



OECD DEVELOPMENT CENTRE

Working Paper No. 6
(Formerly Technical Paper No. 6)

EFFICIENCY, WELFARE EFFECTS,
AND POLITICAL FEASIBILITY
OF ALTERNATIVE ANTIPOVERTY
AND ADJUSTMENT PROGRAMS

by

Alain de Janvry and Elisabeth Sadoulet

Research programme on:
Adjustment Programmes and Equitable Growth



TABLE OF CONTENTS

Summary	7
Preface	9
I. Explaining Government Behaviour Toward Poverty	11
II. Who Are the Rural Poor?	12
III. Why Public Interventions for Poverty Alleviation?	14
A. Theory of Aggregation	15
B. Theory of Triggering Mechanisms for Collective Action	15
C. Theory of Collective Action	16
IV. Constructing an Index of the Political Feasibility of Policies	20
V. The Political Feasibility of Alternative Antipoverty Programs Explored in CGE and Multimarker Models	26
VI. Interlinking Policies for Political Feasibility	28
VII. Conclusion	30
Notes and References	32
Tables	35
Figure 1	46

SUMMARY

This document presents an exploratory contribution to the understanding of the political economy of poverty alleviation. Usually, governmental decisions to apply macroeconomic measures that minimise the negative effects of adjustment on the poor, or to implement programmes specifically aimed at reducing poverty, assume that the majority of the population will support them. While there are many studies on the rationality of public choices, there are very few on the political conditions required for the implementation of anti-poverty programmes. This paper presents an indicator for assessing the political feasibility of such programmes. To take into account the influence weights of each social group, the authors have retained seven elements. Among these are: exercise of economic power, group size and the expectations of gains from the policy.

Taking as an example alternative policies in India and Ecuador, the authors show that coalitions comprising a majority of non-poor will support anti-poverty programmes because they benefit from the indirect effects. This is the case, for example, when the non-poor are the producers of what the poor consume or when weakly targeted anti-poverty instruments leak benefits to the politically relevant groups.

RESUMÉ

Ce document présente une première approche à la compréhension du contexte politico-économique dans lequel s'inscrivent les mesures de lutte contre la pauvreté. Habituellement, les décisions gouvernementales concernant l'application de mesures macroéconomiques qui minimisent les effets négatifs de l'ajustement sur les pauvres, ou l'exécution de programmes destinés spécifiquement à diminuer la pauvreté, supposent le soutien de la majorité de la population. Alors qu'il y a beaucoup d'études sur la rationalité des choix publics, il y en a très peu sur les conditions politiques requises pour mener à bien des programmes de lutte contre la pauvreté. Ce document propose un indicateur pour estimer la faisabilité politique de tels programmes. Pour prendre en compte le poids en terme d'influence de chaque groupe social, les auteurs ont retenu sept éléments. Parmi ceux-ci, on compte l'exercice du pouvoir économique, la taille du groupe et les anticipations relatives aux gains à espérer d'une telle politique.

Ayant choisi comme exemples des politiques alternatives en Inde et en Equateur, les auteurs montrent que des coalitions comprenant une majorité de non-pauvres soutiennent des programmes de lutte contre la pauvreté parce qu'ils bénéficient des effets indirects de tels programmes. C'est le cas, par exemple, quand les non-pauvres produisent des biens que les pauvres consomment ou lorsque des instruments de lutte contre la pauvreté mal ciblés profitent aux groupes politiquement influents.

PREFACE

In January 1987, the Development Centre launched a project on "Adjustment Programmes and Equitable Growth", under the direction of Christian Morrisson. The importance of the subject is reflected in the fact that many developing countries have undertaken programmes whose short-term effects are often negative, such as lower formal employment and lower incomes in the informal sector, or cutbacks in education services which hit poor families particularly hard. To avoid such effects, some governments have embarked on compensatory programmes to alleviate poverty, but such policies can also generate the opposition of non-poor people who must bear higher costs of adjustment. In other countries, meanwhile, governments repress the demands of the poor.

The objective of this paper is to seek an understanding of why the degree of commitment to poverty alleviation varies so greatly between governments and how to achieve acceptance of some measures of alleviation by the non-poor. While important contributions have been made in explaining the economic rationality of public choice, this has not been extended to providing an understanding of the political economy of poverty alleviation interventions.

Here, we provide an indicator to assess the political feasibility of such interventions. This indicator depends on several elements such as: group size, exercise of economic power and expectations of the possible gains from the policy. The authors use computable general equilibrium and multimarket models for India and Ecuador with the indicator to calculate the political feasibility of alternative policies to poverty alleviation. With such models, all the effects of anti-poverty programmes can be taken into account. For example, a programme which raises the productivity of poor smaller farmers has a high likelihood of political acceptance among the consumers of food produced by these farmers. The authors show in which cases anti-poverty policies could be accepted by a coalition dominated by the non-poor because the non-poor gain through the general equilibrium effects created by anti-poverty programmes.

On the other hand, they advise a looser targeting of anti-poverty measures. Political feasibility results from the access of the non-poor to anti-poverty instruments. A fertilizer subsidy, for example, financed by and accessible to all farmers creates benefits for medium and large producers thus increasing political feasibility. In this case, narrowing the targeting of an anti-poverty programme will tend to decrease its political feasibility.

The conclusions reached by using the indicator — itself a question for debate — will open up new and promising avenues for our thinking on the efficiency/political feasibility nexus of anti-poverty programmes.

Louis Emmerij
President, OECD Development Centre
December 1989

I. EXPLAINING GOVERNMENT BEHAVIOR TOWARD POVERTY

Like economic growth rates, poverty rates differ significantly across countries, even at equal levels of per capita income. The determinants of poverty are highly complex but can generally be attributed to the following four categories: (1) the choice of development strategy and of macroeconomic policy; (2) the distribution of access to assets; (3) differentials in the definition and access to public goods and to institutions; and (4) existence and implementation of welfare programs. Antipoverty initiatives have been implemented by modifying any of these four determinants. Their effectiveness is conditioned by many intervening variables such as the size and resource base of a country, the economic and social structure, the economic outlook, and bureaucratic efficacy. Significant advances have recently been made in understanding the determinants of poverty and in analyzing the effectiveness of alternative approaches to poverty alleviation (Streeten, 1979a, b; Adelman).

What remain to be understood are the reasons why the degree of commitment to poverty alleviation and the ways of approaching it vary so greatly across governments. In other words, why do governments face up so differently to poverty, with responses spanning from repression of the demands of the poor, to benign neglect, and to different degrees of involvement in poverty alleviation programs? Why do they choose such markedly different instruments ranging from pure transfers of goods or income to asset redistribution, use of price distortions, choice of rate and bias of public goods, changes in access rules to institutions, and promotion of labor intensive development strategies? While important contributions have been made in explaining the economic rationality of public choice and in advancing the theory of the state (Buchanan, Downs, Olson, etc.), this has not been properly applied to providing an understanding of the political economy of poverty alleviation interventions. It is the objective of this paper to help bridge this gap.

We start by noting that an identification of the rural poor reveals that poverty is highly socially and demographically differentiated. We show this by looking, in Part II, at social poverty maps for rural areas. In Part III, we ask the question of what explains preoccupations with poverty by civil society and governments. Explanations include economic calculus of self-interest, fear of large losses, autonomy of the welfare state, and altruism. This leads us to discuss several aspects of what matters in the construction of a model of the political economy of poverty alleviation: the basis on which individuals aggregate into pressure groups for political action, the triggering mechanisms for engaging in collective action, the determinants of effectiveness in collective action, the expected payoffs from collective action for the poor, and the opportunity cost for the nonpoor and the state of yielding to the poor's demands. In Part IV, we use this baggage of theoretical and empirical knowledge to construct an index of the political feasibility of policies, and we test the predictive power of this index by applying it to well-established political choices. In Part V, we use computable general equilibrium (CGE) and multimarket models for India and Ecuador to calculate the relative political feasibility of alternative approaches to poverty alleviation. Finally, in Part VI, we explore the importance of interlinking policies to achieve political feasibility. We do this by studying different approaches to economic stabilization introduced in response to an oil shock in a CGE model for Ecuador. In each case, we measure the economic effectiveness, the impact on the welfare of the rural poor, and the political feasibility of the approach. We show that these three criteria used to evaluate policies are quite distinct and that, in particular, stabilization "with a human face" (Cornia, Jolly, and Stewart) is not the same as a politically feasible stabilization.

II. WHO ARE THE RURAL POOR?

Needless to say, rural poverty remains pervasive in the LDCs and its incidence much higher than in the urban sector. In countries with GNP per capita under \$750 (1986), the share of population below poverty line was 60 per cent in the rural sector and 36 per cent in the urban sector according to latest estimates (UNICEF). Thus, in spite of rapid urbanization and international concerns with the excessive size of cities, world poverty remains a fundamentally rural phenomenon. Even on a continent like Latin America, where most countries are in the World Bank category of Middle Income Economies, the share of rural population in absolute poverty was estimated to be 65 per cent in 1980 and that in destitution 33 per cent (FAO). And it is not clear that rapid economic growth in the 1970s was able to reduce the incidence of poverty. Compared to 1970, absolute poverty in 1980 in Latin America increased by 4 percentage points while destitution decreased by only 1 percentage point. The economic crisis of the 1980s has brought per capita incomes back to what they were in the mid-seventies and poverty rates are commonly believed to be significantly higher today than they were in 1980 (Pfeffermann).

In looking at the levels of satisfaction of basic needs across countries, there are several important regularities that suggest the causal importance of political economy phenomena as opposed to a pure GNP per capita determination. They are the following:

- i) There exists a high correlation among indicators of the average level of satisfaction of basic needs such as health (life expectancy at birth, infant mortality rates); nutrition (average per capita calorie consumption as a share of requirements); education (literacy rate, primary school enrollment); and housing (average number of persons per room, share of housing units with piped water, sanitary facilities) (Table 1; see also Rietschin). This indicates that there is, overall, relatively little difference in the composition of basic needs across countries while there are large differences in the overall level of basic needs satisfaction. Explaining intercountry differences in specific indicators, such as low infant mortality in Chile and high literacy in Tanzania, is important. Yet, in dealing with the political economy of poverty on a world scale, the issue is consequently less one of composition than of level, and this is what we address here.
- ii) The relation between basic needs indicators and GNP per capita is highly nonlinear (Hicks and Streeten). This is illustrated in Figure 1 that shows the relations between GNP per capita and three indicators of basic needs: life expectancy, infant mortality, and male adult literacy. Because of nonlinearity, correlation between basic needs and GNP per capita is moderate across all countries (0.60), but it is very low in the poor LDCs (0.29 in countries below \$450 of GNP per capita) and in the MDCs (0.26 in countries above \$3 000) (Table 2). It is only in the transition economies, with per capita GNP between \$450 and \$3 000, that the correlation is somewhat higher (0.46). For the MDCs, this indicates that saturation levels have been approximated and that residual poverty is not a matter of overall levels of per capita income. For the poor LDCs, it makes the important point that satisfaction of basic needs is more a matter of social choice than of level of economic development. In other words, poverty alleviation is in fact affordable by all LDCs if the political will to deal with it exists.

- iii) Unexplained by these observations is whether the satisfaction of basic needs is a causal precondition for the transition from LDC to MDC status or whether their satisfaction automatically follows economic development. The theories of human capital investment (Schultz), of the nutritional efficiency of wage (Leibenstein), of massive educational campaigns as a precondition for equitable growth (Adelman), as well as recent World Bank estimates of the rate of return from investment in primary education and training of middle management would support the first. Theories of surplus labor (Lewis) and of trickle-down effects of growth (Rostow) would support the second. Clearly, this unresolved issue is important to an understanding of the political economy of poverty. In the first case, poverty reduction is a rational social investment that creates net social gains. The political economy of poverty alleviation is thus fairly trivial. In the second, there exists a trade-off between the separate pursuits of welfare improvement and of growth, and the politics of poverty reduction imply redistributive struggles or ethical motives which have an economic opportunity cost.

A social poverty map for the rural region of the Ecuadorean Sierra gives an example of the diversity of rural poverty (Table 3). We see that the poorest are the landless workers and the marginal farmers (subfamily farms). Landless workers depend on wage income, but an important fraction of these wages are earned in nonagricultural activities. With rural labor markets increasingly integrated between agricultural and nonagricultural activities, employment and wage effects in nonagricultural activities (particularly in nontradables such as construction and services) affect the welfare of agricultural workers.

Marginal farmers also earn the bulk of their income from participation to the labor market. In this case, women have an important role in agriculture as men work on often distant labor markets. On family farms and small and large commercial farms, agriculture is the main source of income. The income effects of terms-of-trade movements are, however, substantially different across these farms as labor intensity declines with farm size while the use of industrial and imported inputs rises. Larger farms also have a higher marketed surplus and produce more livestock and dairy products. Finally, merchants, artisans, and government employees have sources of income that are quite specific to them.

Access to public goods and services is equally heterogenous and skewed. Education and health services benefit principally the more urbanized among the rural social groups. Public goods in support of production, such as irrigation, credit, and infrastructure, benefit disproportionately the largest farmers. Social programs such as rural development and land reform benefit the family and small commercial farmers, but these public expenses are minimal.

We thus conclude that there is not one type of rural poor as the structure of rural poverty is highly heterogenous. In terms of the political economy of poverty alleviation, this implies that antipoverty strategies will of necessity be multidimensional, implying the likely existence of trade-offs in their effects on different groups. It also implies that different subsets of the rural poor will have different demands for poverty alleviating interventions. How the poor (and the nonpoor) aggregate into interest groups based on these divisions and how effective these groups are in exercising political influence will be important to explain.

III. WHY PUBLIC INTERVENTIONS FOR POVERTY ALLEVIATION?

If we turn to the literature on endogenous government behavior to find out what types of reasons have been advocated to explain the origins of public policies and programs directed at poverty alleviation, we find basically four contrasted streams of thought: (1) rent seeking through the exercise of pressure and influence (Becker, Zusman, Roe and Yeldan); (2) insurance against large losses (Horowitz); (3) altruism and interdependent utilities (Hochman and Rodgers, Giertz and Sullivan); and (4) autonomy of the welfare state. The inertia of past institutions also has an important role to play (Nugent).

In explaining what motivates public policy toward poverty alleviation, there is a key difference between programs that originate in altruism, interdependent utilities, or the autonomous welfare state as opposed to those that originate in pressure and influence or in the fear of large losses. In the former, programs are handed down to the poor and they can create net social gains in utility or social welfare. Maximization of the donors' utility function or of the state's criterion function implies an optimum level of welfare expenditures. The main issue is one of efficiency in the choice of instruments in order to minimize the opportunity cost of achieving a unit of welfare. In the latter, it is necessary for the poor to exercise pressures and threats, presumably because the programs either create net social gains but there are losers among the nonpoor, or because they create net social losses and there are trade-offs between efficiency and equity. It is the political economy of these latter determinants of public policy toward rural poverty which we consider in what follows.

If political demands for poverty alleviation have to originate with the poor, either through the direct exercise of influence or indirectly in coalitions with other social groups, the extent of their power over the nonpoor and the state crucially depends:

For the poor, on:

1. The opportunity cost for them of exercising pressure on these other institutions (the nonpoor and the state).
2. The effectiveness of their coalitions in creating pressure.
3. The present value for them of the expected payoff of success.
4. The disagreement payoff for them in case of failure to succeed.

For the nonpoor and the state, on:

5. The opportunity cost to the other institutions in resisting the poor's demands.
6. The effectiveness of the nonpoor in creating pressure and of the state in imposing its own goals (degree of relative autonomy).
7. The opportunity cost to the other institutions of yielding to the poor's demands.
8. The disagreement payoff for the other institutions in refusing to yield to the poor's demands.

For all institutions together, on:

9. The nature of the political institutions that transform pressure into influence over government policy-making.
10. The portfolio of available alternative antipoverty instruments.
11. The net effects of gains from growth and from public policy.

In what follows, we only discuss some of the key elements in the above categories (1) and (2), (3), and (7). We do this in order to identify the arguments that should be taken into account in the construction of influence indexes for the empirical measurement of the political feasibility of alternative poverty alleviation policies and programs.

III.1. Opportunity Cost of Exercising Pressure

A. Theory of Aggregation

In theory, groups should form to exercise pressure on the basis of common interests and shared ideology. Individuals should aggregate into groups on the basis of similarity in the way their real incomes are affected by a particular policy instrument that will be the object of collective action. In previous analyses of the political economy of public choice, groups have thus been defined in terms of the subsidized versus the taxed when the policy instrument is income transfers (Becker), large versus small farmers when the policy instrument is land reform (Horowitz), agriculture versus industry when the policy instrument is the terms of trade (Roe and Yeldan), and producers versus consumers when the policy instrument is the price of a commodity (Zusman, Beghin). A particularly fruitful approach to aggregation derives from the theory of transaction costs. Households characterized by similar transaction costs, that define for them the optimum rate and bias of public goods, will aggregate to lobby for public goods such as agricultural technology (de Janvry, Sadoulet, and Fafchamps). In practice, the most functional rule for aggregation is that which we followed in the social poverty map above, namely to group individuals by levels of control over assets and sources of income.

B. Theory of Triggering Mechanisms for Collective Action

Social groups can be defined in terms of shared interests for collective action. Yet, this does not imply that interest groups will actually organize into pressure groups (Naert). Several triggering mechanisms of social aggregation for collective action have been identified in the development literature concerned with grassroots movements. They include:

- i) The sudden deterioration of income as a result of aggression (Hirschman). The aggressor may be nature, the landlords and other dominant groups, or the state.
- ii) Deterioration of income due to changes in relative prices (Ruttan).
- iii) The role of leadership and in particular the transfer of prior experiences derived from social movements in other sectors of the economy.
- iv) The role of nongovernmental organizations in serving as brokers or catalysts for grassroots movements (Wells).

- v) The role of the church and of international assistance in providing funds and protection (Annis and Hakim).
- vi) Greater difficulty in "exit" behavior, making imperative the use of "voice and loyalty" (Hirschman).
- vii) Perception by the poor of the causes of poverty, in particular, whether it is blamed on others (the "system", the state, discrimination, exploitation by the rich) as opposed to the self (failure to educate oneself, to work harder, to take initiatives, to assume risks).
- viii) How the gains or losses from change are seen to be shared in the population. While permanent mass poverty may be endured passively, differential changes in income (Hirschman's "tunnel effect") are likely to induce resentment and recriminatory behavior among those who lose most or gain least.

Observations of collective action by the poor tend to indicate that their mobilization is more reactive than anticipatory. It responds to large sudden deteriorations in their welfare. As a result, poor people's movements tend to be forceful and sharply focused in their demands but discontinuous in their activities. In constructing influence indexes, we will consequently use the proposition that there exists an asymmetry in the forms of exercising pressure between the poor and nonpoor. For the poor, large welfare losses (a sharply nonlinear loss function) are a determinant of mobilization and the number of poor that engage into collective demands is more important than the financial resources which they can commit to lobbying. For the nonpoor, pressure is motivated by the expectation of gains or losses which induces a more proportional response than among the poor, and this to both expected gains and losses. In addition, the magnitude of the pressure they can exercise depends more on the quantity of financial resources which they can mobilize, and hence on their income status, than on the size of the coalition.

C. Theory of Collective Action

There exists here a vast literature on the determinants of success in collective action. Much attention has been given to the free rider problem as an important determinant of group failure in exercising pressure (Olson, Nugent). The likelihood of controlling free riding requires:

- i) **Smaller group size:** There are, however, economies of scale in group size for collective action as the number of votes and the number of members from whom financial contributions can be gathered increases. An optimum group size thus exists that balances the losses from free riding to the gains from economies of scale as group size increases.
- ii) **Greater group homogeneity:** If groups are organized on the basis of common interests, based in particular on transactions costs, here again economies of scale have to be balanced against greater heterogeneity of interests as group size increases.
- iii) **More shared ideology:** Ideology is a powerful means of reducing transaction costs internal to a group and, hence, free riding as well (Leff).
- iv) **Group members that have been longer together or share greater geographical proximity:** This allows a better level of information on the expected behavior of group members.

- v) Greater ability by leaders to conceal costs and exaggerate benefits to their members.

From a more general standpoint, the theory of collective action is based on the **concept of power** both over other groups and over the state, a concept that has been much used in political economy and, yet, in generally logically loose if assertive terms (Bardhan). Recent advances in games theory and in the theory of transactions costs have helped clarify a number of aspects of how power is exercised. Some of the aspects of power which are relevant here are the following:

i) *Everyday forms of exercising power:* The theory of public choice focuses on the exercise of pressure through time and financial commitments to lobbying. There are both less and more dramatic forms of exercising power than this. Everyday forms of power include worker resistance through shirking, abuse of the employer's assets, sabotage, stealing products, slowdowns, etc. These actions can be concerted and thus pertain to collective action. The employer's response is to motivate workers through efficiency wages set above market equilibrium. Unemployment created by disequilibrium wages gives the employer countervailing power in deciding who is going to work, and thus capture the incentive rent, and who will be dismissed (Stiglitz; Bowles and Gintis). Control over the assets gives the power of selective exclusion. For peasants, everyday forms of resistance to impositions by the state or the landlords take the form of returning to production for only self-sufficiency, concealing part of the product, or disappearing in the thick of the bush to escape tributes (Scott). The collective effect of these diffused acts of resistance is the form of bargaining that weakly organized groups may pursue. The implication is that political calculus by leaders will necessarily be crude compared to a situation where pressure is exercised by formal lobbying (Hopkins). With groups' reactions more difficult to forecast, the likelihood of political miscalculations also increases.

ii) *Dramatic forms of exercising power:* Riots, strikes, rebellions, and *jacqueries* are other ways of exercising power (Piven and Cloward). Their accounting enters in the determinants of collective action through the probabilistic benefits and costs which they imply. The probabilistic outcomes of dramatic behavior tend to be all-or-nothing for the opposing parties or the freezing of progress in the social programs of the state.

iii) *Power from ability of financing election campaigns and bribing bureaucrats:* Funds and bribes are made conditional upon satisfaction of specific wishes expressed by the donors. The exercise of pressure and influence is thus fundamentally determined by the relative economic power of different groups. This is because capital markets are largely failing to finance investment in rent seeking with the result that credit for lobbying is not available. Capturing the expected gains from lobbying thus heavily depend on the distribution of wealth and economic power.

iv) *Power from differential ability of handling time:* The key to the resolution of conflict is the relative ability of the contending partners to hold on to positions and wait. This will be determined by the opponents' relative discount rates and relative constraints in access to resources. Asymmetry in the distribution of the assets is, here again, important. Access to loan capital, relative levels of accumulated savings, existence of union strike funds, and the relative ability to take risks will determine the likelihood of a win.

v) *Power from asymmetric information advantages:* Access to and control over information and the media are important in bargaining. They allow one to establish reputation and legitimacy with a broader constituency with which coalitions may be sought. Reputation is indeed key in bargaining as it allows credible pre-commitments

to be made (Dixit). Investing in reputation building is thus a rational aspect of the management of collective action. Investing in selectively informing government and public opinion is also important in influencing government and in generating public support for particular policies.

vi) *Power due to changes in competitive structures and in relative factor scarcities:* Monopolistic positions in markets give not only the ability of setting prices but also of establishing the bases for rent seeking, particularly if the market controlled is of strong public interest. Oligopolistic or monopolistic trade unions thus have the possibility of effectively organizing strikes. National strikes can seriously discredit a government which needs to make concessions in order to preserve its legitimacy. Rising labor scarcity will not only raise wages and workers' incomes through market forces but also endow them with more power in collective bargaining.

vii) *Power through coalitions:* The poorest, particularly in the rural areas where they are geographically dispersed, are rarely sufficiently organized to exert direct influence on national policies (Nelson). This does not mean that they have no influence but that it is usually exercised indirectly by membership through coalitions with better organized groups. It is often these other groups that take the initiative of mobilizing the support of the rural poor. The political feasibility of antipoverty programs will consequently depend on the eventual coincidence of interests with groups of rural or urban nonpoor.

viii) *Power through balkanization of the state:* Pressure groups can in some situations gain direct access to the decision-making process of the state. Corporatism is the ultimate manifestation of this arrangement. In this case, interest groups no longer exercise pressure on government, but become part of decision making in specific areas of government intervention. They then become an instrument of government as they pledge to enforce the results of the negotiation with their rank and file (Naert).

III.2. Expected Payoff of Success for the Poor

Games theory also tells us that the expected payoff from collective action determines the intensity of pressure. The way in which these expectations are formed raises several interesting questions.

i) A well-established result from collective action is that the expected payoffs are high if the receiving coalition is small while the taxed constituency is large. This has been used to explain the apparent paradox of urban success over the terms of trade for agriculture in the LDCs and rural success in the MDCs. Since the poor in the LDCs are principally rural and are many, this would explain their lack of success in turning the terms of trade in their favor and in gaining access to food subsidies.

ii) Tracing out the growth and distributional implications of antipoverty policies and programs is extremely complex because of the general equilibrium and time effects which they create. In particular there are trade-offs between short-run welfare—achieved, for example, through food subsidies—and long-run growth and employment if the welfare funds are invested in labor-intensive industries or in the support of industries such as staple foods and the urban informal sector in which the poor are important participants. The discount rate applied to calculating the present value of these two programs is crucial since their benefits materialize *at different points in time*. If capital markets are imperfect and, in particular, if the poor have less or no access to capital markets, their discount rates are higher and they will tend to opt for programs with short-run payoffs. In addition, there is an important element of risk in opting for a growth strategy as opposed to guaranteed short-run transfers: growth may

fail, information about the future is imperfect, and the benefits of growth may accrue to others. The Sri Lankan experience where welfare was voted down in favor of job creation is an important laboratory to understand the political economy of this choice (Edirisinghe).

iii) Finally, all programs involve transaction costs and leakages. Effective transfers via subsidies are only a fraction of cost because of bureaucratic costs and losses. The management of targeted food subsidies in Colombia has, for example, costs which are superior to the value of the food distributed (Taylor, Horton, and Raff). The higher these transaction costs, the less the expected payoff per unit of cost devoted to the exercise of pressure. Bureaucratic inefficiencies are thus an important deterrent in the implementation of antipoverty programs.

III.3. Opportunity Cost for the Other Institutions in Yielding to the Poores' Demands

There is a key difference in the political economy of three types of antipoverty programs in terms of what they do to the nonpoor:

i) *Programs that create net social gains and are Pareto optimal:* In this case, the programs should have been implemented. If they have not been, this is due to underinvestment in public goods and services due to ignorance, budget constraints, or bureaucratic incapacities. International loans and assistance are important to relax these constraints. Since the financing of public budgets is commonly binding, there are likely to exist important unexplored opportunities for poverty alleviation without conflicts in the political economy. Identifying projects with benefits which leak to the nonpoor is thus a safe strategy for political success in the international financing of antipoverty programs (Tendler). It is a first thesis of this paper that there exists, in the LDCs, an important set of unexplored opportunities to deal with poverty in this fashion, allowing both economic and political success. The proposal we recently made to use adjustment in the real exchange rate induced by the debt crisis to define a new strategy of rural development for Latin America, financed in part by international structural adjustment loans, derives from this thesis (de Janvry et al.).

ii) *Programs that create net social gains but where there are losers among the nonpoor or the state:* If *ex-post* redistribution is possible, Pareto optimality can hold after compensation. The political economy of these programs is then one of compensation and hence of the ability for government to make credible prior commitments. This is the case with land reform when transaction costs have the potential of creating efficiency gains through redistribution. If *ex-post* compensation is not possible or not credible, the expected distribution of gains and losses from the program, the exercise of pressure and of relative influence by interest groups, and the specific objectives of the state resolve this game. In a dynamic sense, "redistribution with growth" (Chenery et al.) whereby part of the income created by growth is transferred to the poor under the form of assets, will usually pertain to this category. While there are losers within a time period compared to the counterfactual situation of no redistribution, there are no losers relative to the income levels of the previous period. The political economy of this approach to poverty is thus particularly appealing. It is a second thesis of this paper that the most successful antipoverty initiatives have grounded their political economy in the dynamics of growth.

iii) *Programs that create net social losses and where there consequently exists a trade-off between efficiency and poverty alleviation:* It is for the implementation of these programs that a political economy analysis is a necessary prerequisite as they will be politically the most difficult to implement. Pure transfers with transaction costs

belong to this category (Becker). In general, the size of the deadweight loss and the distribution of its costs relative to the distribution of political power are here determinant. Consumption-oriented programs (food subsidies, potable water, health, education) may thus be easier to implement than production-oriented programs (rural development, land reform) if the agrarian elites enjoy significant political influence because the negative second-round effects of these former programs on them, particularly through price adjustments, are likely to be smaller for a given level of public expenditure. It is consequently a third thesis of this paper that programs oriented at the household (or the place of living if distinct from the place of work) may be more politically feasible than programs oriented at the farm (or the place of work) in poor countries where agrarian society dominates the political landscape. By contrast, in post-agrarian societies, many opportunities exist to develop strategic alliances with specific groups of urban nonpoor that may also benefit from the antirural poverty programs and need to be carefully identified. Production-oriented programs that reduce rural poverty by increasing the assets controlled by the poor, or the level of the productivity of the resources they control, and also result in lowering the price level of wage goods are likely to find their political feasibility in this type of alliance.

IV. CONSTRUCTING AN INDEX OF THE POLITICAL FEASIBILITY OF POLICIES

Before investigating the political feasibility of alternative approaches to rural poverty alleviation empirically, it should be clear from the long list of relevant arguments reviewed above that the predictive capacity of public choice models applied to this question will inevitably be rather low. For this reason, most models have confined themselves to using the relative sizes of coalitions in explaining influence (Olson). In addition, the complexity of the intersectoral, interpersonal, and intertemporal processes involved together with (ideally) the specification of transactions costs, formation of expectations, and effects of risk are, at this stage, beyond the profession's modeling capabilities.

The complexity of the economic trade-offs induced by antipoverty policies and programs requires multisectoral modeling. Ideally, the allocation of resources to pressure by groups in response to the anticipated pay-offs from lobbying, the aggregation of group pressures into influence over the state, the government's own-objectives, and the criterion function representing the political process should be included in these models (Roe and Yeldan). Short of doing this at this moment, we use the results obtained from CGEs for India (de Janvry and Subbarao) and Ecuador (Kouwenaar) and from a multimarket for India (Quizon and Binswanger) to derive *ex-post* the political feasibility of alternative public policy approaches to rural poverty alleviation. We do this as follows:

From the arguments reviewed in the previous section on the determinants of influence by different social groups, we retain the following seven elements which we use to construct the influence weights for each social group:

i) *Group size and the advantage of numbers*: A larger group increases the ability of exercising direct pressure by enabling to collect more membership fees and to mobilize more votes. With n_k representing the size membership of group k and n total population size, the direct effect of numbers on influence (N_k) is represented by

Equation 1 below

$$N_k = \frac{n_k}{n}.$$

ii) *Indirect influence through coalitions*: While the rural poor may mobilize directly in response to large losses, they rarely do so in response to expected positive gains because of lack of information and organization. When policies that could create positive gains for them also benefit groups of nonrural poor, it is these latter groups that are the activists and that take the initiative of mobilizing the potentially benefited rural poor in support of these policies. In this case, the influence which the rural poor derive from numbers only materializes through coalitions with the other groups. We can thus postulate that the nonrural poor gainers of a particular policy will appropriate the support provided by the numbers of rural poor gainers proportionally to the distribution of gains from the policy across nonrural poor. This is represented by the following index of the effect of coalitions on influence (C_k):

Equation 2

$$C_k = \delta_{1k} \left(1 + \frac{\delta_{2k} \max(0, dy_k)}{\sum_h \delta_{2h} n_h \max(0, dy_h)} \cdot n_{rp+} \right).$$

In this index:

α_{1k} is a dummy variable that takes the value 0 if k is a rural poor group that gains from the policy, and 1 otherwise;

δ_{2k} is a dummy variable that takes the value 0 if k is a rural-poor group and 1 otherwise;

dy_k is the change in the real income of group k induced by the policy; and n_{rp+} is the number of rural poor gaining from the policy.

iii) *Group size and the cost of free riding*: Following Olson, a larger group size increases the likelihood of free-riding behavior which reduces the effectiveness of numbers in exercising pressure. The index of the effect of free riding on influence (F_k) is thus represented by

Equation 3

$$F_k = 1 - \delta_{2k} \beta_F \left(\frac{n_k}{n} \right)^{\alpha_F}.$$

The dummy variable δ_{2k} eliminates free riding in collective action by the rural poor. This is because there is a strong element of collective good behavior in their

activity. They mobilize only sporadically and in response to large losses but, when they so do, free riding does not occur.

In this index, the elasticities α_P and n_P should be moderately greater than one and will be taken equal to 1.2.

iv) *Exercise of economic power*: The ability of exercising pressure by financing election campaigns, bribing bureaucrats, gaining control of information to influence others, and holding out in negotiations are all related to economic power which, as we have seen, is fundamentally determined by the inter-group distribution of the assets. We use as a proxy the group average per capita income relative to the average per capita income in the country. The effect (P_k) of economic power on influence can thus be represented by:

Equation 4

$$P_k = \left(\frac{y_k}{\bar{y}} \right)^{\alpha_P}$$

where:

\bar{y} is the average per capita income in the country.

The elasticity α_P of economic power on influence should be significantly larger than one and will be taken equal to 1.5 in the following analysis.

v) *Formation of expectations regarding the gains from the policy*: Groups will mobilize to exercise pressure in response to the expectations they form regarding the changes in real income that the policy in question may bring about. Since the availability of information is highly unequally distributed across groups, we can postulate that the richest and best informed groups may approximate rational expectations with an elasticity γ_E . The poorer a group, the less informed it is and the less the expected gains or losses from the policy. Full ignorance leads to predicting the status quo. The index of the effect of expectations on influence (E_k) can thus be represented as:

Equation 5

$$E_k = 1 + \varepsilon_E \left(\frac{y_k}{y_{\max}} \right)^{\gamma_E} |\dot{y}_k|^{\phi_k}$$

The scaling parameter ε_E and elasticity γ_E of the role of income in the formation of expectations should be moderate and will be taken equal to 0.5 in the following empirical analysis.

vi) *Triggering mechanisms and asymmetric loss functions*: We have seen that the poor do not mobilize to exercise pressure in the same manner as the nonpoor do. While the poor have a symmetrical and gradual loss function centered on the pre-policy equilibrium point, the poor have a highly asymmetrical loss function with:

No direct response to potential positive gains, as explained above;

A response to expected losses that is highly exponential: small losses hardly induce a response while the intensity of response increases very rapidly with the size of the expected loss.

To represent these differential triggering thresholds, the exponent Φ_k in the E_k index can thus be expressed as:

Equation 6

$$\phi_k = \alpha_T + \beta_T \left(\frac{y_{\max} - y_k}{y_{\max} - y_{\min}} \right).$$

The strength of the triggering mechanisms vary between $\alpha_T + \beta_T$ for the lower income group and α_T for the higher income group. The parameters α_T and β_T are taken equal to 1 and .8, respectively.

vii) *Perceived relative deprivation in sharing the gains or losses from change:* While gains above the average level induced by the policy, or losses smaller than the average, may not stimulate a differential response of the groups thus affected, losses relative to the average effect of the policy are strongly resisted due to the feelings of relative deprivation which they arouse. The effect of relative deprivation on the exercise of influence can thus be represented by:

Equation 7

$$D_k = 1 + \varepsilon_D \max \left(0, \frac{\bar{y} - y_k}{\bar{y}} \right)^{\alpha_D},$$

where \bar{y} is the average income effect induced by the policy.

The scaling parameter ε_D elasticity α_D of influence with respect to relative deprivation should be small and will consequently be taken equal to 0.5.

The overall influence weight for group k is thus:

Equation 8

$$I_k = a N_k C_k F_k P_k E_k D_k$$

and the government's criterion function is

Equation 9

$$\dot{U}_g = \sum_k I_k \dot{y}_k + I_g \dot{G},$$

here a is a normalization factor, G is the rate of change in the government's own objective induced by the policy, and I_g is the influence that government has in front of civil society, thus measuring its degree of relative autonomy. The state's own objective may be to minimize its deficit (the government's change in real budget balance induced by the policy in the India and Ecuador CGEs) or to seek global efficiency and thus to maximize the size of GNP (the change in real GNP induced by the policy in the India multimarket). The exercise of influence being a zero sum game, the sum of the influences is equal to one,

Equation 10

$$\sum_k I_k + I_g = 1,$$

which determines a .

The general specification of the influence weights above gives us a "general influence model". If influence were only determined by the income share of group k in total income, the model specializes to an "economic model" where:

Equation 11

$$I_k = \frac{n_k}{n} \frac{y_k}{\bar{y}} = a N_k P_k.$$

In this case, the total influence of groups in the government's criterion function becomes

Equation 12

$$\sum_k I_k \dot{y}_k = \frac{a \sum_k n_k \dot{y}_k}{n \bar{y}} = a \dot{GNP}.$$

The economic version of the general influence model is thus one where the state weights the relative demands of the groups proportionally to their contributions to the rate of change in GNP. The general influence model is written in deviation from this most simple rule of influence: The N_k and P_k effects are modified by the C_k , F_k , E_k , and D_k effects, all of which are equal to one when nonexistent.

Calculating the changes in government utility induced by different poverty alleviation programs will reveal their political feasibility. The structure of gains and losses across groups will also reveal the type of coalition that the rural poor should seek in order to enhance the political likelihood of program implementation.

While we can rely, as we have done above, on the theories of public choice, collective action, and the state to specify the structure of an influence index, full estimation of the parameters in this index is impossible due to lack of degrees of freedom. In order to validate the choice of a particular set of parameters, what can be done is to verify the predictive power of the model on specific instances of well-established political choices which the model should replicate.

One of the best-established policy contrasts between MDCs and LDCs is the way they handle their agricultural policies (Krueger; Anderson and Hayami; Olson, 1986). The MDCs tend to protect their agriculture, turn the terms of trade in favor of agriculture, and incur high government costs in supporting farm prices. Farmers gain proportionately to marketed surplus, the rural and urban poor lose because of high food prices, and the urban medium and high-income households also lose because of the tax burden required to finance the farm subsidies. The LDCs, by contrast, tax their agricultures and subsidize their consumers. Farmers lose proportionately to assets and the landless also lose as employment opportunities in agriculture decline. The urban households benefit from cheap food and employers benefit from low wage costs. The government incurs some cost of food subsidies.

We use in Table 4 the population and income structure for India (Binswanger and Quizon) to characterize the LDC context and that for the United States for the MDC context. The agricultural protectionist policy is characterized by a 12 per cent increase in farm income paid for by an income tax levied on the urban population. The food subsidies experiment simulates a 10 per cent subsidy on food expenditures of the urban population paid for by the rural population proportionately to their agricultural income. With different population distributions, income source structures, and shares of food in consumption expenditure in the two country types, these programs have very different impacts on the different income groups. However, both of them are conceived as pure redistribution schemes at no cost to the government. By construction then, their economic feasibility indexes are equal to 0.

Calculating the influence weights and the government criterion function for agricultural protectionism versus taxation in these two structural contexts should reveal the political superiority of protectionism in the MDC and of taxation in the LDC. Details of the calculations are given in Table 5 for the case of the LDCs. The results indeed show that taxation in the LDC is politically feasible, while, by contrast, protectionism is politically justified in the MDC. Protectionism in the LDC and taxation in the MDC are both politically infeasible. We use this result as a confirmation of the predictive ability of the general influence model we developed and proceed to use it to analyze the political feasibility of a variety of antipoverty policies and programs.

V. THE POLITICAL FEASIBILITY OF ALTERNATIVE ANTIPOVERTY PROGRAMS EXPLORED IN CGE AND MULTIMARKET MODELS

Table 6 gives the elements that enter in the construction of the influence weights for each social group: the share of population, per capita income relative to average in the population, and the percentage change in real income induced by each poverty-alleviation policy relative to the base run without such policy. It also gives the effect on government (percentage change in GNP per capita, in budget deficit, or in government real savings) induced by these policy changes.

In India, rural population has a very heavy weight — and more so in the multimarket (80 per cent) than in the CGE (68.5 per cent) due to different definitions of rural population — while it is equally split between rural and urban sectors in Ecuador. In India, the rich are the large farmers, the urban formal sector workers, and the urban capitalists. In Ecuador, they include the large farmers and the medium and high education urban groups. In all countries, the rural poor are the landless workers and the small farmers, but not the rural nonagricultural households in Ecuador. Basically, all the policies considered reduce poverty among the rural poor except for: (1) fertilizer subsidies in B&Q-6, as fertilizer is labor saving and leads to falling employment for the Rural 1; (2) irrigation in large farms in d&S-8 due to the negative price effect created by rising supply on the income of small farmers; and (3) the urban housing program in K-1 that reduces the real income of family farmers (1-5 hectares) due to the inflationary impact that it creates. The questions we consequently address are: (1) what is the overall political feasibility of each antipoverty policy given the specification of influence developed in the previous section; and (2) what type of social alliance should the rural poor seek in order to increase the likelihood that any of these policies be implemented? The overall political feasibility of each policy is measured in Table 7.

Some of the conclusions that can be derived from these simulations are the following:

1. *Pareto optimal policies:* These antipoverty policies have a very high likelihood of implementation both in purely economic terms (economic model in Table 7) and also through the forces of the political economy (general influence model in Table 7). Among all the antipoverty policies analyzed, the only Pareto optimal cases are rural development in Ecuador (K-3) and productivity growth in agriculture with price support in India (d&S-2). There is, however, an important difference between these two cases. In the first, the program is funded by reallocation of government investment with a constant total level of investment. The economic expansion, which this reallocation of public investment induces, enhances government real savings. The program is thus not only Pareto optimum for civil society, but also for government. Clearly, its political feasibility can only be high. This is not the case for the program of productivity growth in India with government supporting prices through storage of surplus grains. In this case, the cost to government increases sharply. While the program is Pareto optimal for civil society, its political feasibility depends on the degree of relative autonomy of the state (which reflects the importance attached to cost of the program in future years). With $I_g = .2$, the current gains for interest groups far overwhelm the losses for government, making quite high the political feasibility of the program. Clearly, the lower the relative autonomy of the state or the lower the weight which government attaches to the welfare of future generations, the greater the acceptability of transferring to the public budget the costs of the program. Further instances of these ideal situations evidently need to be sought to identify politically feasible approaches to poverty alleviation.

2. *Policies with a zero opportunity cost on domestic resources:* This is the case with food subsidies in India (B&Q-1) and urban housing programs in Ecuador (K-1) which are aid financed and with disembodied productivity growth in agriculture (B&Q-5 and d&S-1 and 2). Even though these programs have no direct domestic resource cost, negative income effects on some groups can result from general equilibrium effects on prices and employment. This is the case for the rural rich when food subsidies based on foreign supplies lower the domestic price of food (B&Q-1); when irrigation or technological change depress farm prices in a closed economy (B&Q-5, d&S-1); and when a targeted housing program induces inflation throughout the economy (K-1). Because these programs always create large net social gains, their economic feasibility is highly positive. In addition, the substantial net social gains which they create overwhelm the negative influences which the group-specific losses induce. In the general influence model, these antipoverty approaches consequently tend to dominate the political agenda. International aid for poverty alleviation and very high rate of return productivity gains that benefit the poor as producers and/or consumers (agricultural research) are thus prime candidates among politically successful poverty-alleviation approaches.

3. *Rural versus urban alliances in the incidence of costs:* Who will pay for the poverty alleviation policy, and the political weight that those who bear the cost have, are key to political feasibility and to choice of strategic alliances by the rural poor. This is clearly seen in the financing of food subsidies in India by excise taxes (B&Q-3) versus procurement levied on the large farmers (B&Q-4); and in reallocation of the urban food subsidies budget to rice irrigation (d&S-6). In the general influence model, food subsidies financed by procurement are more feasible than a scheme financed by excise taxes because the urban alliance dominates due to its considerable economic power, and this in spite of its very small number. If, however, only economic effects were taken into account, taxation would be more feasible than procurement as it is the rural alliance that dominates. The political feasibility of alternative means of financing food subsidies thus crucially depends on which political alliance dominates. The rural poor need to secure the political feasibility of these programs by seeking alliances with the rural rich when the subsidies are financed by tax and with the urban poor when they are financed by procurement.

Economic feasibility is, of course, insured for a program to eliminate urban food subsidies and reallocate the budget saving to investment in agriculture (d&S-6) since welfare costs go into inducing growth. Even though the urban marginals and workers lose from the elimination of food subsidies, their relatively small influence compared to that of the urban capitalists and rural rich makes the program politically feasible. In all cases, since the urban poor are hurt, the rural poor have to seek alliances with the rural rich and the urban capitalists. Political feasibility, in turn, depends on political institutions and, more specifically here, on the relative importance of economic power as opposed to the power of numbers in the exercise of influence.

4. *Rural versus urban alliances in the incidence of benefits:* Programs that create benefits for the nonpoor through general equilibrium effects also have a high likelihood of political success. This is the case for productivity gains in food production (B&Q-5 and 6; d&S-1) that lower food prices and raise urban real incomes. Reducing poverty by raising the productivity of labor of the poor thus has a high likelihood of political acceptance among the consumers of what the poor produce or the employers of these consumers if real wages do not rise proportionately to the fall in the consumer price index. In addition, the stronger the linkage effects between the incomes of the rural poor and the production of nontradables, the larger the domestic multiplier effects and the higher the likelihood of political feasibility. Political acceptance of antipoverty programs is thus also obtained among the producers of what the poor consume. If the

alliance between rural poor and urban dwellers dominates the political agenda, political feasibility for this approach exists. This is the case when the rural poor are numerous, eventually surrendering the influence of their numbers only through coalitions with the nonpoor gainers, and when urban interests are economically powerful and politically active, a likely combination.

Another source of leakage of benefits that creates political feasibility is when *access to the antipoverty instrument is not confined to the rural poor* and benefits some of the politically important nonpoor. A fertilizer subsidy financed by aid and accessible to all farmers (B&Q-6) creates benefits for medium and large farmers that mobilize a rural coalition and make political feasibility very high, particularly if lobbying is dominated by the economic power of the large farmers. Much has been said about the importance of targeting in antipoverty programs: the economically optimum targeting requires minimizing the joint cost of the subsidy (hence, tighter targeting) and of the management of a needs tests (hence, looser targeting). In terms of political economy, maximizing political feasibility may well require a looser targeting in order to allow leakages toward the politically relevant interest groups. Increasing the targeting accuracy of an antipoverty program may delegitimize it in spite of lowering its costs.

The economic analysis of alternative policies and programs using CGEs has been done by simulating their impact relative to a base run one at a time. When analyzing the political feasibility of policies, this is no longer adequate. The art of politics is, after all, to a large extent in the packaging policies and programs in such a fashion that the sum total of the gains or losses they create is politically acceptable. In Egypt, for instance, the maintenance of high cost food subsidies was used as a side-payment to the politically powerful poor in order to make them accept the social costs of economic liberalization (*infitah*). While neither policy alone would be politically feasible, the joint outcome of their income effects makes them implementable. The study of *interlinked policies* is a vast field of empirical analysis that opens all kinds of possibilities for finding politically acceptable antipoverty approaches. We turn to an exploration of this field in the next section.

VI. INTERLINKING POLICIES FOR POLITICAL FEASIBILITY

We use a CGE for Ecuador in 1980 to explore the political feasibility of the stabilization and adjustment policies that need to be introduced in response to an external shock and the impact these policies have on the rural poor. It is well known that implementation of such policies have often failed because of the political response they have induced (Nelson). As opposed to the recent UNICEF proposal of making adjustment socially acceptable by protecting the poor (Cornia et al.), we are seeking the conditions for *political* feasibility which may be quite distinct. Indeed, the key to feasible implementation of stabilization and adjustment policies is to identify which, among the losers, have enough political weight to oppose the measures and how the resulting combination of influence results in a particular level of political feasibility. An important factor to be considered in that respect is the time dimension of the impact of shocks and policies. Policies to achieve long-term adjustment may have heavy short-term costs on specific social groups. The interlinking of policies to selectively compensate the politically relevant losers is necessary for success. We will explore the minimum compensation necessary for political feasibility and the economic opportunity cost of managing political feasibility according to the origin of the resources transferred. Since we are concerned with rural poverty, we also follow the implications of alternative approaches to stabilization on the welfare of the rural poor.

The Ecuador CGE has two specific features introduced to analyze the growth and welfare effects of alternative approaches to stabilization: (1) 40 per cent of government current expenditures creates welfare on the recipient social classes proportionately to their access to public goods and services (see Ecuador poverty map in Table 3). Each group's utility level is thus the sum of its real income and the government real current expenditures that it receives. (2) In the long-run analysis, investment creates productivity growth to capture the effect of capital accumulation, and public investment has a higher productivity effect (an elasticity of 0.10) than private investment (0.07) to reflect the public goods nature of the first (this productivity effect is neutral across sectors).

Table 8 gives the CGE results and the political feasibility of alternative responses to an oil shock corresponding to a 25 per cent drop in the international price. Scenario 1 gives the economy's long-run response to the oil shock with a flexible exchange rate but no adjustment policies in the sense that government expenditures (current and public investment) are maintained at their pre-crisis levels. This induces a strong recession (-3.5 per cent GNP), a 10 per cent devaluation of the exchange rate, and a 6 per cent decline in government revenue (mainly falling oil revenues but also falling tax income). By maintaining government expenditures, the public deficit rises sharply (78 per cent), creating a crowding out of private investment that falls by 20 per cent. The recession leads to falling utilities for all social classes and most particularly the urban and the rural nonagricultural households. While relatively less affected than the urban poor, the rural poor remain by far the poorest class with a per capita level of utility less than 40 per cent of that of the urban poor. Political acceptability of the shock without adjustment policies is very low, measured by an index of -4.3 in the general influence model.

A stabilization policy is introduced in Scenario 2 by cutting government expenditures to maintain the deficit constant at the pre-crisis level. The budget cut is distributed proportionately to both investment and current expenditures. The stabilization policy is successful in protecting private investment and in restoring growth compared to the shock without adjustment (0.5 per cent GNP growth over Scenario 1). While the rural groups gain over Scenario 1 they benefit from the larger exchange rate devaluation (induced by growth and the high import content of investment goods) as they produce tradable goods: political feasibility is, in fact, worse than that of no adjustment. This is due to the fact that the urban groups lose utility the poor and medium income levels due to their loss of government benefits and the upper-income levels due to loss of employment opportunities in the public sector. Typical of the distribution of social cost of the crisis in much of Latin America, the classes most negatively affected by stabilization are the urban middle and upper groups due to falling government employment and benefits. Because they are classes with significant political influence, they are able to oppose implementation of stabilization policies. Making stabilization politically feasible thus requires interlinking it with other policies that are able to compensate these politically powerful groups.

One option, explored in Scenario 3, is to reduce government expenditures selectively by protecting public investment and confining the cuts to current expenditures, an approach typically followed in Latin American adjustment policies. Private investment and growth increase relative to Scenario 2. All groups gain relative to Scenario 2, particularly the rural medium and large farmers. Even though the urban medium and rich still lose compared to the scenario with no stabilization scheme, this policy is politically feasible. This shows that policies that protect growth are the best long-term response to an external shock.

However, in the short run, i.e., before the productivity effect has taken place, the negative impact of the reduction in current expenditures on the urban classes

remains high (column 5). All urban classes and the nonagricultural rural class still lose and, for them, stabilization remains unacceptable. Political feasibility remains negative due, in particular, to the political influence of the urban rich. Clearly, making stabilization politically feasible in the short run requires neutralizing their opposition. Compensation schemes for the urban rich are for this reason explored in Scenarios 6 and 7. Since the rural rich are the net gainers from stabilization, a scheme of taxes and transfers (unemployment compensation) between rural medium and rich farmers and urban classes could be implemented (column 6). Both the economic and political feasibilities of this scheme are, however, limited. Economically, the income level of the rural medium-rich is much lower than that of the urban rich, requiring a 3.3 per cent income tax on the former to improve the income level of the urban medium and rich by 0.7 and 1.4 per cent, respectively. Politically, because the rural medium-rich are not insignificant, a high rate of taxation decreases feasibility. Clearly, in the context of a shrinking economy due to an external shock, seeking compensation mechanisms among rural and urban rich to increase political feasibility has serious limitations. In addition, taxing the rural rich worsens the welfare level of the rural poor as the poor depend on the rich for employment and income. Other sources of revenues that can be transferred to the urban rich need to be identified.

If this can be done via foreign aid, the question is what is the minimum aid budget to insure the short-run political feasibility of stabilization through cutting current expenditures. The foreign aid cost of insuring a zero political feasibility index is explored in Scenario 7. It requires transferring a subsidy to the urban medium and rich equal to 60 per cent of their initial government employment income loss, i.e., of 0.7 per cent and 1.4 per cent of their incomes, respectively. The size of the foreign aid transfer needed to insure political feasibility is equal to 6.5 per cent of the annual foreign capital inflow, a small figure which makes this policy economically feasible.

We thus conclude that, in the long run, the approach to adjustment to an external shock that has the greatest likelihood of political feasibility and of sheltering the rural poor is one that protects investment and economic growth. If, however, this approach is politically unfeasible in the short run, the solution of growing out of the crisis will not be possible. Handling the political feasibility of the short run will consequently require the interlinking of policies. Since growth over a nonadjustment option is modest at best, the possibility of taxes and subsidies on the rural rich is of limited economic gain and politically unfeasible. This leaves the eventual need to call on modest amounts of foreign transfers to sufficiently pacify, in the short run, the most politically vocal urban groups, namely, the government employees and the urban beneficiaries of public programs. The cost of failing to do this is political destabilization and the failure of economic stabilization through growth in the longer run.

VII. CONCLUSION

Policy reforms and, more specifically, anti-rural poverty initiatives can only be implemented if politically feasible. While economists have learned to calculate the growth and welfare effects of policy reform, using in particular CGE and multimarket models, the calculus of political feasibility is still in its infancy. After reviewing the body of theoretical and empirical knowledge on the determinants of influence and on the role of the state in policy-making, we have specified a general influence model that attempts to quantify the political feasibility of alternative policy reforms directed at poverty alleviation and at economic stabilization. This has allowed to identify a number of promising avenues to politically feasible reforms, in particular by choosing policies that induce the emergence of coalitions dominated by the nonpoor. This is the case when the nonpoor gain through the general equilibrium effects created by antipoverty

programs, either because they are the consumers of what the poor produce or the employers of these consumers or because they are the producers of what the poor consume. Coalitions with nonpoor are also induced when weakly targeted antipoverty instruments leak benefits to the politically relevant groups, suggesting optimum targeting rules for both economic efficiency and political feasibility. Finally, we have seen that the interlinking of policies can be an effective way of insuring the political acceptability of a particular policy, such as economic stabilization in response to an external shock which, alone, has heavy short-run welfare costs on politically powerful groups. Managing through transfers the political feasibility of the short run is a necessary condition to be able to benefit, in the longer run, of the growth and income effects that economically effective stabilization and adjustment can offer.

NOTES AND REFERENCES

- ADELMAN, I. "A Poverty-Focused Approach to Development Policy." University of California, Department of Agricultural and Resource Economics, Working Paper No. 345, Berkeley, 1985.
- ANDERSON, K. and Y. HAYAMI (eds.). *The Political Economy of Agricultural Protection: East Asia in International Perspective*. Sydney: Allen and Unwin, 1986.
- ANNIS, S. and P. HAKIM. *Direct to the Poor: Grassroot Development in Latin America*. Boulder, Colorado: Lynne Rienner Publishers, 1988.
- BARDHAN, P. "Some Reflections on the Use of the Concept of Power in Economics." University of California, Department of Agricultural and Resource Economics, Berkeley, 1988.
- BECKER, G. S. "The Theory of Competition Among Pressure Groups for Political Influence." *The Quarterly Journal of Economics*, Vol. XCIII (August, 1983), pp. 372-400.
- BEGHIN, J. "A Game Theoretic Model of Food and Agricultural Price Policies in Senegal." University of California, Department of Agricultural and Resource Economics, Berkeley, 1988.
- BINSWANGER, H. P. and J. B. QUIZON. "Distributional Consequences of Alternative Food Policies in India." World Bank, Agricultural and Rural Development Department, Report ARV20, Washington, D. C., August, 1984.
- BOWLES, S. and H. GINTIS. "Contested Exchange: Political Economy and Modern Economic Theory." *American Economic Review*, Vol. 78, No. 2 (May, 1988), pp. 145-50.
- BUCHANAN, J. M. "Rent Seeking and Profit Seeking." In J. M. Buchanan, R. D. Tollison, and G. Tullock (eds.), *Toward a Theory of Rent Seeking Society*. Texas: A&M University Press, 1980.
- CHENERY, H., M.S. AHLUWALIA, C. BELL, J. H. DULOY, and R. JOLLY. *Redistribution with Growth*. Cambridge, England: Oxford University Press, 1974.
- CORNIA, G., R. JOLLY, and F. STEWART. *Adjustment with a Human Face: Protecting the Vulnerable and Promoting Growth*. Oxford: Clarendon Press, 1987.
- DE JANVRY, A., E. SADOULET, and M. FAFCHAMPS. "Agrarian Structure, Technological Innovations, and the State." Forthcoming in P. K. Bardhan (ed.), *Economic Theory of Agrarian Institutions*. Oxford: Oxford University Press, 1989.
- DE JANVRY, A. and K. SUBBARAO. *Agricultural Price Policy and Income Distribution in India*. Oxford: Oxford University Press, 1986.
- de JANVRY, A., R. MARSH, D. RUNSTEN, E. SADOULET, and Carol Zabin. *Rural Development in Latin America: An Evaluation and a Proposal*. InterAmerican Institute for Agricultural Cooperation, Monograph, San Jose, Costa Rica, September, 1988.
- DIXIT, A. "Recent Developments in Oligopoly Theory." *Imperfect Competition and Public Policy*, Vol. 72, No. 2 (May, 1982), pp. 12-17.

- DOWNS, A. *An Economic Theory of Democracy*. New York: Harper and Row, 1975.
- EDIRISINGHE, N. *The Food Stamp Scheme in Sri Lanka: Costs, Benefits, and Options for Modification*. Research Report 58, International Food Policy Research Institute, March, 1987.
- GIERTZ, F. J. and D. H. SULLIVAN. "Donor Optimization and the Food Stamp Program." *Public Choice*, Vol. 29 (Spring, 1977), pp. 18-35.
- HICKS, N. and P. STREETEN. "Indicators of Development: The Search for a Basic Needs Yardstick." *World Development*, Vol. 7 (1979), pp. 567-580.
- HIRSCHMAN, A. O. *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge: Harvard University Press, 1970.
- HOCHMAN, H. M. and J. D. RODGERS. "Pareto Optimal Redistribution." *American Economic Review*, Vol. LIX, No. 4 (September, 1969), pp. 542-557.
- HOPKINS, R. "Political Calculations in Subsidizing Food." IFPRI Conference Paper, November, 1984.
- HOROWITZ, A. W. "Time Paths of Land Reform: A Theoretical Model of Reform Dynamics." University of Wisconsin-Madison, November, 10, 1988.
- INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT/THE WORLD BANK. *World Development Report 1988*. Washington, D. C., and Oxford: The World Bank and Oxford University Press, 1988.
- KOUWENAAR, A. *A Basic Needs Policy Model: A General Equilibrium Analysis with Special Reference to Ecuador*. Amsterdam: North Holland, 1988.
- KRUEGER, A. "Some Preliminary Findings from the World Bank's Projects on the Political Economy of Agricultural Pricing." Paper presented at the XX International Conference of Agricultural Economists, Buenos Aires, Argentina, August, 1988.
- LEFF, N. H. "Trust, Envy, and the Political Economy of Industrial Development: Economic Groups in Developing Countries." Paper presented at the Conference on "The Role of Institutions in Economic Development," Cornell University, November, 1986.
- LEIBENSTEIN, H. *Beyond Economic Man: A New Foundation for Microeconomics*. Cambridge, Massachusetts: Harvard University Press, 1976.
- LEWIS, A. "Economic Development with Unlimited Supplies of Labor." In A. Agarwala and S. Singh (eds.), *The Economics of Underdevelopment*. New York: Oxford University Press, 1958.
- NAERT, F. "The Political Economy of Pressure Groups." *Journal of Public Finance and Public Choice* (1985), pp. 55-63.
- NELSON, J. "The Politics of Pro-Poor Adjustment Policies." Country Economics Department, World Bank, 1988.
- NUGENT, J. B. "Applications of the Theory of Transactions Costs and Collective Action to Development Problems and Policy." Paper presented at the Conference on "The Role of Institutions in Economic Development," Cornell University, Ithaca, New York, November 14-15, 1986.
- OLSON, M. *The Logic of Collective Action*. Cambridge: Harvard University Press, 1985.

- OLSON, M. . "The Exploitation and Subsidization of Agriculture in Developing and Developed Countries." In A. Maunder and U. Renborg (eds.), *Agriculture in a Turbulent World Economy*. Aldershot, England: Gower Publisher, 1986.
- PFEFFERMANN, G. "Poverty in Latin America: The Impact of Depression." The World Bank, Washington, D. C., November, 1986.
- PIVEN, F. F, and R. CLOWARD. *Poor People's Movements: Why They Succeed, How They Fail*. New York: Pantheon Books, 1977.
- QUIZON, J. and H. BINSWANGER. "Modelling the Impact of Agricultural Growth and Government Policy on Income Distribution in India." *The World Bank Economic Review*, Vol. 1, No. 1 (September, 1986), pp. 103-48.
- RIETSCHIN, R. *Les Determinants de La Satisfaction des Besoins Essentiels et leur Impact*. International Labor Office, World Employment Programme Research, Working Paper No. WEP 2-32/WP 24, Geneva, 1981.
- ROE, T. and E. YELDAN. *An Open Economy Model of Political Influence and Competition Among Rent Seeking Groups*. University of Minnesota, Economic Development Center, Bulletin No. 88-1, St. Paul, February, 1988.
- ROSTOW, W. *Politics and the Stages of Growth*. United Kingdom: Cambridge University Press, 1971.
- RUTTAN, V. W. "Institutional Innovation and Agricultural Development." Paper presented at the Conference on "The Role of Institutions in Economic Development," Cornell University, November 14-15, 1986.
- SCHULTZ, T. W. *Transforming Traditional Agriculture*. New Haven: Yale University Press, 1964.
- SCOTT, J. C. *Weapons of the Weak: Everyday Forms of Peasant Resistance*. New Haven: Yale University Press, 1985.
- STIGLITZ, J. "Information and Economic Analysis." *Economic Journal*, Supplement (1985), pp. 21-41.
- STREETEN, P. "From Growth to Basic Needs." *Finance and Development*, Vol. 16, No. 3 (September, 1979a), p. 31.
- _____. "Basic Needs: Premises and Promises." *Journal of Policy Modeling*, Vol. 1, No. 1 (1979b), pp. 136-46.
- TAYLOR, L., S. HORTON, and D. RAFF. *Food Subsidy Programs: A Survey*. Report prepared for the Ford Foundation, Massachusetts Institute of Technology, December, 1980.
- TENDLER, J. "Rural Projects Through Urban Eyes: An Interpretation of the World Bank's New Style Rural Development Projects." World Bank Staff Working Paper No. 532, Washington, D. C., 1982.
- UNITED NATIONS CHILDREN'S FUND (UNICEF). *The State of the World's Children 1984*. Oxford: Oxford University Press, 1984.
- WELLS, M.J. "Mediation, Dependency, and the Goals of Development." *American Ethnologist* (March, 1983), pp. 770-88.
- ZUSMAN, P. "The Incorporation and Measurement of Social Power in Economic Models." *International Economic Review*, Vol. 17, No. 2 (1976).

TABLES

Table 1
CORRELATION BETWEEN SELECTED BASIC NEEDS INDICATORS

	(1)	(2)	(3)	(4)	(5)
All countries					
(1) Infant mortality	1.00				
(2) Life expectancy	-0.97	1.00			
(3) Daily calorie supply	-0.78	0.82	1.00		
(4) Daily calorie intake	-0.79	0.81	0.88	1.00	
(5) Male adult literacy	-0.88	0.88	0.63	0.66	1.00

Sources: Data from the International Bank for Reconstruction and Development/The World Bank, World Development Report 1988 (Washington, D. C., and Oxford: The World Bank and Oxford University Press, 1988) and United Nations Children's Fund (UNICEF), The State of the World's Children 1984 (Oxford: Oxford University Press, 1984).

Table 2
CORRELATION OF BASIC NEEDS INDICATORS WITH GNP PER CAPITA (1986)

	Correlation coefficients				Sample size			
	All countries	Below \$450	\$450-\$3 000	Above \$3 000	All countries	Below \$450	\$450-\$3 000	Above \$3 000
<u>Incidence of poverty (percent)</u>								
Urban	-.44				43			
Rural	-.55				45			
<u>Social indicators</u>								
Infant mortality rate	-.69	-.36	-.57	-.52	97	31	42	24
Life expectancy at birth	.72	.31	.64	.43	97	31	42	24
Daily calorie supply	.72	.22	.46	.09	97	31	42	24
Daily calorie intake as percent of requirement	.66	.40	.39	-.19	96	30	42	24
Primary school enrollment	.24	.22	.24	-.14	92	29	40	23
Male adult literacy rate	.54	.25	.48	.16	80	27	42	11
Simple average (of absolute values)	.60	.29	.46	.26				

Sources: Data from the International Bank for Reconstruction and Development/The World Bank, World Development Report 1988 (Washington, D. C., and Oxford: The World Bank and Oxford University Press, 1988) and United Nations Children's Fund (UNICEF), The State of the World's Children 1984 (Oxford: Oxford University Press, 1984).

Table 3

SOCIAL POVERTY MAP FOR THE RURAL OF ECUADOR

	Percent households	Assets				Sources of Income				Net income per household US\$	Net income per capita US\$
		Land	Livestock	Literacy	Agriculture	Trade and handicrafts	Agricultural wage	Non agricultural wage	Other nonfarm transfers		
Landless laborers	12.4	0.0	0.0	0.0	0.0	10.0	29.5	47.9	12.6		
Farms (Ha)											
0.1-1 (SF)	23.9	1.7	7.3	19.0	9.4	20.2	33.6	17.8			
1-5 (F)	26.9	11.1	22.2	53.5	5.4	18.3	16.8	6.0			
5-20 (SC)	13.5	17.6	22.1	70.8	6.1	5.2	6.2	11.7			
20+ (LC)	8.3	69.6	48.4	70.4	4.2	1.3	3.3	20.8			
Merchants and artisans	8.0	0.0	0.0	0.0	86.0	0.0	0.0	14.0			
Government employees	2.0	0.0	0.0	0.0	0.0	0.0	85.0	15.0			
Access to public goods services (US \$ per capita per year)											
	Education	Health	Irrigation	Credit (% farms)	Credit (r paid)	Reforestation infrastructure	Land reform development	Rural			
Landless laborers	17.2	0.8	0.0	0.0	28.5	0.0	0.0	532.0	100.0		
Farms (Ha)											
0.1-1 (SF)	17.2	0.8	0.4	2.6	13.8	4.9	0.4	0.8	663.0	125.0	
1-5 (F)	25.0	1.5	2.0	5.8	13.1	9.5	2.0	3.9	581.0	110.0	
5-20 (SC)	16.8	2.3	3.7	11.8	10.6	8.2	2.4	4.5	1,178	186.0	
20+ (LC)	26.4	8.3	35.3	21.8	8.9	159.2	1.3	0.0	6,639	1,236	
Merchants and artisans	91.5	34.4	0.0	0.0	0.0	0.0	0.0	0.0	180.0		
Government employees	91.5	34.4	0.0	0.0	0.0	0.0	0.0	0.0	200.0		

Notes: Preliminary figures.

Table 4

MODEL VALIDATION: AGRICULTURAL PROTECTIONISM VERSUS TAXATION IN MDC AND LDC

	Real income effects of							
	Population		Income/average income per capita		Agricultural protectionism		Agricultural taxation	
	MDC	LDC	MDC	LDC	MDC	LDC	MDC	LDC
	per cent				percentage change over base			
Rural 1	6.0	20.0	19.0	45.0	1.20	8.9	-6.3	-2.5
Rural 2	4.9	20.0	48.0	71.0	.89	9.0	-4.7	-2.5
Rural 3	6.0	20.0	81.0	88.0	.86	8.9	-4.4	-2.5
Rural 4	5.9	20.0	160.0	159.0	.83	9.4	-4.4	-2.6
Urban 1	18.3	5.0	25.0	69.0	-.19	-24.1	4.2	8.1
Urban 2	19.4	5.0	65.0	91.0	-.19	-24.1	2.1	7.8
Urban 3	18.5	5.0	111.0	139.0	-.19	-24.1	1.5	7.2
Urban 4	21.0	5.0	212.0	249.0	-.19	-24.1	0.1	5.9
Government net saving					0.0	0.0	0.0	0.0
Economic model					0.0	0.0	0.0	0.0
General influence model					0.1	-16.4	-2.1	1.4
Parameter values:	$\alpha_F = 1.2, \beta_F = 1.2, \alpha_P = 1.5, \gamma_E = 0.5,$ $\epsilon_E = 0.5, \alpha_T = 0.5, \beta_T = 0.5, \alpha_D = 0.5,$ $\epsilon_D = 0.5, I_G = 0.$							

Table 5

POLITICAL FEASIBILITY OF ALTERNATIVE AGRICULTURAL PROGRAMS IN LDCs

	Population income per capita (share)	Population income per capita (Rs)	Ag protection 12% ag. inc.		Ag taxation 10% food sub.		General influence Model							Economic Model		
			Delta 1	Delta 2	N	C	F	P	E	O	I	N	P	I		
Rural 1	0.20	0.45	0.00	0.00	0.20	0.00	1.00	0.30	11.82	1.00	0.00	0.20	0.45	0.09		
Rural 2	0.20	0.71	0.00	0.00	0.20	0.00	1.00	0.60	12.13	1.00	0.00	0.20	0.71	0.14		
Rural 3	0.20	0.88	1.00	1.00	0.20	1.69	0.83	0.82	11.48	1.00	0.06	0.20	0.88	0.18		
Rural 4	0.20	1.59	1.00	1.00	0.20	2.31	0.83	2.01	9.22	1.00	0.17	0.20	1.59	0.32		
Urban 1	0.05	0.69	1.00	1.00	0.05	1.00	0.97	0.57	61.10	3.46	0.14	0.05	0.69	0.03		
Urban 2	0.05	0.91	1.00	1.00	0.05	1.00	0.97	0.87	53.36	3.46	0.19	0.05	0.91	0.05		
Urban 3	0.05	1.39	1.00	1.00	0.05	1.00	0.97	1.64	36.51	3.46	0.24	0.05	1.39	0.07		
Urban 4	0.05	2.49	1.00	1.00	0.05	1.00	0.97	3.92	13.07	3.46	0.20	0.05	2.49	0.12		
Total	1.00	1.00	0.75	0.75	0.13	1.00	0.94	1.34	26.09	2.23	1.00	0.13	1.14	1.00		
Average Coefficient of Variation			0.62	0.62	0.64	0.77	0.08	0.89	0.81	0.59	0.74	0.64	0.58	0.73		
														-16.4		

Table 6

IMPACT ON REAL INCOME OF ALTERNATIVE PROGRAMS OF POVERTY ALLEVIATION

INDIA - Binswanger and Quizon		Food subsidies									
		Domestic supply					Domestic supply				
Population (per cent)		Income/average income per capita	Foreign supply aid	Foreign supply tax	Domestic supply tax (percent change over base)	Domestic supply procurement	Irrigation	Fertilizer	Subsidy		
Rural 1	20.0	0.45	17.6	16.1	10.1	13.8	2.9	-0.4			
Rural 2	20.0	0.71	10.7	8.3	8.9	10.4	1.7	0.8			
Rural 3	20.0	0.88	-0.9	-4.1	0.7	-3.2	0.9	1.5			
Rural 4	20.0	1.59	-3.8	-9.1	4.8	-5.7	-0.7	2.5			
Urban 1	5.0	0.69	20.1	18.1	-2.8	7.3	6.0	0.6			
Urban 2	5.0	0.91	16.9	14.1	-7.0	4.8	5.7	0.7			
Urban 3	5.0	1.39	6.6	2.7	-15.7	-3.7	5.2	0.6			
Urban 4	5.0	2.49	2.8	-4.1	-14.5	-2.2	3.5	0.4			
Total	100.0	1.00	4.0	0.0	0.5	0.3	1.7	1.3			
Gross national product per capita			4.0	0.0	0.5	0.3	1.7	1.3			
INDIA - de Janvry and Subbarao											
Population (per cent)		Income/average income per capita	Productivity growth in agriculture, flex prices	Productivity growth in agriculture, price support	Income transfer to poor (percent change over base)	Urban food subsidies replaced by:					
Landless	8.4	0.55	7.8	7.4	0.8	0.1	0.1	0.3	0.5		
Small farms	23.6	0.44	3.0	8.1	1.3	0.4	1.2	0.1	-0.2		
Medium farms	25.2	0.73	-1.9	8.9	0.2	0.7	-0.3	0.4	-0.7		
Large farms	11.3	1.78	-6.0	9.4	0.4	0.8	0.6	0.5	0.6		
Urban workers	17.8	1.77	6.9	3.1	-0.9	-0.6	-0.6	-0.6	-0.6		
Urban marginals	11.2	0.71	3.9	3.9	-0.7	-1.3	-0.9	-0.9	-1.0		
Urban capitalists	2.5	2.77	2.8	3.9	-0.6	-0.3	0.1	0.1	0.1		
Total	100.0	1.25	1.8	-7.1	-0.1	0.0	-0.1	-0.1	-0.3		
Government budget			-4.0		0.1	0.1	1.4	1.4	1.3		

Sources: Binswanger and Quizon, Distributional Consequences of Alternative Food Policies in India, World Bank, Agricultural and Rural Development Department, report ARU 20, August 1984. De Janvry and Subbarao, Agricultural Price Policy and Income Distribution in India, Oxford University Press, 1986. Kouwenaar, A Basic Needs Policy Model: A General Equilibrium Analysis with Special Reference to Ecuador, North-Holland, 1988.

Table 6 (Continued)
 IMPACT ON REAL INCOME OF ALTERNATIVE PROGRAMS OF POVERTY ALLEVIATION

ECUADOR - Kouwenaar		Population	Income/average income per capita	Urban housing aid funded	Producer subsidy tax funded	Rural development for small-scale agriculture	Land reform and livestock productivity
		(per cent)				(per cent change over base)	
Rural <1 ha		16.3	0.49	2.4	10.1	7.7	7.0
Rural 1-5 ha		18.3	0.47	-0.1	18.0	6.3	5.4
Rural 5-20 ha		9.2	0.70	-3.0	16.6	4.0	-0.4
Rural >20 ha		5.7	1.27	-2.2	8.6	0.2	0.0
Rural non-ag		8.4	0.94	5.8	-6.9	7.8	1.4
Urban illiterate		2.6	0.66	5.0	7.0	4.6	0.8
Urban low educ.		25.2	1.05	3.0	-7.7	2.9	0.5
Urban med educ.		10.7	1.92	-0.2	-10.2	0.3	-0.3
Urban high educ.		3.6	3.61	-0.5	-7.8	1.7	-0.1
Total		100.0	1.00	1.1	-1.5	3.2	1.2
Government real savings				15.0	22.4	4.5	6.9

Sources: Binswanger and Quizon, Distributional Consequences of Alternative Food Policies in India, World Bank, Agricultural and Rural Development Department, report ARU 20, August 1984. De Janvry and Subbarao, Agricultural Price Policy and Income Distribution in India, Oxford University Press, 1986. Kouwenaar, A Basic Needs Policy Model: A General Equilibrium Analysis with Special Reference to Ecuador, North-Holland, 1988.

Table 7

POLITICAL FEASIBILITY OF ALTERNATIVE POVERTY ALLEVIATION PROGRAMS

	Economic model	General influence model
INDIA. Binswanger and Quizon (B&Q)		
1. Food subsidies: Foreign supply & aid	4.0	10.7
2. Food subsidies: Foreign supply & tax	0.0	-2.0
3. Food subsidies: Domestic supply & tax	0.5	-7.6
4. Food subsidies: Dom. supply & procurement	0.3	-1.9
5. Irrigation	1.7	3.3
6. Fertilizer subsidies	1.3	1.6
INDIA. de Janvry and Subbarao (d&S)		
1. Productivity growth in ag. with flex prices	0.7	1.3
2. Productivity growth in ag. with price support	3.6	4.5
3. Food subsidies cut & investment in industry	0.72	1.14
4. Food subsidies cut & transfer to all poor	-0.07	-0.27
5. Food subsidies cut & producer subsidies	0.04	-0.20
6. Food subsidies cut & irrigation (medium farms)	0.23	0.16
ECUADOR. Kouwenaar (K)		
1. Urban housing & aid	3.9	4.3
2. Producer subsidy & tax	3.3	5.2
3. Rural development	3.4	4.1
4. Land reform & productivity growth	2.3	1.6

Parameter values:

$\alpha_F = 1.2$, $\beta_F = 1.2$, $\alpha_D = 1.5$, $\gamma_E = 0.5$, $\epsilon_E = 0.5$,
 $\alpha_T = 0.5$, $\beta_T = 0.5$, $\alpha_D = 0.5$, $\epsilon_D = 0.5$, $I_G = 0.2$.

Table 8

OIL SHOCK AND STABILIZATION POLICIES, ECUADOR 1980*

(Impact of a 25% decrease in oil price with alternative government budget adjustments)

	Before shock base values	Long term			
		Constant expenditure	Constant deficit and proportional cut in current and investment expenditures	Constant deficit and cut in current expenditures	
	millions sucres	% change over base value	% change over constant expenditure		
GOP at market prices Exchange rate index Government	293,781 100,00	-3.5 10.0	0.5 1.6	2.0 2.3	
Deficit Current expenditures Investment	8,032 44,377 18,850	78.1 0.0 0.0	-78.1 -8.9 -8.9	-78.1 -9.8 0.0	
Private investment	57,798	-20.1	12.6	13.8	
Welfare-Utility per capita	1,000 sucres				
Small farm	14.1	-3.5	0.6	2.0	
Medium farm	20.7	-3.0	1.5	3.2	
Large farm	38.8	-2.9	1.7	3.5	
Rural nonagricultural	30.9	-4.7	0.0	1.3	
Urban poor	39.4	-5.0	-0.5	0.7	
Urban medium	81.1	-4.9	-1.7	-0.8	
Urban rich	159.7	-4.7	-3.2	-2.7	
Economic feasibility		-4.1**	-0.6	0.6	
Political feasibility		-4.3**	-1.4	0.0	

* Simulation with a Computable General Equilibrium model

** With reference to the preshock situation.

Table 8 (Continued)

OIL SHOCK AND STABILIZATION POLICIES, ECUADOR 1980*

(Impact of a 25% decrease in oil price with alternative government budget adjustments)

	Short term			
	Constant expenditure	Constant deficit and cut in current expenditures	Constant deficit and cut in current expenditures	
	millions sucres	% change over base value	Tax on rural, income transfer to urban	Foreign aid, income transfer to urban
			% change over constant expenditure	
GDP at market prices	-1.3	0.4	0.3	0.5
Exchange rate index	10.8	1.6	1.1	0.4
Government				
Deficit	72.8	-72.8	-72.8	-72.8
Current expenditures	0.0	-9.0	-6.2	-6.3
Investment	0.0	0.0	0.0	0.0
Private investment	-15.0	9.3	6.5	7.2
Welfare—Utility per capita 1,000 sucres				
Small farm	-1.3	0.5	0.3	0.5
Medium farm	-0.5	1.3	-2.3	1.1
Large farm	-0.3	1.5	-2.2	1.2
Rural nonagricultural	-2.3	-0.1	-0.1	0.2
Urban poor	-2.6	-0.6	-0.4	-0.2
Urban medium	-2.9	-1.8	-0.6	-0.4
Urban rich	-3.5	-3.2	-0.8	-0.5
Economic feasibility	-2.2**	-0.7	-0.6	0.1
Political feasibility	-2.8**	-1.4	-1.1	0.0

* Simulation with a Computable General Equilibrium model

** With reference to the preshock situation.

Figure 1. Relation between Per Capita Income and Basic Needs Indicators

