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The Program of Development Studies is primarily concerned with the role income distribution plays in determining the development of a country and the way such development affects the distribution of income. The research necessarily requires considerable interdisciplinary cooperation. Discussion Paper No. 24 considers the following specific issues in relation to the Program: 1) the effect of distribution of wealth and income on the growth and investment strategy pursued by government and private economic decision-making units; 2) the determination of tax type and its base and, indirectly, the level of government expenditures through distribution and size of income; 3) the extent to which differences in political parties and public policies are the result of compromise between those seeking rapid economic growth and those seeking a more equal distribution of gains from growth; 4) the sense in which differences in development programs reflect only responses to desires of different elitist economic, political, regional, and social groups; 5) the determination of the role of foreign investment by distribution of income; and 6) the creation of inflationary pressures. The author deals with what he considers the most important aspects of the distribution of gains from development insofar as it effects the rate and composition of growth, political and social development, and the economic and political strategy pursued to achieve development.

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PROGRAM OF DEVELOPMENT STUDIES

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Paper No. 24

A Proposal for Research on  
DISTRIBUTION OF GAINS, WEALTH AND INCOME  
FROM ECONOMIC AND POLITICAL DEVELOPMENT

Summer, 1972

## PREFACE

For some time the Program of Development Studies has been undertaking research on the distribution of gains, wealth and income from economic and political development. We thought that the social scientists and administrators on our mailing list would be interested to learn more about the Program's research efforts.

Sections 3, 4, and 5 of this paper describe research which is financed mainly by the Agency for International Development (contract no. AID/csd 3302, "Distribution of Gains, Wealth and Income from Development"). Sections 6, 7 and 8 describe research financed mainly by the National Science Foundation (grant no. GS-34581, Proposal no. P1S0982). The Menil Foundation grant to the Program finances the general operations of the Program and parts of all its research efforts.

James W. Land  
Director  
Program of Development Studies

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## 1. The Program of Development Studies

The Program of Development Studies was established with the generous assistance of the de Menil family in the Fall of 1969. The charter of the Program calls for the establishment of a program of interdisciplinary study into the pressing economic, political, and social problems of developing nations.

Funds of the Program have been used to support summer research, a seminar series, distribution to the research community of work in progress, and regular meetings to discuss research problems. The University in turn has provided spacious quarters for the Program of Development Studies in the new Sewall Hall Social Science Building.

The organization of the Program of Development Studies is simple. The Associates of the Program are drawn from throughout the University community. Any Rice faculty member interested in development and who wishes to attend the semi-monthly meetings of the Program may become an Associate, and thereby eligible for research and other assistance by the Program. The Director of the Program is charged with coordination of research efforts as well as directing the publication, secretarial and research facilities of the Program. The Director, together with the Chairman of the Department of Economics and the Dean of the Arts and Humanities Division of the University, constitute the Executive Committee of the Program. The Committee makes budgetary and

personnel decisions of the Program in accordance with broad research programs decided by the Associates.

In general, the Associates of the Program of Development Studies constitute an unusually mature group of scholars in the area of development. All of the individual researchers have extensive experience living and working abroad. They all have publications and research in progress on aspects of development. The credentials in abbreviated form for the Associates are given in section 9 of this proposal. A list of discussion papers distributed by the Program is given in section 10. Copies of these papers are available upon request from the Program.

Sections 3 to 8 describe the various projects now in progress. The Agency for International Development is currently financing the research described in Sections 3 to 5. The National Science Foundation is currently financing the research outlined in Sections 6 to 8. All other operations of the Program are supported by the de Menil Foundation grant.

## 2. Introduction

Despite substantial gains in many directions, the hopes of many developing nations are tempered with frustrations, uncertainties, and a gloomy outlook for the future. Growth in total output and import substitution policies have frequently resulted in the creation of capital and foreign exchange gaps, population pressures have held down per capita growth rates while rates of unemployment were rising, and the landless urban and rural worker frequently is no better off after several decades of growth than he was before growth began. Finally, the gap between the average income in developing nations and in the western industrialized nations has continued to increase. These frustrations are becoming deeper at a time when foreign aid from the developed nations is decreasing or merely holding its own and when many of the developed nations are adding restrictions against exports from the less developed world.

The economic ills described in the preceding paragraph present grave economic and social problems for the United States. A world in which a majority of its people live near the subsistence level, where there is growing disparity between the poor and the rich within the developing nations and between the living standard of the developing nations and the more advanced industrial nations is likely to be a world of political instability and economic and social crises. For both humanitarian and self-interest reasons, there is an urgent need for

additional study of the grave economic, political, and social difficulties which confront the developing nations.

The problems of distribution of gains from development constitute a particularly important and under researched subset of these difficulties. The term "distribution of gains" is merely a shorthand expression, referring in a broad sense to wealth, resources, political power, and income. Furthermore, distribution may be discussed from many points of view: among regions within an underdeveloped country, between the urban sector and the rural sector, between producing sectors of the economy (such as agriculture, manufacturing, and service industries), between groups of employers and employees, and many other ways as well.

Development research, at least in economics, often ignores the distributional aspects of growth, concentrating on the size of the pie rather than its division. Interest in distribution, if shown at all, has mainly reflected concern about equity and social justice. However, the distribution of, for example, income is relevant not merely to questions of equity but also to the ability of a society to allocate resources in such a way as to promote the long-range economic growth of the society. Furthermore, distribution is of interest as a political and sociological issue as well as an economic issue since it involves the kind of leadership a society has or is able to develop, the kind of decisions made by that leadership, the ability of such institutions as the bureaucracy to enforce these decisions, and the degree of political stability.

To achieve the goal of economic growth a society makes certain decisions concerning which groups or institutions shall sacrifice a share of their potential consumption in the interests of investment (whether private or public) in real or human capital. Such decisions are economic insofar as they involve a rational allocation of goods to spur economic growth; they are political and social insofar as they involve choices between competing power groups and institutions and the enforcement of such decisions. An unequal distribution of income is often tolerated by development economists and political scientists since it is considered necessary to generate the savings for rapid growth. What often is not realized, however, is that the structure of demand created by such an unequal distribution of income may exert its own effect on the form of capital, import, and skill requirements, calling for a path of development that may be disadvantageous in terms of the country's resources. By following such paths developing countries have often resorted to economically inefficient policies to provide the goods demanded by those with purchasing power.

The Program of Development Studies conducts research into the problems associated with the uneven gains from development. We are not primarily concerned with distribution from a point of view of social justice and equity, although they are important questions. Our primary concern is with the role income distribution plays in determining the development of a country and the way such development affects the distribution of income. The research undertaken by the Program necessarily requires interdisciplinary cooperation. Fortunately, the subject is one of considerable interest to economists, political scientists, sociologists, and anthropologists.

The distribution of wealth and income by class, region, economic activity etc., is a main, if not principal, determinant of the political and social structure of a country and this political and social structure in turn determines the development program of a country. This interdependence provides an exciting and profitable focus for interdisciplinary effort.

The multidisciplinary aspects of the distribution of wealth and income can be easily illustrated. On the one hand the distribution of income, through its influence on consumption patterns, determines the composition of output, employment, the growth rate, and even the kind of development strategy and government structure characterizing a country. On the other hand income distribution is itself determined not only by the ownership of capital, and distribution of skills, but also by social attitudes toward work and leisure (the realm of the sociologist), import substitution or other industrialization strategies (the realm of the economist), and other government policies such as education and health (the realm of the political scientist). Furthermore, economic, political, and social policies toward the distribution of gains from development are frequently in conflict with one another since a policy that makes economic sense need not make political sense.

In the following pages, we shall deal with some of what we consider the most important aspects of the distribution of gains from development insofar as it affects the rate and composition of growth, political and social development, and the economic and political strategy pursued to achieve development. Where relevant the names of individual researchers

will be supplied.<sup>1</sup>

Specific questions that will be considered in the next few sections include, but are not limited to, the following:

(1) How may the distribution of wealth and income, by determining the structure of demand in a country, determine the growth and investment strategy pursued by government and private economic decision-making units?

(2) How may the distribution and size of income determine the tax type and its base and indirectly, through the political and social structure, the level and composition of government expenditures? Conversely, how does the level and composition of government expenditures affect the distribution of income?

(3) To what extent are differences in political parties and public policies the result of compromise between those who seek rapid economic growth and those seeking a more equal distribution of gains from growth? What is the effect of such a compromise on the rate of growth, kind of growth, level of employment, etc.?

(4) In what sense do differences in development programs of the underdeveloped countries reflect only responses to desires of different elitist economic, political, regional, and social groups? How are the interests of such groups affected by different development strategies?

(5) How may the distribution of income, by affecting the structure of demand, determine the role of foreign investment and conversely in what way does foreign investment affect the distribution of gains from

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<sup>1</sup>The credentials in abbreviated form for researchers mentioned individually are given in section 9 of this proposal.

economic growth?

(6) How may lack of socio-political agreement as to who should pay for development create inflationary pressures, in what ways do inflationary pressures redistribute income in developing countries, and how may the distribution of income itself create inflationary pressures?

(7) To what extent are differences in political parties and public policies the result of compromise between those who seek rapid economic growth and those seeking a more equal distribution of gains from growth? What is the effect of such a compromise on the rate of growth, kind of growth, level of employment, etc.?

### 3. Income Distribution, Structure of Demand, and Growth

The income distribution of a country determines the pattern of demand and consumption and the pattern of investment, production, and employment. Land and Soligo have developed a general equilibrium model which shows the interaction between limited factor substitutability in production, relative factor payments, income distribution, demand patterns and employment.

Since the model developed by Land and Soligo assumes limited factor substitutability in production, it is related to the Richard S. Eckaus article on the Factor Proportions Problem,<sup>1</sup> which shows clearly how limited substitutability in factor proportions may cause underemployment in the sense of redundant labor "arising from resource and technological restraints in the structure of demand." However, Eckaus deals with the factor proportions problem from the production side. The Land-Soligo model is more comprehensive, attempting to deal with the relationship between factor payments (and the distribution of income) and the structure of demand. They hope to show that in achieving the same growth rate there is a trade-off between the set consisting of a skewed income distribution, high savings rates, and preference for capital and import intensive commodities and the set consisting of a more

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<sup>1</sup>"The Factor Proportions Problem in Underdeveloped Areas," American Economic Review (September, 1955), pp. 539-65.

equal income distribution, lower savings rate, and preference for labor intensive commodities that have a lower import content. Successful demonstration of this trade-off would be of major interest to planners and other policy makers who, in line with most development literature, tend to regard a skewed distribution of income as a necessary cost of providing the savings to finance development. (See, for example, W. Galenson and H. Leibenstein, "Investment Criteria, Productivity, and Economic Development," Quarterly Journal of Economics, August 1955, pp. 343-70).

There are several policy implications of the Land-Soligo model. It suggests that the effects on unemployment brought about by fixed factor proportions in production and imperfections in the labor market can be ameliorated by tax measures to encourage shifts in the proportions in which goods are consumed, measures to increase the capital owned by low income earners, and income redistribution measures. In fact any scheme which redistributes income, such as government subsidization of mass production of simple manufactures with low capital and import intensity, may make it possible for a lower rate of savings and greater employment to occur with an unchanged growth rate. These implications and a proposal for further research in this area are dealt with in Section 4.

Another policy implication of the Land-Soligo model deals with the ownership of capital. Within the structure of their model, efforts to increase employment must be accomplished through changes in the composition of demand. Although such changes may be affected directly through changes in the distribution of income, this is not likely to be the practical way. There are serious political and economic difficulties

with massive changes in the distribution of earned income. However, it is likely to be much easier, at least at the margin, to effect changes in the ownership of capital. Such measures might include subsidization of simple manufactures and agriculture by making loanable funds available to small factory owners, farmers, and cooperatives. An even less offensive way of increasing the amount of capital owned by the poor is in increasing the amount of human capital, particularly through education and training.<sup>1</sup>

Although the Land-Soligo model has interesting and important policy implications, their proposal for research is concerned not so much with model building and theoretical analysis as it is with empirical investigation of the parameters assumed in the model. There has been a serious neglect of the distribution of income by those who collect, process, and analyze national income data. In addition to its difficulty, part of the reason for this neglect lies in the lack of a framework in which the distribution of income can be related to other economic variables. The Land-Soligo model provides such a framework within which empirical investigation of income distribution and related variables can take place.

There are several assumptions about the Land-Soligo model which need to be tested empirically--specifically, information about consumption patterns for different income classes, factor intensity of commodities consumed by different income classes, the ownership of capital by different income classes, as well as the distribution of income itself.

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<sup>1</sup>For further analysis of this point, see Krzyzaniak's proposal in Section 4.

Once data on these variables are collected for a number of countries, it will be possible to evaluate the magnitude of effort necessary to affect the level of employment (and the distribution of income) by such measures as changing consumption patterns and/or increasing the capital ownership of certain income classes, and government policies to promote or subsidize certain industries.

There are two general methods of analysis suitable for this study. One is to determine the values of the parameters suggested by the Land-Soligo model, or some enlarged variation of the model, and to plug in the values of these parameters for a simulation analysis. One can then calculate, for the values of the parameters and for values of the policy variables, the trade-off between, for example, growth and employment for various industrialization or growth strategies. The obvious difficulty with this procedure is that, in order to make the model manageable, one must make arbitrary classifications of the data into consumption classes, investment categories, and consumption patterns, and the results of the simulation are undoubtedly sensitive to changes in these arbitrary classifications. However, this limitation can be minimized by applying the analysis to several countries and testing the results for sensitivity to the classifications used.

A second technique will be an econometric analysis of how changes in the distribution of income, by affecting the allocation of savings, raises or lowers the growth rate. The procedure here might be similar to that employed by Bill Cline<sup>1</sup> in his study of several Latin American

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<sup>1</sup>William R. Cline, "The Potential Effect of Income Redistribution on Economic Growth in Six Latin American Countries," Discussion Paper No. 1 of the Research Program in Economic Development, Woodrow Wilson School (Princeton University: Princeton, New Jersey, August 1970).

countries. There is, however, a major deficiency of the Cline study.

He omits the relationship between capital and growth via changes in the composition of production brought about by changes in income distribution. That is, he fails to take into account the central point of the Land-Soligo model--namely that a decrease in overall savings, if matched by an appropriate change in composition of demand, may not reduce the growth rate. Such analysis is difficult because of the large data requirements, but by encouraging graduate student dissertations in this area, it is hoped that the missing links in the data can be generated and a study applying to at least three countries can be completed.

#### 4. Income Distribution and Government Policy

In a formal way the determinants of the distribution of income can be classified into six categories: the state of technology, consumer preferences and the demand for goods, ownership of labor services, distribution of ownership of fixed capital goods, ownership of land, and ownership of human capital or skills. It is difficult for policy makers to alter the first three determinants listed above. Consequently, from a policy point of view, efforts to alter the distribution of income must be either direct through government transfers or concentrate on changing at the margin the distribution of capital (both fixed and human) and land.

All of the research projects covered here deal to some extent with this question. We saw in the previous section that Land and Soligo place emphasis on altering the distribution of income through altering the distribution of wealth. As they point out in some of their previous work, government economic and political policy play a great role in the determination of the distribution of wealth. Commercial and foreign exchange policy, credit and interest rate policy, marketing schemes, education policy, all affect the concentration of investment and wealth. Furthermore, as Land and Soligo suggest, government policy in a country with a markedly skewed distribution of income is likely to subsidize and favor development of capital and import intensive production--that is, the production of commodities demanded by the well-to-do. A final result of such policies is that they help generate widespread unemployment and perpetuate the skewed distribution of income.

In this section Krzyzaniak and McLure propose to examine the way in which taxes and government expenditures affect the distribution of income. After estimating the existing distribution of income, the first step is to determine how the pre-tax distribution of income is altered by tax policy; that is, to allocate the burden of taxation among income groups and to calculate the effective tax rate (the percentage of income taken by tax for each income group.)

The procedure by which this determination is made is, at least in principle, fairly straightforward. One first assumes the price effects of each tax and then allocates the tax among income groups according to the hypothesized price effects, consumption patterns, factor ownership, etc.<sup>1</sup> Only rarely will it be feasible to undertake extensive econometric estimation of the price effects involved, though such estimation is certainly not precluded.

On the expenditures side, however, there are several complications. One of these is the necessity to distinguish the incidence of benefits derived from public services from the incidence of expenditures for providing those services. For example, expenditures on education provide benefits to students and the society at large (benefit incidence) and may increase teachers' incomes (the expenditure incidence).

In the short run the benefit incidence accrues to those groups who receive the benefits of public services. The method of allocating the benefits depends upon whether the goods are consumer public services or investment in human capital. For some consumer public services the procedure by which

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Two of the best known recent studies for the U.S. are Irwin W. Gillespie, "Effects of Public Expenditures on the Distribution of Income," in Richard A. Musgrave (ed.), Essays in Fiscal Federalism, Brookings Institution, 1965, pp. 122-86, and George A. Bishop, Tax Burdens and Benefits of Government Expenditures by Income Class, 1961 and 1965, Tax Foundation, New York, 1967.

benefits are allocated among, say, income groups is fairly straightforward. This is especially true where benefits could be provided in either the private or public sectors. On the other hand, the allocation of benefits from services that are essentially "pure public goods" may be inherently unknowable. For example, it might be reasonable to allocate benefits from national defense expenditure on a per capita basis, in proportion to income, or in proportion to wealth. In such cases it is usually desirable to show patterns of benefit distribution according to alternative allocation procedures.

Whereas consumer public services provide goods and services of immediate benefit to individuals, the benefits of investment in physical and human capital continue over a period of time. An extremely important question is how such investment affects private incomes in the future. In the case of education, for example, income groups with children benefit from education now, but the impact of education upon the distribution of income in the future is more general and more complicated. Preliminary model building by Krzyzaniak suggests that while the benefits of education accrue in the short run heavily to labor, in the long run they may be more widely diffused throughout the economy. The creation of human capital through government expenditures is also taken up in the Land-Soligo portion of this proposal.

The second method by which public expenditures alter the distribution of real income or welfare is through the pattern of purchases by the government. No effect upon private incomes is likely to occur if the goods and services purchased by the public sector resemble those used in the private sector. If, on the other hand, the government purchases highly capital-intensive goods, then the real income of the suppliers of capital services can be expected to rise relative to those of laborers. Moreover, to the

extent that the government bids away factors in scarce supply, users of products produced with those factors are likely to be faced with higher prices. Thus, real private incomes can be changed by differences between marginal public and private propensities to consume various items. The extent to which this shift occurs, or can be made to occur as a matter of public policy, is an important question. It is, again, intimately related to the questions to be examined in the Land-Soligo portion of this project.

It might reasonably be wondered why the distinction between short and long run is made on the expenditures side and not the tax side. In actuality when one does a study of tax incidence, the assumptions he makes about price effects will have inherent in them the time horizon for which the incidence analysis is being made. If it is felt that the short-run problem is the important one, then total factor supplies will be assumed to be fairly well fixed and perhaps immobile between regions and industries. If, on the other hand, the long run is being considered, augmentation of both capital and labor will need to be considered, and the role of technical progress must be made explicit. Krzyzaniak and McLure have contributed to the theory of tax incidence in both a short-run, general equilibrium situation and in a long-run growth context.<sup>1</sup> In addition, Krzyzaniak is the co-author of the well-known econometric study of the incidence of the corporation income tax.<sup>2</sup> McLure has also recently published a theoretical analysis of expenditure incidence and

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See Marian Krzyzaniak, "Factor Substitution and the General Tax on Profits," Public Finance, v. XX, No. 4, 1970, pp. 489-514; "The Differential Incidence of Taxes on Profits and on Factor Incomes," to be published by Finanzarchiv, by the end of 1971; and "Benefit-Cost and Incidence Analysis of Transfers, Financed by a Profits Tax, in a Neoclassical World, with Two Labor Imputs," mimeographed at Rice University, 1969. See also Charles E. McLure, Jr., "Tax Incidence, Absolute Prices, and Macroeconomic Policy," Quarterly Journal of Economics, May 1970, pp. 254-67, and "Tax Incidence with Imperfect Factor Mobility," Finanzarchiv, 1971, pp. 27-48.

2

In collaboration with Richard A. Musgrave, The Shifting of the Corporation Income Tax, The Johns Hopkins Press, 1963.

has made estimates of the incidence of taxes in Colombia, Malaysia, and Panama.<sup>1</sup> Thus both investigators have experience in the research they propose to do.

Thus far this proposal has been couched in terms of "income groups." Ordinarily income groups are classified according to level of income, but this partitioning of the population is not the only one possible. One can also partition it as urban-rural, agricultural-nonagricultural, or according to regions or industries.

In many, though not all, cases the information necessary to do the analysis with one sort of partitioning is also sufficient, or nearly sufficient, for the analysis using a different partitioning. And, in any case, the methodology to be followed would be more or less the same. That is, price effects would be hypothesized on the basis of reasonable theoretical assumptions, and taxes would be allocated among regions, for example, rather than among persons in various income brackets.

In practice, however, priority will be assigned to analysis in terms of income groups and urban versus rural. This priority, however, would not foreclose the possibility of making other partitioning later on. This is true on both the tax and the expenditure sides of the budget, at least in the short run.<sup>2</sup> In the long run, especially on the expenditures side, the question becomes more complex. Government expenditures on infrastructure and investment

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See, "The Theory of Expenditure Incidence," forthcoming in Finanz-archiv as second part of a two-part series, "Tax Incidence in Colombia," in Fiscal Reform for Colombia: The Final Report and Staff Papers of the Colombian Commission for Tax Reform, Malcolm Gillis (ed.), International Tax Program, Harvard Law School, Cambridge, 1971; "The Incidence of Taxation in West Malaysia," Program of Development Studies, Discussion Paper No. 17, Fall, 1971; and "The Distribution of Income and Tax Incidence in Panama, 1969," Program of Development Studies, Discussion Paper No. 18, Fall, 1971 (when cleared by government of Panama).

2

In this context, it might be mentioned that McLure has written extensively on interregional incidence of taxation, and has made empirical estimates

in human capital have crucial impacts on the differential rates of development in various regions. For example, educational expenditures have important effects on the growth rate of a region and internal migration. Even more pervasive effects may accrue from government decisions on transportation policy. Depending upon the structure of the transportation network, cities and regions may be brought into the process of economic development, or they may be left to stagnate. This important complex and difficult analysis overlaps considerably with the McLure-Von der Mehden proposal on regional development.

The research proposed here involves questions of varying complexity. The simplest task and one that should be completed first, is the estimation of the incidence of taxation in the various countries. As indicated above, McLure has attempted such an estimate for Colombia in his work for the Musgrave commission on tax reform. These estimates should be updated, using the more extensive data now available on the distribution of income in Colombia. Such an updating and improvement of his previous work should be fairly straightforward, given McLure's previous experience. Duplication of the estimates in Brazil and Turkey depend crucially upon the availability of information upon which to base estimates of the distribution of income.

The empirical problem of estimating expenditure and benefit incidence is substantially more difficult than that of estimating tax incidence. Though there may be hundreds of taxes in a given country, they can ordinarily be lumped together into a few categories with fairly well defined characteristics and incidence. Once this is done, the analysis of incidence is fairly straightforward, and even mechanical.

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of interstate incidence of taxes levied in the United States. See "Commodity Tax Incidence in Open Economies," National Tax Journal, June 1964, pp. 187-204; "The Interstate Exporting of State and Local Taxes: Estimates for 1962," National Tax Journal, March 1967, pp. 49-77; and "The Interregional Incidence of General Regional Taxes," Public Finance, 1969, pp. 457-83.

Such is not the case with the incidence of expenditures and benefits of public services. There are hundreds of government expenditure programs, each of which provides services to different groups of individuals. Once the distribution pattern is known it is a fairly simple matter to allocate the benefits to income groups. The problem is knowing the beneficiaries of various government programs. Budget documents rarely, if ever, give this kind of information. It can be gained only from a painstaking examination of government programs. Thus an important portion of this empirical research will be precisely to develop the programmatic detail on government expenditures necessary to allocate benefits among income groups. For this purpose the methodology of valuing costs and benefits involved in cost benefit analysis will be an important input, as the question being asked is essentially costs to whom and benefits for whom. It is in the nature of the benefits of public expenditures that they are not bought and sold on the market. Therefore, some way must be found to place a value upon the benefits, and often upon the costs as well. Often it is possible to use market prices of final outputs to learn something about the value of inputs. Alternatively, it is often possible, for example, in the analysis of health programs, to use the value of output not lost and costs of curative medical care avoided as a measure of the potential benefits of preventative medicine. Examples could be multiplied, but the basic principle is clear: to try to use information supplied by the market to value benefits of services provided publicly, and therefore not valued in the market. There are, of course, reasons that this method must be used with caution. For example, prices may be artificially high because of protective tariffs, monopoly powers, or taxes. These problems are familiar to those knowledgeable about cost benefit analysis. (Incidentally, there may be

occasions in which it will be necessary to convert costs and benefits to present value terms, but it is not anticipated that this would be an important component of the research proposed here.)

An analysis of the impact of government expenditures upon the distribution of income would proceed in three stages: the first stage would be a conceptualization of how sub-projects to be described below in greater detail would be carried out in order to give an overall view of the impact of government expenditures upon income distribution. This would be carried out primarily by Krzyzaniak and McLure, but in conjunction with other investigators who would subsequently be doing the research on the sub-projects. It is at this level--the level of conceptualization--that the expertise and experience of Professors McLure and Krzyzaniak in working on incidence would be especially beneficial. This stage would include dividing the budget of Colombia and Turkey into roughly five or six sub-components for further investigation by a scholar devoting his attention solely to that sub-component. Among the obvious sub-categories would be education, public health and sanitation, agricultural policies, and transportation. Such catch-all categories as public works, and development expenditures would need to be examined more closely to determine their content. Since Colombia does not have a unitary government, it would be necessary to consider such expenditures as education at all three levels of government. In Turkey, with its highly centralized government structure, attention can be limited to the expenditures of the Central government as revealed in the general and annexed budgets. At the next stage, the sub-projects would be assigned to investigators interested in doing in-depth analyses of them. Such analyses would be appropriate for students writing doctoral dissertations. Thus we would expect to have at least one student from Rice doing one of the analyses in Colombia for his dissertation, and we are negotiating

with a graduate student at Wisconsin and at Vanderbilt to do another. Furthermore, we have undertaken preliminary negotiations with an economist just finishing his Ph.D. on Machinization in Agriculture in Colombia to do a third analysis, presumably of the distributional impacts of agricultural policies in Colombia.

In this connection, the contemplated research can attempt to answer two, quite different, sets of questions. On the one hand, the beneficiaries of, say, government expenditures on education can be grouped by income level, the value of education according to each level of education can be determined, and an estimate calculated of how the expenditures alter the distribution of income. Such a calculation, though conceptually easy, is difficult in practice because of problems in obtaining the relevant data. However, this clearly is a first approximation of how education, for example, alters the distribution of income.

Nonetheless, it is only an approximation. A far more useful question is to determine how education, over a period of time, has caused the distribution of income to be different from what it would have been in the absence of such expenditures or had the expenditures been different in composition. To answer this question requires a conceptual framework for dealing with the long-run effects of education (or other government expenditures) referred to earlier in this proposal. It is these conceptual problems that McLure and Krzyzaniak are presently dealing with in the workshop referred to above.

The final stage would be to use the material developed in the sub-projects to write an overview of how government expenditures affect the distribution of income. Such an overview might look something like what Gillespie did in the United States, but it would benefit from the material gathered in the sub-projects for the specific purpose of feeding into such an overview. This is, of course, the reason for carefully laying out the conceptual framework for

the analysis to be done in the sub-projects. We would hope that when the sub-projects and the overview are completed we might be able to publish a volume of perhaps six or seven papers on the distributional implications of government expenditures in Colombia, and another for Turkey. Such a volume would contain fifty to sixty page summaries of the analyses of the sub-projects and a paper of equal length bringing the work together in the overview mentioned above. In addition, we would probably want to include a detailed statement in the conceptualization in the first volume to appear, and a summary of it as an introduction to the second volume.

### 5. Development Planning and Special Interest Groups

Development programs, whether in the form of comprehensive economic and social planning or merely the sum of government efforts to encourage development, rarely reflect purely national economic objectives. More often, they are efforts to reach a national compromise reflecting conflicting objectives of various regional groups, ethnic, or religious groups, or vying elitist groups such as the bureaucracy, military, and educated classes. Leaders even within the same group often differ as to the desirable approach to development.

Von der Mehden and McLure propose research to analyze the influence of different groups on the structure of development programs. They suggest economic, political and social research to assess the reasons, both public and private, for the area of concentration of development programs. Such analysis would include examination of the economic considerations in the programs (such as increased production, export earnings, GNP, distribution networks), and political considerations (such as satisfaction of local and national political pressures, ethnic, religious, party and insurgency considerations) in determining the structure of the development programs in each country.

It often has been assumed that development programs of a unified nation that seek to increase as rapidly as possible total output of a nation are somehow more desirable than compromise efforts that, by political necessity, take into account the economic and political future of special interest groups. However, the reasons for this conclusion

are by no means apparent. In terms of the models previously described, economic growth must not be viewed in terms of one variable--growth of total output. Its composition and distribution are inherently important, not only for describing progress or desirable outcomes but in determining the structure and growth of output. For example, a nation forced by political necessity to take into account the effects of development on a particularly poor region, may discover several desirable political and economic consequences of such necessity. The resulting structure of demand may be more feasible in terms of the resource endowment of the country, it may retard the growth of dual economies, and by spreading the results of development more evenly over the population, may postpone or eliminate the problems of rapid urbanization and growing unemployment.

In order that this project be sufficiently discrete in scope, it is planned by both Von der Mehden and McLure to give the study a regional emphasis, based on a secondary city and its surrounding economic hinterland. The choice of area is also based upon a desire to study a country in which there is more than one city of size and importance aside from the capital. By concentrating upon regions one is able to use regional differences as proxies for studying various special interest groups. For example, poor regions to some extent serve as proxies for the study of poor income groups, or, to give another example, regions reflecting different cultures, religions, ethnic groups, and social attitudes provide data and basis for exploration not only of the regions themselves, but also for study of these special interest groups. Some of the political questions which Von der Mehden raises are:

(1) What have been the political explanations for the need for development programs in the region?

(2) To what extent have national, and regional political groups influenced the character of development programs; and what means have been used to effect the pattern of development?

(3) What patterns of political communication have been maintained between regional and national interest groups in their efforts to influence development programs?

(4) To what extent do social groups (ethnic, religious or familial) influence the planning and implementation of development programs?

(5) To what degree are interest groups divided on policy and how do divisions affect policy?

(6) To what extent have national development programs influenced the character of administrative practices in the region?

(7) To what extent have political factors made development programs less functional in an economic sense?

Very little previous scholarly publication has been presented on interest groups in developing nations. A comparative government group under G. Almond initially intended considerable work in this area, but of all the volumes published in this series, none has dealt with interest group politics. This means that the most noteworthy research remains classic case studies such as Robert Alexander's Organized Labor in Latin America, and Merle Kling's A Mexican Interest Group in Action.

Because of his personal experience, Von der Mehden emphasizes the importance of methodological flexibility and eclecticism, given the less organized and more ephemeral nature of interest groups in

developing areas. However, as he presently envisions the research, it would encompass the following elements:

(1) Development programs: an analysis of regional programs using program reports, national and regional statistical data and interviews with government personnel to develop the type of programs to be found in the region. Similar research would also be implemented at the regional and national level with regard to private projects.

(2) Explanation of programs: data would be gathered from (a) published reports, (b) newspaper reports and (c) public statements made in commissions, parliaments and other forums.

(3) Influence of interest groups: this area of research must remain the most flexible, dependent upon field conditions. The following data have been found the most useful:

(a) Initial interviews with members of the national and regional bureaucracy dealing with development programs.

(b) Interviews with selected members and spokesmen for interest groups, organized and informal.

(c) Careful analysis of newspapers and organizational literature at both the national and regional level.

(d) A review of commission and/or parliamentary debates where possible. Professor Anderson has emphasized both the open nature and usefulness of such commission hearings in the Colombian case.

In bringing these data together, Krzyzaniak's data on the distribution of tax and government spending policies and McLure's work on regional economics would also be used. Essential to his final analysis

would be consideration of the bases upon which development expenditures are distributed within a country and the non-economic bases for these decisions.

Two types of comparison are envisioned in order to develop more general hypotheses dealing with distribution within the state under consideration and the developing world as a system. First, other secondary cities would also be analyzed, although in less detail, to assess differences in the patterns of influences on development planning. Secondly, in the future research would be taken in states without significant large secondary cities such as in Thailand and Peru in order to assess the extent to which the dominance of the single city influences decision-making.

McLure is particularly interested in the questions concerning regional development. Most developing countries are nations of extreme contrast in the standard of living enjoyed by various regions. These contrasts are particularly severe when comparing the regions comprising the major industrial cities and the regions comprising the poor agriculture areas. Furthermore, the differences tend to be self sustaining since the major cities in richer regions tend to grow more rapidly than do the minor cities in poorer regions. One reason for the persistence in differences between the richer and the poorer regions lies in government policy. Casual observations suggest that political power is concentrated in the richer regions of a country, and this political power tends to support public policies that support development efforts in the richer cities and regions.

McLure wants to investigate further the disparities in regional development, the sources for such disparities, and the basis of public policy to attempt to change these policies. He suggests that the reasons for disparities and their continuation lie probably within the realm of external economies, the conglomeration effects of development, the subtle impact of learning-by-doing, the migration of the more able from stagnant regions to those experiencing growth, etc. Policies that have contributed to these disparities include those in the fields of taxation, education, and transportation, to name but a few.

The work McLure proposes to do in Colombia breaks itself naturally into several sub-projects. The first would be an in-depth analysis of existing differences in the regions of Colombia. One focus of such a sub-project would be simply upon regional differences in income. For this considerable use would be made of the data being compiled by Professor Albert Berry of Yale University. But perhaps equally important, it would be necessary to have a fairly detailed description of the economic characteristics of the regions, in order that the differences between them could be better understood. Systematizing knowledge on these regional differences would entail both references to earlier literature and to some field investigation.

The second sub-project would be the identification of the policies that have contributed to regional disparities in Colombia. Because of his work with the Commission for Colombian Tax Reform<sup>1</sup>, McLure is familiar with differences in the local tax policies allowed cities of

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<sup>1</sup>See Fiscal Reform for Colombia: The Final Report and Staff Papers of the Commission for Colombian Tax Reform, Malcolm Gillis (ed.). Earlier work includes Milton Taylor's Fiscal Survey of Colombia and

various sizes, and believes that these may have contributed to the accentuation of existing differences in urbanization, city sizes, and regional development. Policies for industrialization, including tax incentives, have undoubtedly also had regional implications. For example, location of the Paz del Rio steel mill in Boyacá and subsidization of it, despite its high cost, have probably increased the development of that region. Though there may be too few observations to make testing feasible, econometric analysis of the importance of these policies will be attempted. A second strand of public policy that has undoubtedly influenced regional development in Colombia relates to transportation. Transportation networks naturally enough link major cities. But in so doing they augment any natural advantages these cities may have and are likely to foster their growth relative to other cities. This, again, suggests that early cities have an almost insurmountable lead and that the regions in which they are located are likely for a long time to dominate development of the country. We are especially fortunate in that the Harvard Transportation Group has just finished a massive analysis of the transportation network in Colombia. This should provide a great deal of the data necessary to determine the influence of transportation policies on regional development in Colombia.

Part of the conventional wisdom is that people migrate from the country to the cities in order that their children may have access to better education (see, for example, Lauchlin Currie, Accelerating Development). If this is true, then we would expect that the cities with the Richard Bird's Taxation and Development: Lessons from the Colombian Experience.

best education might grow in dominance and that regions without such cities would be likely to remain stagnant. It will be useful to study patterns of migration to determine the extent of influence of this factor. Ongoing work in Colombia, especially in the economics of education, should provide data that will be valuable in testing both this migration hypothesis and the impact migrants have upon the further development of cities.

The analysis described in this sub-project ties in closely with that proposed by Von der Mehden. His emphasis will be primarily upon determining why policies that affect regional development are what they are. The emphasis here is upon determining just how important these policies have been in either increasing or decreasing regional disparities. In this sense the two analyses are companion-pieces.

A third and far more ambitious sub-project involves determining the importance of urbanization itself upon regional and national economic development.

## 6. Import Substitution, Income Distribution and Foreign Investment

Several poorer countries have attempted to create modern industrial structures behind prohibitive import barriers. Some have "succeeded" in the sense that industry has indeed grown and the share of imports in total supply has fallen. Yet industrialization has been much less of a panacea than its architects had anticipated.<sup>1</sup> In particular, the gains from import substitution apparently have not been widely distributed. And far from creating an active domestic entrepreneurial class, "deep" import substitution has often meant market domination by multinational firms. There seems little doubt that both of these characteristics have substantially intensified social and political instability in many countries.

The interaction in semi-industrialized countries of the deep import substitution strategy with income distribution and foreign direct investment is the subject of Smith's research. His analysis is divided into several projects. Each is partial, corresponding to one aspect of a more general system. Joined they will permit Smith to model and measure many of the income distributional impacts of the deep import substitution (IS) strategy.

Brazil will be the first case studied in depth. The advantages of this choice are many. First, deep import substitution (IS) has been

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<sup>1</sup>See, for example, Albert O. Hirschman, "The Political Economy of Import Substituting Industrialization in Latin America," Quarterly Journal of Economics, February, 1968.

massive in Brazil. Second, the problems of income distribution and dualism are severe despite rapid growth.<sup>1</sup> Third, foreign firms have played a very important role in the IS process.<sup>2</sup>

Summary of projects

Project 1. What is the effect of income distribution on the demand for the activities protected in deep IS? On the demand for activities in which foreign firms have a distinct advantage? What is the likely future participation of foreign firms in the economy given various paths of growth and income distribution?

Project 2. Deep IS appears to be intensive in the use of precisely those inputs which are most scarce in LDCs: capital and managerial, scientific and labor skills. These forms of wealth are possessed mainly by the upper middle class and foreigners. Thus, deep IS may reenforce marked income inequalities over the short run. Furthermore, it may induce a growth path which perpetuates dualism for decades, even though investment in management and training in the modern sector is economically "optimal."

Adaptation of technology to local conditions seems a near imperative if these negative distributional side effects of IS are to be minimized. The degree and type of adaptation which has occurred and the determinants of the adaptation process will be examined in this project. Particular attention will be given systematic variations in adaptation

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<sup>1</sup>Bergsman and A. Candal, "Industrialization: Past Success and Future Problems" in Howard Ellis (ed.), The Economy of Brazil (Berkeley: 1969).

<sup>2</sup>S.A. Morley and G.W. Smith, "Import Substitution and Foreign Investment in Brazil," Oxford Economic Papers, March, 1971.

between foreign, private domestic and publicly owned corporations.

Project 3. Without analysis of the conditions of the supply over time of relatively scarce inputs and the functioning of factor markets, the effects of deep IS on income distribution remain vague and speculative. Equally important for distributional questions is knowledge of how oligopolistic product markets function in a semi-industrial, "hot-house" environment. At least three additional sub-projects are indicated:

1. The process by which the work force for deep IS is generated, including professional and supervisory personnel.
2. The determination of wages and salaries in Brazilian manufacturing.
3. Various case studies in "industrial organization." These will examine concentration, pricing policies, acceptable forms of competition, buyer-supplier relations, etc. Sources of financing and their impact on the relative advantages of foreign and domestic firms are of particular importance here.

Smith will undertake much of the research jointly with Samuel A. Morley (University of Wisconsin). Field work in Brazil on Project 2 during FY 73 will be closely coordinated with and complementary to that of Werner Baer (Vanderbilt University), who will undertake a study of technological transfer and employment problems in Brazil under the auspices of the Yale Growth Center (see below). Project 2 will also include the cooperation of Ferdinand K. Levy (Rice University) in formulating models and hypotheses on the behavior of foreign firms. Project 3 will draw in part on Huddle's research (see Section 7), and upon the cooperation of several Brazilian economists.

Given the above empirical work, Smith, Morley, Huddle, and perhaps other associates plan to generate a multi-sectoral model of deep IS, foreign investment and income distribution for Brazil. Project 1 supplies information on the determinants of product and factor demands. Project 2 illuminates the production sector and the forces behind technological change, while Project 3 links production and demands through factor markets. The urban services sector provides the transition between the backward and modern sectors of the economy.

The model will be used to simulate the behavior of the Brazilian economy in the past and projected to 1980.

#### Elaboration of hypotheses

The exact hypotheses of Project 3 remain to be determined. Which industries will be studied, which aspects of the labor market and in which regions of Brazil are still open questions. Their answers will depend upon contacts with Brazilian economists which Smith-Morley will make in the summer of 1971. What follows is an elaboration of the hypotheses to be investigated in Projects 1 and 2.

Project 1. Smith-Morley will examine for the period 1949-70 the influence of the size distribution of income upon the success of deep IS in Brazil and upon the participation of foreign firms. Projections to 1980 of the "importance" of foreign firms in the Brazilian economy will be made under various assumptions concerning future income distribution policies in Brazil.

They will examine three hypotheses. The first is that a skewed distribution of income in favor of the upper-middle class will, ceteris paribus, increase the demand for the products produced in deep IS. This

aspect of the research requires data on consumption patterns by income size and size distribution of income. Much of the required data is already available. Professor Albert Fishlow of the University of California, Berkeley has estimated income-consumption functions from cross-section data, roughly comparable to the two-digit SIC classification. He has granted permission to use these data. Fishlow has also made careful estimates of the size distribution of income for Brazil in 1960 and 1968, and ECLA has published rough estimates for 1960.<sup>1</sup>

With the income elasticity estimates, several income distributions will be assumed to determine hypothetical final consumption vectors. These will be converted to value added by industrial origin through Brazil's 1959 input-output table. This calculation yields the demand for value added as a function of the income share accruing to the upper-middle classes.

The underlying model for the approach suggested above is incomplete since it does not incorporate feedbacks from patterns of demand to relative prices and income distribution. Although the model could be formally closed, little would be gained, since information on the operation of factor and product markets in Brazil is quite fragmentary.

The second hypothesis to be investigated is that, given the level of protection for deep IS, a highly unequal distribution of income tends to be self-reinforcing through the factor intensities of the products stimulated. Factor intensity of the final consumption vector can be estimated using estimates of capital-output and capital-labor ratios

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<sup>1</sup>Economic Bulletin for Latin America, October, 1967.

collected by van Rijckeghem.<sup>1</sup> These figures can be updated as the 1970 census data become available in 1972. Finally, using more accurate data from other countries, rough checks will be made on the Brazilian capital-labor figures. There are sound theoretical and empirical reasons to expect the ranking of industries by their factor intensities to be similar across countries.

The third hypothesis has to do with the advantage of foreign firms in deep IS strategies. Smith and Morley<sup>2</sup> have already established that in Brazil IS industries tend to be those in which foreign firms have an advantage compared with domestic private industry. They plan to estimate foreign shares for 1970, comparing the estimates with those from other sources as they become available (USAID/RIO, ECLA). Then they will partition the change in the share of foreign firms for the period 1962-70 into two sources: different rates of growth of different industries and changes in the share of foreign firms in each industry. They will investigate sources of the advantages of foreign firms in terms of management, coordination and complex processes. This work will rely heavily on the work of Hymer, Kindleberger and Vernon.

Finally, they will make projections to 1980 of the foreign firm component of final demand assuming (1) various income distributions, and (2) constant and changing shares of foreign firms in the value added for each industry.

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<sup>1</sup>"An Intersectoral Model for Economic Planning in Brazil," in Howard Ellis (ed.), The Economy of Brazil.

<sup>2</sup>Op. cit.

Project 2. That some adaptation of technology does occur in developing countries now seems beyond dispute.<sup>1</sup> Not surprisingly, adaptations which occur are generally considered rational from the viewpoint of the firm implementing them. However, the private rationality of foreign and private domestic oligopolists may differ systematically. Furthermore, private rationality may depart radically from social welfare when the signals generated by distorted markets (often a deliberate policy decision) does not represent social scarcity values.

These two different issues will both be treated for Brazil for the period 1950-72. The distortion of market incentives is relatively straightforward and will entail an analysis of the incentives employed by the Brazilian government in generating and perpetuating deep IS. Much of the material here will be based upon the work of Joel Bergsman.<sup>2</sup>

The investigation of the degree and determinants of technological adaptation will be undertaken jointly with Baer and Levy. Smith and Morley will assume primary responsibility for foreign firms, while Baer will deal with Brazilian private and public firms. Levy will collaborate in the development of models of adaptation and in formulating the research design. Among the issues to which they will seek answers are:

1. What is the source of the oligopoly advantage of foreign firms in different industries (production, marketing product differentiation, etc.)?

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<sup>1</sup>See, for example, J. Baranson, Industrial Technologies for Developing Economies (Syracuse: 1969), W. Paul Strassman, Technological Change and Economic Development (Ithaca: 1968), and several recent unpublished theses from the Harvard Business School.

<sup>2</sup>Brazil: Industrialization and Trade Policies (New York: 1970).

2. What kinds of oligopoly behavior are acceptable in different industries? How do these differ from (say) the U.S.?
3. What have been the patterns of adaptation and technological change in each deep IS industry for the period 1955-70? Specifically, does a model of diffusion from the "center" (or "product cycle") explain this pattern equally well over different time periods?
4. Does the pattern of technological change differ significantly between foreign, private and public firms in a given industry? If so, how?<sup>1</sup>
5. Do foreign firms differ systematically in the degree of their adaptive activity as a function of their country of origin?<sup>2</sup>
6. Are technologies transplanted from more labor abundant countries better adapted to Brazilian conditions than those from labor scarce countries?
7. Do foreign firms with many subsidiaries in developing countries engage in more R & D activities directed to conditions in these countries?
8. Are companies with a longer history of participation in the Brazilian economy more likely to be adapted to Brazilian conditions than recent arrivals?

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<sup>1</sup>The constraints facing domestic and foreign firms are radically different given highly imperfect international markets in information and management. In addition, the objective functions between the three groups should differ. Conflicting tendencies are expected. The objective function of the domestic firms should favor greater adaptation, but the nature of the constraints should favor adaptation by foreign firms.

<sup>2</sup>For example, the Japanese or Italians may excel in adaptive activities due to their prior experience in molding foreign technologies

The research methods for this stage of the research are two-fold: First, Smith-Morley will conduct extensive firm interviews. Second, they expect 1970 Brazilian census data to become available by 1972-73. Production function estimates will be made using cross section methods, controlling for size and ownership of firm.

The Harvard Business School Project on Multinational Enterprise has accumulated vast amounts of data on 11,000 U.S. subsidiaries abroad and has established many clear patterns of behavior in U.S. multinational enterprise. They do not intend to study Brazil. Professor Raymond Vernon, Director of the Project, has offered the Program access to much of the information and his full cooperation in coordinating work of the Program of Development Studies with Harvard's work on this subject. The Harvard Business School is seeking to set up a joint project with Jorge Katz in Argentina to study systematic variations in the behavior of firms of different nationalities. This should offer enlightening comparisons with Brazil.

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to the labor abundant conditions of their home countries. Or the typical management structure, differing across countries, may facilitate or inhibit adaptive activities in developing countries.

## 7. Income Distribution, Inflation, and Gains from Development

The distribution of income interacting through the structure of demand is also the topic of interest for Huddle. However, Huddle's main concern is how this process interacts with inflation--both as a cause and as a result. In Latin America, for example, there is the phenomenon of "locked inflation" in which inflation rates increase, growth diminishes, and distribution of income is such that demand will not sustain the pattern of industrial production already achieved.

The disequilibrium in commodity markets is partly the result of government subsidization of investment in industry, which Huddle believes results in a transfer of income to the entrepreneurial class. The added spending by this class is primarily for luxury goods and investment goods which are more capital-intensive than wage goods. Thus, the implicit tax of inflation on wage earners is reinforced by a relatively reduced demand for labor services. The inflation eventually leads to a lock-in whereby further economic growth becomes impossible, with or without inflation, and without continued and increasing foreign aid and/or exports. Since growth based upon expansion of exports and foreign aid is becoming less and less feasible, the lock-in may become inevitable. If we better understand the causes of and consequences of such inflation, we can examine alternative means of preventing and/or escaping this structure-lock type of inflation. Discussion of long-term

inflation is usually in terms of aggregate demand and supply, since it is assumed that over and under supplies of particular commodities would be adjusted through the market mechanism. Excess aggregate demand may be the result of deficit spending by the government, or excess demand by consumers and investors with access to borrowing by virtue of easy money policies of the central bank. However, Huddle's interest in the inflation occurring in developing countries is qualitatively different, since it focuses not on aggregate demand and supply but upon the structure of demand and supply, particularly as it is related to the distribution of income within a country.

Huddle's proposal should be distinguished carefully from the work of Werner Baer on the relationship between industrialization and inflation in Brazil. Baer's study is based mainly on aggregate data such as savings and investment classified according to private and public; aggregate wages and salaries; growth rate and production indexes of output; price indexes of exports, imports, and cost of living; changes in inventories, capital output ratios, and foreign capital inflows. Baer concluded that wage and salary lags accompanying inflation helped finance the industrialization process. Significantly, he also concluded that there were no important inefficiencies resulting from this method of financing industrialization. However, in testing the wage and salary lag hypothesis for Brazil, Huddle found it to be inconsistent with the data. Therefore, both of the above propositions by Baer are at best shaky.

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<sup>1</sup>See "Measurement of Import-substitution Industrialization in Brazilian Growth" (in Portuguese), Revista Brasileira de Economia (June, 1969), and/or "Postwar Brazilian Industrialization: Growth Patterns, Inflation, and Sources of Stagnation," in E. Baklanoff (ed.) The Shaping of Modern Brazil (L.S.U. Press: 1969), Appendix B, pp. 107-108.

Huddle proposes a different tact and different kinds of data. He plans to use budget studies on consumption patterns and savings for various income levels to analyze how patterns of consumption change as income rises, inflation proceeds, or redistribution of income occurs. He then proposes to link the structure of effective demand to the structure of production. If, as a typical instance, an import substitution industry is heavily protected through tariff restrictions and import quotas, will the pattern of employment and income distribution for the economy as a whole permit utilization of this plant and others at production levels which permit full economies of scale? If not, the employment and income distribution pattern may be so misalligned with production capacity that what we call a structure-lock has occurred.

The resulting inconsistency between the pattern of production and the pattern of consumption may result in (1) radical political revolution, (2) continued stagnation, or (3) a clamp down on the expansion of luxury goods production and expansion of wage goods. What seems clear is that without a better idea of consumption patterns and their changes over time under conditions of growth and inflation, industrialization strategies may result in a misallocation of resources and severe political problems.

Huddle's research, as Smith's, concentrates on the period 1950-70, a period encompassing the very inflationary years up to the present. During this period the rate of industrialization increased, faltered in the early sixties and once again seems to be gathering force.

The first part of the project will deal primarily with the inflationary financing of Brazilian and foreign industries. Firms and industries will be ranked according to the amount of cheap credit they/received

from the financial system. Relevant data are available from the Bank Brazil, the National Bank for Economic Development (BNDE), and the former lending agency The Superintendency of Money and Credit (SUMOC). Hopefully, data by firms can be gathered as part of the survey which will be carried out by Werner Baer in his study of domestic and public firms in Brazil and by Smith for foreign firms. However, data by firm are not essential for completion of the project.

The second part of the study is to classify the wage consumption component of each industry's output classified according to income and wage classes. Information for this aspect of the research will come from several sources, including Albert Fishlow's income consumption information for Brazil classified by two-digit categories, the Economic Bulletin for Latin America, and several studies now available at the Fundação Getulio Vargas in Rio de Janeiro on expenditure patterns and budgets by income classes for all major Brazilian cities. Some of this work will be done in collaboration with Smith. Huddle will also provide an input to Smith's study by examining the pattern of wages and the structure of the labor market mainly for Sao Paulo. Much of this will have to be done in the field.

The third part of the project will investigate the relationship between factor intensity of the final consumption vector and wage class inflation financed industries, and income classes. Factor intensity has been estimated for Brazilian industries by Van Rijckeghem<sup>1</sup> at the two-digit level for 1959. Huddle will cooperate with Smith in updating the figures from the 1970 Census when they become available in 1972.

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<sup>1</sup>"An Intersectoral Model for Economic Planning in Brazil," in H. Ellis (ed.), The Economy of Brazil, 1970.

Ho is interested in further empirical investigation of the link between income distribution, inflation, and growth. Most literature on inflation assumes that inflation redistributes income among different functional groups in an economy.<sup>1</sup> More specifically, inflation increases the share of entrepreneurs and reduces the share of workers, and, since it is assumed that the former have a higher propensity to save and invest than the latter, it is concluded that inflation enhances the potential for growth by raising the rate of capital formation.

However, experience in the postwar area in the developing world does not provide much support for this line of reasoning. There is strong evidence that growth is compatible with various rates of inflation, save perhaps hyperinflation, whereas on the other hand, growth does not take place in other economies experiencing inflation. Furthermore, there is no empirical evidence that inflation increases the relative share in national income of those with a higher propensity to save and invest.<sup>2</sup> Consequently, attempts to relate the rate of inflation to the rate of growth have not been successful.<sup>3</sup>

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<sup>1</sup>See A.S. Shaalan, "The Impact of Inflation on the Composition of Private Domestic Investment," (IMF, Staff Papers, 1962); Werner Baer and Isaac Kerstenetzky (eds.), Inflation and Growth in Latin America (Homewood, Ill., Richard D. Irwin, 1967); and T.E. Davies, "Inflation and Growth in Latin America: Theory, Performance, and Policy," Economic Development and Cultural Change (1966).

<sup>2</sup>The study of the relationship between the rate of inflation and that of growth may be looked upon as the IMF approach. See, for example, U. Tun Wai, "The Relation between Inflation and Economic Development: A Statistical Inductive Study," (IMF, Staff Papers, 1959); and J.O. Adegunle, "Rates of Inflation in Industrial, Other Developed, and Less Developed Countries, 1949-65," (IMF, Staff Papers, 1968).

<sup>3</sup>One important exception worth noting is Werner Baer's study on the Brazilian experience. See W. Baer, "Inflation and Economic Growth: An Interpretation of the Brazilian Case," in Economic Development and Cultural Change (1962). Other studies related to the experience of inflation in Latin America include: Dudley Seers, "A Theory of Inflation

Ho's principal contention is that the economic and social structure of an economy conditions the ultimate consequences of inflation. Furthermore, in view of the differences in the economic and social aspects of developing as opposed to developed economies, Ho believes that the gains and losses of real income from inflation may be drastically different in the two types of economies, and that empirical evidence pertaining to the developed countries may be of little applicability in understanding developing countries. To understand the relationship between inflation and development one must consider the following characteristics of an economy:

1. Distribution of wealth. The redistributive effects of inflation depend to a great extent on the existing distribution of wealth. In developing nations where financial intermediaries are either absent or real estate is held as a hedge against inflation, the distribution of land holdings affects the redistributive effects of inflation. This suggests that the growth implications of inflation in developing nations may not be comparable to those in developed economies. Moreover, the output composition of large farming units in developing nations is typically different from that of small farming units. Thus, so long as price increases are characterized by differentiated rates among commodities, inflation will unevenly affect farm producers. Likewise, so long as distribution of land ownership deviates from the actual cultivation of land, tenure arrangements play an important role in determining the distribution of gains and losses of real income resulting from inflation

and Growth in Underdeveloped Countries Based on the Experience of Latin America," Oxford Economic Papers (1962); and David Felix, "Structural Imbalance, Social Conflict, and Inflation," Economic Development and Cultural Change (1960). Furthermore, the underlying theme that the consequences of inflation are conditioned by the social and economic structure of the economy is not explicitly considered in Baer's analysis.

2. Regional inequality. As a general principle, income distribution among regions is more unequal in the developing than in the developed nations. Not only are there important income differentials between regions, but there are also differences in the output mix of regions. Consequently, regions with distinctive product mixes will be discriminately affected by inflation, depending on the degree of differentiation in the rate of price changes of various products. Particularly relevant here is the relative importance of exportables in the product mix of a given region and the import content of the commodity basket consumed. These considerations suggest the following testable hypothesis: inflation redistributes income among regions in a way determined by the output mix of regions on the one hand and the consumption patterns on the other hand, and the resulting redistribution occurs in the same manner that inflation redistributes income between income groups.

3. Size of the foreign trade sector. The foreign trade sector is typically larger in less developed economies. As in (1) and (2) above, inflation may lead to differentiated effects between the trade sector and the domestic sector.

4. Dominance of the agricultural sector. Given changes in the terms-of-trade between the industrial and agricultural sectors, the size of the redistributive effect is determined by the relative size of agriculture. In the neo-classical theoretical framework the economic consequences of inflation are analyzed in terms of functional groups, e.g. capital versus labor. Ho believes that this analysis is formulated at too high a macro level. He suggests that empirical findings (from a similar approach but at a more disaggregated level) for the developing countries may very well yield observations and interpretations that are unique to the developing nations.

5. Structure of taxes. The structure of taxes in the developing countries is more regressive than in the developed countries. Fiscal policy theorists in development are mainly concerned with: (1) the incidence of tax and its effect on income distribution, (2) the share of the public sector in a growing economy, and (3) the expenditure pattern of the public sector and its bearings upon income distribution. Since inflation is an indirect form of taxation, the same questions can be raised with respect to inflation. Because of the scope of this aspect of inflation, Ho is limiting himself to the question of the effect of inflation on the share of the public sector in national income.

Ho's position is that as long as inflation is apt to take place in a developing nation (and, judging from the postwar experience in developing nations, it is seemingly inevitable) the effects of inflation on growth in general and its effect on income distribution in particular should be empirically identified and measured. Such findings would have important policy implications, particularly in the formulation of "counter-inflation measures"; i.e. measures to nullify the negative effects and enhance the positive effects of inflation.

To scale down the scope of the proposed research to a manageable size, Ho has planned his research in two steps:

Step 1. His first project is to investigate econometrically the relationship between inflation and the redistribution of income between labor and non-labor groups, and between the public and private sectors in developing countries. He hopes to find information indicating the magnitude as well as the direction of such redistribution. He also hopes to show how the redistribution effect is related to the rate of inflation.

This project requires data on national income and its sources, government taxes, and prices. Largely because of the availability of national income data, the study will cover only the postwar years, and as many developing nations as national income data would allow. A preliminary survey of the U.N. Yearbook of National Accounts Statistics indicates that the study of the redistribution effect in terms of labor versus non-labor share can cover 36 developing nations and 20 countries for the study on the public versus the private share. Sources of data, aside from the above-mentioned U.N. Yearbook include: U.N. Monthly Bulletin of Statistics, U. N. Statistical Yearbook, and I.M.F. International Financial Statistics.

Step 2. Given the empirical findings from Step 1, Ho plans to analyze in greater detail the redistributive effects of inflation in terms of the social and economic variables discussed above. He wants in this research to show that the ultimate effects of inflation on growth are conditioned by the social and economic structure of the country. In other words, it is an attempt to identify the changes in the economic and social variables necessary to make inflation compatible with growth. Such a study requires more refined information. Data on income distribution, region inequality, product mix, consumption patterns, major price indices, employment data, and government budget figures. Quite obviously, this phase of the proposed study can only cover a small number of the developing nations. Turkey, Indonesia, and Brazil appear to be promising. Relevant data compiled by Land-Soligo and Krzyzaniak (for Turkey), McLure and Von der Mehden (for Indonesia), and Huddle and Smith (for Brazil) are necessary inputs to the study proposed here.

### 8. Income Distribution, Political Parties, and Development Strategies

The proposals described above have obvious political and social implications. If the distribution of income determines the structure of demand and consequently the composition of production, it is also likely to influence greatly government policy. Consequently, government policy in a country with a markedly skewed distribution of income is likely to subsidize and favor development of capital and import intensive production. In terms of the Smith proposal, such policies generate demand for direct foreign investment or at least make such investment attractive; and in terms of the Huddle and Ho model, they result in a structure of production and demand with inflation.

The political implications of these models need to be explored. It needs to be questioned, for example, why public policies in the developing economies have been so slow to treat the employment implications of the industrialization schemes they have so vigorously supported. There are a large number of related questions dealing with the level and structure of investment and level and structure of government expenditures and other public policies that are clearly related to the distribution of income, wealth, and power.

Some writers stress the necessity to sacrifice consumption for investment in infrastructure and industrial plant, a distribution of income in favor of those most likely to employ resources to generate long-term growth. Others stress the desirability of a more equal income distribution, both as a requisite for growth and for equity.

Though few experts, political leaders, parties, or governments wholly support either position, the difference in emphasis is clear and the potential implication for economic growth, of one or the other approach is pursued, is profound. The former group we call developmentalist; the latter populist.

This compartmentalization may be attacked along strictly economic lines. The Land-Smith-Soligo hypotheses described in Section 3 suggest that it is by no means clear that a skewed distribution of income will not necessarily generate a higher level of growth. Furthermore, even if it does, the higher growth rate may not be desirable. The resulting level of unemployment and the development of a dual economy may act to retard growth rather than encourage it. The concept of economic progress is called into question when only the growth rate of total output rather than its distribution is considered.

However, the division of development programs between developmentalist and populist is a useful one. Dix proposes research into the structure of development programs and political parties with the idea of comparing these two approaches. His object is to determine the differences and similarities between political movements and public policy in terms of ideologies and programs, leadership, sectors of population from which they derive their support, the way in which they organize for political action, and actual policies when in office.

In some Latin American countries there have been strong currents of both developmentalism and populism, often coinciding with each other. In Colombia, for example, the national front regime (1958- ) has been essentially developmentalist; the government of General Gustavo Rojas Pinilla (1953-1957), and even more so his subsequent political movement

ANAPO, were more populist in nature. Since 1964 Brazilian governments have been primarily developmentalist, with the populists in muted opposition; prior to that year, and especially under President Goulard (1960-64), populism had considerable influence on government policy and in several of the then extant political parties. The comparisons of such development systems, Dix hopes, will enhance the value of the conclusions derived.

Dix's proposal entails several methods of data collection and analysis. An important set of inputs will be statistical and analytical results of the Smith and Land-Soligo research. Such research should more clearly identify the costs and alternatives of developmentalist growth strategies. In addition, biographical information will be gathered on the leaders of the political movements or regimes in question. It will then be coded according to such criteria as occupation, education, date and place of birth, and prior political careers as a basis for comparing the various leaderships empirically. Election returns, correlated insofar as possible with demographic data, will be analyzed in an effort to determine which kinds of people have voted for which political movements. The press and other publications of the various movements and leaders will be analyzed with a view to bringing out similarities and contrasts in ideology and programs. Statistical data and government documents will be utilized as primarily sources for the performance of different governments. All of these will be supplemented by interviews with political participants, and others knowledgeable, in order to develop information not fully available in published sources.

Somewhat surprisingly, relatively little attention has been paid in the literature on development, or in the literature on Latin America,

to the impact on development of various political movements or regimes.

In particular, differences in the leadership, support, and organization of political movements has seldom been expressly related to their ideologies, or to their policy performance while in office. There are some, at least partial, exceptions, however.

Charles Anderson, in his Politics and Economic Change in Latin America, does seek to relate the ideology of regimes to their economic performance. His distinction among conventional, reformist, and revolutionary regimes is useful in this connection. However, Anderson's concerns reach only tangentially to the nature of the leadership and support of such regimes. Nor is he primarily concerned with distinctions among political movements within countries; he is essentially comparing approaches to development among nations.

In a quite different vein, there has been considerable scholarly work on the Peron regime in Argentina (1945-55), and on the subsequent neo-Peronist movement in that country. The Peronist movement's ideology, its leadership, the roots of its support, and its performance while in office, have been rather thoroughly examined, by both Argentine and North American scholars. Peronism is, indeed, the prototype for the kind of populist movement and populist regime that we propose to investigate in other national contexts. The extant studies of Peronism will serve as convenient foils for the comparison of other movements in other countries which at least appear similar (the degree of similarity, the reasons for any perceived similarities or differences, as well as their developmental implications, remain, of course open for analysis).

Other parts of the scholarly literature are less directly related to the proposed research design. But one chapter of Dix's own forthcoming book on Chilean political development attempts to do something quite similar with regard to the regime headed by Carlos Ibáñez del Campo during the 1950s.

9. Associates of the Program of Development Studies  
with Summary of Educational  
and Research Experience

Robert H. Dix

Educational Background: Harvard College B.A. 1951  
Harvard University M.A. 1953  
Harvard Graduate School Ph.D. in 1962  
of Arts & Sciences Government

Experience Abroad

United States Foreign Service (1957-60), primarily as a political officer of the U.S. Embassy, Bogota, Colombia.  
Residence while doing research during summer of 1963 in Colombia, and during the summer of 1965 and academic year 1966-67 in Chile.

Publications and Research in Progress\*

A. Publications

Colombia: The Political Dimensions of Change (Yale University Press, 1967)

Oppositions and Development in Latin America (ch. of a book on Emerging Oppositions being edited by R.A. Dahl for Yale University Press, forthcoming).

Chile: The Politics of Intermediate Development (book to be published under auspices of Harvard Center for International Affairs, forthcoming).

B. Articles

"Political Stability and Political Change in Latin America" (in VENTURES 9 Magazine of the Yale Graduate School), Fall 1967.

Yhi-Min Ho

Educational Background: National Taiwan University B.A. 1955  
(Taipei, Taiwan)  
Utah State University M.S. 1961  
Vanderbilt University Ph.D. in 1965  
Economics

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<sup>1</sup>\*Publications and Research in Progress are limited to representative work in the area of development studies.

Yhi-Min Ho--continued.

Experience Abroad

Marketing Division, Chinese Petroleum Corporation, Taipei, Taiwan,  
1955-58.

Publications and Research in Progress

A. Publications

Agricultural Development of Taiwan, 1903-1960, Nashville, Tenn.,  
Vanderbilt University Press, 1966.

"Development with Surplus Population: The Case of Taiwan - A  
Critique of the Classical Two-Sector Model, a la Lewis," forth-  
coming in Economic Development and Cultural Change.

"On Taiwan's Agricultural Transformation under Colonialism: A  
Critique," forthcoming in The Journal of Economic History.

"On Solow's Method of Estimating the Residual," forthcoming in  
The Journal of Development Studies.

B. Research

"Korean Rice, Taiwan Rice, and Japanese Agricultural Stagnation:  
An Economic Consequence of Colonialism--A Comment," submitted  
to the Quarterly Journal of Economics in August, 1971.

"A Theoretical Model of Rural Development: A Development  
Alternative," with Donald Huddle.

"Return to Investment in Agriculture: A Comparative Study of  
the Experience of Japan (1878-1942) and Taiwan (1901-1965)."

Donald L. Huddle

|                         |   |                       |      |
|-------------------------|---|-----------------------|------|
| Educational Background: | University of California<br>(Los Angeles) | B.S.                  | 1959 |
|                         | University of California<br>(Los Angeles) | M.A.                  | 1960 |
|                         | Vanderbilt University                     | Ph.D. in<br>Economics | 1964 |

Donald L. Huddle--continued.

Experience Abroad

Coordinator for Summer Research Project, Brazil, 1966 (AID)

Publications and Research in Progress

A. Publications

- "Plano Trienal; critica do sator externo," Revista Brasileira de Economia (Getulio Vargas Foundation, Rio de Janeiro, Brasil) Ano 16, Numero 4, Dec. 1962, pp. 143-153.
- "Balanco De Pagamentos E Controle De Cambio No Brasil: Parte I. Directrizes, Politicas, E Historia, 1946-54," Revista Brasileira de Economia (Getulio Vargas Foundation) Ano 18, Numero 1, March 1964, pp, 5-41.
- "Balanco De Pagamentos E Controle De Cambio No Brasil: Parte II. Eficacia, Bem Estar, E Desenvolvimento Economico," Revista Brasileira De Economia (Getulio Vargas Foundation) Ano 18, Numero 2, June 1964, pp. 5-49.
- "Furtado on Exchange Control and Economic Development: An Evaluation and Reinterpretation of the Brazilian Case," Economic Development and Cultural Change (University of Chicago) April 1967; pp. 269-285, reprinted in: Economic Growth Center Papers, Yale University (New Haven, Conn.).
- "The Brazilian Industrialization: Sources, Patterns, and Policy Mix," review article for Economic Development and Cultural Change (University of Chicago), July 1967, pp. 472-479.
- "An Estimate of Import Surplus under a Disequilibrium System," Public Choice, Fall 1968, pp. 113-120.
- "The Postwar Brazilian Industrialization: Growth Patterns, Inflation, and Sources of Stagnation" in E. Baklanoff (Ed.) The Shaping of Modern Brazil (L.S.U. Press) February 1969, pp. 86-108.
- "Measurement of Import-Substitution Industrialization in Brazilian Growth," Revista Brasileira de Economia, June 1969, p. 38.
- "Allocating Foreign Aid: An Appraisal of a Self-Help Model," (with J. Conlisk), The Journal of Development Studies, (London, England), July 1969, pp. 245-251.
- "New Evidence on Price Elasticities in International Trade," Oxford Economic Papers, July 1970, pp. 235-242.

Donald L. Huddle--continued.

"International Monetary Rules and External Disequilibrium in Developing Countries," presented at Southern Economic Association meetings in Nov. 1967, Weltwirtschaftlicher Archiv, p. 19, Dec. 1971.

"Multiple Exchange Rates as an Instrument for Attaining Multiple Development Objectives," Revista de Teoria e Pesquisa Economica (Sao Paulo), p. 39, December 1970.

"Essays on the Economy of Brazil: The Berkeley Group," forthcoming review article for Economic Development and Cultural Change (University of Chicago).

"Notes on Non-Inflationary Devaluation: The Brazilian Case," forthcoming in Economia Internazionale (Genoa), p. 31.

"The Role of Publicly Owned Enterprise in Latin America, A Discussion," forthcoming in D. Geithman, Fiscal Policy for Industrialization in Latin America (University of Florida).

B. Research

"Industrialization and Labor Absorption Processes in Latin America."

"Evaluation of the Duty Free Areas on the Mexican Border."

"Inflation and Economic Development in Latin America."

Marian Krzyzaniak

|                         |   |                          |      |
|-------------------------|---|--------------------------|------|
| Educational Background: | University of Poznan<br>(Poland)            | M. Econ. &<br>Poli. Sci. | 1932 |
|                         | University of Insbrueck<br>(Austria)        |                          | 1945 |
|                         | University of Alberta<br>(Edmonton, Canada) | M.A.                     | 1954 |
|                         | M.I.T.                                      | Ph.D. in<br>Economics    | 1959 |

Experience Abroad

Civil servant in Poland.

Editor of a Polish weekly magazine in Rome.

Public relations officer with Polish Forces in Italy.

Marian Krzyzaniak--continued.

Publications and Research in Progress

A. Publications

In collaboration with Richard A. Musgrave, The Shifting of the Corporation Income Tax, Baltimore, The Johns Hopkins Press, 1963. Chapters 1 and 2 to be reprinted in Public Finance by R.W. Houghton, Baltimore, Md., Penguin Books, 1970.

Editor of Effects of Corporation Income Tax, Detroit, The Wayne State University Press, 1966.

"The Long-Run Burden of a General Tax on Profits in a Neoclassical World," read before the Southern Economic Association meeting in Atlanta, Georgia, November 1966, Public Finance, XXII, 1967.

"Factor Substitution and the General Tax on Profits," read before the Econometric Society meeting in Evanston, Ill., December 1968.

"Benefit-Cost and Incidence Analysis of Transfers, Financed by a Profits Tax, in a Neoclassical World, with Two Labor Inputs," mimeographed at Rice University, 1969.

"The Differential Incidence of Taxes on Profits and on Factor Incomes," to be published by Finanzarchiv, by the end of 1971.

"The Long-Run Incidence of Government Spending on Education," mimeographed at Rice University, 1970.

B. Research

Revision of "The Long-Run Incidence of Government Spending on Education."

"Determinants of Government Expenditure in Turkey."

"Incidence of Taxes in Turkey."

"The Functional and By Income Groups Redistributive Effort of the Turkish Government."

James W. Land

|                                |                               |                       |      |
|--------------------------------|-------------------------------|-----------------------|------|
| <u>Educational Background:</u> | Southern Methodist University | B.A.                  | 1957 |
|                                | Southern Methodist University | M.A.                  | 1960 |
|                                | Princeton University          | Ph.D. in<br>Economics | 1963 |

James W. Land--continued.

Experience Abroad

Research Consultant and Director of Project for the State Institute of Statistics in Ankara, Turkey and Yale University Economic Growth Center, 1964-65, and parts of 1968, 1969, 1970.

Consultant to Organization for Economic Cooperation and Development and AID, parts of 1968, 1970, 1971.

Publications and Research in Progress

A. Publications

Economic Accounts of Government in Turkey, 1938, 1948, 1950, 1953-1963 (Ankara: State Institute of Statistics, 1969).

Economic Accounts of Public Enterprises in Turkey, 1939-1963 (Ankara: State Institute of Statistics, 1969).

"The Role of Public Enterprises in the Economic Development of Turkey," accepted for inclusion in Government and Economic Development, Gustav Ranis (ed.), (New Haven: Yale University Press, 1970).

"An Analysis of Turkey's Second Five Year Plan: The Public Sector," a study prepared for the Organization of European Cooperation and Development, 1967.

"The Changing Role of Government in the Economic Development of Turkey," paper read to The Middle East Studies Association Annual Meeting, November 1968, and submitted for publication to The Journal of Economic History.

B. Research

The Public Sector in the Economic Development of Turkey, forthcoming publication of the Yale University Economic Growth Center, 1972.

The Economic Development of Turkey, forthcoming publication of the Yale University Economic Growth Center, 1972.

Charles E. McLure, Jr.

|                                |                      |           |      |
|--------------------------------|----------------------|-----------|------|
| <u>Educational Background:</u> | Kansas University    | B.A.      | 1962 |
|                                | Princeton University | M.A.      | 1964 |
|                                | Princeton University | Ph.D. in  |      |
|                                |                      | Economics | 1966 |

Charles E. McLure, Jr.--continued.

Experience Abroad

Staff member, Colombian Commission for Tax Reform (Musgrave Commission),  
Summer, 1968.

Consultant to U.S. Treasury Department, Summer, 1967.

Tax Adviser to the Government of Malaysia (under auspices of Harvard  
University Development Advisory Service), Summer, 1969.

Publications and Research in Progress

A. Publications

"Commodity Tax Incidence in Open Economies," National Tax Journal,  
June 1964, pp. 187-204.

Five chapters in Richard A. Musgrave, President, and Malcolm Gillis,  
editor, Fiscal Reform for Colombia: The Final Report and Staff  
Papers of the Colombian Commission on Tax Reform, Part II, Harvard  
Law School, International Tax Program, Cambridge, (1971):

"The Incidence of Taxation in Colombia," pp. 239-66.

"Colombian Tax Incentives," pp. 530-44.

"The Design of Regional Tax Incentives for Colombia," pp. 545-56.

"Coordination of Tariffs and Internal Indirect Taxes," (with  
Malcolm Gillis), pp. 573-92.

"Automotive Tax Reform," pp. 692-719.

"The Incidence of Taxation in West Malaysia," mimeographed, 1969,  
but released for publication by Malaysian government only in  
November, 1971, to be submitted for journal consideration.

"The Distribution of Income in Panama, Tax Incidence, and Policy  
Conclusions," a three-part study for the National Planning Office of  
Panama, mimeographed, 1971.

B. Research

Value added Taxation

Fiscal Federalism

Fiscal Policy

Samuel A. Morley

Educational Background: Yale University B.A. 1956  
University of California,  
Berkeley Ph.D. in 1965  
Economics

Experience Abroad

Ford Foundation Latin America Area Summer Research Grant, 1969  
NSF - Grant for Study of Foreign Investment in Brazil, 1972-73  
Research Economist in Brazil, on leave from University of  
California, Berkeley, September 1965-September 1967.

Publications and Research in Progress

A. Publications

The Economics of Inflation (Dryden, 1971).

"Stabilizing an Economy: A Comparison of Stabilization Programs in  
Chile, Brazil and Korea," Agency for International Development,  
Summer Research Paper (Washington, D.C.)

"Import Demand and Import Substitution in Brazil," in Howard S.  
Ellis, ed., The Economy of Brazil (Berkeley, 1969), pp. 283-313.

"Inflation and Stagnation in Brazil," Economic Development and  
Cultural Change (University of Chicago), January 1971, pp. 184-203

"On the Measurement of Import Substitution," American Economic  
Review (with Gordon Smith), September 1970, pp. 723-735.

B. Research

Foreign Investment in Brazil.

Gaston V. Rimlinger

Educational Background: University of Washington B.A. 1951  
University of California Ph.D. in 1956  
Economics

Experience Abroad

Interpreter for U.S. Army and U.S. Military Government  
Advisor to Ford Foundation in Lagos, Nigeria, 1969-72

Gaston V. Rimlinger--continued.

Publications and Research in Progress

A. Publications

Welfare Policy and Industrialization in Europe, America and Russia, A Comparative Historical Study. Submitted for publication, 384 pp. typed.

"American Social Security in a European Perspective," in F.H. Harbison, The American System of Social Insurance (New York: McGraw-Hill), 1968, pp. 213-232.

"Industrialization, Nation Building, and Social Security," included in a volume published by the Social Security Administration, 1969.

"Income Security and Economic Growth: A Theoretical Model of the German System," Joint Economic Committee, U.S. Congress, Old Age Income Assurance (Washington, D.C.:G.P.O., 1968), Part II, pp. 357-361.

"The Expansion of the Labor Market in Capitalist Russia: 1861-1917," Journal of Economic History (June, 1961), pp. 208-215.

"Welfare Policy and Economic Development: A Comparative Historical Perspective," Journal of Economic History, Vol. XXVI, No. 4, (December 1966), pp. 556-571.

B. Research

"West African Economic Development"

Gordon W. Smith

|                                |   |                       |         |
|--------------------------------|---|-----------------------|---------|
| <u>Educational Background:</u> | Washington University                   | B.A.                  | 1956    |
|                                | Harvard University<br>(Divinity School) | --                    | 1956-58 |
|                                | Harvard University                      | Ph.D. in<br>Economics | 1966    |

Experience Abroad

September, 1962 to October 1963 - in Brazil gathering material for Ph.D. dissertation

Gordon W. Smith--continued.

October, 1965 to July, 1967 - in Brazil as technical advisor in economics in the Ministry of Planning's Institute of Applied Economic Research. This involved work on the formulation of the Ten Year Plan and later on the Three Year Plan.

Publications and Research in Progress

A. Publications

"A Agricultura e O Plano Trienal," Revista Brasileira de Economia Dezembro de 1962. ("Agriculture and the Brazilian Three-Year Plan," Brazilian Economics Journal, December, 1962.)

"Brazilian Agricultural Price Policy 1950-1967," in Howard S. Ellis (ed.) Essays on the Economy of Brazil. (Berkeley: University of California Press), 1969.

"On the Measurement of Import Substitution," with Samuel A. Morley American Economic Review, September, 1970.

"The Effect of Changes in the Distribution of Income on Labor, Foreign Investment and Growth in Brazil," with Samuel A. Morley, in A. Stepan (ed.), Brazil in the 1960's, Yale University Press.

"Import Substitution and Foreign Investment in Brazil," with Samuel A. Morley, forthcoming in Oxford Economic Papers.

B. Research

Revision and updating for publication of Ph.D. dissertation, Marketing and Economic Development: A Brazilian Case Study.

"Government Expenditures, Comparative Advantage and Protection." An article which attempts to examine the impact of government expenditure patterns on comparative advantage and of protection through several hypothetical political mechanisms, on government expenditures.

Adaptation of Technology by Multinational Firms in Brazil.

Ronald Soligo

|                                |                                |           |      |
|--------------------------------|--------------------------------|-----------|------|
| <u>Educational Background:</u> | University of British Columbia | B.A.      | 1958 |
|                                | Yale University                | Ph.D. in  | 1964 |
|                                |                                | Economics |      |

Experience Abroad

Research Advisor, Pakistan Institute of Development Economics, Karachi, Pakistan (in cooperation with the Stanford University Pakistan Project sponsored by the Ford Foundation) during 1963-1965.

Ronald Soligo--continued.

Residence during the summer of 1968 in further research and advisory capacity in Karachi, Pakistan.

Publications and Research in Progress

A. Publications

- "Growth and Structural Change in Pakistan's Manufacturing Industry, 1954 to 1964," Pakistan Development Review, Spring 1964 (with Stephen R. Lewis, Jr.)
- "Tariff Protection, Import Substitution and Investment Efficiency," Pakistan Development Review, Summer 1965 (with Joseph J. Stern).
- "Export Bonus, Export Promotion and Investment Criteria," Pakistan Development Review, Spring 1966 (with Joseph J. Stern).
- "Tariff Protection, Import Substitution and Investment Efficiency: Reply," Pakistan Development Review, Spring 1966 (with Joseph J. Stern).
- "Monetary Problems of Pakistan," Journal of Political Economy, October, 1967.
- "Rural-Urban Migration, Agricultural Output, and the Supply Price of Labor in a Labor Surplus Economy," Oxford Economic Papers, July 1968, pp. 230-248 (with Albert Berry).
- "Some Welfare Aspects of International Migration," Journal of Political Economy, September/October, 1969 (with Albert Berry).
- "Real and Illusory Aspects of an Overvalued Exchange Rate: The Pakistan Case," Oxford Economic Papers, March 1971, pp. 90-109.

B. Research

Inter-wing resource transfers in Pakistan

Income distribution and employment in Pakistan

Optimal wage and educational policy with international migration  
(with Albert Berry)

Fred R. von der Mehden

|                                |  |                       |      |
|--------------------------------|--|-----------------------|------|
| <u>Educational Background:</u> | University of the Pacific              | B.A.                  | 1948 |
|                                | Claremont Graduate School              | M.A.                  | 1950 |
|                                | University of California<br>(Berkeley) | Ph.D. in<br>Pol. Sci. | 1957 |

Fred R. von der Mehden--continued.

Experience Abroad

Research to Burma (Fulbright Grant), 1959-60  
Research in Southeast Asia (Ford Grant), 1963  
Southeast Asia and India Consultancy (International Area Studies), 1964  
Research in Thailand with AID, 1965-67  
Research and Consultancy in Thailand and Indonesia, 1969

Publications and Research in Progress

A. Publications

- Politics of the Developing Nations. Prentice-Hall, 1964, Rev. 1969.
- Issues of Political Development (with Anderson-Young). Prentice-Hall, 1967. Japanese edition, 1969.
- The Military and Politics in Five Developing Nations. Co-author, CRESS, 1970.
- Local Authority and Administration in Thailand. Editor with Wilson, AACT, 1970.
- "Party Development in Newly Independent States," Social Science, 1959.
- "Political Action by the Military in the Developing Areas," with C. Anderson, Social Research, 1961.
- "Some Aspects of Political Ideology in Malaysia," Studies on Asia, 1964, 1965.
- "The Growth and Development of the Religio-Nationalist Movement in Southeast Asia," to be reprinted from Religion and Nationalism in Southeast Asia: The Politics of National Integration, by John T. McAlister, Knopf Publishers.
- "The Military and Development in Thailand," Journal of Comparative Administration, November 1970, pp. 323-40.
- Comparative Political Violence. Prentice-Hall, forthcoming in the Spring, 1972.
- "Rise and Fall of the Buddhist State in Burma," Southeast Asia, Fall 1971.
- "Thai-Burmese Relations: Traditional, Cordial and Clandestine," Asian Studies Series, forthcoming in the Spring, 1972.
- "The Secularization of Theravada Buddhism in Burma and Thailand," in volume edited by Donald Smith on religion and politics in Asia, Yale University Press, forthcoming in the Spring, 1972.



## PROGRAM OF DEVELOPMENT STUDIES

### Discussion Papers

1. "Brazilian Agricultural Policy: 1950-1967" . . . . . Gordon Smith
2. "On the Measurement of Import Substitution" . . . . .  
Samuel A. Morley and Gordon Smith
3. "International Monetary Rules and External Disequilibrium in  
Developing Countries" . . . . . Donald L. Huddle
4. "Real and Illusory Aspects of an Overvalued Exchange Rate:  
The Pakistan Case" . . . . . Ronald Soligo
5. "Import Substitution and Foreign Investment in Brazil" . . . . .  
. . . . . Samuel A. Morley and Gordon Smith
6. "Measurements of Static Welfare Losses, Horizontal and Vertical  
Distribution Inequities, and Revenues in a Multiple Exchange Rate  
System . . . . . Donald L. Huddle
7. "National Policy Criteria in a World with International Migration"  
. . . . . R. Albert Berry and Ronald Soligo
8. "The Role of Government in the Economic Development of  
Turkey, 1933-63" . . . . . James W. Land
9. "Income Distribution, Employment, and Growth in Labor  
Redundant Economies" . . . . . James W. Land and Ronald Soligo
10. "The Long-run Incidence of Government Spending on Education" . . . . .  
. . . . . Marian Krzyzaniak
11. "Interpreting Domestic Terms of Trade Changes in Pakistan" . . . . .  
. . . . . Ronald Soligo
12. "The Design of Regional Tax Incentives for Colombia" . . . . .  
. . . . . Charles E. McLure, Jr.
13. "Transformation of Polish Agriculture from 1920 on: A Historical  
Perspective" . . . . . Marian Krzyzaniak
14. "The Incidence of Taxation in Colombia" . . . . . Charles E. McLure, Jr.
15. "The Effect of Changes in the Distribution of Income on Labor, Foreign  
Investment and Growth in Brazil". . Samuel A. Morley and Gordon Smith
16. "Korean Rice, Taiwan Rice, and Japanese Agricultural Stagnation:  
An Economic Consequence of Colonialism--A Comment". . . . Yhi-Min Ho
17. "The Incidence of Taxation in West Malaysia". . . Charles E. McLure, Jr.
18. "Vocational Improvement Centres: A Successful Nigerian  
Experiment". . . . . Gaston V. Rimlinger and Carolyn Stremlau
19. "Government Expenditures, the Revenue Constraint and Wagner's Law:  
The Case of Turkey". . . . . Marian Krzyzaniak
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