Projects have been selected for AID financing on a project-by-project basis without fitting into any overall plan or into overall development goals. We found in some instances that AID had financed transportation projects because of the lack of well-defined projects, suitable for external financing, in other sectors of the economy. In the three countries we selected for detail review--Brazil, Bolivia, and Chile--about \$364 million, or approximately 68 percent of the total AID transportation assistance to Latin America, was programmed without the benefit of overall countrywide transportation studies and plans.

Previously we reported our observations on AID's assistance to the transportation sector in the Dominican Republic as part of our overall country reviews (B-161470, May 1, 1968). Our observations relating to the transportation sector were similar to the observation included herein.

The end result of a transportation study is an overall countrywide transportation plan which should delineate the amount of transportation required to support economic development goals, the kinds of systems which are best suited to accomplish this task; the financial, organizational, and

administrative requirements for building and operating the facilities needed, and the priority of implementation. These plans should take into account the transportation needs of the country in the light of the requirements in other sectors.

The need and requirement for the preparation of studies and plans in the transportation sector of developing countries stem primarily from an increasing recognition by international lending institutions that macroeconomic planning is not enough and that it urgently needs the support of detailed analysis of individual projects. Also, the transportation systems of most developing countries are distorted due to historical and political circumstances. As a result there is continued investment in outmoded and uneconomical systems.

The status of overall countrywide transportation plans in the 17 Latin American countries receiving this type of AID assistance as of December 31, 1968, is as follows:

<u>Country</u>	<u>Overall countrywide transportation plan</u>	<u>No overall countrywide transportation plan</u>
Argentina	X	
Bolivia		X ^a
Brazil		X ^b
Chile		X
Colombia	X	
Costa Rica	X ^c	
Dominican Republic		X
Ecuador	X	
El Salvador	X ^c	
Guatemala	X ^c	
Guyana		X
Honduras	X ^c	
Nicaragua	X ^c	
Panama		X
Paraguay		X
Peru		X
Uruguay		X

^aA transportation study is under progress but the final report had not been issued.

^bNo overall countrywide transportation study was made. Studies were completed in 1967 for four states.

^cThese five Central American countries did not have overall countrywide transportation plans of their own, however, a regional transportation study was made.

We reviewed the transportation studies that had been completed or were in process. These studies sponsored by AID or international organizations emphasize that, before prudent allocations of transportation funds can be made, a countrywide transportation plan should be established. Our findings in this matter as they pertain to Bolivia, Brazil, and Chile are discussed below.

Transportation Assistance Program in Bolivia

During the period July 1, 1962, through June 30, 1968, AID's assistance to the transportation sector in Bolivia amounted to the equivalent of about \$83 million. Within the transportation sector, the major portion of AID's assistance was to road projects financed with dollar loans. AID stated that its objective was to establish a rudimentary road and air transportation network.

Our review showed that a major factor directing AID's heavy investment in the transportation sector was a lack of well-defined projects, suitable for external financing, in the other sectors of the economy.

We found that AID had attempted to assist Bolivia in conceiving sound projects in all sectors of the economy. In July 1962, AID made a \$6 million feasibility study loan to Bolivia to determine the economic potential of various development projects and to develop adequate engineering, economic, and financial data for the preparation of loan applications for external assistance. AID stated that the feasibility studies should include all sectors representing economic potential or requiring balanced economic growth, in order to break through the past concentration of economic activities on the main product of the country, tin mining.

The determination of priorities and the selection of specific projects to be studied were made by Bolivia. Through September 1968, the record showed that:

- Approximately \$5.1 million of the \$6 million had been expended or obligated for 12 transportation project feasibility studies.
- Approximately \$0.8 million had been expended or obligated for three projects in the other sectors of the economy.
- As a direct result of the loan, AID had financed or expects to finance about \$84 million worth of transportation projects. None of the projects in the other sectors, conceived through this loan, had been financed by any source.

In September 1965, an international organization, in reviewing the progress of economic development of Latin American countries, questioned the pattern of external financing in Bolivia whereby substantial funds had been invested in road projects. It was pointed out that:

- Bolivia had basic transportation facilities which were in tune with the current and near future needs of the economy.
- The fact that the volume of agricultural products shipped to the Altiplano from the Santa Cruz area from 1955 to 1963 had remained practically constant indicated that the basic premises underlying past highway transportation investment plans in Bolivia--namely, the projected movement of large volumes of agricultural and forest products to the Altiplano from the eastern and north-eastern plains areas associated, in part, with colonization plans--had failed to be borne out.
- Future investments in the transportation sector were likely to have a low economic return compared with other possible investment opportunities. A need existed for a general transport survey to provide the basis for better planning of transport investments.

Another international organization stated in January 1967 that no new major investment decision in the transportation sector should be undertaken until the findings were known of an over all transportation study it was performing. It pointed out that (1) major efforts would be required in defining priorities for meeting the large claims on resources by infrastructure, both in the economic and social fields, and (2) investment planning in Bolivia had been weak due, in part, to an unrealistic approach toward planning.

Our review of certain large dollar-financed transportation projects showed that project costs had been grossly underestimated and caused additional financial needs and that construction problems which should have been pointed out in the feasibility or design studies were overlooked or ignored. We also found that economic factors justifying construction of these projects were unrealistic and unreliable. We believe that these deficiencies were attributable primarily to AID's reliance on poor feasibility studies and to the lack of well-defined projects, suitable for external financing, in other sectors of the economy.

The manner in which priorities were set and projects were selected for external financing can best be illustrated by a statement by AID in June 1966 when it proposed a loan for a transportation project.

"After critical review of the benefit-cost study, it is our conclusion that these ratios are valid and that the project is feasible. This conclusion is reinforced *** by a comparison of this project with other road projects for which feasibility reports are available. Although such a comparison is difficult, in the absence of an over-all transportation study in Bolivia, it was felt to be necessary to establish relative merits and priorities before recommending this loan for approval. This comparison has satisfied the loan committee that there are no better alternative uses for these funds at this time among the transport projects available."

Subsequent to the signing of this loan agreement, the feasibility study for this project was described by a responsible AID official as being near to unreliable and inaccurate. This conclusion had been confirmed by Bolivia and by the consultant firm which had prepared the feasibility study. As stated by AID, the priority of this project was established by comparing this project with other road projects for which feasibility studies had been made. Our review also showed that AID did not compare the priority of this project with projects in the other sectors of the economy, because of the almost complete lack of well-defined projects, suitable for external financing, in the other sectors.

Each of the three AID dollar-financed road construction projects in Bolivia encountered a substantial increase in construction costs primarily due to poor technical investigation performed in the feasibility study or design stage or to the outdated feasibility study. As a consequence, both AID and Bolivia were required to provide additional scarce funds to complete these projects.

AID financed both paved roads and all-weather gravel roads for colonization purposes without making adequate determination as to which type of road surface produces the greatest degree of colonization. Mission records indicated that in Bolivia all-weather gravel roads had been quite successful in inducing colonization. We believe that, because of the marked difference in costs between the two road surfaces, such determinations should have been made prior to approving the loans.

We found the colonization factor used, in part, to justify certain large costly road projects to be unreliable or unrealistic. Road projects had been justified for colonization purposes in areas where the land to be opened was not suitable for agricultural development purposes. For example, about 6 months after a \$7.2 million loan was signed--August 1, 1963--for an access road project, the Mission became aware that a major portion of the area to be served by one of the two roads in the project was not suitable for agricultural development purposes, due to poor soil and flooding conditions. Despite this knowledge, AID went ahead with the original construction plans.

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Because of severe floods in the area in 1966 and 1967, the original design for the project was changed considerably. The engineering firm that made the economic study justifying construction of the project in 1963 reversed its position in 1967 and stated that construction of one of the roads was not economically feasible, because of severe flooding conditions in the area and because the colonization factor originally used to justify the project had been very overoptimistic. Construction of the project, which started late in 1964, is still under construction, and AID has recently approved additional financing to.

- cover shortfalls in the original estimate,
- construct river defense works,
- complete a bridge partially destroyed by floods; and
- pave part of the project.

The Mission Director informed us in April 1969 that completion of the bridge and construction of 22 kilometers of the road were of marginal economic feasibility. However, he stated that it makes more sense to have this work done with additional financing, rather than have the potentially embarrassing possibility of a bridge remaining as an unfinished monument to a frustrated Alliance for Progress.

A similar situation exists with another large colonization road project. In January 1964, AID had data which showed that land near the project was not suitable for economic development, because of poor soil and flooding conditions. However, AID did not question the adequacy of the land for agricultural development described in the feasibility study as well suited for such purposes and approved a loan for construction of this project in September 1964. Extensive soil investigation studies completed in 1967 concluded that most of the area to be served by this road was not suitable for agricultural development purposes. The report stated that the area most suitable for colonization was not in the area to be served by the road.

We found also that AID's local currency financing for most transportation projects had been provided without adequate feasibility and engineering studies and financial plans. As a result, some of these projects did not meet their stated objectives.

BEST DOCUMENT AVAILABLE

For example, on June 30, 1964, AID made a local currency loan for the equivalent of about \$650,000 for construction of a road in a gold mining area. In October 1964, a Mission engineer pointed out that the loan funds were deficient. By January 1965, it was established that slightly over the equivalent of \$1 million was needed to construct the project. Mission records showed that the original cost estimate for this road was done in a hurry and that the amount estimated was quite nebulous since only aerial photos were used to arrive at the estimated cost. The records showed also that no instrument surveys had been made over the bulk of the project, no soil borings had been made, and no actual location of the road had been established. Nor had the need and length of the bridges and spans been established.

Consequently, construction proved much costlier than estimated and, as a result, the road was not completed the entire length since the original financing was no longer sufficient to cover all the planned work. Since the economic justification for this road was based on the entire area served, the failure to complete the entire length of the road would cast doubt on the economic value of the portion constructed.

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In November 1968, we brought our observations to the attention of the Mission. The Mission Director informed us in April 1969 that the Mission had a good idea of the country's transportation problem, based on a series of subsector studies together with some common sense.

Because of the limited amount of resources available for overall economic and social development, it is essential, we believe, that funds be allocated only to the highest priority projects within the transportation sector, as well as the other sectors of the economy. We do not believe AID has done this.

Transportation Assistance Program in Brazil

During the period July 1, 1962, through June 30, 1968, AID's assistance to the transportation sector in Brazil amounted to about \$186 million. Within the transportation sector, AID placed primary emphasis on highway construction and maintenance equipment projects.

The record shows that the Mission's overall project loan portfolio is mostly in power and transportation, despite the fact that these two sectors have been internally well financed by the Government of Brazil. We found that a lack of well-defined projects in other sectors of the economy was a major factor directing AID's emphasis in the transportation and power sectors.

Although Brazil has invested heavily, with its own resources, in the highway transportation sector, there exists some doubt as to the economic soundness of some of these investments. Because Brazil has no overall countrywide transportation plan, the priority of the projects selected for financing could not be determined. Furthermore, we found that, at the state level, only four states of the 25 states and territories had a transportation plan, and these plans were completed as recently as 1967.

In March 1965, an international organization issued a report concerning the Brazilian transportation sector. The report pointed out, in part, that.

1. There was no effective mechanism to coordinate the various transportation modes.
2. Transport investment in Brazil had not been based on a systematic transport plan taking into account needs and resources. Even in the selection of individual projects, the Government could not be sufficiently certain that they were, in fact, justified.
3. Roads in much of Northeast Brazil were not undertaken as part of a rational plan, and much of the Northeast road network was unrelated to the economic requirements of the region.
4. Brazil had an overall transportation plan only in the sense of allocating certain funds to each mode of transport. In general, highway planning has been accomplished with inadequate attention to economic factors.

In August 1965, the Mission informed AID/Washington that the major handicap in the development of a planned highway improvement program in Brazil was the lack of an overall transportation plan based on an analysis of national and state systems. The Mission stated that there was a definite need for a coordinated study of national and state highways, which included a determination on the basis of an engineering and economic study of the needs for maintenance, betterments, and new construction, with establishment of priorities. During the 3 fiscal years ended June 30, 1965, AID provided \$86.5 million of assistance to the transportation sector.

The Mission informed us that, when it began formulating priorities for development lending in the transportation sector, it found the Brazilian highway transportation sector to be in urgent need for both investment and cost-reducing technical assistance. AID stated on the other hand that, in railroads and ports, not only were the technical assistance problems almost insuperable, but also there was overinvestment in many cases, through construction of uneconomic capacity.

We believe that, in addition to AID's above-stated reasons for investing so heavily in the transportation sector, there were three other major factors which influenced AID's decisions for committing funds:

- a \$131 million, 2-year investment commitment to Northeast Brazil,
- the relatively large dollar component of highway construction and maintenance equipment projects, and
- the lack of well-defined projects, suitable for external financing, in other sectors of the economy.

With regard to the \$131 million Northeast commitment, the Mission informed us that.

"One word should be said about AID's transport landing in the Northeast. These loans were part of the \$131 million commitment *** to the Northeast. This commitment was made when there was a great sense of urgency in Brazil and the U.S. about the extreme poverty of the region, and the political turbulence that was growing out of it. It was hoped that the investments in highway construction and maintenance would relieve somewhat the strangulated development of the region, and increase the opportunity for labor mobility. *** There was considerable urgency in committing funds as rapidly as was possible. This was a highly difficult task because of AID's newness to the Northeast, and because of the delays and problems caused by having to work with both *** [the Federal] and the nine individual state highway departments."

We previously commented on some of the inadequately planned projects undertaken to fulfill this commitment in our report on "Review of Administration of United States Assistance for Capital Development Projects in Brazil" (B-133283, May 16, 1968).

The strategy used in planning the fiscal year 1966 AID program illustrates the attraction of large dollar component projects. A lending program of \$150 million was contemplated. The planned strategy was to concentrate on a limited number of projects of a relatively large dollar amount, and the core of the program to be a highway equipment loan. The economic rationale was that highway construction had far surpassed all other phases of transportation development and that, whatever the merits of this development, an extensive investment in construction could be dissipated without proper attention to maintenance. Highway maintenance equipment loans to three states were authorized in June 1967. The Mission was experiencing an extreme amount of difficulty implementing these loans,

and, at the conclusion of our field review in December 1968, the loans had not been signed. AID was undertaking these loans despite its unfavorable experience with other highway equipment loans.

AID's concentration in such infrastructure projects as highway and power was described by a responsible Mission official in 1966 as "more a reflection of the ability of projects in this sector to sop up dollars than it is a matter of development strategy."

With regard to the lack of well-defined projects, a Mission evaluation of project lending, made in March 1968, stated that, since the flow of large capital projects was scarce in Brazil and since pressure was high to obligate project applications rapidly, AID had almost no choice. The evaluation commented that there were not enough projects to allow weeding out the less feasible ones, nor was there enough time to rework them into desirable proportions. Hence, many projects of doubtful value were approved. It was stated that, in any attempt to diminish the misallocations of project lending, it was crucial that the supply of project applications be increased and that the increase in the flow of projects might also improve the quality of economic analysis on the part of the Mission. Since economic reasoning thrives on the concept of choosing between alternatives, it is difficult for such analysis to flourish where there are no alternatives.

Our review showed that the Mission was experiencing implementation difficulties in the majority of the AID-assisted transportation projects. We believe that a major cause behind these implementation difficulties stems primarily from a premature authorization of AID funds. We found several instances where funds were authorized just prior to the end of the fiscal year.

1. Of the 10 active transportation dollar project loans as of February 28, 1969, eight were authorized in June. Seven of these loans were authorized from June 21 through June 30.
2. As of February 28, 1969, no funds had been committed or disbursed for the last four transportation dollar project loans authorized in June 1966 and June 1967.
3. Of the total of \$108.1 million authorized from June 1964 through June 1967 for the active transportation dollar project loans, only \$36 million had been disbursed as of February 1969. Also, as of February 1969, the funds authorized for these projects had been reduced by about \$16 million.

Loan funds were authorized before there was complete agreement as to how projects were to be implemented. For example, \$31.6 million highway maintenance equipment loans were authorized late in June 1967, before agreement was reached with respect to the equipment to be imported

or with respect to transfer of national highway maintenance responsibility to the individual states. AID considered this transfer of responsibility absolutely essential for successful implementation of the project.

As of February 1969, the loans were still unsigned and the authorized funds were reduced to about \$21 million, due to further refinement of the list of equipment to be imported. We were informed that an understanding had been reached whereby agreements would be entered into by December 31, 1969, which would provide for gradual transfer, as conditions permit, of maintenance responsibilities. The deadline previously had been December 31, 1968.

We also found that local currency financing for road projects had been provided without adequate feasibility and engineering studies and without adequate assurance as to the timing of the availability of funds needed to complete projects. As a result, the projects cost considerably more than anticipated, and some of these projects did not meet their stated objectives timely.

For example, in November 1964, AID authorized a local currency loan equivalent to \$18.3 million subject to the availability of U.S.-owned local currency to assist in completion of a 4-lane highway between two major cities. Local currency equivalent to \$7.4 million was provided under the loan agreement, and the difference was made up with U.S.-controlled local currency. Subsequently, it became evident that funds were inadequate, and Brazil was unable to budget the additional financing needed for completion of the project. In 1967, the road was completed 13 months behind schedule after AID provided the equivalent to an additional \$16 million in U.S.-controlled local currency. AID financing for the project rose from an estimate of about \$18 million to about \$34 million.

Although inflation was a factor in increasing the cost of this project, we found that other factors were the inadequacy and lack of project feasibility and engineering studies and financial plans. Construction contracts were awarded with a minimum of plans, based upon a budget estimate, rather than a realistic cost estimate. The consultant to the project cited such things as the lack of information on material sources and haul distances, lack of design of cut sections and consequent slides, and lack of provision for roadside drainage, as having contributed to swell the estimated cost beyond the initial estimate.

The Mission Director informed us in February 1969 that, where the local currency was Brazil-owned (U.S.-controlled), the Mission did not physically control the funds and that its role was limited to agreement with Brazil on the use of funds for development projects to be undertaken. He stated that the Mission attempted to satisfy itself that the project was technically sound and economically justified and that it was properly implemented. Nevertheless, he stated that the Mission did not have the same degree of control over these projects as it had in the case of loans from AID's own resources.

Transportation Assistance Program in Chile

From July 1, 1962, through June 30, 1968, AID's assistance to the transportation sector in Chile amounted to the equivalent of about \$95 million. The major portion of this assistance was in AID-controlled local currency (the equivalent of about \$74 million) generated primarily from program loans. The transportation sector was the major recipient of such local currency allocations.

We found that no determinations had been made, at the time the local currency was allocated, as to the extent to which AID-assisted transportation projects would contribute to the overall economic and social development of the country. A lack of well-defined projects in the other sectors of the economy was a strong factor in directing the allocation of AID-controlled local currency to the transportation sector.

AID was aware for many years that the transportation sector investment budgets, submitted by Chile, contained many low-priority projects. Furthermore, no clear understanding existed between (1) transportation and economic and social goals, (2) the contribution that improved transportation could make to increased production, and (3) the interrelationship of transportation projects to investment decisions outside the transportation sector. Also, transportation goals have not been translated into identified and well-justified projects.

In justifying the 1964 program loan, AID stated that its intention was to negotiate with Chile and agree on high-priority investments for the local currency generated by the loan. However, we found that the transportation sector received the highest local currency allocation from this loan and that AID made this allocation without making any determinations as to the extent to which the individual transportation projects would contribute to the overall economic and social development of the country.

Concerning the 1965 program loan, AID pointed out that Chile intended to formulate the sector distribution of its 1965 public investment program to reflect the importance of the more productive sectors of the economy. The Mission stated that its intention was to direct the use of the local currency to projects and programs in agricultural production, marketing and processing, industrial production and mining, and secondary and technical education and training.

At the time the program loan was considered, the Mission pointed out that drastic cuts were needed in the road transportation sector until higher standards of economic analysis of new projects were developed. It was recommended that investments in the transportation sector be cut heavily. However, we found that, in the sector allocation of local currency generated from the 1965 program loan, transportation received more than

double the amount of any of the other sectors. Furthermore, no determinations were made as to the extent to which the individual projects would contribute to the overall economic and social development of the country.

In May 1965, the Mission informed AID/Washington that successful Chilean Government investment decisions in the future depend, to a large extent, upon the revising and updating of the development plan, a project which had not yet been completed. The Mission stated that it believed that, unless the selection of public sector investment projects were systematized and coordinated with overall development needs, much of the expanded investment program, begun in 1965, would be dissipated in low-priority projects. The Mission stated further that Chile would have to develop projected levels of investment and sectoral priorities, if the final list was to consist of projects directed toward development plan objectives and priorities, rather than a random list of project presentations by sector.

In regard to the 1966 program loan, AID stated that local currency allocations would be used to improve the quality of the investment budget. AID/Washington had previously pointed out to the Mission that, instead of attributing the local currency to the best of the available projects which were already in the budget, AID should be in a position to introduce top priority programs of an institutional and structural nature which the recipient government might not otherwise include in the investment budget. We found that the transportation sector again received the largest allocation of local currency and that about 89 percent of the local currency allocated to the transportation sector went to on-going transportation projects already included in the investment budget.

In June 1966, a review of the public works budget performed under a mission contract pointed out that none of the road projects scheduled in Chile's 1966 investment budget had adequate economic justification. In essence it recommended that anything that can be deleted from the highway budget this year is desirable.

Our review showed that the amount of local currency AID allocated to road projects in that year's investment budget was almost double the amount that Chile originally requested from AID. Furthermore, two road pavement projects, specifically identified by the above review as not having adequate economic justification, were subsequently financed, in part, by 1966 program loan local currency. In all, AID allocated about the equivalent of \$1.7 million of local currency for the paving of these two road projects which were generated by the 1964, 1965, and 1966 program loans.

In March 1966, an AID report pointed out that different standards had been developed by the Chilean Government for the preparation and evaluation of transportation projects--one for external financing and another for those financed by internal resources. The report pointed out that only a small fraction of the total transport investment was financed by foreign lenders. As a result, low-priority projects having inadequate plans and standards often have been selected for internal financing despite limited Chilean resources.

In attributing AID-controlled local currency to projects, it appears that AID's prime motive is United States identification with sound technical projects rather than financing projects on a priority basis. For example, in August 1964 a Mission official stated that:

"Since the attribution of Program Loan *** [local currency] to projects will have little effect on *** [Chile] resource use, and is principally being done for *** [U.S. Government] public and congressional relations purposes, there is an evident necessity to identify our assistance with the best available projects."

A Mission engineer responsible for approving projects for local currency financing has informed us that he is concerned with selecting sound technical projects free of potential construction problems. He has further stated that he assumes that every project presented to the Mission by the Chilean Government has high priority and therefore no Mission review is made of the project priority or economic feasibility.

With regard to the transportation sector in Chile, the record clearly shows that AID has been aware for some time.

- that there has been a need for a slow down on road investments and for higher standards of economic analysis of projects,
- that roads provide the greatest latitude for wasteful use of resources and that the transportation and housing sectors have been the most popular sectors for political spending; and
- that transportation projects have been dispersed over a series of widely separated and disconnected points.

In view of limited resources available to both AID and Chile, it seems that the large allocation of local currency to the transportation sector on the basis described above would not be in consonance with the stated development objectives of both Chile and AID.

We believe that, to the extent possible, AID has the responsibility to encourage a prudent, practical, and properly directed investment budget and could exercise this responsibility, in part, by insisting that AID-controlled local currency be allocated to higher priority projects and to the more productive sectors of the economy.

The Mission Director informed us that the AID program has supported technical assistance projects to improve transportation planning, policy, and project selection. He stated that, under this program, the transportation plan for 1968-70, which provides the first complete analysis of Chile's transport sector, was prepared and was published in May 1968. Although AID's technical assistance efforts in the transportation sector have been directed to improving these problem areas, we found that the recently developed 3-year transportation plan (1968-70) had not been refined to a point where specific projects were identified and priorities were established.

We were informed also by another AID official that, since the local currency generated by program loans was such an insignificant part of the overall Chilean budget, it did not provide sufficient leverage to effect changes in Chile's expenditure pattern.