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ESTUDIOS CONJUNTOS SOBRE INTEGRACION ECONOMICA LATINOAMERICANA

(ECLIEL)

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A PROPOSAL
FOR RESEARCH
ON
EDUCATION IN LATIN AMERICAN
ECONOMIC DEVELOPMENT
595 - 567

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BY
THE ECLIEL PROGRAM

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**FOR INFORMATION
CONTACT:**

Joseph Grunsald
General Coordinator
ECIEL Program
The Brookings Institution
1775 Massachusetts Avenue, N.W.
Washington, D.C. 20036
Telephone: 202/797-6159

CONTENTS

Preface	1
Outline of the Project	6
Joint Studies	
The Determinants of Schooling	10
Costs and Financing of Education	19
The Pilot Studies	24
The Modern Sector	27
The Urban Traditional Sector	30
The Rural Sector	33
Integration of the Studies	37
Research Schedule	39
Budget Estimates	41
References	47
Selected Latin American Bibliography	50

P R E F A C E

At the Twentieth ECIEL seminar held in San José, Costa Rica in July 1973, twenty of the twenty-eight ECIEL institutions decided to participate in a major study in the field of education and development, provided adequate resources could be obtained. (A list of the institutions, which covers sixteen Latin American countries, is attached.) Several preliminary working papers were presented at that seminar and it was agreed to explore the field further with the view of preparing a project proposal. A working group was appointed consisting of the following persons: Adolfo Canitrot (Instituto Torcuato Di Tella, Argentina), Claudio Castro (Planning Ministry, Brazil), Adolfo Figueroa (Centro de Investigaciones Sociales, Económicas, Políticas y Antropológicas, Catholic University of Peru), Alejandro Grajal (Centro de Estudios del Futuro de Venezuela, Venezuela), Ernesto Schiefelbein (Regional Employment Program for Latin America and the Caribbean; International Labor Organization, Chile), and Marcelo Selowsky (International Bank for Reconstruction and Development). Denisard Alves (Instituto de Pesquisas Econômicas, Universidad de Sao Paulo, Brazil) joined the group later.

The working group met in early November after resources for the planning of the project became available. With the participation of members of the ECIEL coordination, a number of general research questions were outlined. Participating ECIEL institutions sent additional proposals and reactions about the planned project to the ECIEL coordination.

A second workshop was held in early January 1974, just prior to the Twenty-First ECIEL seminar in Rio de Janeiro. Eight working papers were presented for discussion to the workshop which was attended by most members of the originally appointed working group, the full ECIEL coordination team and outside consultants. (A list of persons participating in the Rio workshop is attached.) On the basis of the discussions at the meeting, a paper was prepared which constituted the framework for the proposed project and which was presented to all the ECIEL seminar participants. The research framework was reviewed in working meetings and individual sessions with staff members of ECIEL institutes committed to participate in the proposed studies. Following the seminar, several ECIEL institutes presented to the coordination outlines of research avenues together with some indications of data and resource availabilities.

During March 1974, Adolfo Canitrot, Claudio Castro and Philip Musgrove prepared preliminary drafts of proposals for specific studies in the project, derived from the previous workshop discussions and from the further reactions received from the participating ECIEL institutes. These drafts were reviewed by the consultants who attended the January workshop. Martin Carnoy, Richard Eckaus, and Finis Welch gave especially helpful comments. Their critiques were the basis for revisions by Jorge Sanguinety and a final rewriting by Philip Musgrove of the drafts which form the basis of the present proposal.

LIST OF ECIEL INSTITUTES
WHICH EXPRESSED THEIR INTENTION
TO PARTICIPATE IN THE PROPOSED PROJECT

<u>Country</u>	<u>Institution</u>
Argentina	Fundación de Investigaciones Económicas Latinoamericanas (FIEL) Instituto Torcuato Di Tella
Bolivia	Instituto Boliviano de Estudios Económicos (IBEE) - La Paz Instituto de Estudios Sociales y Económicos (IESE) Universidad de San Simón - Cochabamba
Brazil	Instituto Brasileiro de Economía Fundacao Getulio Vargas Rio de Janeiro Instituto de Pesquisas Económicas Universidad de Sao Paulo
Central America	
Costa Rica El Salvador Guatemala Honduras Nicaragua	Secretaría Permanente del Tratado General de Integración Económica Centroamericana (SIECA)
Chile	Centro de Estudios de Planificación Nacional (CEPLAN) Universidad Católica de Chile Departamento de Economía Universidad de Chile Instituto de Economía Universidad Católica de Chile
Colombia	Centro de Estudios Sobre Desarrollo Económico (CEDE) Universidad de los Andes
Costa Rica	Instituto de Investigaciones Escuela de Ciencias Económicas y Sociales - Universidad de Costa Rica

<u>Country</u>	<u>Institution</u>
Ecuador	Instituto de Investigaciones Económicas, Pontificia Universidad Católica del Ecuador
	Junta de Planificación
Mexico	Centro de Estudios Educativos
	El Colegio de México
	Dirección General de Estadística - Ministerio de Industria y Comercio
Paraguay	Centro Paraguayo de Estudios de Desarrollo Económico y Social (CEPADES)
Peru	Centro de Investigaciones Sociales, Económicas, Políticas y Antropológicas (CISEPA), Pontificia Universidad Católica del Perú
Uruguay	Departamento de Investigaciones Económicas - Banco Central del Uruguay
Venezuela	Centro de Estudios del Futuro de Venezuela

List of Participants in
EDUCATION AND DEVELOPMENT WORKSHOP
Rio de Janeiro, Brazil January, 1974

WORKING GROUP

Canitrot, Adolfo
 Instituto Torcuato Di Tella
 Buenos Aires, Argentina

Castro, Claudio de Moura
 Ministro de Planejamento
 Rio de Janeiro, Brazil

Ekerman, Raul
 Instituto de Pesquisas Económicas
 Universidad de Sao Paulo
 Sao Paulo, Brazil

Figueroa, Adolfo
 CISEPA
 Lima, Peru

Meyer, Arturo
 OAS
 Buenos Aires, Argentina

ECIEL COORDINATION

Buttari, Juan J.

Ferber, Robert
 (also University of Illinois)

Grunwald, Joseph

Herrera, Felipe
 (Rio de Janeiro, Brazil)

Musgrove, Philip

Salazar, Jorge

Sanguinetty, Jorge

CONSULTANTS

Carnoy, Martin
 Stanford University
 Stanford, California

Eckaus, Richard
 M.I.T.
 Cambridge, Massachusetts

Schiefelbein, Ernesto
 PREALC, ILO
 Santiago, Chile

Welch, Finis
 University of California
 Los Angeles, California

OBSERVERS

Jallade, Jean Pierre
 International Bank for
 Reconstruction and Development
 Washington, D.C.

Myers, Robert
 Ford Foundation
 New York, New York

Selowsky, Marcelo
 International Bank for
 Reconstruction and Development
 Washington, D.C.

EDUCATION IN LATIN AMERICAN ECONOMIC DEVELOPMENT
AN ECIEL RESEARCH PROPOSAL

Outline of the Project

The member institutes of ECIEL propose to investigate the relations between education and the economic and social development of their respective countries. Because the subject is so vast, some limitations must be imposed before research topics can be defined. "Education" will refer primarily to formal schooling, with some attention to apprenticeship and job-related training. The aspect of "development" to be emphasized is the level and distribution of income. Income distribution is of increasing concern in the region, as development ceases to mean simply growth in per capita income, and it is also the subject of a current ECIEL study.

There are two major links between education and income distribution. The first is that education generally raises the incomes of individuals. If it does this by making them more productive, it increases total income as well as affecting its distribution. (Education may however simply give people access to better-paying jobs, even displacing other people from them; then there is a distributional effect but no contribution to development.) To the extent that education meets needs for educated labor in certain sectors or industries, it also affects the composition of income and growth. The second link is that higher incomes make it easier for people to finance education for themselves or their children.

If both these mechanisms operate, then education becomes an important way of perpetuating the income distribution from one generation to another. It may also be a means of modifying that distribution, particularly if the way education is financed has important distributional consequences.

It is proposed to investigate these two links separately. One side of the project will treat the effects of education in different sectors of the economy. The other will consider the educational system itself and the factors determining the amount of education received by individuals. This separation permits manageable studies to be defined, which in addition to providing information and analyses that may be useful in the formation of public policy, can serve as a basis for later investigations of the varied and complex relations between education and development.

The first part consists of two studies, which can be undertaken largely or entirely with existing information (including data gathered in previous ECIEL projects). Partly for that reason and partly because of greater conceptual simplicity these two studies can be undertaken jointly by most or all ECIEL institutes collaborating on the project.

(1) Costs and the financing of the educational system. Here the object is to discover what it costs to produce the education people receive, how different costs are related to differences in quality or in efficiency, and how these costs are met. The analysis will be based on data generated by the school system.

(2) Determinants of the amount of schooling received by people now of school age, and of the expenditure on education. Here the object is to

relate schooling to characteristics of the individual and his family, while controlling for differences in the supply of schooling available.

The second part of the project will be treated quite differently. There is a wealth of evidence that education raises income, but little knowledge of the mechanisms involved or of their relation to other factors. Therefore, three pilot studies will be undertaken, each in one or two countries, to explore these questions.

(3) Education in the modern urban sector. Here the object is to discover the importance of education to the acquisition and productivity of employment in the modern sector, and the consequences for income distribution in that sector.

(4) Education in the traditional urban sector. Here the object is to learn how education affects people's entry into this sector (by rural - urban migration) and their exit from it (to employment in the modern sector), as well as to judge its effect on employment and income distribution within the sector.

(5) Education in the rural sector. Here the object is to understand how education is provided and obtained in rural areas, and how education affects employments, incomes, and the propensity to migrate.

Each of these pilot studies will require considerable methodological development and the conduct of new surveys to obtain the desired information. At a later stage, the findings will be analyzed to see how education affects the distribution of income among sectors.

Another group of studies, which is not described in this proposal but which is of importance for the aspects of development less directly related to income generation and distribution, concerns education and family behavior.

It is hoped to analyze in future studies the relation of education to saving, fertility, nutrition and health: all these are connected to income, but are also of direct importance for human welfare.

The study of education in the process of economic development is a new field of inquiry everywhere, but in Latin America in particular few economists have had significant experience in this area. There is an abundant literature on education in general (for Chile alone, a bibliography - not appended here - containing 764 entries for the period January 1970 to October 1973 was presented to the ECIEL seminar in Rio de Janeiro in January 1974): nonetheless Latin American work relating education to development is limited. Moreover, most existing studies do not consider the questions which now seem important and to which the present proposal is addressed. (See the appended Selected Latin American Bibliography; references to the studies mentioned in the text of this proposal, which are more concerned with these questions but which are mostly non-Latin American are appended separately.)

It should not be surprising that the ECIEL institutions have had little, if any, opportunity to work in this field. Thus an important by-product of the proposed studies will be a mutual learning process and the development of research capacity in Latin America which is expected to contribute to better formulations of policies in education and related areas.

In all the studies to be undertaken, the object is to add to substantive knowledge, to derive insights and conclusions with implications for policy, and, as a byproduct, to use the ECIEL network to spread and strengthen the capacity for valuable economic analysis of the region's development needs.

The Specific Studies; Joint Studies

I. THE DETERMINANTS OF SCHOOLING

Introduction

The amount of schooling received by an individual, although affected by many non-market factors, can be regarded as determined by demand and supply, just as for any other good or service. It is, however, difficult to distinguish demand and supply, unless strong simplifying assumptions are made about supply (such as that it is perfectly elastic at a given cost). It is analytically much easier to distinguish between those determinants originating in the household and those originating outside it, as in the labor market and the educational system: the former largely coincide with demand, while the latter mix demand and supply considerations.

A second distinction is between the number of years of schooling (and the type of schooling) received by an individual, and the amount currently spent by him or by his family to obtain it. Such expenditures are not uniquely related to the schooling received, because of differences in cost among types of schools, among different places, and over time. The cost of schooling in foregone income also varies according to the level and type of education already received, and to other characteristics of the individual or household. The two variables differ also in that schooling is a stock, while expenditures are a flow.

Research Objectives and Methods

Years of Schooling Received

The chief question to be answered is: what determines the number of years of schooling obtained by an individual (with secondary emphasis on the type of schooling)? For a group of people facing essentially the same

conditions of supply (physical availability, quality and cost of schooling), this question can be largely answered with information about the individual and his family, taking account particularly of the following variables: sex of the individual, income of the household, number of members, number of children of school age, education, age and occupation of the parents. Under these equal supply conditions, it is differences in demand which determine who goes to school. When supply conditions vary across the population studied (either spatially or over time), differences in these conditions must be taken into account. More generally, external factors as well as household characteristics must be considered. The most important of these are the supply of schooling, and the prospects and conditions of employment for school-leavers. The latter influence both the cost of schooling and the return to education, while the former (supply) can be considered to affect only costs.

Both of these extra-household effects can in principle be analyzed by time-series data, but it would be difficult to separate the intra-household and extra-household effects over time, except in studying the short-run effect of changes in employment or income on enrollments. When unemployment rises, children may have to leave school, or delay entering it, in order to help support the household. On the other hand, when unemployment is high the indirect costs of staying in school (in income foregone) diminish, and the demand for education may rise because the educated suffer less unemployment. Simple relations can be estimated from aggregate data between economic conditions and enrollment rates, but the distributional impact on schooling received can be better studied if household data are also used. Time-series results can be complemented by comparative (inter-regional, inter-national or inter-group) cross-section relations.

Changing economic conditions may also affect the expectations of individuals and their families, and therefore their willingness (apart from their ability) to acquire education. This effect might be studied by comparing cohorts of parents with similar educational levels, to see whether there are systematic differences in their determination of the schooling their children receive. Such an effect might not, however, be separable from the effects of income and age.

It is not possible simultaneously to take account of differences in intelligence or "educability" unless such information is available in school records and the individuals tested can be identified so that they or their families can be interviewed. This extension of the analysis is desirable, but is costly to undertake and may, when many variables are considered together, be difficult to interpret. A simpler approach is discussed below.

Given information about the individual and the household and the relevant factors, the basic objective can be put in two slightly different forms: (1) to explain the schooling of an individual, and (2) to discriminate among individuals with different levels of schooling at the same age (in order to remove purely inter-generational effects). The first requires multivariate regression, using as the dependent variable children's years of schooling, or the years deflated by age, or the educational "deficit" (expected less actual schooling, given age), or a similar measure. In the independent variables, one must choose related measures of income and of household size: whether total income per capita, or income per adult equivalent consumer is appropriate, for example, and other explanatory variables. To the extent that parents educate their children in order to raise their "quality" and usefulness, substitution occurs between the number of children and their quality, including their education, at a given income. It may also be impor-

tant to take account of age differences among children in a household.

Given very imperfect capital markets for financing private educational expenditure, a family's ability to educate its children may depend on their spacing as well as on their number.

External factors enter the regression analysis whenever observations are drawn from different places or times, or whenever household observations are grouped for analysis, with the groups distinguished by different supply or labor market conditions. Appropriate independent variables must be constructed to measure supply, using information obtained from the school system.

All the variables discussed so far can be observed. It might also be valuable to take account of two unobservable variables: there are the permanent or normal income of the household (correcting for transitory effects in the observed income, which are likely to be large in short-period data), and the income expectations which a family has for its children. Both can be estimated (by regression analysis) from the observed data for all households together, although there are some difficult methodological questions to resolve in doing so. In particular, to judge the income which a family expects for its children as a result of their education, assumptions must be made about the horizon employed (whether lifetime earnings or initial out-of-school income) and about the dependence of such expectations on the careers of parents and on changes over time in the economy. The ECIEL study on wage determination (ECIEL, 1974) is a source of estimates of threshold education levels "required" for particular occupations and incomes, and thus of expectations. (Although the expectation may be inaccurate because educational requirements change with the supply of educated people, families may not take account of these changes.)

The second approach - discriminating among people by level of education -

calls for the use of analysis of variance, tests of distributions, or discriminant analysis to determine what systematic differences there are between those who do, and those who do not, complete a particular level of schooling. It is important in this analysis to control for age, since when enrollment rates change over time there will probably be shifts in the characteristics of the enrolled. In addition to comparisons of mean family income, comparisons should also be made of the distribution of income for different schooling levels, to see whether only the low end of the distribution or whether the entire curve is shifted, from one level of schooling to another. It should also be possible to examine, using school records, the distribution of intelligence (as measured by some standard test) of those in school at different levels of age or schooling. Provided income or status could also be known, this would show whether ability has any independent effect on a child's staying in school.

Expenditure on Education

Because educational expenditure and schooling received are strongly, though not uniquely, associated, many of the variables determining the latter can be expected also to influence the former. Nonetheless it is valuable to distinguish the two questions, so as to tell how important the costs of education are in determining the decision to remain in school or to leave. It can also be seen whether these costs (expenditures) differ systematically for different groups (defined by location, income and other features) in the population. Only household budget data are suitable for this type of analysis. Multivariate regression is an appropriate technique for these problems of choosing dependent and independent variables and for estimating the years of schooling received. It is particularly important to correlate with expenditure per child, perhaps also adjusted for age of the child.

The simplest approach is to estimate single equations explaining some measure of expenditure. This is easily done, but it has the disadvantage of not showing how the decision to spend on education is related to the other expenditures of the household. The latter can be analyzed by constructing a multi-equation demand system, provided it can be assumed that supply or external conditions are the same for all households. Thus system estimation is limited to cross-section data with homogeneity of supply. Comparisons of parameters could be made after separate estimation for two or more populations.

This analysis permits estimation of the income- and price-elasticities of spending on education, and also of cross-price elasticities. Thus, it may be that for low-income families the price of food is an important determinant of educational expenditure, for example. The only other way to measure price responses is by analyzing grouped data, where prices or supply conditions of education are homogeneous within a group and vary among groups: geographic regions might be suitable for such analysis. System estimation may also yield estimates of threshold spending levels on education. Alternatively, direct estimates of such thresholds might be computed from exogenous price information and from estimates of the physical minimum requirements of a household for sending children to school (including adequate clothing and nutrition as well as the costs of books and materials and school transport).

Another question to be investigated with income and expenditure data is whether labor force participation appears to be affected by the decision to spend on education. Parents may be more likely to work, or to hold multiple employments, in order to keep children in school; or some children in a family may be more likely to work in order to finance the education of siblings.

Sources of Data

Either of these analyses can be applied to appropriate cross-section data using the household as the unit of observation. Census data offer very large samples and cover (in principle) the entire population, but they have the disadvantage of giving no, or not very reliable, information about income and expenditure. Household survey data, such as the ECIEL samples and several other sources, provide the latter information but are restricted in size and coverage. In all countries, a mass of comparable demographic/educational data is available for the major urban centers; in some cases there are comparable rural or country-wide household surveys. In practice, it may be desirable to make joint use of census and household data. The household data may also be used to determine which characteristics available in census data are most related to the nonavailable variables, and the census data can be used to judge the representativity of the household samples, particularly for higher levels of education.

The currently available data should be adequate for studying the determinants of primary and secondary schooling. One limitation of survey data is that they do not always indicate whether a person is currently attending school, so it is not certain when his education was received or how it is related to current household variables. Another is that information often refers only to children living at home. This limitation may be serious for children of university age, but is insignificant for young children (information on children in boarding school can usually be obtained).

Cross-section data can be used to show time profiles, in two ways. The simpler is to compare surveys taken at different times, such as the 1960 and 1970 censuses. The other is to stratify the population by age, and see whether the relations examined are different for different age groups and thus are presumably shifting over time. For educational policy, it is important to

know what relations hold for those people now in school or approaching school age, and these may differ from the relations which determined the schooling of their parents' generation. The chief limitation on stratification (whether by age or by other characteristics such as household size or the attributes of the parents) is the small size of the household samples.

The other data sources of interest here are school records of age, schooling level, and some measure of intelligence or ability, together with indications of household income or status; regional and/or time-series information on unemployment by age and schooling level; and regional and time-series information about the supply of schooling (physical availability and price) generated by the school system. The intention throughout is to use primarily existing information rather than to undertake new surveys.

A Note on Previous Investigations

The importance of understanding how households assign resources to education is emphasized by Edwards and Todaro (1973). The importance of the price (or cost) of schooling is noted by Campbell and Siegel (1967). Other studies using aggregate cross-section or time-series data in the U. S. and Canada - Galper and Dunn (1969), Crean (1973), Gustman and Pidot (1973), De Prano and Nugent (1968) - indicate the weight of external factors, particularly of costs and unemployment, or of the "profitability" or rate of return expected from additional education. Some of the difficulties of estimating such a rate are noted by Carnoy (1973, pp.62-63) and Eckaus (1973). Further evidence on the importance of supply prices comes from Welch (1966). The connection between these factors and private demand for education - in particular, the reason why demand may consistently exceed both educational supply and the demand for educated labor - is discussed by Edwards and

Todaro (1973, 1974) and treated in detail by Carnoy (1973, 1972), using Brazilian data analyzed by Langoni (1970, 1972) as well as evidence from Puerto Rico and other less-developed countries.

Studies by Bowles and Gintis (1973) and Hansen et al. (1970) suggest that family background is very important in determining the income associated with a given level of education. Intelligence or ability appears to be important, after considering other factors, only for those with low education. To the extent that families invest in their children to assure them future income, the same factors should influence the demand for education. Investment to create a consumer durable for the utility of parents, rather than for children's future benefit, is treated by Willis (1973), De Tray (1973) and Becker and Lewis (1973); these analyses emphasize the relation between number of children and their "quality", including education. They also stress the complexity of household decisions and the importance of intra-household characteristics.

Much of the work cited has the disadvantage either of a very high-level of aggregation, or of emphasis on the United States and other high-income countries. Some evidence for less-developed countries is assembled and analyzed by Carnoy (1973), and a short bibliography is provided by Schiefelbein (1974) for Latin America. There is not yet, however, a systematic set of answers to the questions posed here: some are treated in the studies of Drysdale (1972), Selowsky (1968) and Carnoy (1972).

II. COST AND FINANCING OF EDUCATION

The objective of this part of the project is to study the cost of producing formal education, to learn how these costs are determined and how they are distributed, and to see what relation they have to the output of the educational system. The topic is of great significance for the relation of education and development, first because educational costs in the aggregate are large and growing rapidly; and second because the structure of those costs, and the ways they are financed, have important distributional consequences about which very little is known.

Because education, or schooling, is not a homogeneous good, there is some difficulty in measuring the output of the educational system. Two approaches will be followed to quantify the product whose costs are to be studied. One is to count the number of graduates from a given level of education, per entrant to that level, taking no account of differences in quality either among students or in the schooling they receive. This procedure is easy to apply (since the necessary data are readily available). Moreover, it may be the measure of output which is implicitly used by the labor market in evaluating applicants, all people with the same educational level being considered equal. The second approach is to measure production by an index of quality, based on standardized tests of achievement. Some of the difficulties of this procedure are discussed later.

Given a measure of the production of schooling at each of several levels (primary, secondary, university or vocational), the questions about costs to which answers will be sought may be organized as follows:

(1) What is the variation in unit cost, and with what factors are different cost levels associated?

(2) How is the cost divided among different factors or inputs used to produce schooling (teachers, buildings, equipment, materials)?

(3) In publicly supported schools, how are the costs divided between the public sector and the student or his family?

(4) How are the costs borne by the public sector financed?

These questions are related to the efficiency of the system in the narrow sense of how well it uses inputs to produce output. In particular, it is of interest to know whether variations in cost are reflected in variations in the quality of output; whether they reflect quality differences in inputs, either educational inputs or the entering students themselves; or whether they simply indicate variations in efficiency of resource use. There is considerable debate over this issue in the United States (Coleman, 1966; Jencks, 1972), and a good deal of evidence has been gathered to suggest that raising costs or inputs need not generally result in greater output. The estimation of such relations must take account of differences among students when they enter the school, as in the studies by Bowles (1970) and Bowles and Levin (1968).

It must be noted that in attempting in this way to measure the efficiency of the educational system, or to explain cost variations, reference is made only to what the system is actually trying to produce (which requires some analysis to ascertain). The study is not intended to answer the much more difficult questions of what the system ought to be producing, or of its efficiency in meeting the needs of society and the economy (Carnoy, 1973:22). It may serve as a basis for, but it is not intended to be, an analysis of the proper strategy of investment in education (Simmons, 1973). Nonetheless, the narrower concept of efficiency is important to study, because of the considerable, scattered evidence of inefficiency, or at least

of great variations in unit cost, in Latin America (Castro, 1974a).

Some of the variables to be examined for their possible effect on costs are size of school or class, location, quality of teachers (as measured by their own schooling, salaries, time devoted to teaching, etc.), quality and utilization of buildings and equipment, and characteristics of entering students. Among the latter, the most important are likely to be intelligence, achievement in previous level(s) of schooling, and family background and income. In examining these factors the study will interact closely with the study of the determinants of schooling (Part I of this proposal). These variables may be studied at the level of individual schools (using information aggregated over all the students in each, or aggregate characteristics of the region served by each school) or among individual students (pooling observations over a sample of schools). Quality of input to one level of education may be measured, in part, by quality of output at the preceding stage.

The basic questions are also related to the distribution of the cost burden of the educational system. In this respect it is particularly important that throughout Latin America the share of direct educational cost (excluding foregone income) borne by the public sector tends to rise with the schooling level. University education may have almost no direct cost to the student, while secondary schooling is expensive. The distribution of schooling thus includes a large element of subsidy to students from high-income families. Poorer students cannot take advantage of the subsidy because there is no capital market for financing their secondary education. Besides being inequitable, this arrangement may be inefficient as a rationing device (Selowsky, 1973). Within a given level of schooling, there may be distribu-

tional inequities between urban and rural areas, among regions, or among ethnic groups. Such inequities will arise even if there are no differences in the direct costs to students, if there are differences in the public costs, in the quality of schooling, or in the quality of entering students.

Finally, the way that public costs (that part not paid by the student in tuition or fees) are financed also has significant distributional consequences. To study these in detail would require assessing the incidence of the various taxes from which educational expenditures are met, as well as assumptions about the share of each of those taxes in meeting total costs. The available estimates are not very satisfactory for this purpose (Bird and DeWulf, 1973) so that this aspect of the study probably cannot go beyond description of the sources of revenue. Some assessment may be possible of the redistributive effects among regions, particularly when education is financed partly from national and partly from provincial or municipal sources.

To answer the four questions on which the analysis is based, most of the data needed can be provided by the school system. Certain problems nonetheless deserve emphasis. The difficulty of measuring output has been mentioned. When standardized measures of quality are not available (within one country or among countries), some research will be needed to make comparable the different standards used. Information on the quality of entering students may not be available, requiring that estimates be made by taking special surveys of students in a representative group of schools. Exogenous information is of course needed to estimate the indirect costs of attending school, in income foregone; such estimates can be drawn from existing studies and from the study of schooling determinants. Even the information on costs endogenous to the school system, particularly capital costs, may require revision or

exogenous verification. Bookkeeping practices do not necessarily reflect true economic costs (Castro, 1974a).

The study can probably draw on a great deal of published or readily available information to answer the simpler questions about costs and financing, and the first step must be to examine and synthesize the cost data in each country. Only recently has theoretical attention been devoted to the relative importance of different factors in determining costs and outputs (Selowsky, 1973: 48-49) and the associated needs for information. Detailed studies of cost and financing are very few in number in Latin America (Barkin, 1971; Muñoz, 1967) and still more rarely are the distributive implications analyzed with consideration of the sources of finance (Jallade, 1973a, 1973b).

This study may be expected to have implications for educational policy (apart from possible implications for policy in other sectors) in two respects. The first is to indicate inefficiencies in the use of educational resources, and ways in which costs might be reduced without sacrificing educational output in quantity or quality. The second is to quantify inequities in the provision of schooling, and thereby to serve as a basis for changes in the way education is financed. One proposal of this sort is to raise tuition to cover the direct costs of higher education, and at the same time to introduce loans which would allow low-income students access to such schooling (Selowsky, 1973: 50-62; Jallade, 1974). Other possibilities involve changes in those elements of cost, direct or indirect, which have the greatest distributional impact.

The Pilot Studies

The question of what effects education has on development is inherently more complex than the questions related to the provision and distribution of education to which the previous two studies are addressed. In the past, there have been two principal approaches to the question: measures of the rate of return to education, and estimates of the requirements for education as a function of needs for different kinds of trained manpower. The ECIEL project is intended to draw on what has been learned from both these lines of investigation.

The manpower approach (Harbison and Myers, 1964) in effect supposes that certain occupations or jobs must be expanded for development, and that these positions have relatively inflexible educational requirements. Unemployment is determined by excesses of supply of people at particular educational levels, and the overall distribution of income is determined by the supply/demand balances at each level.

The rate-of-return approach (Psacharopoulos, 1972) in effect supposes that income is determined by education, which is a form of capital (Becker, 1964; Schultz, 1964; Blaug, 1970). The distribution of income is related to the distribution of schooling, but it is not clear, without much further study, how this depends either on the occupational structure or on the supply of people with different levels of schooling. The incorporation of these factors into such models is only beginning (Thias and Carnoy, 1972).

At this point, neither approach is entirely satisfactory, but the results of each, and recent historical experience in Latin America and in less developed countries generally, give us evidence for the following propositions:

- (1) 'requirements' for many jobs are flexible and adjust to supply, education becoming more of a screening device than a necessity;
- (2) partly for this reason, high individual returns to education do not imply high social returns;
- (3) rates of return behave very differently across occupations (Eckaus, 1973) and, over time, for different levels of education (Carnoy, 1973; Carnoy and Marenbach, 1973);
- (4) the return to education may actually be due to other characteristics of the individual or his family (Gintis, 1971; Castro, 1974 b), whether or not income is associated with productivity; and
- (5) imbalances - which are seen to be very difficult to measure - can and do occur not only among levels of education but between education and other types of capital (Carnoy, 1973), leading to the growth of unemployment among the educated (Edwards and Todaro, 1973, 1974; Blaug et. al., 1969).

Past research in Latin America and elsewhere demonstrates that the effect of education is to a large extent a matter of how labor markets operate. Investigation of this subject is only beginning, so that despite a great deal of literature about education, we know very little of exactly how it is related to the probability of employment; to the type or types of work an individual performs; to mobility within occupations and among them; and to productivity.

Similarly, we know very little about which characteristics of education, and therefore which types of education or training, are significant for these relations.

This group of questions is the focus of this part of the ECIEL project. It is split into three sectoral studies because we expect that education does not have identical, or even similar, effects in all sectors of the economy - if only because they are characterized by quite different labor markets. Each study is designed as a pilot investigation, both because of the complexity and unfamiliarity of the questions, and because in order to study them thoroughly it will be necessary to obtain some new information by surveys. Each study will begin by reviewing the information and analyses which are already available, as a guide to new investigation. The extent of new data collection required will partly depend on the country or countries chosen to study. Once the effects in each sector are better understood, the results of the analyses can be combined to see how education is related to inter-sectoral income distribution and development.

The object, in each case, is two-fold. One is to extend the understanding of how education interacts with other elements in each sector to generate and distribute income. The other is to identify implications for public policy with respect to education, or with respect to labor markets, investment regimes, land tenure and other features which may be significant.

III. THE MODERN SECTOR

This sector is defined as consisting of relatively large, highly capitalized firms concentrated in urban areas (omitting from examination the modern enterprises occasionally found in rural areas). The object is to study the relations between the education of the work force and various characteristics of their present jobs and of their occupational histories. "Education" is taken to mean formal academic schooling, vocational or technical schooling, and organized on-the-job training.

With regard to present jobs, three questions are important:

(1) How far are educational requirements actually set by the nature of the work performed and how far do they respond to changes in the supply of educated workers? This information gives an idea of the extent of excess or "unrequired" education among those employed, considering only labor market "needs".

(2) How does education interact with ability or intelligence and with other features of the individual worker to determine his job, work pattern and income? This is a further way of estimating the necessity of education and of seeing what it contributes, beyond the other factors.

(3) How far are the different kinds of education substitutes for particular jobs or levels of skill (Castro, 1974c)? This, together with estimates of educational costs from Part II, provides data on the cost of providing a particular skill or job capacity in different ways.

With regard to occupational history, the chief question is how education affects an individual's probability of employment, his mobility among jobs and his advancement in terms of income. Such information, if obtained for the recent past for the same individuals, will complement cross-section

analysis, and may allow relations to be established between their occupational experience and changes over time in job educational requirements.

Four kinds of information contribute to this analysis:

- (1) time-series data on employment conditions and labor supply by level of education;
- (2) characteristics (size, capitalization, rate of growth, techniques, hiring practices) of individual firms, and their investment in on-the-job training (Mincer, 1962);
- (3) expert consensus, among training personnel and employers, on job requirements and their relation to characteristics of work; and
- (4) current characteristics, occupational histories, and job evaluations of individual workers (including their own estimates of educational needs and substitutability in their jobs).

The kinds of information sought include some relevant to manpower analysis as well as some relevant to rate of return estimation, and will be taken at several levels of aggregation. Data under (1) are readily available; (3) may be available, or can be obtained by consultation with employers and students of labor markets; (2) and (4) will be available in varying degrees in different countries and industries. A complete analysis will require new workplace surveys, to collect information on both the firm and the individual workers. The data collection can perhaps include short intelligence tests as well as interviews, so that the effects of intelligence or ability and education can be distinguished.

Such a survey, covering perhaps ten to thirty firms and a sample of perhaps five to ten thousand workers, will be the key element in answering the questions relevant to this sector. This is probably the only way to combine substantial cross-section data with historical information on indi-

viduals. At the level of the firm and of specific jobs, comparison will be made to the ECIEL study of wage and salary structures (ECIEL, 1974) in the modern sector, which is based on firm-level surveys conducted in 1968. A new survey will be designed to retain comparability with this study while expanding the scope of the data and of the analyses.

IV. THE URBAN TRADITIONAL SECTOR

The urban traditional sector consists of the self-employed and of workers in a variety of small-scale, not highly capitalized, enterprises in urban areas. The labor market in this sector is assumed to be more competitive - less restricted by the power of employers or labor organizations - than the modern sector market, and relatively open to new arrivals. It is also of interest for the relation between education and income distribution because it occupies a middle position between the other two sectors. Most immigrants to urban areas initially find work here (although a few get modern sector jobs); and most of the labor for expanding the modern sector is drawn from this group (a stable modern-sector labor force might be largely recruited from the children of workers already in that sector). Therefore education probably acts both to pull people into this sector, and to help them to leave it for more stable and better-paying jobs. It may also act to raise the incomes of those who stay in the traditional sector. If the labor market rewards individual productivity and is competitive, there is a presumption that in that case education raises productivity and does not act simply as a screening device for jobs (as it may in passing people into the modern sector). These are the guiding hypotheses of the investigation.

The questions to study then are:

(1) How does an individual's education affect his mobility into, through, and out of the traditional sector?

(2) How does education affect the type of employment and the income of those who do not leave?

(3) Is the schooling of children associated either with their parents' having migrated or with their having some work experience in the modern sector?

(This touches on the study of determinants of schooling, Part I, but asks whether there is an effect due to sector or to past migration and occupation.)

To answer these questions properly requires knowing people's migratory, educational and occupational histories, which may be best obtained by a new survey of the traditional-sector population. The sector is defined by employment conditions, but it cannot easily be studied in workplaces because of the great number of small, unorganized enterprises and individual employments. It is necessary, as in the rural sector, to take the household as the unit of observation, and then to create a sample corresponding to the traditional sector on the basis of employment of the household head. The sample can be drawn primarily from areas of a city in which most people are known to have "traditional" employments: there is a considerable base of information and previous studies about such "barriadas", "villas", or "favelas", or the so-called "marginal population". It will also be possible to draw on previous cross-section information such as censuses and city-wide household samples, including the ECIEL budget surveys (ECIEL, 1973). A sample of about 1,000 households, including 2,000 to 3,000 employed individuals will be conducted, probably proportionally to the estimated population of the sector.

The principal problems with this approach are those of sample bias, particularly because of people's self-selection into or out of the sector. The biases can be at least partly offset by linking this study to city-wide survey information and to the relations which emerge from the analysis of the other sectors. There are also advantages to the household survey approach, particularly the opportunity to compare current characteristics and occupational histories among members of a household, who may be employed in dif-

ferent sectors. The unemployed are also included.

Movements of individuals between sectors are of particular interest to study because past experience in a modern sector job may make it easier for a person to get such a job again, or may raise his productivity and income while he works in the traditional sector. In either sense, such experience may be a substitute for education. It will probably not be possible in this study to control also for the effects of ability or intelligence.

The principal policy issue to which this investigation is relevant, is how far education raises the productivity or standard of living of people in the traditional sector. Education is individually desirable, but not socially valuable, if it serves mainly to select individuals for the small number of modern sector jobs, but does not of itself create new employment in that sector. It is more valuable if it opens employment or raises productivity in a sector which does not also use large amounts of capital.

V. THE RURAL SECTOR

The role of education is studied separately in the rural sector, in part because in several respects that sector is more complex than the urban part of the economy. Since these differences shape the kind of investigation proposed, they are first briefly described. They apply particularly to areas characterized by numerous small farms. Plantation agriculture with hired, landless labor much more resembles the urban modern sector.

(1) Labor in rural areas can take at least three significantly different forms: work on one's own (household) farm; hired work on another farm; and non-agricultural labor, often in small towns.

(2) Landowners are entrepreneurs who must make production decisions, and they may be much more numerous in rural areas than entrepreneurs (owners of capital) are in cities. Their production possibilities are affected by the size of their holdings. This feature, together with the fact that some people do not own any land, means that the land tenure arrangement may fundamentally influence the effect that education can have on work patterns, productivity and income. In particular, education may acquaint people with choices which, because they own little or no land, they cannot put into practice.

(3) Choices of technique (introduction of different crops, seeds, fertilizers, machinery) must be made by a great many producers. The variety of these techniques and the choice of which one to use will be influenced by extension services, which are themselves a form of specialized education.

(4) In addition to the different kinds of labor, and the possibility of unemployment, an individual or household has the choice of migration. (People could, but seldom do, migrate from urban to rural areas; most migration is always toward a more densely populated place.)

(5) Agricultural labor is usually very seasonal, and rural incomes depend both on such labor and on the demand for off-season non-farm labor.

For these reasons, the study of education in rural areas is devoted primarily to three basic questions, each of which leads to some subsidiary questions:

(1) How does education affect the propensity of individuals and households to migrate? (Bowman and Meyers, 1967; Sjastaad, 1962). Does more education make migration more, or less, likely? How does the effect of education on migration depend on land tenure and on the local labor market?

(2) How does education affect the type of work an individual performs (own farm, hired farm labor, non-farm labor) and the pattern of that work throughout the year? (Erownstein, 1972). For hired labor, agricultural or not, how does education affect wages and income? Are there differences in this respect between farm and non-farm work?

(3) How does education affect production techniques, output, and income or profit for families working their own land? Are there stable differences in inputs or outputs among farmers with different levels of education? Are there differences in the speed of acceptance of new techniques? Does the effect of education depend on the size of landholdings? Does education affect income distribution (Gotsch, 1972) because of its relation to technical change?

The best, if not the only, focus of observation for these questions is the household. Thus household survey data are necessary, and will be collected by interviewing a fairly large number of households, probably between 500 and 1,000 in each of a few (not more than three) rural areas in a country. Stratified samples will be taken of households in different landholding

classes. Where possible, data will be collected from the household concerning family members who have migrated out of the area.

The areas selected for new data collection will be ones about which some information is available from the study of the cost and financing of education (Part II) so that account can be taken of the supply of schooling. If such an area cannot be studied, then some supplementary information on the school system in the area will be gathered as part of the survey. The area should exhibit some variety in landholdings and in the types of employment available; in other respects, it should be as homogeneous as possible. Existing data from censuses, school records, cadastral surveys and other sources will be reviewed before the new survey is undertaken.

The complexity of the relations to be studied, the costs of survey work in rural areas, and the number of variables which might be important but which will be impossible to study within the context of the present proposal (soil fertility, product and factor prices, characteristics of families who have left the area) require that the study be modest in its objectives. Nonetheless it should be possible to gain a great deal of information. In addition to its value for understanding the role of education in a rural setting, the study should yield implications for public policy toward some of the following questions, about which little is known at present.

(1) Is education likely to make land reform easier, or less difficult in terms of lost production? Conversely, do current land tenure patterns prevent individuals and society from benefitting fully from the investment in education? - that is, would land reform make education more valuable?

(2) How necessary is education for the adoption of technological change in agriculture? Is education a complement or a substitute for extension

services in fostering such change?

(3) If rural education is increased, is there likely to be any effect on agricultural output, or will the effects appear only in non-farm labor markets?

INTEGRATION OF THE STUDIES

Each of the three pilot studies will provide information on how education affects the level and distribution of income within a given sector of the economy. These studies will also give some indication of the way education affects income distribution among sectors, since they will include analyses of how education affects people's movement from one sector to another, by migration or by change of employment. In order to see more clearly the role of education in the economy-wide distribution of income, it will then be necessary to integrate the results of the three studies. Since these studies may be undertaken in different countries, this integration must abstract so far as possible from the characteristics of the particular countries. The object is to understand some general features of the way income is generated and distributed, so as to be able to provide answers to questions such as the following:

- (1) Does education in the rural sector raise incomes there relative to the rest of the economy, or does it, by promoting migration, actually retard development in rural areas?
- (2) Does education raise the incomes of those employed in the traditional sector, or is it of value to people in that sector only in so far as it enables them to find employment in the modern sector?
- (3) Does more education, in each sector and in the economy as a whole, create employment and income, or does it simply allocate the available employment?
- (4) Is education, considered as a productive input, scarce or abundant relative to other factors such as land, physical capital and intermediate goods?

While these questions are abstract and difficult to answer from the pilot studies, some understanding must be sought in order to learn how education is related to development of the whole economy and society.

Recommendations for educational policy may come from any of the five studies proposed here (including Parts I and II). All the studies must then be integrated so far as possible, to take account of all the effects of a particular policy. The studies may equally lead to recommendations for policy in other matters than education. Of particular importance are policies which affect the working of labor markets, the distribution of wealth in land, and the rate and type of investment in physical capital.

RESEARCH SCHEDULE

The project is expected to extend over five years. A budget estimate is presented for the first two years. At the end of that initial period preliminary drafts of the first results of the joint studies (Parts I and II) are expected to be completed, and the pilot studies (Parts III, IV and V) will have accumulated enough research experience to serve other ECIEL institutes as a guide to embark on these studies if further resources become available.

The proposed project can be initiated at the 22nd ECIEL seminar which will be held in Caracas from July 8-12, 1974. At that meeting specific methodologies would be discussed for the different studies.

The Joint Studies

It is estimated that most of the joint research described in Parts I and II of the proposal can be completed within two years. Preliminary drafts of some sections of these two studies (Determinants of Schooling, and Costs and Financing of Education) will be prepared before the end of that period and completed drafts of the first reports will be available by the end of the third year.

Subsequent publications for each of the two studies would provide additional analysis, including inter-American comparisons and some comparisons with other regions of the world. The preparation of additional reports is expected to take an additional two years, so that by the end of five years there would be one publication for each of the two studies and a second set in draft form.

The Pilot Studies

The basic pilot studies are expected to extend over a four year period. Within the first two years, the samples will be designed and tested, the

surveys completed and the resulting data cleaned. Processing and analysis of the information will take an additional year and drafts of the findings will be completed by the end of the fourth year.

By the end of the initial two year period the three pilot studies will provide the basis for replication or improvement of the research design in other Latin American countries, for subsequent international comparison. It is therefore expected that with adequate financing, many of the ECIEL institutes can study the effects of education in the different sectors of their countries within five years of the initiation of the pilot studies. The progress and results of the study will be reported in four kinds of documents:

(1) internal papers describing the methodology adopted and the preliminary results. Much of this material will be reported in the Summaries of the ECIEL seminars and will be available within a few months after each seminar.

(2) working papers reporting results of the study, prepared by individual institutes or by the coordinating staff. These will have been edited and reviewed by the ECIEL coordination.

(3) monographs published by the individual institutes, primarily for circulation in their respective countries. These will be useful for national policy makers as well as for a better understanding of country-specific problems.

(4) books, published by the coordination, to report the final results of the study. These will draw on the working papers and will summarize the results from different countries of different parts of the study. Their preparation may carry beyond the intended five-year span of the project. While the earliest publications will focus primarily on country studies, later publications will concentrate on inter-American comparisons.

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Reexamination of statistical data relative to occupation and education, that attempts to estimate the requirements of the formation of human resources and the capacity of the education system to form the necessary resources.

Chile (cont.)

Elizaga, Juan C. Migraciones a las áreas metropolitanas de América Latina. Santiago, 1970.

An original work that analyzes the results of a survey of the population of Gran Santiago. Information was collected on living conditions, demographic characteristics, education, economy, their last place of residence, date of arrival of immigrants, their migratory history, motives, occupational traits before migrating, and on their first job in Gran Santiago.

Escudero Burrows, Ethel. Destino profesional de los egresados de la educación técnico-profesional de nivel medio en Chile. Santiago, 1969.

Research on the degree of accommodation among the education obtained from the mid-level technical-professional teaching establishments, the opportunities that are available to the student upon completion of his/her courses, and the requirements that the labor market has set for them.

Fischer, Joseph C. Factors Associated with college aspirations and expectations of Chilean secondary school pupils. Chicago, 1971.

A Ph.D. thesis that describes the factors associated with the aspirations and expectations of Chilean students in the selection of various types of secondary education, a choice that has to be made upon finishing primary education. It also deals with the choice between university and working careers, a choice to be made during the final year of secondary education.

Goldfarb, Marsha. Some Evidence on Educational Relationships in Chile.

A statistical analysis of factors related to the drop-out rate and to the influence of education on the private rate of return. The first part puts the two analyses inside a theoretical mark of costs and benefits and plants doubts about the convenience of attending to the growing demand for private education.

Herrick, Bruce and Morán, Ricardo. Declining Birth Rates in Chile and their Effects on Output, Education, Health, and Housing. Washington, D.C., 1972.

A reexamination of Chilean statistical population data allows the exploration and quantification of the future impact of fertility rates on the PNB, the per capita PNB, potential demand for education, health and housing services, and the resources necessary to satisfy this potential demand. It also deals with the effects of age of the population on the work force.

Instituto Nacional de Capacitación Profesional (INACAP). Encuesta sobre personal de nivel medio en la industria manufacturera de las provincias de Santiago, Valparaíso, y Concepción. Santiago, 1970.

An original work that analyzes the quantitative (number, distribution, agreements, promotions, retirement, origins) and qualitative (accomplished activities, schooling, deficiencies, service training, age and sex) characteristics of personnel.

Menanteau-Horta, Darío. Aspiraciones y logros vocacionales de la juventud en Chile, Resultados de dos encuestas: 1969-1972. manuscript to be published en la Revista CEE, 1974.

An original study that presents some results on educational aspirations and vocational plans of Chilean youth. It tries to determine the factors associated with the success or failure of a young person's intention to attend a university.

Menanteau-Horta, Darío. Perfiles vocacionales de los estudiantes de últimos cursos de enseñanza media en Chile. 1972?

A partial report on field research about educational aspirations, occupational plans, socio-cultural attitudes and values of the Chilean youth. It summarizes the characteristics of this sector of the population, discussing some relative findings about vocational orientation, and touches on the aspirations and occupational profiles that appear to be most attractive to the youth.

Chile (cont.)

Programa regional del empleo para América Latina y el Caribe (PREALC). El empleo y el proceso de desarrollo en Chile, 1960 - 1970. 1973.

A world-wide study on employment, and of the underemployment situation in Chile in the sixties.

Schiefelbein, Ernesto. Hacia una evaluación de los estudios de recursos humanos realizados en Chile. Santiago, 1972.

An empirical work which tried to estimate the validity of the supply and demand predictions between 1960 and 1965 for the situation in 1970 for those professions that required a higher level of formal education (university, normal schools and technical institutes). Given the precision, three estimates for 1980 per career are made.

Schiefelbein, Ernesto and Farrell, Joseph. Relaciones entre los factores y los resultados del proceso educativo. Santiago, 1971.

A preliminary work that attempts to provide objective elements in the study of the existing relations in the educational process so as to give a better understanding of the decisions adopted in educational policy.

Colombia

Drysdale, Robert S. Factores determinantes de la deserción escolar en Colombia. Estudio de un caso de escolaridad rural primaria. Mexico, 1972.

In 1967 the Colombian government commissioned the preparation of a tax reform with the hope of increasing government revenues so as to offer primary education to all Colombian children.

Instituto Colombiano de Especialización Técnica en el Exterio (ICETEX). Recursos y requerimientos de personal de alto nivel. Bogotá, 1966?

Research that attempts to study the highly qualified human resources of the country, as a function of need.

Ministerio de Educación Nacional. Bases para una política educativa. Bogotá, 1966.

A report prepared by the Office of Educational Planning to be presented at the Fourth Meeting of the Consejo Interamericano Cultural. It presents a synthesis of the national educational structure as an important factor in the development of the country, and of the Plan Integral Educativo 1966-1978.

Ministerio de Educación Nacional. Flujo educativo en secundaria, 1958-1980. Bogotá, 1973.

A succinct report taken from the Plan General de Desarrollo de la Universidad Industrial de Santander, 1971-1975 that analyzes the status of secondary education in Colombia in terms of its structure and the characteristics of the flow of students that are part of the universities.

Ministerio de Educación Nacional. Informe resumido sobre la situación educacional de Colombia. Bogotá, 1969.

A document that summarizes the information presented by the Ministerio de Educación colombiano to the Congress; it includes a presentation of the status of Colombian education, educational policy of the government, its successes and the programs it hopes to accomplish.

Muñoz Izquierdo, Carlos. La productividad del gasto educativo como instrumento de la planificación escolar: Comparación de dos estudios realizados en Colombia. Buenos Aires, 1972.

A work that comparatively analyzes two studies: Selowsky, Marcelo The Effect of unemployment and growth on the rate of return to education: the case of Colombia, Harvard; 1968 and Schultz, Theodore P., Rates of Return to schooling in Bogotá, Rand Corporation, Santa Monica, 1968.

Costa Rica

Gutierrez Carranza, Claudio. Análisis de información sobre rendimiento académico de estudiantes. 1972.

A statistical reexamination that presents, by years of schooling according to entrance date, student retention data, the credits taken in terms of academic load, and the efficiency of students; the performance of students by generations in relation to the high schools from which they come, the areas of study undertaken and the type of scholarships received; information relative to the Centro Regional de San Ramón; and an analysis of admission examinations and comprehensive examinations.

Consejo Superior Universitario Centroamericano.(CSUCA). El sistema educativo en Costa Rica, Situación actual y perspectivas. Costa Rica, 1964.

A study that attempts to present a panorama of the Costa Rican educational system, its present state and perspectives, from the point of view of human resources.

Romero, Mario. La deserción estudiantil en la Universidad de Costa Rica. 1964.

An original work that attempts to determine the levels and tendencies of university drop-out rates, quantify its importance with respect to the University as a whole and for each of the schools according to sex and year of study, to find out the principal factors that cause the drop-out rate, and to suggest some means of eliminating or reducing the problem.

Torres Padilla, Oscar. Un estudio de utilización. Los Profesionales en Servicio Social y el mercado de trabajo. 1972.

The first work in a series on "utilization" of professionals as projected by OPLAU. It analyzes in detailed form the professional opinions of Social Service of the University of Costa Rica in relation to their professional role and social status. It tries to relate their performance with the professional formation received and suggests forms of modifying the studies of future promotions.

Torres Padilla, Oscar. Las implicaciones económicas de un modelo demográfico-educativo para Costa Rica: 1970 - 2000. 1973.

A study of statistical data and population projections so as to determine the increase in matriculation at different levels of formal schooling, and of the costs of education at these levels, year by year, between 1970-2000.

Ecuador

Ministerio de Educación Pública. Ministerio de Educación Pública. Informe a la Nación. 1969. 1968-1969.

Annual report delivered by the Ministerio de Educación Pública to the Cámaras Legislativas. It presents a synthesis of the Ecuadorian plan of education, the government's educational policy, and the distinct educational programs for different levels and sectors of the system. It evaluates national education in relations with the necessities of socio-economic development of the country.

El Salvador

McAnany, Emile G. Research and evaluation in the El Salvador project of educational reform; some preliminary research findings from the first school year, 1969. Washington, D.C., 1970.

A report that summarizes the preliminary conclusions obtained from research on an educational reform project in El Salvador at the end of the first school year, 1969.

McAnany, Emile G. et al. Televisión y reforma educativa en El Salvador. 1970.

A report that summarizes the research carried out by the educational reform of El Salvador after the first year of education by television. (Feb.-Nov., 1969)

El Salvador (cont.)

- Speagle, Richard E. Reforma educativa e instrucción por televisión en El Salvador: costos, beneficios y retornos. 1972?
On original work that analyzes costs and benefits of educational reform promoted in El Salvador, with conclusions that the author deems valid and beneficial for other countries.

Guatemala

- Escobar C., Arnoldo E. Situación socio-económica de los educados guatemaltecos. 1972.
A monograph that explains the socioeconomic situation of the educated Guatemaltecos, the scarcity of fiscal resources in the educational system, and the elevated costs of the private educational system.

Jamaica

- Hankin, Edward K. Capacitación de obreros jamaquinos en una planta industrial recién instalada. 1972.
A monograph that explains the specialized manpower capacity for a new plant for Alumina Partners in Jamaica (ALPART). It was developed by Instituto Industrial Dunwoody. (Minneapolis, Minnesota, USA).

Mexico

- Araiza Arvizu, Juan José et al. Peso y estatura en escolares de primaria por niveles socioeconómicos. Mexico, 1972.
An empirical study that seeks to see if there are significant differences in the weight and height of school children in the Federal District, in relation to the socioeconomic class to which they belong, and to establish height and weight norms for the ages studied within the area being researched.
- Barkin, David. Acceso a la educación superior y beneficio que reporta a México. Mexico, 1971.
A reexamination of population data, income distribution data and data on rates of schooling that studies the Mexican education system with the objective of evaluating its role as educational opportunity equalizer.
- Del Camino, Isidoro and Muñoz Batista, Jorge. La enseñanza profesional en México en 1970. México, 1972.
A statistical analysis that quantifies and analyzes professional education at its distinct levels in Mexico.
- Jimenez Lozano, Blanca et al. Factores pedagógicos, psicológicos y socioeconómicos que influyen sobre el rendimiento escolar, en lengua nacional y en aritmética y geometría, de los alumnos que asisten a las escuelas primarias oficiales del Distrito Federal. Mexico, 1972.
Research sponsored by the OAS that attempts to (1) study the level of academic proficiency of the students in primary schools in the Federal District in the following subjects - Spanish language, arithmetic and geometry in 1967. (2) determine the influence of some factors on this proficiency (3) design and apply a methodology to study these factors and (4) provide a base for pertinent administrative measures.
- Muñoz Izquierdo, Carlos. Evaluación del desarrollo educativo en México (1958-1970) y factores que lo han determinado. Mexico, 1973.
A reexamination of the available data that examines the educational development experienced in Mexico from 1958 - 1970, evaluating it from the points of view of its external and internal efficiency, and of its adequacy with respect to the growth of potential demand.

Mexico (cont.)

Muñoz Izquierdo, Carlos and Lobo Oehmichen, José. Expansión escolar, mercado de trabajo y distribución del ingreso en México. Un análisis longitudinal 1960 - 1970. Mexico, 1974.

A reexamination of statistical data that attempts to examine the quantitative relationship between graduate schooling and the labor market, and the effects generated by this relation with regard to distribution of personal income. This study complements and amplifies the information and analysis given in a previous study. (cfr. RAE N°)

Peru

Briones, Guillermo and Mejia Valera, José. El obrero industrial. Aspectos sociales del desarrollo económico en el Perú. Lima, 1964.

Original research that attempts to show the diverse characteristics of the workers in the manufacturing industry in Lima and Callao. Factors such as geographic origin, reasons for migration, occupational mobility, qualifications, job satisfaction, etc. are taken into consideration.

Consejo Nacional de la Universidad Peruana. Algunas características socioeconómicas de los postulantes y estudiantes de la universidad peruana. Lima, 1972.

A statistical study that analyzes the socioeconomic situation of Peruvian university candidates and students in relation to a population analysis that examines the characteristics of the population (urban and rural), occupation levels, and education and income levels. It studies the growth of the university population from 1960 to 1969.

Meyers, Robert G. Academic Achievement, Social Background, and Occupational Recruitment: A Longitudinal Study of Graduates from a Peruvian University. Chicago, 1972.

An original work that analyzes the relationship between academic perfection and occupational recruitment in a sample of graduates from the Universidad Agraria de la Molina (Peru) between 1956 and 1968.

Organisation de Coopération et de Développement Economiques (OCDE). Ressources humaines, education et développement économique au Pérou. Prevision des besoins en main-d'oeuvre pour 1980 et des perspectives de développement de l'éducation. Paris, 1967.

A report on a study of human resource planning prepared by the Instituto Nacional de Planificación (INP) of Peru, in collaboration with the OCDE: Its primary objective - apart from the limits of social and economic development in Peru - is a long range forecast of Peruvian human resources (quantitative and qualitative) and a determination of the educational requirements as a base for the design of educational policy.

Puerto Rico

Carnoy, Martin. Un enfoque de sistemas para evaluar la educación, ilustrado con datos de Puerto Rico. Puerto Rico, 1971.

This paper develops a system based on cost-benefit analysis that attempts to provide a model in which one can evaluate the effects of family history, formal education and out-of-school training on the society. The model is applied to education in Puerto Rico.

Carnoy, Martin. The Rate of Return to Schooling and the Increase of Human Resources in Puerto Rico. Puerto Rico, 1972.

The rate of return on schooling is a measure of the economic incentive for individuals to acquire additional schooling. This work is a reexamination of data from the general census of the Puerto Rican population in 1960.

República Dominicana

Kritz, Ernesto and Ramos, Joseph. La situación ocupacional en Santo Domingo y Santiago de los Caballeros: Analisis de dos encuestas experimentales de mano de obra. Santiago, 1973.

A preliminary working paper that analyzes the levels of utilization and underutilization of manpower in Santo Domingo and Santiago de los Caballeros.

Venezuela

Barrios, Hildebrando. Tasa social de retorno de la educación pública. Metodología y cálculo. (zona metropolitana de Caracas, 1970) Caracas, 1973.

Document prepared by the Second Seminar on Research and Planning of the Costs of Education, by the signatory countries of the Convenio Andres Bello in July of 1973. It analyzes the cost-benefit ratio of education in the metropolitan region of Caracas in an effort to arrive at a more rational distribution of resources.

Carbo de Proaño, Rosario and Johnson Vogeler, Susan. El efecto del gasto en el rendimiento escolar: una primera aproximación. Caracas, 1972.

A work measuring the relation between teachers' salaries and scholarly proficiency of student production.

deLeón, Lilian; de Mendoza, Cylie; Piñango, Ramón; and Sánchez, Basilio. Nivel de aprendizaje de los estudiantes venezolanos de sexto grado en adición, sustracción, multiplicación y división. Caracas, 1971.

An original work that establishes a preliminary diagnosis of achievement levels in the basic mathematical operations attained by Venezuelan students who have completed primary education.

Lobo Oehmichen, José. Educación y distribución del ingreso en Venezuela: un análisis regional. Mexico, 1972.

An original work that proposes to prove by empirical means the theoretic model designed by Mincer, Becker and Chiswick (Becker, Gary and Chiswick, Barry: "Education and the Distribution of Earnings", American Economic Review, May, 1966) that relates personal distribution of earning with investment in human capital.

Ministerio de Educación. Conocimientos generales de los educados. Caracas, 1970.

A first report in a series of documents related to the Evaluación Nacional del Rendimiento Escolar (National Evaluation of Educational Proficiency) carried out by the Department of Educational Research.

Ministerio de Educación. Educación y adiestramiento. Caracas, 1963?

Part V of the Annual Report presented by the Venezuelan Government to the 1963 meeting of the Consejo Interamericano Económico y Social (CIES). Summarizes the most characteristic aspects of Venezuelan education to date, describing its organization, progress, and a four-year plan for development. It describes the Plan Integral de Educación as elaborated by EDUPLAN, including the national education policies, and what has been accomplished according to sectors and services.

Johnson Vogeler, Susan. Manual metodológico sobre un analisis del efecto del gasto en el rendimiento escolar. Caracas, 1973.

A work prepared by the Second Seminar on Research and Planning of the Costs of Education in the signatory countries of the Convenio Andres Bello in July, 1973. It develops a methodology that serves as a basis for studies on costs of education in these countries.

MEMBER INSTITUTIONS
OF THE ECIEL PROGRAM

Annex A

ARGENTINA	— Centro de Investigaciones Económicas Instituto Torcuato Di Tella (INSTELLA)	CENTRAL AMERICA	— Secretaria Permanente del Tratado General de Integración Económica Centro Americana (SIECA)	UNITED STATES	— The Brookings Institution, Washington D.C.
	*— Fundación de Investigaciones Económicas Latinoamericanas (FIEL)	CHILE	— Centro de Estudios de Planificación Nacional (CEPLAN) Universidad Católica de Chile	MEXICO	**— Centro de Estudios Educativos *— Dirección General de Estadística — El Colegio de México (COLMEX)
	— Instituto Nacional de Estadística y Censos (INDEC)		**— Instituto de Economía, Universidad Católica de Chile	PARAGUAY	— Centro Paraguayo de Estudios de Desarrollo Económico y Social (CEPADES)
BOLIVIA	— Universidad Mayor de San Andrés		*— Departamento de Economía, Universidad de Chile (DECON)	PERU	— Centro de Investigaciones Sociales, Económicas, Políticas y Antropológicas, Universidad Católica del Perú (CISEPA)
	— Instituto Boliviano de Estudios Económicos (IBEE)	COLOMBIA	— Centro de Estudios sobre Desarrollo Económico — Universidad de Los Andes (CEDE)	URUGUAY	— Departamento de Investigaciones Económicas — Banco Central del Uruguay
	*— Instituto de Estudios Sociales y Económicos (IESE)		— Departamento Administrativo Nacional de Estadística (DANE)	VENEZUELA	— Centro de Investigaciones Universidad Económicas de Zulia-Maracaibo — Centro de Estudios del Futuro de Venezuela Universidad Católica Andrés Bello — Departamento de Estadística Banco Central de Venezuela
BRAZIL	**— Instituto Brasileiro de Economia — Fundação Getúlio Vargas		**— Corporación Centro Regional de Población	ANDEAN GROUP	— Junta del Acuerdo de Cartagena (JUNAC)
	— Instituto de Pesquisas Económicas Universidade de São Paulo (IPE)	COSTA RICA	*— Instituto de Investigaciones Escuela de Ciencias Económicas y Sociales, Universidad de Costa Rica		
	— Instituto Universitário de Pesquisas do Rio de Janeiro	ECUADOR	— Instituto Nacional de Estadística (INE)		
	*— Instituto de Pesquisas Economicas Universidade de Brasília		— Junta de Planificación		
			— Instituto de Investigaciones Económicas — Pontificia Universidad Católica del Ecuador		

*Participating in the Joint Studies
**Participating in the Pilot Studies

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 76 to FY 79
Total U.S. Funding: \$365,000
Date Prepared: 10/75

Annex B

Project Title & Number: _____

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>Goal: To improve the welfare of low income families in Latin America.</p>	<p>Measures of Goal Achievement: Improved income distribution within Latin American countries. Income/capita of target population grows by at least 3%/year.</p>	<p>Studies of GenI Index. National economic reports.</p>	<p>Assumptions for achieving goal targets: Education contributes to an improvement in the recipients welfare.</p>
<p>Sub-Goal: To improve the efficiency, relevance, and access of education to lower income groups in Latin American countries.</p>	<p>Reduced drop-outs in rural areas increased % of school-aged children enrolled. Lower cost graduate. Curriculum reformed to reflect rural needs.</p>	<p>Ministry of Education statistics and reports.</p>	<p>-Research done in Latin America by Latin Americans will have greater impact in those countries than if done elsewhere and/or by non-Latins. -Education in Latin America can be made more efficient and relevant and can be provided to larger numbers of people. Latin American governments and AID donors seek to provide more effective education to low income groups.</p>
<p>Project Purpose: To improve the quality and quantity of educational information and analysis at the disposal of educational decision-makers.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status</p> <ol style="list-style-type: none"> 1. Reports on at least thirteen of the ECIEL education studies disseminated through normal channels. 2. Regional seminar held for key government and non-government officials for primary purpose of discussing research findings. 3. Several of the participating institutions make specific provisions to carry out additional research on the economics of education 4. Reports judged to be of high quality 	<ol style="list-style-type: none"> 1. Publications received by AID. 2. AID represented at seminar. 3. Information provided at semiannual seminars (workshops) 4. AID evaluation. 	<p>Assumptions for achieving purpose:</p>
<p>Outputs:</p> <ol style="list-style-type: none"> 1. Studies completed on the costs and financing of education and the determinants of schooling. 2. Pilot studies completed on the role of education in the generation and distribution of income in the rural, urban modern, and urban traditional sectors. 3. Report completed which summarizes the results of the above-mentioned studies, explains new methodologies developed, and attempts to integrate the results. 	<p>Magnitude of Outputs:</p> <ol style="list-style-type: none"> 1. Eleven 2. Five 3. One 	<ol style="list-style-type: none"> 1. Reports of studies received and/or results discussed in ECIEL seminars. 2. Same as #1. 3. Same as #1. 	<p>Assumptions for achieving outputs:</p>
<p>Inputs:</p> <p style="text-align: center;">See Financial Tables.</p>	<p>Implementation Target (Type and Quantity)</p>		<p>Assumptions for providing inputs:</p>

The Joint Studies *A. THE DETERMINANTS OF SCHOOLINGIntroduction

The amount of schooling received by an individual, although affected by many non-market factors, can be regarded as determined by demand and supply, just as for any other good or service. It is, however, difficult to distinguish demand and supply, unless strong simplifying assumptions are made about supply (such as that it is perfectly elastic at a given cost). It is analytically much easier to distinguish between those determinants originating in the household and those originating outside it, as in the labor market and the educational system: the former largely coincide with demand, while the latter mix demand and supply considerations.

A second distinction is between the number of years of schooling (and the type of schooling) received by an individual, and the amount currently spent by him or by his family to obtain it. Such expenditures are not uniquely related to the schooling received, because of differences in cost among types of schools, among different places, and over time. The cost of schooling in foregone income also varies according to the level and type of education already received, and to other characteristics of the individual or household. The two variables differ also in that schooling is a stock, while expenditures are a flow.

Research Objectives and MethodsYears of Schooling Received

The chief question to be answered is what determines the number of years of schooling obtained by an individual (with secondary emphasis on the type of schooling)? For a group of people facing essentially the same conditions of supply (physical availability, quality and cost of schooling), this question can be largely answered with information about the individual and his family, taking account particularly of the following variables: sex of the individual, income of the household, number of members, number of children of school age, education, age and occupation of the parents. Under these equal supply conditions, it is differences in demand which determine who goes to school. When supply conditions vary across the population studied (either spatially or over time), differences in these conditions must be taken into account. More generally, external factors as well as household characteristics must be considered. The most important of these are the supply of schooling, and the prospects and conditions of employment for school-leavers. The latter influence both the cost of schooling and the return to education, while the former (supply) can be considered to affect only costs.

* Taken from the ECIEL Proposal dated May 10, 1974.

ANNEX C

Both of these extra-household effects can in principle be analyzed by time-series data, but it would be difficult to separate the intra-household and extra-household effects over time, except in studying the short-run effect of changes in employment or income on enrollments. When unemployment rises, children may have to leave school, or delay entering it, in order to help support the household. On the other hand, when unemployment is high the indirect costs of staying in school (in income foregone) diminish, and the demand for education may rise because the educated suffer less unemployment. Simple relations can be estimated from aggregate data between economic conditions and enrollment rates, but the distributional impact on schooling received can be better studied if household data are also used. Time-series results can be complemented by comparative (inter-regional, inter-national or inter-group) cross-section relations.

Changing economic conditions may also affect the expectations of individuals and their families, and therefore their willingness (apart from their ability) to acquire education. This effect might be studied by comparing cohorts of parents with similar educational levels, to see whether there are systematic differences in their determination of the schooling their children receive. Such an effect might not, however, be separable from the effects of income and age.

It is not possible simultaneously to take account of differences in intelligence or "educability" unless such information is available in school records and the individuals tested can be identified so that they or their families can be interviewed. This extension of the analysis is desirable, but is costly to undertake and may, when many variables are considered together, be difficult to interpret. A simpler approach is discussed below.

Given information about the individual and the household and the relevant factors, the basic objective can be put in two slightly different forms: (1) to explain the schooling of an individual, and (2) to discriminate among individuals with different levels of schooling at the same age (in order to remove purely inter-generational effects). The first requires multivariate regression, using as the dependent variable children's years of schooling, or the years deflated by age, or the educational "deficit" (expected less actual schooling, given age), or a similar measure. In the independent variables, one must choose related measures of income and of household size: whether total income per capita, or income per adult equivalent consumer is appropriate, for example, and other explanatory variables. To the extent that parents educate their children in order to raise their "quality" and usefulness, substitution occurs between the number of children and their quality including their education, at a given income. It may also be important to take account of age differences among children in a household. Given very imperfect capital markets for financing private educational expenditure, a family's ability to educate its children may depend on their spacing as well as on their number.

External factors enter the regression analysis whenever observations are drawn from different places or times, or whenever household observations are grouped for analysis, with the groups distinguished by different supply or labor market conditions. Appropriate independent variables must be constructed to measure supply, using information obtained from the school system.

ANNEX C

All the variables discussed so far can be observed. It might also be valuable to take account of two unobservable variables: there are the permanent or normal income of the household (correcting for transitory effects in the observed income, which are likely to be large in short-period data), and the income expectations which a family has for its children. Both can be estimated (by regression analysis) from the observed data for all households together, although there are some difficult methodological questions to resolve in doing so. In particular, to judge the income which a family expects for its children as a result of their education, assumptions must be made about the horizon employed (whether lifetime earnings or initial out-of-school income) and about the dependence of such expectations on the careers of parents and on changes over time in the economy. The ECIEL study on wage determination (ECIEL, 1974) is a source of estimates of threshold education levels "required" for particular occupations and incomes, and thus of expectations. (Although the expectation may be inaccurate because educational requirements change with the supply of educated people, families may not take account of these changes).

The second approach - discriminating among people by level of education calls for the use of analysis of variance, tests of distributions, or discriminant analysis to determine what systematic differences there are between those who do, and those who do not, complete a particular level of schooling. It is important in this analysis to control for age, since when enrollment rates change over time there will probably be shifts in the characteristics of the enrolled. In addition to comparisons of mean family income, comparisons should also be made of the distribution of income for different schooling levels, to see whether only the low end of the distribution or whether the entire curve is shifted, from one level of schooling to another. It should also be possible to examine, using school records, the distribution of intelligence (as measured by some standard test) of those in school at different levels of age or schooling. Provided income or status could also be known, this would show whether ability has any independent effect on a child's staying in school.

Expenditure on Education

Because educational expenditure and schooling received are strongly, though not uniquely, associated, many of the variables determining the latter can be expected also to influence the former. Nonetheless it is valuable to distinguish the two questions, so as to tell how important the direct costs of education are in determining the decision to remain in school or to leave. It can also be seen whether these costs (expenditures) differ systematically for different groups (defined by location, income and other features) in the population. Only household budget data are suitable for this type of analysis. Multivariate regression is an appropriate technique, but the same problems of choosing dependent and independent variables arise as in explaining the years of schooling received. It is particularly important to work with expenditure per child, perhaps also adjusted for age or school level.

ANNEX C

The simplest approach is to estimate single equations explaining some measure of expenditure. This is easily done, but it has the disadvantage of not showing how the decision to spend on education is related to the other expenditures of the household. The latter can be analyzed by constructing a multi-equation demand system, provided it can be assumed that supply or external conditions are the same for all households. Thus system estimation is limited to cross-section data with homogeneity of supply. Comparisons of parameters could be made after separate estimation for two or more populations.

This analysis permits estimation of the income-and price-elasticities of spending on education, and also of cross-price elasticities. Thus, it may be that for low-income families the price of food is an important determinant of educational expenditure, for example. The only other way to measure price responses is by analyzing grouped data, where prices or supply conditions of education are homogeneous within a group and vary among groups: geographic regions might be suitable for such analysis. System estimation may also yield estimates of threshold spending levels on education. Alternatively, direct estimates of such thresholds might be computed from exogenous price information and from estimates of the physical minimum requirements of a household for sending children to school (including adequate clothing and nutrition as well as the costs of books and materials and school transport).

Another question to be investigated with income and expenditure data is whether labor force participation appears to be affected by the decision to spend on education. Parents may be more likely to work, or to hold multiple employments, in order to keep children in school; or some children in a family may be more likely to work in order to finance the education of siblings.

Sources of Data

Either of these analyses can be applied to appropriate cross-section data using the household as the unit of observation. Census data offer very large samples and cover (in principle) the entire population, but they have the disadvantage of giving no, or not very reliable, information about income and expenditure. Household survey data, such as the ECIEL samples and several other sources, provide the latter information but are restricted in size and coverage. In all countries, a mass of comparable demographic/educational data is available for the major urban centers; in some cases there are comparable rural or country-wide household surveys. In practice, it may be desirable to make joint use of census and household data. The household data are most related to the nonavailable variables, and the census data can be used to judge the representativity of the household samples, particularly for higher levels of education.

The currently available data should be adequate for studying the determinants of primary and secondary schooling. One limitation of survey data is that they do not always indicate whether a person is currently attending school, so it is not certain when his education was received or how it is related to current household variables. Another is that information often refers only to children living at home. This limitation may be serious for children of university age, but is insignificant for young children (information on children in boarding school can usually be obtained).

Cross-section data can be used to show time profiles, in two ways. The simpler is to compare surveys taken at different times, such as the 1960 and 1970 censuses. The other is to stratify the population by age, and see whether the relations examined are different for different age groups and thus are presumably shifting over time. For educational policy, it is important to know what relations hold for those people now in school or approaching school age, and these may differ from the relations which determined the schooling of their parents' generation. The chief limitation on stratification (whether by age or by other characteristics such as household size or the attributes of the parents) is the small size of the household samples.

The other data sources of interest here are school records of age, schooling level, and some measure of intelligence or ability, together with indications of household income or status; regional and/or time-series information on unemployment by age and schooling level; and regional and time-series information about the supply of schooling (physical availability and price) generated by the school system. The intention throughout is to use primarily existing information rather than to undertake new surveys.

A Note on Previous Investigations

The importance of understanding how households assign resources to education is emphasized by Edwards and Todaro (1973). The importance of the price (or cost) of schooling is noted by Campbell and Siegel (1967). Other studies using aggregate cross-section or time-series data in the U.S. and Canada - Galper and Dunn (1969), Crean (1973), Gustman and Pidot (1973), De Prano and Nugent (1968) - indicate the weight of external factors, particularly of costs and unemployment, or of the "profitability" or rate of return expected from additional education. Some of the difficulties of estimating such a rare are noted by Carnoy (1973, pp. 62-63) and Eckaus (1973). Further evidence on the importance of supply prices comes from Welch (1966). The connection between these factors and private demand for education - in particular, the reason why demand may consistently exceed both educational supply and the demand for educated labor - is discussed by Edwards and Todaro (1973, 1974) and treated in detail by Carnoy (1973, 1972), using Brazilian data analyzed by Langoni (1970, 1972) as well as evidence from Puerto Rico and other less-developed countries.

Studies by Bowles and Gintis (1973) and Hansen et al. (1970) suggest that family background is very important in determining the income associated with a given level of education. Intelligence or ability appears to be important, after considering other factors, only for those with low education. To the extent that families invest in their children to assure them future income, the same factors should influence the demand for education. Investment to create a consumer durable for the utility of parents, rather than for children's future benefit, is treated by Willis (1973), De Tray (1973) and Becker and Lewis (1973); these analyses emphasize the relation between number of children and their "quality", including education. They also stress the complexity of household decisions and the importance of intra-household characteristics.

Much of the work cited has the disadvantage either of a very high-level of aggregation, or of emphasis on the United States and other high-income countries. Some evidence for less-developed countries is assembled and analyzed by Carnoy (1973), and a short bibliography is provided by Schiefelbein (1974), for Latin America. There is not yet, however, a systematic set of answers to the questions posed here: some are treated in the studies of Drysdale (1972), Selowsky (1968) and Carnoy (1972).

B. COST AND FINANCING OF EDUCATION

The objective of this part of the project is to study the cost of producing formal education, to learn how these costs are determined and how they are distributed, and to see what relation they have to the output of the educational system. The topic is of great significance for the relation of education and development, first because educational costs in the aggregate are large and growing rapidly; and second because the structure of those costs, and the ways they are financed, have important distributional consequences about which very little is known.

Because education, or schooling, is not a homogeneous good, there is some difficulty in measuring the output of the educational system. Two approaches will be followed to quantify the product whose costs are to be studied. One is to count the number of graduates from a given level of education, per entrant to that level, taking no account of differences in quality either among students or in the schooling they receive. This procedure is easy to apply (since the necessary data are readily available). Moreover, it may be the measure of output which is implicitly used by the labor market in evaluating applicants, all people with the same educational level being considered equal. The second approach is to measure production by an index of quality, based on standardized tests of achievement. Some of the difficulties of this procedure are discussed later.

Given a measure of the production of schooling at each of several levels (primary, secondary, university or vocational), the questions about costs to which answers will be sought may be organized as follows:

- (1) What is the variation in unit cost, and with what factors are different cost levels associated?

- (2) How is the cost divided among different factors or inputs used to produce schooling (teachers, buildings, equipment, materials)?
- (3) In publicly supported schools, how are the costs divided between the public sector and the student or his family?
- (4) How are the costs borne by the public sector financed?

These questions are related to the efficiency of the system in the narrow sense of how well it uses inputs to produce output. In particular, it is of interest to know whether variations in cost are reflected in variations in the quality of output; whether they reflect quality differences in inputs, either educational inputs or the entering students themselves; or whether they simply indicate variations in efficiency of resource use. There is considerable debate over this issue in the United States (Coleman, 1966; Jencks, 1972), and a good deal of evidence has been gathered to suggest that raising costs or inputs need not generally result in greater output. The estimation of such relations must take account of differences among students when they enter the school, as in the studies by Bowles (1970) and Bowles and Levin (1968).

It must be noted that in attempting in this way to measure the efficiency of the educational system, or to explain cost variations, reference is made only to what the system is actually trying to produce (which requires some analysis to ascertain). The study is not intended to answer the much more difficult questions of what the system ought to be producing, or of its efficiency in meeting the needs of society and the economy (Carnoy, 1973:22). It may serve as a basis for, but it is not intended to be, an analysis of the proper strategy of investment in education (Simmons, 1973). Nonetheless, the narrower concept of efficiency is important to study, because of the considerable, scattered evidence of inefficiency, or at least of great variations in unit cost, in Latin America (Castro, 1974a).

Some of the variables to be examined for their possible effect on costs are size of school or class, location, quality of teachers (as measured by their own schooling, salaries, time devoted to teaching, etc.), quality and utilization of buildings and equipment, and characteristics of entering students. Among the latter, the most important are likely to be intelligence, achievement in previous level(s) of schooling, and family background and income. In examining these factors the study will interact closely with the study of the determinants of schooling (Part I of this proposal). These variables may be studied at the level of individual schools (using information aggregated over all the students in each, or aggregate characteristics of the region served by each school) or among individual students (pooling observations over a sample of schools). Quality of input to one level of education may be measured, in part, by quality of output at the preceding stage.

ANNEX C

The basic questions are also related to the distribution of the cost burden of the educational system. In this respect it is particularly important that throughout Latin America the share of direct educational cost (excluding foregone income) borne by the public sector tends to rise with the schooling level. University education may have almost no direct cost to the student, while secondary schooling is expensive. The distribution of schooling thus includes a large element of subsidy to students from high-income families. Poorer students cannot take advantage of the subsidy because there is no capital market for financing their secondary education. Besides being inequitable, this arrangement may be inefficient as a rationing device (Selowsky, 1973). Within a given level of schooling, there may be distributional inequities between urban and rural areas, among regions, or among ethnic groups. Such inequities will arise even if there are no differences in the direct costs to students, if there are differences in the public costs, in the quality of schooling, or in the quality of entering students.

Finally, the way that public costs (that part not paid by the student in tuition or fees) are financed also has significant distributional consequences. To study these in detail would require assessing the incidence of the various taxes from which educational expenditures are met, as well as assumptions about the share of each of those taxes in meeting total costs. The available estimates are not very satisfactory for this purpose (Bird and DeWulf, 1973) so that this aspect of the study probably cannot go beyond description of the sources of revenue. Some assessment may be possible of the redistributive effects among regions, particularly when education is financed partly from national and partly from provincial or municipal sources.

To answer the four questions on which the analysis is based, most of the data needed can be provided by the school system. Certain problems nonetheless deserve emphasis. The difficulty of measuring output has been mentioned. When standardized measures of quality are not available (within one country or among countries), some research will be needed to make comparable the different standards used. Information on the quality of entering students may not be available, requiring that estimates be made by taking special surveys of students in a representative group of schools. Exogenous information is of course needed to estimate the indirect costs of attending school, in income foregone; such estimates can be drawn from existing studies and from the study of schooling determinants. Even the information on costs endogenous to the school system, particularly capital costs, may require revision or exogenous verification. Bookkeeping practices do not necessarily reflect true economic costs (Castro, 1947a).

The study can probably draw on a great deal of published or readily available information to answer the simpler questions about costs and financing, and the first step must be to examine and synthesize the cost data in each country. Only recently has theoretical attention been devoted to the relative importance of different factors in determining costs and outputs (Selowsky, 1973:48-49) and the associated needs for information. Detailed studies of cost and financing are very few in number in Latin America (Barkin, 1971; Munoz, 1967) and still more rarely are the distributive implications analyzed with consideration of the sources of finance (Jallade 1973a, 1973b).

ANNEX C

This study may be expected to have implications for educational policy (apart from possible implications for policy in other sectors) in two respects. The first is to indicate inefficiencies in the use of educational resources, and ways in which costs might be reduced without sacrificing educational output in quantity or quality. The second is to quantify inequities in the provision of schooling, and thereby to serve as a basis for changes in the way education is financed. One proposal of this sort is to raise tuition to cover the direct costs of higher education, and at the same time to introduce loans which would allow low-income students access to such schooling (Selowsky, 1973: 50-62; Jallade, 1974). Other possibilities involve changes in those elements of cost, direct or indirect, which have the greatest distributional impact.

THE DEPARTMENT OF THE TREASURY
OFFICE OF THE GENERAL COUNSEL
WASHINGTON, D.C. 20230

5980567-④

October 31, 1974

PD-AAB-561-F1

TO: Mr. Bushnell

FROM: Michael Bradfield *JB*
Assistant General Counsel

SUBJECT: Proposed SPTF Financing of ECIEL Education Study

You have requested my opinion concerning the authority under the Social Progress Trust Fund Agreement to provide a \$790,000 equivalent technical assistance grant from SPTF resources to the Program of Joint Studies on Economic Integration of Latin America (ECIEL).

The proposed ECIEL grant would assist the financing of a major study on the relationship between education and economic and social development in Latin America. According to the IDB project description (Document AP-233) this study would "provide information and methodologies for improving educational planning; and policies for education financing, and for making sound decisions for investment in the sector." The IDB's contribution to this study would pay for salaries and expenses of individuals working on the study, cover the costs of printing final reports, and help meet computation costs.

Section 4.03 of the Social Progress Trust Fund Agreement provides the only authority for grants, as opposed to loans, of Fund resources:

"Upon request, technical assistance may be provided by the Administrator on a loan, grant or reimbursable basis, for the preparation, financing, and execution of plans and projects for carrying out the purposes set forth in Article I, Sections 1.04 and 1.05, of this Agreement."

Section 1.05 provides in pertinent part that,

" . . . the Administrator shall utilize the resources of the Fund to provide:

- a) technical assistance related to projects in the fields set forth in Section 1.04, . . ."

Section 1.04(d) delineates the permissible scope of use of Fund resources to assist education. It states that assistance may be offered to projects or programs to provide,

"such supplementary financing of facilities for advanced education and training related to economic and social development as may be agreed upon from time to time between the United States and the Administrator."

Under a broad construction of the SPTF Agreement, it can be argued that the proposed grant is authorized. Sections 1.05 and 1.04(d) read together authorize grant technical assistance related to projects for financing of advanced education facilities. The ECIEL study is a program of technical assistance which will "provide information for making sound decisions for investment in the (education) sector," and as such it is related, as that word is used in Section 1.05, to the financing of advanced education facilities. This interpretation emphasizes the authorization contained in Section 1.04, and broadly construes the phrase "related to projects in the fields set forth in Section 1.04." I have been informed by the Office of the General Counsel of the IDB that this broad construction has been applied in the past to proposals for SPTF technical assistance grants.

On the other hand, you should be aware that under a narrower, and what appears to me to be a more reasonable, reading of the language, the proposed grant cannot be said to meet the provisions of the SPTF Agreement.

The language of Sections 1.03, 1.04(d) and 1.05 supports the view that these sections were intended to allow technical assistance grants to help countries prepare specific projects and to assist them in their implementation. In connection with education, it was undoubtedly envisioned that SPTF funds would be used to assist projects involving the construction of such facilities such as buildings, laboratories, libraries, etc., for advanced education. This interpretation is consistent with the basic purpose of the SPTF, which is to provide loans for socially oriented development projects, in contrast to other funds appropriated by Congress at the same time and administered by the U.S. foreign assistance program for broad technical assistance purposes on a grant basis.

Accordingly, when the specific language of Sections 4.03, 1.05 and 1.04(d) is applied to the grant to ECIEL, it does not appear to be a grant for "the preparation, financing and execution of plans and projects for carrying out of the purposes of ... Sections 1.04 and 1.05 ...", i.e., "supplementary financing of facilities for advanced education and training related to economic and social development"

On the contrary, the ECIEL study is an academic inquiry into education and development. Any projects directly involving the financing of advanced education facilities would be only an incidental result of this basic research study and no projects may, in fact, result from it.

The scope of the word "related" in Section 1.05 is limited by Section 1.04(d) which specifies that SPTF assistance is to go to the financing of facilities. Accordingly, "related" is most appropriately read as intended to apply to technical assistance in connection with a specific and identifiable facility in the higher education field capable of being financed by the SPTF. There appears to be no justification for allowing the term "related" to encompass any study in the education field which is in some way "related," directly or indirectly, to SPTF purposes.

5480567-5

DEC 1975

PD-AAB-561-G1

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR (LA)

From: LA/DR, Donor M. Lion *Ji.*

Subject: DAEC Approval of LA Regional Project "Economics of Education, (ECIEL)

13p.

Problem: LA/DR convened a pre-DAEC meeting on October 23, 1975 to discuss the proposed grant project entitled "Economics of Education" (ECIEL). ECIEL is the Spanish acronym for Estudios Conjuntos Para La Integracion Economica Latinamericana (Joint Studies for Latin American Economic Integration), a regional network of thirty-two Latin American social science research institutions and the Brookings Institute. ECIEL's director (called the ("Coordinator")) is currently Felipe Herrera. Headquarters for the ECIEL staff are located in Rio de Janeiro.

The pre-DAEC meeting was attended by personnel from PPC and TAB, as well as the LA Bureau offices concerned. The technical director of the ECIEL education studies, Dr. Claudio de Moura Castro, was in attendance to answer questions of a technical nature.

The proposed A.I.D. assistance would support a series of empirical studies on the economics of education. The research is intended to increase understanding of how education affects and is affected by the growth and distribution of income in Latin America. The impetus for these studies came from the 1973 Bellagio meeting of donor agencies. The studies have already received financial support from the Inter-American Development Bank (\$790,000), the Ford Foundation (\$125,000), the Rockefeller Foundation (\$44,000) and the Canadian International Development Research Corporation (\$125,000). A.I.D. support of \$365,000 would provide the remainder of the required external assistance.

LA/DR believes that this project will help to answer questions of great interest to A.I.D. and to the countries to which our assistance is provided. Although several of the issues raised suggest ways in which the project might be restructured to more directly respond to A.I.D. objectives, our ability to influence the design of this project is somewhat more limited than it is on bilateral activities. This results from the nature of the project and from A.I.D.'s limited role in it. This is a research project, and researchers almost always insist upon considerable autonomy. Moreover, the proposal has been accepted by four other donors, and work has already been initiated using local funds and other donor support. A.I.D. support will provide about 33% of project financing for the "Pilot Studies" and about 10% for the total ECIEL research package on the economics of education.

In view of these factors, our options are limited to assisting the studies as they are now constituted or not participating in the project. We believe the project as presented is well worth the investment which has been requested.

The following paragraphs discuss the issues raised at the meeting. LA/DR believes the issues have been adequately addressed and that a formal DAEC meeting is not indicated.

Discussion:

1. Predominance of graduate countries in the project. Of the five planned studies, only one will be carried out in a country (Chile) where future A.I.D. inputs are planned; one will be carried out in Colombia where a gradual A.I. D. phase-out has recently been announced; two will be carried out in Brazil where A.I.D. programs are terminating; and one will be carried out in Mexico which has not received bilateral assistance for many years. Should A.I.D. finance a project where most of the activity will be carried out in graduate countries?

Unlike most A.I.D. activities, the proposed project will not provide assistance to an action program. It will finance research, and, like all A.I.D.-assisted research programs, the primary purpose is to achieve a better understanding of some aspect of the development process. Although it would be difficult to help the poor in one country by delivering a service to the poor in a different country, doing research in one geographic area may have important benefits for other areas. This basic concept within the research area is well established. For example, much of the A.I.D.-sponsored research actually takes place in U.S. universities. Similarly, A.I.D. has frequently attempted to establish regional research networks so that the results of research conducted in one country can be utilized elsewhere.

The studies for which A.I.D. assistance has been requested, have been referred to as "Pilot Studies". This title is used because the studies have been considered trial or experimental in nature, to be replicated elsewhere if the methodology developed proved successful. In fact, plans are being developed to draw on the Brazilian experience in the rural sector to carry out similar studies in rural areas of Bolivia and Paraguay. Favorable indications of financial support for these studies have already been received from the West German Government.

Although from the A.I.D. viewpoint it might be preferable to carry out the first round of these studies in countries where A.I.D. has active programs, the expertise and experience is clearly greater in the more developed countries. LA/DR believes that carrying out the studies partly in recent-graduate countries which share common languages, cultural heritages, and many socio-economic characteristics with countries now receiving A.I.D. assistance will provide useful knowledge and methodology to the latter countries and will strengthen regional ties through which other benefits could follow in the future. In the present instance, the ECIEL network offers a desirable middle ground between reliance on researchers in A.I.D. recipient countries who lack adequate experience and training and reliance on research carried out in the U.S. or with large inputs of high-cost U.S. expertise.

In sum, we believe that the benefits to A.I.D. recipient countries from the transfer of knowledge and techniques and the strengthening of the regional technical network are adequate to justify this expenditure of A.I.D. resources. Failure to approve assistance to a research organization which includes representation from every A.I.D. receiving country in Central and South America (except Guyana) simply because much of the research was to be conducted in "graduate countries" while funding many research projects carried out by U.S. universities in the U.S. and in graduate countries, often with only token local participation, would be both imprudent and uneconomic.

2. Emphasis on rural areas. The five Pilot Studies which the project would finance include two on the role of education in the modern part of the urban sector, two on the marginal or traditional part of the urban sector, and only one on the rural sector. Is sufficient attention being given to the rural poor to warrant A.I.D. involvement?

The urban traditional sector is essentially the transition step between the rural and the modern urban sector. Completing the transition may take only weeks or it may take generations. Families living in the urban traditional sector are generally those urban dwellers which most recently left the rural areas.

The two proposed studies on the transitional sector will try to determine the extent to which various forms of education affect entry into and upward mobility within the sector and to the modern sector. They will identify the potential and the limits of education's ability to assist persons of different races, ethnic backgrounds, sex, age, socio-economic background, etc. to improve their economic and social status. The studies are thus of great importance to an understanding of the conditions facing the increasing numbers of rural poor that seek to improve their lot by moving to urban centers.

Even if entry into the urban traditional sector were not a main channel upward for the rural poor, the conditions of poverty prevalent in that sector would constitute an appropriate area for A.I.D.-sponsored research and development programs.

A.I.D.'s interest in the two studies of the modern part of the urban sector centers largely on factors which restrict access. We know that members of the modern urban sector are better educated, but does that mean all we need to do to help the poor is provide them with more education? Under what conditions will education facilitate entry into the modern sector? What type of education would be most effective for different groups?

Studying those who earn decent incomes may reveal ways to help those who do not. Studying middle and high income groups is not the same as helping them. Our very limited understanding of the role played by education and other factors influencing entry into this sector constrain

our ability to develop effective programs to assist the poor to move into more productive, better paying jobs. The disappointing experience with special education and training programs to end rural and urban poverty in the U.S. provide considerable evidence of the need to better understand education's influence on various groups and in different labor markets before making large investments of public funds in the expectation that those receiving the programs will be able to move into the modern sector.

In sum, while the study of the rural sector may be of greatest importance to A.I.D., there are numerous things to be learned from the other studies which will be of considerable interest to A.I.D., to the governments in A.I.D.-assisted countries, and to the other participating donors.

3. Non-formal education. The Pilot Studies will focus primarily on the role of formal education. Should more attention be given to non-formal education since it may provide LDC governments a more cost-effective way to transmit needed skills, knowledge and attitudes?

All the survey questionnaires will collect relatively detailed information on the life histories of the respondents. In addition to information on job experience, mobility and background variables, a detailed account of educational experiences will be included. To the extent that any one modality of non-formal education can be observed in a statistically significant number of individuals, it becomes possible to evaluate its impact on the different measures of achievement (earnings, promotion, etc.).

Many of the researchers share A.I.D.'s interest in non-formal education. In the two modern sector studies, one of the central objectives is to compare the effect of general education, technical education and non-formal education. In the rural study, an attempt will be made to see whether common non-formal types of education (e.g. agriculture extension) are most effective after some formal schooling.

4. Alternative Sources of Funding: Use of the Special Progress Trust Fund (SPTF). Most of the project costs will require the use of local currencies rather than foreign exchange. Under these conditions would it not be preferable to finance the project from the SPTF?

The IDB proposed using the SPTF to finance its \$790,000 contribution to this project. However, a legal determination was made that the financing of the proposed research would constitute an improper use of SPTF. The IDB's own contribution thus had to be financed out of its general funds.

5. Role of Women. The studies do not focus specifically on the role of women. Should more emphasis be given to this subject?

In attempting to establish the relation between education, earnings, access to jobs, promotion, market structures and other related variables, different characteristics of workers will be taken into consideration. Sex is believed to be a variable of considerable importance. In each situation where it may have significant explanatory power, the nature of its influence will be examined. The studies will thus help us to know the special factors which constrain women from playing a greater role in the development process and the situations in which education can alter that role. We believe, therefore, that adequate attention will be given to the role of women. It should also be noted that professional women researchers will participate in several of the studies.

6. Availability of Data for Subsequent Research. Valuable data sources sometimes receive relatively little use because they are inaccessible to bona fide researchers. In some cases inadequate or primitive methods of data storage may limit utilization, while in others a monopolistic policy towards data reutilization may prevent other researchers from using the data. Can A.I.D. be certain that the data collected for these studies will be available for subsequent research?

Traditionally, ECIEL has put considerable emphasis on the preparation of computer tape data files. Design of filing systems for storing data sets has been done centrally by the ECIEL staff with the help of outside consultants. ECIEL keeps copies of the tapes used by the participating institutes in order to proceed to the comparative studies following the individual reports from participating countries.

According to ECIEL written regulations, member institutes are urged to allow other researchers to utilize their data. Ultimately the final authorization for use must be given by the participating institute which owns the data and which would suffer the consequences if its use were to embarrass the host government. So far, institutes have been liberal with respect to allowing other local and foreign researchers to use the data. Indeed there are several instances of research done by outsiders with data from ECIEL.

The Coordination of the Education Project is particularly eager to encourage joint research between members of the participating institutes and outside researchers. This strategy not only minimizes the political problems of releasing data, but also builds in an inducement to a mode of operation that has a powerful training component. By working with local graduate students or researchers, well-trained and experienced foreign researchers will improve the quality of the research produced, and improve local research capabilities as well.

While this arrangement falls short of certainty that the data will be available to all bona fide researchers, it is the strongest assurance A.I.D. can seek and should be sufficient.

7. Utilization of Results. The PP provides considerable discussion on the dissemination of the research results, but there is no direct host country financial input which would signify that decision-makers are interested in the results. Are the planned publications and seminars likely to interest policy-makers?

In addition to the formal mechanisms of publication and distribution, two seminars with government decision-makers are scheduled. Local governments for the most part are not directly sponsoring the research, although most participating institutes receive government funding or subsidies.

On the other hand it is pertinent to emphasize that the questions raised in the research are very germane to subject matter appearing frequently in Latin American newspaper editorials, educational authorities press releases and interviews, as well as general journalistic coverage. In addition, Education and Planning Ministries have been sponsoring seminars and conferences on issues covered by the research. Thus, in many cases, it is not a matter of calling public attention to issues but rather a question of providing some solid information on openly debated issues.

Recommendation: That you approve the PP on Economics of Education (ECIEL).

Approved

Disapproved

Date

UNITED STATES GOVERNMENT

Memorandum

TO LA/DR, Mr. Donor Lion

FROM GC/LA, ^{UW} Norman R. Williams

SUBJECT: SPTF Financing of ECIEL Project

DATE: December 8, 1975

You have been requested by Mr. Kleine to obtain a GC "ruling" on whether SPTF currencies could be used instead of AID dollars to finance the Economics of Education Studies (ECIEL) project (No. 598-15-690-567) proposed for his approval. His question appears to have been prompted by the response given to Issue 4 in your memo to him dated December 2, 1975. That issue was whether the SPTF would be a better source of funding for the project, and the response was in part that the IDB had earlier proposed to make a \$790,000 contribution to the project from the SPTF, but that a legal determination resulted in other resources being used.

The events leading up to the IDB's decision to use resources other than SPTF are instructive on the current question. As I have been able to determine, in September 1974 IDB management's recommendation to the board of directors was that the SPTF be used to finance a \$790,000 IDB contribution to the ECIEL project. Consultations by John Porges, U.S. Executive Director, with the Treasury Department resulted on October 30, 1974, in Mr. Porges' advising the IDB that Treasury felt the use of SPTF resources to finance research of the type proposed was inappropriate. (See attached Bradfield/Bushnell legal opinion dated October 31, 1974, upon which Treasury based its position.) IDB management, having consulted with the Bank's General Counsel's Office, maintained its view that the SPTF Agreement was sufficiently broad in its treatment of technical assistance grants to permit the proposed use of SPTF, but Mr. Porges reportedly remained firm. In order to resolve the controversy, and since ample FSO local currencies were available for the project at the time, the Bank yielded, so that a resolution proposing the use of FSO grant funds was presented to the Board, which approved it on December 12, 1974.

The issue remains unresolved in the sense that the IDB General Counsel's Office at this time would probably again interpret the SPTF Agreement broadly and construe it as permitting the financing of the ECIEL studies, and it is equally likely that Mr. Porges and Treasury would not be



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inclined to espouse now an interpretation inconsistent with the one they held to firmly a year ago. Last year it appears AID deliberately deferred to the IDB's own judgment on whether to use SPTF funds. While I personally favor the broader interpretation given the SPTF Agreement by IDB/GC, I think it would be a waste of time to try to reopen this issue with the Bank, which even now would probably prefer to go to the FSO if it were asked to finance an additional \$365,000 for ECIEL. The AID support described in the PP seems appropriate.

In conclusion, while we may find it necessary to fight a battle on the uses of SPTF for technical assistance, ECIEL does not appear to be the case to start with.

Attachment: Legal Opinion

cc: LA/DR, G. Wein
GC/LA, I. A. Levy

GC/LA, NWilliams:lb:12/8/75

DEPARTMENT OF STATE

Memorandum of Conversation

DATE: December 19, 1975

SUBJECT: Use of SPTF to Fund ECIEL-Economics of Education Project

PARTICIPANTS: US Treasury, Carl Lohmann and LA/DR/EST, Gerald Wein

COPIES TO: LA/DR/EST, S. Applegate, LA/DR, C. Stockman, C. Weinberg, D. Lion,
W. Feldman, LA/MRSD, P. Lansdale, LA/GC, NWilliams

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1. In response to my request, Mr. Lohmann checked with various officials within the U.S. Treasury to determine their views on Mr. Kleine's suggestion that the SPTF be used to provide \$365,000 for the subject activity. These funds would be in lieu of an A.I.D. contribution of that amount.
 2. Mr. Lohmann reported that neither Mr. Bushnell nor the Treasury's lawyers saw any reason to reverse their previous position that this project is not appropriate given the present SPTF Agreement. Mr. Lohman further indicated that on the basis of his conversations he felt that Treasury would probably not object to amending the SPTF Agreement so that the project would be appropriate. Lohman noted, however, that Mr. Porgis may personally object to the use of SPTF to support this ECIEL activity as he did in the past. If this happens, the fact that Porgis did agree to the IDB providing \$790,000 from FSO should strengthen A.I.D.'s position.

Comment: An amendment (protocol) to the SPTF Agreement could be drawn up specifically for the ECIEL activity, or ECIEL could be included in a broad amendment to be drawn up by the L.A. Bureau's SPTF task force. Timing is of major concern in reviewing our options. Other donors made their commitments to ECIEL more than a year ago, and the studies have been initiated using the support from other donors and from ECIEL member institutions. The other donors are likely to share ECIEL's concern about further delays. The Ford Foundation representative has already voiced his concern.

MEMORANDUM OF CONVERSATION, continued

ECIEL has also recently requested that the IDB finance other studies that are planned for next year. If SPTF is used for the education studies, it is likely that it would also be used to finance any IDB participation in those studies.

A completed protocol and Treasury's acceptance (acquiescence) thereto are of no use if the IDB is not also agreeable to using SPTF to provide \$365,000 to ECIEL. The next step should therefore be to determine whether the IDB will agree. Phoebe Lansdale suggests that this might best be done informally by having Mr. Kleine call Mr. Sternfeld.

LA/DR/EST, GWein;og;12/19 SW
Clearance: LA/DR, C. Stockman /s/

LA/MRSD, Mr. Edward Marascuilo

December 22, 1975

LA/DR, Donor Lion

SPTF Financing for "ECIEL - Economics of Education Research"

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1. As you may know, Mr. Kleine has directed that we investigate the possibility of using the SPTF to provide \$365,000 for the subject project. We have already learned (see attached memcom) that the U.S. Treasury will object to this proposal under the SPTF Agreement as that Agreement is now formulated. The Treasury's objection is legal rather than technical. The Treasury would apparently not object to an amendment (protocol) to the Agreement which would broaden the definition of acceptable projects so that this ECIEL activity would qualify.

2. Before making a decision, Mr. Kleine will want to have our views on the desirability of proceeding with a protocol to the SPTF Agreement. LA/DR is concerned that waiting for the SPTF task force to present and get approval on a broad amendment may take longer than this project should be delayed. It would be helpful if you would give us your most realistic estimate of the timing of the anticipated "broad" amendment and the desirability, feasibility and timing requirements of immediately submitting a "specific" protocol to permit SPTF funding of this project.

Drafter: GWein: LA/DR/EST:rv

13 JAN 1976 ECIEL

Proj. No. 5980567

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR (LA)

From: LA/DR, Donor M. Lion

Subject: Funding of ECIEL Project - Economics of Education

Problem: On December 11, 1975 you directed that we endeavor to use the SPTF in lieu of AID funds to provide \$365,000 to the ECIEL project. The purpose of this memorandum is to inform you of the outcome of our inquiries and to recommend action to be taken.

Discussion: In late 1974 the U.S. Treasury strongly objected to the use of SPTF funds to finance the I.D.B.'s \$790,000 contribution to this project. I.D.B. eventually used FSO to provide its contribution. The Treasury's position was based upon a legal interpretation which is included as TAB A.

Treasury's acquiescence would be required if the additional \$365,000 were to come from the SPTF. We have learned that the Treasury continues to believe that the ECIEL project is not consistent with SPTF Agreement. The Treasury would not object to the project if suitable changes were first made in the SPTF Agreement. (TAB B).

At my request, Ed Marasciulo, Chairman of the Working Group studying the future of the SPTF, and some of its members addressed themselves to the feasibility of amending the SPTF Agreement for the specific purpose of satisfying Treasury's concerns regarding SPTF funding of this project. The group feels that it would be inappropriate to pursue protocols justified in terms of specific projects at this time, when it is becoming increasingly likely that the US will want to seek broader revisions in the purposes of the SPTF. Following completion of an options paper this month and your review of it, and subsequent discussions with various LA missions and the I.D.B., the Working Group expects that we will be ready to initiate the process of obtaining USG approval and negotiation of such broader revisions. These could take form of one protocol to the SPTF Agreement in the first half of this year. The Working Group believes that the protocol clearly could permit SPTF funding of projects like ECIEL thereafter.

However, amending the SPTF Agreement might not be sufficient to ensure SPTF financing for this activity. Despite I.D.B.'s strong support for the project, we cannot be certain that its Board of Directors will approve a second "dollop" of funding.

There would be some additional delay in I.D.B. management processing and Executive Director approval of the request.

These delays are important because actual work on the ECIEL education studies began about a year ago using the participating ECIEL institution funds and contributions by the other participating donors. Both ECIEL and the other donor agencies have expressed their serious concern about further delays in obtaining the remaining funding required for the project.

Recommendation: In view of these facts, I recommend that you approve A.I.D. dollar financing for the project as proposed, but with the condition that every effort be made to substitute SPTF funds if the anticipated protocol is approved so that the A.I.D. input could be commensurately reduced. This course of action would permit us to move ahead now on the project and also to continue to work toward using the SPTF to the extent feasible. The minimum outlay of AID funds would probably be \$60,000, the initial amount planned for disbursement in FY 1976 and the Interim Quarter.

APPROVED:

DISAPPROVED:

DATE: