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POLICY RESEARCH WORKING PAPER

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Explaining Agricultural and Agrarian Policies in Developing Countries

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What explains differences in agricultural and agrarian policies across countries and over time? Why do countries adopt, and maintain, policy regimes that reduce efficiency and increase rural poverty? What are the conditions for countries to initiate equity- and efficiency-enhancing policy reforms and for these reforms to be maintained? These are the questions pursued in this literature review.

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Summary findings

Political outcomes — such as agricultural taxation, subsidization, and the provision of public goods — result from political bargaining among interest groups. Such bargaining is likely to be efficiency-enhancing and growth-enhancing when equally powerful interest groups — aware of the economywide budget constraint and know the economic implications of different policy options — participate, and when impartial institutions are available to enforce decisions. The greater the deviation from these conditions, the greater the potential for efficiency-reducing outcomes, the costs of which will generally fall disproportionately on politically underrepresented or powerless groups.

Material conditions of agricultural production — such as spatial dispersion, seasonal work cycles, covariance of risk, and the associated market imperfections — exacerbate the difficulties faced by small producers to engage in collective action. So, despite being generally the economically most efficient form of production, family farmers' ability to counteract the political influence of rural elites and urban dwellers is extremely limited. Lack of independent institutions and clearly

defined property rights — and the presence of organizational residues — not only reduce peasants' bargaining power but may also make it more profitable for powerful groups to prefer rent seeking to productive activities.

How can these undesirable outcomes be avoided, and how can sustainable policy changes be initiated? Experience indicates that fiscal crises of the state, often triggered or aggravated by an external shock, can cause lasting changes of policies and institutions. By forcing the state to devolve some of its power in exchange for financial assistance to meet its immediate needs, such a crisis can give rise to the emergence of independent legal, political, and economic institutions that are maintained even once the crisis has subsided. External actors that provide resources in terms of crisis and at the same time enhance the scope for the politically least vocal parts of civil society to participate in political discourse can have a significant impact in changing policy. The paper discusses in detail the implications for research as well as for policy advice.

This paper — a joint product of the Office of the Director, Agriculture and Natural Resources Department and the Office of the Director, Policy Research Department — is part of a larger effort in the department to develop an empirically testable model for the determination of agricultural and agrarian policies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dean Housden, room S11-046, telephone 202-473-6637, fax 202-522-3307, Internet address dhousden@worldbank.org. May 1997. (76 pages)

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HANS P. BINSWANGER AND KLAUS DEININGER

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EXPLAINING AGRICULTURAL AND AGRARIAN POLICIES IN THE DEVELOPING WORLD

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1. INTRODUCTION

The purpose this paper is to describe and, as far as possible, explain variations in policies, programs, and institutions that influence agricultural growth, agrarian relations, and rural welfare across developing countries and over time. It also identifies conditions under which policy reforms meant to bring about greater efficiency and equity are likely to be initiated and sustained. In section 1, we briefly describe the key variations in policy, agricultural growth, and rural poverty found across the developing world. In subsequent sections, we explore the following questions:

- **Why focus specifically on agricultural and agrarian policies?** We examine the material conditions and missing markets that characterize the farm economy in the developing world and show how these influence the agrarian structure and institutional environment within which agricultural production takes place. We hypothesize that the special characteristics of the farm economy also influence a country's social and political environment, and on the political processes that determine key policies. *If this hypothesis is correct, it provides a strong justification for focusing specifically on agricultural and agrarian policies.*
- **How do distorted policy patterns affect the efficiency of agricultural production and rural poverty?** We address this second set of background questions

¹ Hans Binswanger is senior policy advisor for agriculture and rural development and Klaus Deininger is an economist at the World Bank. We are grateful to Xinshen Diao for important back-ground work on general equilibrium modeling and critical input on early ideas, and to Wendy Ayres for her role as a challenging and effective editor. Yair Mundlak and Lyn Squire made very helpful comments. This paper is a greatly condensed version of a larger literature review from which we had to exclude many valuable contributions and references. The findings, interpretations, and conclusions, are the authors' own and should not be attributed to the World Bank, its Executive Board of Directors, or any of its member countries.

by summarizing key conclusions from the literature on the agricultural supply response to various policies, and the resulting impact on productivity growth. We also consider how policy distortions coupled with imperfect and missing markets, and the unequal distribution of wealth act together to reduce efficiency. With these background elements we are able to start addressing the key questions explored in the paper.

- **What explains the observed differences in policies across countries and over time?** Most of the essay is devoted to investigating this issue. We look beyond agriculture because political decisionmaking involves players from all sectors. We review the literature on political decisionmaking, and the literature on the importance of the institutional and political environment, including approaches based on analyses of class relations. Finally, we try to understand why so many developing countries adopted growth-reducing agricultural and agrarian policies, and why the policies have been so difficult to reform.

- **What are the conditions and circumstances under which policy reforms are likely to be initiated? Under what conditions would policy changes lead to improvements in efficiency and/or reductions in poverty? And under what conditions are the reforms likely to be sustained in a new political equilibrium?** We attempt to answer these questions and then examine how the factors and theories discussed in this essay can help explain why rapidly growing and industrializing economies, such as those of East Asia, have stopped discriminating against agriculture, instead giving it a high degree of protection.

- **What elements, regularities, and theoretical insights emerging from the literature reviewed in this essay are most likely to help explain the variations in policies across countries and over time? How can they be used to improve policy advice, and policymaking in developing countries?** We pursue these two questions in the concluding section.

- Then, we reflect on the **future research agenda** and ask how the elements identified in this literature review can be used to build and test an improved political economy of agriculture and agrarian relations.

1.1 Understanding the theories and models.

A bewildering variety of theories, models, and empirical inquiries have been used to address these questions. We use Figure 1 as a map to locate the various theories and models, and to structure the essay. The oval in the middle represents a country. Exogenous influences come from nature or from other countries, and include shocks (S), technology options (T), ideas (I), and opportunities for trade, borrowing, and alliances with other countries (F).²

What must be explained are the variables contained in blocks and designated by capital letters. Policy outcomes (X), which include variables such as the allocation of rights of different groups, state organizations, and public expenditure patterns, influence economic outcomes (Q), (such as flows and prices of output). Accumulation alters material conditions (M)—the quantity and composition of the capital stock and the labor force, the distribution of wealth, and the technology of agricultural production. The political environment (P), including the nature of the state, the power of interest groups, or attitudes and ideologies, influences policy outcomes.

Various theories and models, denoted by lower-case Greek letters, explore the relationships between the variables. The models include static economic models (ε), accumulation models (α), behavioral theories (β), and political decision models (π). Models of political economy differ according to the variables (both endogenous and exogenous) they include and the behavioral assumptions they employ.

² Each of the symbols represents a multidimensional vector of similar variables. For example, T refers to many technologies.

Figure 1 The landscape of theories and models

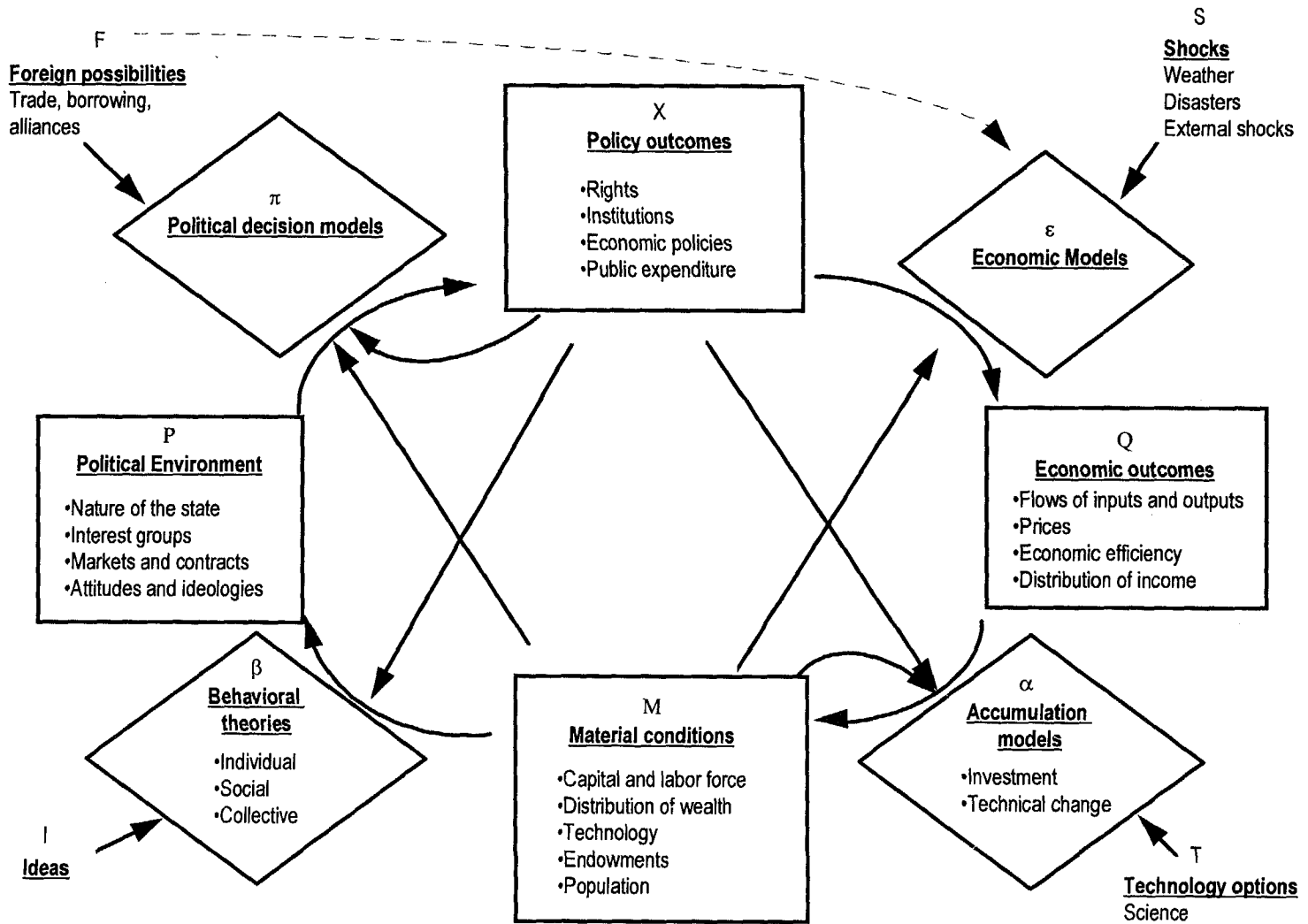


Figure 1 can be summarized in the equations below. All variables and parameters are multidimensional vectors. The endogenous variables appear as dependent variables in some equations and independent variables in others. In empirical investigations, this makes it difficult to establish causality. We briefly comment on this problem in the discussion of the research agenda.

$$Q = Q (M, X, F, S | \varepsilon) \quad (1)$$

$$\Delta M = \Delta M (Q, X, M, T | \alpha) \quad (2)$$

$$P = P (M, X, I | \beta) \quad (3)$$

$$\Delta X = \Delta X (X, P, M, Q, F | \pi) \quad (4)$$

Static economic models (ε) relate political outcomes (X) and material conditions (M) to economic outcomes (Q), such as the composition of production, prices, macroeconomic conditions, and the distribution of income across factor owners. These models may be partial or general equilibrium, microeconomic or macroeconomic, optimizing or mechanical. They generally treat policies as exogenous.

Accumulation models (α) relate economic outcomes (Q) to their long-run impact on material conditions (M). Some accumulation models examine how investment, factor mobility, or natural resource exploitation affect material conditions. Others try to explain how population density, ease of market access, or the capital-labor ratio in an economy is related to innovation and adoption of new agricultural technology. These models take the political environment and policy outcomes as exogenous. Accumulation models have been used extensively to analyze and estimate the economic and social cost of the distortionary policies described above.

Behavioral theories (β) relate material conditions (M) to the social and political environment within which political decisions are made. Theories of collective action relate the ability of interest groups (which are exogenously given) to influence economic

endowments, material conditions, and their access to, and ability to make use of information. Analyses of institutional economics, historical materialism, and a large body of historical literature relate the formation, nature, and behavior of states to material conditions of production and prior political outcomes. All the behavioral models assume that self-interest explains the participation of actors in economics or politics, and the specific policy objectives they pursue.

Models of political decisionmaking (π) relate elements of the political environment, to specific policy outcomes, and the economic consequences of such policies. They consider the behavior of political actors (benevolent dictators who maximize a social welfare function, autocratic self-interested decisionmakers, interest groups) and the nature of voting rules and mechanisms.

2. THE MAIN PATTERNS OF POLICY, AGRICULTURAL GROWTH AND RURAL POVERTY

Global agricultural output has grown faster than food demand for more than a century. Over the same period the proportion of the population deriving a livelihood from agriculture has declined, real food prices have fallen, and—in many countries—the proportion of rural households living in poverty has fallen (World Bank 1990 and 1996). But, there has been great variation among countries and regions in output, productivity, and rural welfare, with some experiencing large improvements and others experiencing stagnating or even declining output, productivity, and rural living standards. These variations and their relationship to government policies and other factors must be explained.

Agricultural policies in developing countries are often highly distorted, as the literature documents. Krueger, Schiff, and Valdés (1991), in characterizing policy mixes for eighteen countries from 1960 to 1983, found that:

- Most of the countries imposed high taxes on their agricultural sectors.
- The indirect tax on agriculture from macroeconomic policies, such as overvalued exchange rates, and measures such as import duties and industrial protection, was three times the direct tax, such as export taxes, on agriculture.

- Most of the direct measures were contrary to the country's long-term comparative advantage—for example, competitive commodities were taxed, while uncompetitive (often food) crops were protected.
- Resources provided to agriculture, through measures such as subsidized credit, infrastructure, research and extension, were not equal to resources extracted.
- The resources that did flow to agriculture almost exclusively benefited large, modern enterprises, not the many small farmers who, together with landless workers, were most affected by the net taxation of agriculture.

Still, among the eighteen countries included in the study, performance of the agricultural sector in terms of growth and poverty reduction varied widely depending on the country's agrarian structure, macroeconomic environment, and provision of public goods to the farming sector. The countries fall into four main groups, depending on their agrarian structures and the policies they pursued.

First, based on an agrarian structure consisting predominantly of family farms, the major Southeast Asian countries—Indonesia, Malaysia, and Thailand, following the earlier lead of Taiwan and Republic of Korea—and China reduced agricultural taxation in the 1970s and started to support smallholders. These countries, in addition to establishing favorable macroeconomic policies, invested in rural infrastructure and social services, provided research and extension services, and supported viable smallholder credit systems. Agricultural output grew rapidly, and the number of rural households living in poverty fell dramatically. The experience of China illustrates the enormous impact that agrarian and agricultural policies have on agricultural output and productivity. In 1978 China abandoned collective agriculture; assigned most agricultural land to families, giving each a very small holding; and sharply increased the prices paid for agricultural goods. Over the next fifteen years farm output grew at a rate of more than 6 percent a year. This dramatic increase in agricultural productivity precipitated China's long-running economic boom, which continues today.

A second group of countries, including Argentina, Ghana, Nigeria, Tanzania, Uganda, Zambia, and many other African countries, also had agrarian structures dominated

by family-farms. However these countries discriminated heavily against agriculture by maintaining overvalued exchange rates, industrial protection, and export taxation. In addition, they provided little support to agriculture, and the support they did provide went primarily to relatively inefficient, but politically powerful large producers. Except in regions with especially favorable agricultural conditions, agricultural output has not kept up with population growth, and rural poverty has increased sharply. Although many of these countries have recently initiated macroeconomic stabilization programs and structural reforms, they are reforming agricultural policies, with some notable exceptions, only slowly.

A third group of countries—including India, Kenya, Mexico, and the Philippines—with agrarian structures that comprise large estates formed during colonial rule also imposed heavy taxes on the agricultural sector through unfavorable policies, such as an unsupportive regulatory environment, dominance of parastatals, exchange rate restrictions, and import barriers. But these countries also partially compensated for these unfavorable policies by implementing large public investment programs in rural areas and partial land reform programs, which addressed structural problems. This combination of policies has resulted in modest increases in agricultural output and modest reductions in rural poverty. Rent seeking by large farmers and bureaucrats has, however, often reduced the efficiency of public spending, which has steadily shifted from investment in public goods (for example, irrigation) to distortionary subsidies for privately used inputs (for example, water and electricity), eroding the basis for long-term growth. Reforms of these public expenditure patterns have begun only recently and are being implemented slowly.

A fourth group of countries—including Brazil, Colombia, Guatemala, and South Africa—has been characterized by a very unequal distribution of land—with Gini coefficients that are uniformly higher than 0.8 (often with 2 percent of farmers holding 33 percent of the land)—that dates back to colonial times.³ The unequal distribution of land was worsened by a policy mix that taxed the agricultural sector directly and indirectly through industrial protection and overvalued exchange rates. To compensate, rural elites were favored in the

³ The Gini coefficient measures the degree of inequality in a distribution. A Gini coefficient of zero implies a perfectly equal distribution whereas a coefficient of 1 implies perfect unequal distribution, with one unit holding everything and all others holding nothing.

allocation of property rights, public investment, services, credit, and subsidies. Although governments sometimes made efforts to redistribute land in response to rural unrest and violence, the programs were poorly designed and consequently achieved little. To the contrary, because they discouraged tenancy (by restricting property rights or by raising fear among landowners of future land reform), or explicitly prohibited tenancy, the land reform programs often led to the evictions of large numbers of tenant farmers, whose loss of income more often than not outweighed the gains achieved by poor farmers.

Although agricultural output grew rapidly in these countries until the mid-1980s, rural employment did not grow enough to keep up with population growth—because by subsidizing credit, governments encouraged large farmers to purchase farm machinery, which displaced labor. Agricultural growth largely stopped after governments stopped subsidizing credit in the mid-1980s with the onset of the fiscal and debt crises. Structural problems, manifested in widespread rural poverty and rural violence, again demand attention.

3. IMPLICATIONS OF MATERIAL CONDITIONS AND MISSING MARKETS

It is impossible to consider the consequences of agricultural policies in isolation from general macroeconomic conditions and policies affecting other sectors. But it makes sense to investigate the key factors influencing agricultural policies separately, since the material conditions of agricultural production and the specific imperfections of financial, insurance, and factor markets in rural areas can explain many observed regularities.⁴ We first identify the special characteristics of agricultural production and their consequences. We then investigate the way policies interact with market imperfections to produce efficiency- and growth-reducing outcomes. Finally, we explore whether and how material conditions can help explain policy choices and distortions.

⁴ This section draws heavily from the large literature on tenancy and sharecropping recently reviewed for the *Journal of Economic Literature* by Otsuka *et al.* (1992) and the literature on agrarian relations and land markets as reviewed by Binswanger, Deininger and Feder (1995). As the purpose of this section is to set the scene rather than provide a detailed discussion, we refer the interested reader to these references for a more elaborate argument and a broader set of citations.

3.1 Material conditions of agricultural production

Agricultural production is characterized by heterogeneity, seasonality, and spatial dispersion, and by large variations in weather and prices that affect similar producers within a region in the same way—implying that their incomes are covariant. These characteristics aggravate the problems caused by well-known informational asymmetries which characterize contracts for insurance, credit, and labor. Covariance and informational asymmetries, have major consequences for financial and insurance markets: crops usually cannot be insured against loss (Hazell, Valdés, and Pomareda 1986), and rural financial intermediation and credit markets develop slowly and with great difficulty (Binswanger and Rosenzweig 1986). Spatial dispersion, heterogeneity, and seasonality imply that hired labor, which does not share in profits, must be closely supervised—and supervision costs are exceptionally high.⁵

These special features of rural areas give rise to three main consequences. First, many of the institutions in rural areas have developed in response to specific material conditions and the resulting imperfections in financial, insurance, and labor markets. Second, fully privatized land rights may not be the most efficient arrangement for rural economies that are characterized by highly incomplete markets. Third, the way in which rights to productive assets, especially land, are allocated affects not only the distribution of income in rural areas, but also the overall efficiency of the rural economy.

3.2 Adaptations to missing and incomplete markets

Missing or incomplete markets can explain many of the characteristics of rural societies.⁶ Subsistence orientation, reliance on family labor, and the use of land and cattle (or other assets) as savings instruments can be explained as the consequence of the

⁵ Empirical evidence regarding the supervision costs of agricultural labor can be found in Dong and Dow (1993) and in Frisvold (1994). Imperfections in financial markets, especially if coupled with impediments to the functioning of the land rental market, can counter this advantage and may, in practice, still lead to the appearance of a positive relationship between farm size and yields (see, for example, Kevane 1996).

⁶ Some analysts have argued that peasants do not maximize profits. This controversy over a distinct "peasant rationality" has largely disappeared, and peasant behavior is now modeled as utility-maximizing in settings characterized by high risk and imperfect markets.

absence, or poor development of markets for products, labor, finance, and risk diffusion (Binswanger and Rosenzweig 1986, Binswanger and McIntire 1987).

Agrarian structure. Many studies of farming systems around the world have shown that there are few economies of scale in agriculture that might provide advantages to farms larger than what a family could operate using its own labor (van Zyl, *et al.* 1995).⁷ The lack of economies of scale in agriculture, coupled with the high cost of supervising wage labor, implies that a farm cultivated by an owner-operator without reliance on permanent outside labor—the family farm—is the most efficient unit of production. The few exceptions occur with plantation crops, or where large farms are able to overcome imperfections in other markets, such as those for outputs, inputs, or credit.⁸

The degree to which covariate and noncovariate risk can be diversified has important implications for equity as well as productive efficiency. Where markets are not well-integrated, prices can vary considerably in response to covariate shocks such as droughts, leading to distress sales of assets at very low prices. Such sales leave the seller with insufficient resources to purchase the assets back later when prices return to normal (Cain 1981). These circumstances can lead to the concentration of land holdings even where large holdings are less efficient than family farms. The inability to insure against the risk of loss can lead to the use of assets such as draft animals to facilitate consumption smoothing during periods of crisis (Rosenzweig and Wolpin 1993).

⁷ The optimal scale of family farms varies widely among and within countries, depending on climate and soil fertility, population density, access to markets and infrastructure, the opportunity cost of family workers and operators in the urban economy, and the technology available.

⁸ Many technical economies of scale can be circumvented by rental markets for machines. Other economies of scale in marketing and credit can be circumvented by village traders, cooperative societies, and contract farming. Managerial economies of scale can be circumvented by extension services or cooperatives. Thus the worldwide prevalence of the family farm suggests that the superior incentives of family members to invest and work hard typically dominate these sources of economies of scale. Exceptions can occur with plantation crops. These are characterized by the occurrence of economies of scale in processing or shipping a highly perishable crop, which leads to a coordination problem between the farm and the plantation. This problem can be solved either by combining the two operations in a single enterprise, or through contract farming. Thus we see very large farms producing sugarcane, bananas for export, tea, and palmoil. For all these commodities the share of output from plantations has declined in recent decades compared with the share from contract farming (Binswanger and Rosenzweig 1986). Another exception occurs when there are virtually no markets for inputs, outputs and credit, as has been the case in transition economies. Families are then understandably reluctant to bear the risks of private farming, preferring the safety of producing as part of large enterprises that can provide some of these services.

Sharecropping can be viewed as a way to allocate land to efficient family operators in places with unequally distributed landownership, high environmental risk, and imperfect credit markets. Although a less efficient system of production than owner operation or fixed-rent tenancy, sharecropping provides tenants with partial incentives to work hard and invest, which wage labor contracts do not.⁹

Social characteristics. Characteristics such as the role of elders in the management of production and food stocks for large extended families have similarly been explained as adaptations to high environmental risk, low population density, and the ensuing isolation from interregional markets (Meillassoux 1981). Spatially diversified social networks, created and maintained through migration and marriage, help insure against covariate risks and prevail as long as less costly mechanisms to insure against such risks are unavailable (Rosenzweig and Stark 1989).

In many cases, however, farmers are forced to resort to second-best strategies—not because of the unalterable material characteristics of the productive environment and the associated market imperfections, but because of government policies. The patron-client relationship is an instructive example, being considered a relatively beneficial insurance-substitute in the neoclassical tradition, but as a sophisticated form of exploitation in Marxist theories (Hayami and Kikuchi 1984; Scott 1976; Bhaduri 1986). Determining which interpretation is valid requires an examination of the policy and institutional framework within which these relationships are adopted.¹⁰

⁹ Numerous empirical studies have shown that legal prohibition of sharecropping as "feudal" does not lead to the choice of fixed-rent tenancy, but rather to further restrictions in small farmers' access to land (see Binswanger, Deininger, and Feder 1995). Restrictions then lead to further efficiency losses and increased poverty, as in the group of countries with dualistic land ownership patterns. Sadoulet, Fukui, and de Janvry (1994) are unable to find a significant effect of sharecropping, compared with owner-operators, for sharecroppers who are poor, face high risk, or have established long-term relationships with their landlords. Shaban (1987), who through the use of panel data adjusts not only for soil quality but also for individual ability, finds that the efficiency loss attributable to share tenancy is modest: about 15 percent.

¹⁰ In the United States south the need to maintain a loyal and cheap labor force led large landowners to actively and fiercely resist attempts to replace a paternalistic system, under which they provided some insurance and protection to their employees, with systems giving workers access to state-provided benefits such as social security. Not until the invention of the cotton picker, which mechanized the cotton harvest, was social security extended to the south (Alston and Ferrie 1993).

3.3 Implications for the evolution of property rights

Property rights assign the rights to and rewards from resource use to individuals, thus providing incentives to invest in resources and use them efficiently (Alchian and Demsetz 1972). Given the high cost of supervising wage labor, clearly allocating land rights to owner-operators would generally increase the efficiency of agricultural production.

However, in environments where information costs are high and markets for finance and insurance are imperfect, private property rights do not always produce the most efficient farming arrangements. Abandoning communal land rights for fully tradable property rights may lead to the loss of safety nets for the poor, the use of economies of scale in herding, or measures to diversify risk (Jodha 1992; Nugent and Sanchez 1993; McCloskey 1991). Furthermore, the process of assigning and transferring private property rights is not cost-free. The costs of maintaining records, negotiating, contracting, and policing property rights can be high and may exceed the value of the land, especially in rural areas with low population densities and little market access.

Communal types of land tenure assign to community members clear inheritable userights to cropland, pastures, forests, and fisheries, and usually allow some degree of exchange (rental or even sale of land) within the community. They often provide security of tenure at low cost, and thus do not discourage individuals from investing in the operation (Migot-Adholla, *et al.* 1991; Bruce and Migot-Adholla 1994). Since the use of the land and its output belong to individual cultivators, communal property rights systems rarely lead to large static efficiency losses—unlike collective farming systems.¹¹ Fully individualized property rights systems become superior to communal systems only once population growth and specialization increase the value of land and the efficiency losses associated with restricting transactions to insiders.

¹¹ The supervision and monitoring cost advantages of family farms seem to be at the root of the preponderance of assignments of land to, and production by, individual families. Collective production of crops is very rare, and cropland is almost always assigned to families on a temporary or permanent basis. Communal use is usually restricted to noncropped forest or pasture areas.

3.4 Efficiency implications of the initial asset distribution

It is well known that in many countries land prices exceed the capitalized value of farm profits (Binswanger, Deininger and Feder 1995). In periurban areas, where land has many alternative uses, this is not surprising. Yet the phenomenon is prevalent even far from cities, because, in addition to the profit stream available from farming, land provides other services to the owner, which are capitalized into land prices. Where insurance markets are imperfect (because of the combination of covariance and moral hazard problems), land provides value as collateral. Land provides additional services, serving as an inflation hedge, a tax shelter (due to the preferential treatment of agriculture in income and property tax systems), and collateral to obtain access to subsidized credit (Just and Miranowski 1989; Brandao and Rezende 1989; van Schalkwyk and van Zyl 1996).

Where land prices exceed the present value of their income streams, poor farmers cannot buy land, even if they have access to credit at the prevailing interest rate. To pay for the land with a loan, poor farmers must reduce their consumption below what they can sustain as workers or sharecroppers. Or, they have to use nonfarm income to service a part of the debt even in normal years. Thus people need savings or nonfarm income to acquire land. And this need tends to make the distribution of land holdings more unequal.

Even without macroeconomic instability or policy distortions, rural land markets have special characteristics. Where nonagricultural opportunities for rural residents are limited, little land is offered for sale during periods when the weather is normal. Landowners are made better off by selling land only if they are able to earn a higher return from the sales proceeds than from cultivation or rental.¹² Therefore, rural land sales are likely to be concentrated in years when profits are low because of adverse weather or low commodity prices, and take the form of distress sales. Since farmers in the same area are affected by the same conditions, the sales will often be to moneylenders or other creditors whose

¹² Mortgaged land cannot be used as collateral for working capital. Thus the owner of mortgaged land cannot reap the production advantage of ownership, and thus will be unable to repay the loan out of increased income from the land. Only unmortgaged land yields a flow of income *and* other services, the present value of which equals the land price (Feder *et al.*, 1988) Since only unmortgaged land provides these services, land purchases are likely to be financed out of household savings.

assets are their outstanding loans.¹³ Thus even without macroeconomic or policy distortions, land holdings may become concentrated in the hands of moneylenders, large landowners, people with urban incomes, or others with financial resources.

Does this matter for efficiency? Land rental or sharecropping could equalize the marginal product of land, labor, and capital in production among land holdings. But these contracts are second-best adaptations to market imperfections—and are still less efficient than owner-operated farms. The initial distribution of land or wealth will thus influence subsequent allocation of factors of production and has important consequences for the long-term productive capacity of the rural economy. Moral hazard, covariance of income, and collateral value of land imply absent insurance and imperfect credit markets. Markets for land may therefore fail to bring about Pareto-improving trades and an efficient farm size distribution—an illustration of the second-best.

The powerful impact of initial land allocations on subsequent agricultural development can be illustrated by comparing land allocations in the United States West and in Brazil in the late nineteenth century. In the United States the Homesteading Acts limited the size of plots that families could acquire to 160 acres. To retain ownership rights, individuals were required to cultivate the plots for a specified number of years. Owner-operated farms dominated agricultural production, with rentals and sales merely reallocating land to more efficient farm families working plots of comparable size. United States agriculture became one of the most productive systems in the world, and remains so today. By contrast, in most of Brazil land could be titled only in lots no smaller than four square kilometers (988 acres)—an area much larger than a family could work. Restrictions on subdivision kept landownership highly concentrated. As a consequence, Brazilian agriculture became dependent on wage labor and was characterized by relatively low efficiency and investment. Investment and productivity rose only after government-sponsored import substitution policies and credit subsidies brought about rapid

¹³ These financial intermediaries retain the property in their portfolios, sometimes renting it to the very farmers who sold it, until land prices improve with the return of normal weather.

capitalization of the sector. Land sales have been unable to reduce significantly the inequality in the size distribution of holdings.¹⁴

3.5 Adaptations to unequal land ownership distributions

Because supervising hired labor is costly, large farms run with hired labor will generally be less efficient than small farms and will not be able to offer owner-operators sufficiently attractive contract terms to induce them to give up their own operations. In the past, where population densities were low, large estates therefore faced severe problems recruiting workers or tenant-farmers. Policies were often adopted to reduce the profits of family farms and therefore the reservation utilities of their operators. These policies included eliminating rights over high quality land; prohibiting the subdivision of large estates; imposing lump-sum taxes on individuals, huts, and labor; restricting the marketing of output; and prohibiting the production of lucrative crops (see section 5.2 for further discussion). In many countries these policies remained in place even after population growth had eliminated labor shortages. They contributed to inefficiency, stagnation, and rural poverty.

Two predominant types of arrangements arose to reduce the inefficiencies of very unequal ownership distribution of land. First, in landlord estate systems owners leased their land to tenants who worked the land with their family's labor. Most commonly, the arrangement was sharecropping, a second-best adaptation to the material conditions and market imperfections of agriculture. Most landlord estate systems have now been eliminated through land reform programs. Obtaining title to the land they worked provided former tenants with incentives and resources to invest in physical and human capital, greater security against exogenous shocks, and often an increased ability to participate in the political process (Grabowski 1994).

Second, in hacienda systems characteristic of many South American and African countries, tenants were allocated just enough land to satisfy their subsistence requirements

¹⁴ Not only were financial and insurance markets absent or distorted, during the twentieth century a combination of macroeconomic instability, tax preferences for agriculture, and credit subsidies for large farmers drove land prices above the present value of farm profits, further reducing the ability of the sales market to bring about an efficient distribution of operational holdings (Binswanger and Elgin 1988; Brandao and Rezende 1989).

but were required to work on the owner's part of the farm, usually to produce crops for the market. These systems were not only less efficient than landlord estates, but also evolved less favorably (de Janvry 1981). Land reforms, where they occurred, often resulted in state-farm or collective-farm structures, which provide very poor incentives for work and investment, and rarely lead to increases in productivity. In most places, however, the fear of impending land reform prompted landowners to reduce their dependence on hired or tenant labor through large-scale evictions. Owners then either mechanized their farm operations, often with the help of generous government subsidies, or converted their farms to undertake extensive livestock ranching, which requires very little labor. In many countries, with so many rural laborers unemployed, wages for all unskilled workers fell, worsening rural and urban poverty.

In the remainder of the paper we will often refer to the special material and informational characteristics of agriculture; the difficulties with output, labor, financial, and insurance markets that they imply, and how they change in the course of development. We have seen that they are very important influences on the organization of production, peasant behavior, and the interaction among the allocation of property rights, contractual freedoms, and the efficiency of production. It would not be surprising to observe that these conditions also affect accumulation processes, such as technical change, and the political environment within which policies are decided.

4. The impact of policies on accumulation

In order to appreciate the full impact of the policy patterns discussed in the first section on rural growth and welfare, it is necessary to understand the impact of policies on accumulation: investment in physical and human capital, the conservation and sustainable use of natural resources, and the pace and direction of technical change. Accumulation processes depend on the provision of complementary public goods and infrastructure, and may therefore be influenced by the quantity and quality of public goods provided to agriculture and rural areas. The prevalence of market imperfections in rural areas, and the far-reaching effects these have on incentives and abilities to accumulate will increase the

importance of initial asset distributions in determining agricultural productivity and rural poverty.

4.1 Supply response and productivity growth

Sustained growth of agricultural productivity is contingent on the generation of new technologies through research and investment in human and physical capital—fostered by a policy environment that provides private agents with incentives to engage in these activities. Policies that discriminate against the agricultural sector will thus have long-term consequences for agricultural growth and rural poverty, in addition to their static effects.

One reason why it has been easy to adopt policies that discriminate against all or part of the agricultural sector is that the short-run supply response of aggregate agricultural output is inelastic, much more so than that of other sectors (Johnston 1960).¹⁵ This inelastic supply response allows myopic politicians to implement agricultural policies without being fully aware of, or concerned about their ultimate deleterious effects on supply and growth.

While the short-run supply response of agriculture is inelastic, the long-run response is highly elastic, as the literature unambiguously shows.¹⁶ The literature also shows that the agricultural sector adjusts to changes in the intersectoral terms of trade through individual investment and migration decisions that have relatively long gestation periods. In the long term declines in the rate of investment will reduce the rate of change in the implemented technology used, thus reducing productivity and growth (Mundlak, Cavallo, and Domenech 1989). Policies thus have much larger and far-reaching long-term consequences than implied in comparative static models.

Boserup (1965) describes in great detail the ways in which population growth has historically led societies to invest in land improvements and irrigation facilities, to intensify land use, and to adopt new technologies that resulted in higher sustainable agricultural

¹⁵ This is because many of the factors of production are highly sector-specific and therefore not very mobile in the short run.

¹⁶ The inelastic short-run supply response of the agricultural sector is not a result of inherent backwardness or irrationally backward-bending supply curves that would allow the state to extract almost unlimited “vent for surplus” without affecting long-term productivity, as was long believed by Marxist scholars.

production per unit of land. But, not all societies experiencing population growth and increased market access have shown growth in agricultural productivity, suggesting that these responses are not automatic. Policies discriminating against agriculture, or parts of the farm economy, for example, small farmers, are likely to slow the evolution of farming systems. Take for instance the cases of Kenya and Ethiopia (Heath and Binswanger 1996). In Kenya (Machakos District), farmers enjoyed secure land rights, access to infrastructure and markets, fairly favorable terms of trade, and cash income from sales of crops or labor. A fourfold increase in the rural population over sixty years was more than compensated for by output growth and investment in land conservation. Ethiopia, on the other hand, lacked the institutions, policies, and infrastructure favorable to farmer investment. A national cross-section showed that high population density is associated with soil degradation.

Getting policies right is even more important for agriculture that uses modern technology, since the growth of total factor productivity can take place in different ways. By responding to factor scarcities, induced technical change is directed toward products or factors that are most efficient for a particular economy (Hayami and Ruttan 1985).¹⁷ If factor prices are distorted, technical change may not occur or may be inappropriate for the economy, given its factor ratios. Either would have negative implications for efficiency and growth.

4.2 Public investment

It has long been known that the potential returns to private investment, and thus its attractiveness will be affected not only by price policies but also by complementary investment in public goods, such as education, infrastructure, basic science, and dissemination of technology. However, despite long-standing empirical evidence that strongly suggests public investment in these areas generate high returns, the patterns of

¹⁷ The induced-innovation hypothesis remains controversial, despite the large body of historical evidence that supports it, especially from agriculture. It is felt that the theory lacks a solid macroeconomic foundation, despite the fact that such a foundation has existed for more than twenty years. In addition, many have argued that it is empirically impossible to distinguish between ordinary factor substitution and biases in technical change (Diamond, McFadden, and Rodriguez 1978). This is so even though the problem has been resolved theoretically by Sato (1970) and empirically by Binswanger (1974) for the United States, using panel data to estimate the underlying substitution parameters and then applying these to aggregate historical data to compute the factor biases residually. For a recent discussion of the controversy, see Ruttan (forthcoming).

public spending observed in many developing countries are not oriented appropriately. Many countries still neglect primary education, especially in rural areas, and provide disproportional subsidies to higher education that benefit the better-off (Schultz 1988; van de Walle and Nead 1995). A large number of studies have consistently found exceptionally high returns to publicly-funded agricultural research. Despite increases in public expenditures in developing countries on agricultural research, studies suggest that rates of return to agricultural research (Evenson and Westphal 1995) and smallholder extension (Birkhaeuser, Evenson, and Feder 1991) are still well above those for other investments—suggesting that countries continue to underinvest.

While skimping on these high-return investments, governments have often spent large amounts on nonproductive activities with low returns, such as untargeted producer and consumer subsidies. The literature describing urban bias (Lipton 1977, 1993) provides qualitative evidence that government investment has often favored the rural elite and the urban upper and middle classes rather than the small family operator. A number of recent studies investigating returns to public investment in different sectors demonstrate that public investment in many developing countries is focused on sectors, such as state-owned enterprises and large-scale agriculture, in which state involvement may crowd out private investment. These investments have not, for the most part, brought about significantly higher growth, and may even have reduced growth (Easterly and Rebelo 1993; Devarajan, Swaroop and Zou 1996).

4.3 Credit market imperfections and asset distribution

In the presence of information deficiencies individuals lacking wealth for collateral may be unable to purchase or lease indivisible assets. They are unable to borrow, not because they are intrinsically less productive, but because the agency cost (the cost of supervision and monitoring) of lending to them is prohibitive (Hoff and Lyon 1994).¹⁸ These problems are particularly severe in rural, as compared to urban, areas, where imperfect

¹⁸ Local lenders can acquire information about the creditworthiness of their borrowers and the risks associated with the projects undertaken by them at relatively little cost. Their ability to diffuse risk is, however, very limited. Thus the transaction costs associated with loans for agriculture are high (because of the high reserve ratios required) even in the informal sector, as confirmed by a large number of empirical studies.

insurance markets, spatial dispersion and covariant incomes add to the difficulties of obtaining access to credit.

The theoretical literature suggests that in the presence of credit market constraints and indivisible investments, the initial distribution of wealth affects aggregate output and investment in the short run and the long run. Different initial distributions of assets are associated with very different, but dynamically stable steady states (Chatterjee 1991; Tsiddon 1992). Societies in which a relatively equal initial distribution of assets allows a large number of individuals to make lumpy investments that enhance productivity may reach permanently higher rates of growth than those in which the highly unequal distribution of assets prevents such investment. This outcome has several implications that are important for agrarian relations and rural welfare.

First, if schooling effectively compensates for capital market imperfections, then a policy of compulsory education could generate high social payoffs, in addition to producing

immediate gains in productivity.¹⁹ A policy requiring schooling could make the distribution of income more equal and lead to permanently higher economic growth (Eckstein and Zilcha 1994).

Second, policies that facilitate consumption smoothing in risky environments may positively affect on productivity by eliminating producers' need to liquidate their stocks of productive assets, such as draft animals or land, at distressed-prices (Rosenzweig and Wolpin 1993; Cain 1981).

Third, allocating public expenditures to urban areas or large farmers who are politically vocal—practices that have been widely followed in developing countries—does not help the rural poor gain access to credit. Rather, it undermines their ability to operate as family farmers, therefore increasing inequality, and also reduces productivity and long-run growth (Bencivenga and Smith 1991).

Fourth, where rural capital markets are highly imperfect and the distribution of wealth is unequal, a one-time redistribution of wealth, such as a land reform, may largely eliminate the need for distortionary redistributive policies later. More importantly, it may also alter the equilibrium growth path of the economy and lead to permanently higher levels of growth (Banerjee and Newman 1993; Chatterjee 1991). This outcome is consistent with the land reform experience in East Asia and suggests that, despite the greater difficulties of carrying out land reform in the remaining hacienda systems (see section 2.4), doing so would likely generate considerable social benefits.

Given their impact on accumulation processes, the welfare and equity costs of distortionary agricultural policies are likely to be very large. Why are such policies adopted? Why do they persist? Why have so many countries persistently pursued agricultural policies and expenditure patterns that inhibit efficiency and growth, waste natural resources, and harm large segments of their populations? And why have the people who are made worse

¹⁹ One example would be to counteract the market imperfections with a government loan scheme that finances primary education on a voucher basis. The high income elasticity of demand for education and health care, as demonstrated in a number of recent studies, for example, Squire (1993), suggests that eliminating the constraints that prevent investment in human capital and providing economic opportunities to use this human capital, may be associated with high payoffs in terms of a more equitable distribution of wealth.

off with such policies, such as small agricultural producers, rural workers, or consumers, often been unsuccessful in changing them? To answer these questions, we must consider the issues related to political decisionmaking and institution formation, depicted in the left-hand side of Figure 1.

5. Political decisionmaking

We first consider whether differences in political regimes and decisionmaking processes can explain variations in policy outcomes (equation 4), independently of how such differences come about. Under ideal conditions a variety of political decision making-processes can lead to efficiency- and growth-enhancing policy mixes. The fact that many countries have not experienced sustained growth suggests that these ideal conditions have rarely been satisfied. It is thus necessary to identify the critical deviations from ideal conditions, the reasons for such deviations, and their likely impact on policy outcomes.

5.1 Political regimes and decisionmaking processes

Models of political decisionmaking processes have been based on three main assumptions: a social planner maximizes a social welfare function, an autocratic ruler maximizes dynastic wealth, or democratic decisionmaking processes make the median voter decisive. Under ideal conditions all of these systems can be consistent with the maximization of efficiency and growth (Lal 1993; Olson 1990, Squire 1993).

The three decision rules can also be viewed as special cases of interest-group equilibria, in which where interest groups use resources to influence policy outcomes. Competitive lobbying by interest groups can, under certain conditions, lead to the adoption of policies that raise output and efficiency. This is because such policies produce gains rather than deadweight costs, so that the groups which benefit have an intrinsic advantage over those harmed (Becker 1983, 1985).

The first condition holds that politicians act as impartial arbitrators rather than self-interested players. The state is stable. Interest groups are predetermined and equally able to use “pressure production technologies” that transform resources (such as labor and capital) into political influence.

Second, the costs of "influence production" (including the deadweight losses associated with redistributing resources) are assumed to be convex in the amount of resources redistributed.²⁰ Also, all participants have perfect information, thus being fully aware of the increasingly distortionary effects of additional redistribution.

Third, an aggregate budget constraint allows decisionmakers to increase public expenditures only by imposing additional (explicit or implicit) taxes on citizens. The intuition behind this third condition is straightforward: if all groups have full knowledge of policy impacts and are equally capable of influencing policies, none will agree to policies that increases another's utility without also increasing its own. They will agree only to the provision of public goods that increase aggregate welfare (for example, infrastructure or agricultural research).

Although these ideal conditions rarely hold, considering them can still provide important information on what might happen if certain conditions are not met. For example, pressure groups with poor pressure production technologies, or few resources to employ their technologies would clearly be heavily taxed. If acquiring information is costly and groups can spread misinformation or appeal to ideologies in order to conceal the true effects of policies, this could lead to the implementation of policies that benefit politically powerful groups while reducing social output. The presence of self-interested politicians whose survival in office may depend on the short-term benefits they provide to vocal constituencies adds further complications. Thus investigating the consequences of political processes under ideal conditions is unlikely to be useful in explaining the variations in agricultural policy regimes discussed in section 1.1. Instead we focus on the differences in political environments within which pressure groups form and interact. First, we look at the factors which effect interest groups' abilities to organize politically and use informational advantages (equation 3). We then turn to the political environment and its implications for policy outcomes (equation 4).

²⁰ Convexity implies that deadweight losses increase more than proportionately with the amount transferred and that the most efficient method of redistribution, that is, the one generating the least amount of resistance, will be chosen. In a number of important cases this assumption does not hold, although—in the absence of coercion or discrimination—the cost of redistribution is generally convex.

5.2 Interest group formation

If interest groups cannot be taken as exogenously given, we need to pay attention to the factors that foster their formation (as indicated in the lower left hand quarter of Figure 1). Interest groups provide members with goods and services that have public-good characteristics, including information, marketing and other services, and lobbying for policies or programs favorable to its members. However, the provision of public goods is associated with a free-rider problem: individuals may enjoy benefits that they do not pay for. Three main factors help facilitate collective action: ease of communication and enforcement, clear property rights to economically valuable resources, and members' high educational and informational status.

Collective action becomes easier if group sizes are small, benefits concentrated, communication easy, and enforcement of sanctions possible at low cost (Olson 1971). The potential for collective action can be enhanced if, in addition to the public good, clubs—which can range from neighborhood associations to political parties—can provide an excludable by-product (for example, legal or tax advisory services, or towing for cars) to members and tie delivery to member contributions. Collective action can also be easier for groups formed on the basis of identifiable characteristics or social ties, which can create barriers to entry and enforce rules at low cost.

Owning economically valuable resources can further effective collective action. Clearly, wealth increases the owner's ability to spend resources to attain political ends. But wealth also affects attitudes toward risk taking. If absolute risk aversion declines with wealth, the poor will be more risk-averse than the rich. Even if they enjoy equal potential for collective action and equal pressure production technologies, they will invest less in lobbying for any given reward. The poor will thus be taxed at higher rates than wealthier agents if tax rates are determined by democratic bargaining between income groups (Aumann and Kurz 1977).

The risk aversion effect on taxation will be stronger if the poor have higher discount rates because of imperfect financial and insurance markets, and inferior risk-diversification options, for example, if they lack nonagricultural sources of income or do not have a strong

social network. That discount rates vary with wealth and income has been confirmed experimentally for landless workers and farmers in South India (Pender 1992).

The educational and informational status of different interest groups affects their ability to evaluate the impact of any given policy or program on their welfare. With low levels of education, it is difficult to detect misinformation (in the form of ideology or “obfuscation”) that may be spread by other interest groups. High levels of education, informational advantages, and the ability to appeal to popular ideologies, by contrast, can greatly enhance a group’s ability to appropriate resources for itself.

Clearly observable and distinguishable group characteristics, in addition to furthering collective action, can facilitate discrimination—using characteristics such as cultural identity, class, gender, race, or skin-color as proxies for economically relevant traits such as skills. Historically, discrimination has been used to create and maintain privileges for certain races and cultures, and to hide the real economic costs of existing privileges.²¹

The continuing importance of discrimination is confirmed by studies that demonstrate the existence of systematic wage differentials that are not related to relevant performance-characteristics, such as schooling or individual ability. Psacharopoulos and Patrinos (1995), for example, document such differentials for Brazilians of African origin (who make up much of the poor rural population of the northeast) and for Indian groups in several Latin American countries (which are over-represented in poor peasant populations). Observable wage differentials may, of course, be compounded by the fact that certain groups are denied equal access to economic opportunities, such as education, markets, or credit, a factor that could—through unequal access to education and its returns—lead to persistence of such differences across generations. Rural panel data from South India, for example, show that higher caste status and male gender are associated with better access to education, even

²¹ Roback (1990) illustrates that in many cases racial differences that had fallen into oblivion were resurrected to legitimize privileges that had no objective justification. Akerlof (1985) shows that sorting on the basis of group characteristics can be dynamically stable, even if the key characteristics are completely unrelated to individuals’ relevant performance attributes.

after correcting for schooling of, and inheritance from parents (Binswanger and Singh 1994).²²

Finally, since forming interest groups involves costs, the evolution of the social and institutional environment should involve accumulation processes similar to those discussed above for physical capital. Theories of social capital formation explore characteristics of the social and institutional environment formally (Durlauf 1992). They demonstrate that initial differences in the quantity or quality of social capital, such as trust, affect the ability of group members to accumulate factors of production and can lead to stratification that is socially inefficient and very difficult to reverse (Benabou 1994). Conversely, destroying social capital and traditional institutions, by, for example, forcibly eliminating communal land tenure as occurred in much of Central America in the 1870s, may have long-term impacts far beyond eliminating the risk diversification and safety-net functions discussed earlier.

The importance of these factors in interest group formation has been confirmed by a number of studies (Bates 1983; Magee, Brock, and Young 1989 Swinnen and van der Zee 1994). Gardner (1987) has quantified and evaluated these factors for the United States in an econometric framework, in order to explore the interaction between collective action, material conditions, and the general characteristics of the economic environment. Spatial concentration of production of a specific commodity and lower variability of production (both of which reduce the cost of communication and organization) lead to greater protection. Higher output per producer, which would make it easier to form a pressure group with fewer members, does the same. A high rate of output growth, everything else constant, makes it more profitable to invest resources in productive rather than redistributive activities, and in less distortionary policies (observations show that distortionary policies are less likely to be applied to fast-growing commodities). Regional shifts of production create divergent interests between "old" and "new" producers, and therefore reduce their ability to lobby for transfers. Finally, commodities that face import competition receive more protection

²² In most cases wage equations have been estimated using cross-sectional rather than panel data, and do not therefore correct for unobservable individual attributes. The South Indian panel data enabled accounting for both unobservable fixed household effects, as well as correction for parental endowment effects, and therefore represent stronger evidence for the persistence of discrimination.

because import tariffs or quotas do not require budgetary outlays or taxation of producers; instead, a large number of consumers bear the costs.

The framework of collective action described above helps identify and define the groups that would likely form and act collectively to influence agricultural and agrarian policies. The groups fall into three broad categories: agricultural producers, rural elites, and urban dwellers.

- *Agricultural producers* are separated by large physical distances, which makes communication difficult, unless infrastructure—such as roads or telecommunications systems—is well developed. Furthermore, since agricultural activities are seasonal, the potential for concentrated collective action is limited to the slow seasons. These limitations are most pronounced for peasants and other small producers who are widely dispersed, produce a variety of heterogeneous goods for home consumption and the market, are lacking education and access to infrastructure, and lack strong social ties. Poor rural women are less mobile than men, which is important when their interests do not coincide with those of men, as in the allocation of land rights. To the degree that small farmers are racially or culturally distinct from dominant groups, discrimination would likely further reduce their potential for collective action and make them more susceptible to taxation, as illustrated by a wide range of historical evidence. The differences in income and wealth generated by discrimination and differential accumulation of social capital in turn reduce the political action potential of the groups suffering from discrimination.

- *Rural elites* are able to overcome the disadvantages of spatial dispersion because they are smaller in number; have greater wealth and education, market participation, and social integration; and have greater access to modern communications technology. Their knowledge of agricultural conditions also gives them an informational advantage relative to urban groups. If they produce a specific (geographically concentrated) commodity, they may be able to supply and withdraw favors. This enables them to form clubs that are potentially valuable partners for urban interest groups, even if the two groups often have different economic interests.

- *Urban dwellers* benefit from spatial concentration, the relative unimportance of weather risks, and freedom from seasonal work cycles. Formal urban workers, especially those who work for large firms or for agencies that deliver public services, can use the organizational structures of their firms for collective action. They also enjoy steady incomes that make them less vulnerable to risk. They have a strong economic interest in low food prices and are able to organize highly visible manifestations of discontent, such as strikes. Informal urban workers, by contrast, generally have few assets, little education, and small and unreliable incomes. Yet because they are concentrated spatially, it is still easier for them to mobilize than it is for peasants. Urban commercial and industrial elites enjoy all the advantages of the rural elites, but without the disadvantages of spatial dispersion and covariance of risk. Bureaucratic elites share these advantages and may also benefit from social ties arising from common class origins and educational experiences. Sometimes they are formally organized into administrative corps, further lowering their cost of organization. In addition, they have privileged access to information and to the enforcement mechanisms of the state.

5.3 Choice of policy instruments

The framework under which lobbying can be “socially efficient,” outlined by Becker (1983, 1985), can also help explain the types of instruments chosen to redistribute resources in the political arena. First, it is often much easier to transfer resources in the political arena when the transfer does not involve a visible exchange of money. Thus, politically, it is easier to transfer resources through distortionary trade, pricing, or tax policies than through policies involving less distortionary direct payments. That is why it has been so difficult to decouple income support to farmers and production decisions in industrialized economies, even though direct income support would enhance overall welfare.²³

Second, politically motivated transfers of resources are more acceptable if they can be administered within existing institutional mechanisms, rather than by creating new ones.

²³ A shift to overt support for farmers through transfer payments that are financed from the regular budget, rather than through price policies financed by all consumers, may be resisted because it would be less regressive, falling more on higher-income earners who are more vocal politically.

The potential to use existing organizational structures or organizational residues to redistribute resources is particularly great in the agricultural sector. Numerous institutions of supply management and price stabilization (marketing boards or buffer stocks) that had been established during times of war or commodity price collapses, with the goal of ensuring food security or supporting producer prices, have subsequently been converted into agencies whose primary purpose shifted increasingly toward transferring resources to powerful lobbies (Krueger 1992).

Third, appealing to popular ideologies enhances the political feasibility of redistributive measures.²⁴ For example, in many countries redistributive measures have been justified to attain food security, agricultural modernization, environmental protection, or economies of scale in agricultural production. Yet innumerable studies show that few policies meant to promote food security actually benefit poor or hungry households. Conversely, the use of ideologies enabled socialist governments to establish state farms or collectives, and enabled many capitalist governments to direct scarce resources toward supporting large haciendas, despite considerable theoretical and empirical evidence demonstrating the efficiency advantage of family farms.²⁵

6. THE INSTITUTIONAL AND POLITICAL ENVIRONMENT

In this section we discuss how the insights from the previous sections can help us to understand the evolution of the institutional and political environment, (equation 3) and its impact on political outcomes (equation 4). We discuss institutional economics and the historical literature before shifting the discussion to recent class-based approaches.

²⁴ It is not clear to what extent ideas and ideologies are used to bring about political and policy changes, rather than to merely legitimize policies that would have been adopted anyway because of interest group pressure. Nor is it clear to what extent ideas and ideologies facilitate the spread of specific policy mixes across countries. The literature on agricultural policies and agrarian relations does not address these issues. Further research is needed.

²⁵ The substantial empirical evidence assembled by Chayanov, shows that the high productive capacity of peasant agriculture had no impact on the policy of collectivization of the Soviet Union in the late 1920s, but was instead suppressed (Thorner, Kerblay, and Smith 1966). Similarly, the considerable evidence indicating the negative association between farm size and productivity generated during the 1960s and early 1970s (Binswanger, Deininger, and Feder 1995) had no influence on the agrarian strategies that were adopted in many Latin American and or southern African countries.

6.1 Institutional economics

Institutional economics is concerned with why institutions vary so much across space and why they change over time. Institutional economics sees the state as a rational device created to reduce the transaction costs that arose once economic relations became too complex to be handled within personalized networks of exchange (North 1989, 1990).²⁶ Transaction costs include costs of measuring the attributes of goods or services, specifying the nature of exchange between parties (the contracting technology), and enforcing contracts. The state reduces transaction costs by providing public goods, such as impersonal rules of exchange and institutions that enforce laws.

North points out that under certain material, political, and economic conditions, which form transaction cost constraints, states are not established, even though this would be economically beneficial. Instead inefficient institutions are adopted. These conditions include barriers to collective action within a given social organization, high fixed costs and risks of establishing or transforming institutions, and networks that provide disincentives for individuals or groups to adopt new rules of the game unless most others do the same, and (d) preferences that are based on ideologies.

Competitive constraints, which arise when economically powerful groups from inside or outside the state are able to contest and challenge the ruler's legitimacy and monopoly on power, may also lead to the establishment of suboptimal institutions.²⁷ While competitive constraints may limit the potential for rulers to arbitrarily exploit their subjects, they may also give rise to anarchy and chaos, a weak state characterized by stagnation and poverty, and the dissipation of resources rather than investment.

²⁶ In economies characterized by personalized exchange relationships, trust-based "contractual technologies" rely on a dense communication network, common ideologies, and a set of rules to which all adhere. The personalized networks are sufficient to maintain the optimal level of economic activity. However, with increased volumes of exchange, personalized networks become less efficient means for economic activity and trade.

²⁷ The concept of competitive constraints is closely related to that of contestable monopoly (Baumol, *et al.* 1982).

In North's framework institutional change is closely related to changes in relative prices or in ideologies that alter the political bargaining power of different groups.²⁸ Changes in real prices occur because of exogenous changes in material conditions, such as changes in population density, productive or military technology, or trade. The relative bargaining power of different groups shifts with exogenous changes by enabling groups to win higher payoffs through recontracting, or by challenging the fairness of existing contractual arrangements. Thus changes in prices and material conditions directly affect political outcomes.

The historical material discussed in the next section explores these ideas in much greater depth, and examines the role of material conditions, and the impact of changes in material conditions on the political power of interest groups and class alliances.

6.2 State formation

A well-functioning and stable state in which all interest groups are represented and can interact freely must exist before efficiency-enhancing policies can emerge. How do such states arise? What influences their characteristics (lower left hand quadrant in Figure 1)? In this section, we explore how material conditions strongly influence state and institutional characteristics. To understand the political economy of rural areas it is essential to go beyond agriculture.

Like other institutions, states are formed because they are useful to specific groups of economic agents. To focus on the relationship between material conditions and the nature of states, it is useful to adopt a broad comparative perspective, as in Tilly (1990). Tilly defines states as organizations that control the principal means of coercion and armed forces in a population that enables them to attack external and internal rivals in order to promote the states' (or the ruling groups') interests, requisition needed resources from

²⁸ Ideology is defined as the willingness of individuals to pay for their convictions. The relation to the relevant economic variables, that is, the ability to pay, is not drawn. This definition ignores the fact that ideological convictions matter little as long as they are not accompanied by the (economic) power to enforce them. Even the abolition of slavery, often attributed to a shift in ideology, occurred only when the power to enforce the new law became available.

subjects, and ensure a minimum acceptable supply of food, means of production, and economic well-being for the people.

In this framework an issue of critical importance is whether states acquire the resources necessary to function through extractive or through representative institutions. Extractive institutions rely on coercion, yield relatively little revenue, and, most importantly, do not encourage private investment—and thus do not instigate a virtuous cycle of growth and increased provision of public goods. Such virtuous cycles arise only where representative institutions, such as parliaments and courts that limit the power of leaders to arbitrarily change rules or expropriate resources, have been established. Then, strong institutions, such as secure property rights and impartial enforcement of contracts, encourage investment by private individuals and facilitate sustainable growth.²⁹

What are the conditions that facilitate the formation of representative rather than extractive institutions? One recurring theme in the historical literature is that representative institutions were more likely to arise when a reasonably well-defined and stable government was faced with fiscal crisis. To meet the associated resource requirements, ruling groups often had little choice but to agree, through bargaining, to the establishment of representative institutions in exchange for resources (Tilly 1990).³⁰ Throughout history, this has been the main reason representative institutions were created. A second issue of great historical relevance is that, once established, institutions, ideologies, or organizational structures often acquired a life of their own and remained in place even after the groups that had created them or the material conditions that led to their formation had disappeared or

²⁹ Historically, representative institutions became important as changes in technology made war increasingly capital-intensive which necessitated the establishment of costly standing armies. Even in centralized states, such as France or Prussia, which had managed to limit the power of representative institutions for several centuries, representative institutions acquired more power with respect to the crown as regular taxation, credit, and payment of the national debt became essential for the maintenance of the armed forces.

³⁰ A formal description of such bargaining and the set of possible solutions is presented in Hong (1987) and Skaperdas (1992).

changed. Such organizational residues continued to affect economic behavior and allocation of public resources.³¹

While bargaining between interest groups is the decisive mode of interaction when a state exists, material conditions and factor endowments determine the range of feasible production and military technologies, thus limiting the degree of specialization that is possible and the nature of the state that can emerge. Three main categories can be distinguished: domestic, capital-intensive, and coercion-intensive societies.

- *Domestic societies.* These are based on villages and social structures that operate without or on the margins of states and are characterized by smooth and uninterrupted, but slow transitions to more productive forms of agriculture and secure individual property rights in land (Boserup 1965). Societies undergoing this sort of transformation were limited to isolated areas with low agricultural or mining potential, and relatively low population densities. Examples include Argentina until the nineteenth century, Colombia, Iceland, and Papua New Guinea—regions that were relatively isolated, with too few resources to interest foreign powers—and Jos Plateau in Nigeria or the central cantons of Switzerland, territories that were easy to defend. In all these regions low population densities, a lack of goods for export, and consequently little economic specialization led to the creation of very small political entities with little formal administrative structures and relatively egalitarian societies that remained largely outside broader economic or political systems.³²

³¹ An important type of such residues are institutions that had been established to cope with fiscal or food supply crises during times of war. Instead of being dissolved after the war, they acquired new functions. In the industrial and developing world the origins of a number of state institutions for managing food supplies can be traced back to the great depression and World War II. In developing countries marketing boards and state-owned marketing organizations for key commodities such as sugar, and a large number of food parastatals fall in the same category. The changing purpose of such institutions—from price stabilization, to financing of the war effort, and finally the continued taxation of small producers—is well-documented (for example, Helleiner 1966, Krueger 1992).

³² There are two main types of domestic societies. Meillassoux (1981) shows that where climatic risk is low, such as in the subhumid and humid tropics, societies are relatively unstratified, composed of loosely connected family-clans. However, where covariate environmental risks are high, societies have hierarchical social structures dominated by elders. In arid and semi-arid environments the survival of households depends on grain storage, a task best entrusted to elders, who have experience evaluating the risks and consequences of failing to manage stores carefully and who possess the social status to enforce decisions. Binswanger and McIntire (1987) have further extended this analysis.

- *Coercive societies.* Coercive societies are characterized by low economic specialization, low investment, and highly coercive political structures, led by either an external power or domestic ruling class or nobility. Coercive societies arose where population densities were low, land was abundant, and populations were spatially dispersed—and where a state was able to impose itself on local populations. Their formation can be explained as follows (Tilly 1990).

First, since specialization was limited and land was abundant, collecting taxes required coercion. Thus much tax revenue was dissipated on military action rather than spent on public goods or invested in productive enterprises.

Second, the spatial dispersion of the population meant that a central ruler had to rely on intermediaries to collect taxes. The tax collectors maintained independent armies, acquired considerable power, established sizable fiefdoms, and often amassed substantial wealth—at the expense of the central ruler who was reduced to heading of a loose federation. A central ruler had to strengthen his position by increasing competition for or monopolizing access to the elite, or through central enforcement of a legal code—an option that was available only where loyal enforcing institutions, such as a bureaucratic corps or the military, existed.³³

Third, in areas with low population densities that produced goods primarily for export (minerals or agricultural outputs) rather than for domestic consumption, it was often very difficult to recruit laborers. Since land was abundant, the native population had little reason to work in the mines or the large farms unless they could earn more than they could on their own farms. Four solutions were used to solve the problem of labor shortages: attractive incentives were offered for immigration (Prussia, United States); slaves were imported on a large scale (Brazil, the Caribbean); indentured laborers were brought in from labor-abundant countries such as India, China, and Ireland (United States, the Caribbean, Fiji); or the

³³ In Russia the central ruler strengthened his position by enforcing legislation to stop individual landlords from raiding each other's labor forces. He endorsed laws requiring the return of escaped laborers to the original owners, actions that would not normally be taken by the producers. Given the prevailing labor shortage, it would have been more profitable for them to employ the escaped workers themselves.

reservation utilities of independent peasant producers were reduced through taxation and discriminatory interventions in factor and product markets (Kenya, South Africa, Peru).

While the first action was not directly coercive, the other three—which involved measures such as taxation, limitations on economic opportunities, restrictions on spatial or occupational mobility, or overt discrimination—depended on strong coercive power. Regardless of their form and primary purpose, the economically most important and lasting effect of these measures was their impact on the ability and incentives to accumulate physical and human capital. They severely reduced efficiency and productivity growth, and in many cases left institutional legacies and organizational residues that outlasted the groups that had created them or the material conditions (such as low population density) that originally led to their introduction.³⁴

For example, it has been argued that the Indian caste system originated to reduce the potential for peasants to establish their own farms on unsettled land where land was abundant. The discriminatory institutional structure that developed remained even after population densities had increased, raising the scarcity value of land and making it possible to collect land taxes without coercion. The caste system, along with the continued extraction of a large proportion of farm output from the peasantry, resulted in severe agricultural stagnation: yields in most of Indian agriculture in 1970 were little different from those of 2000 years earlier (Lal 1988).

There are many examples of coercive institutions which arose in colonies where land was abundant, for example in Nigeria in the nineteenth century or Brazil, Prussia, Russia, and South Africa much earlier. To maintain control over widely dispersed populations, central rulers "co-opted landlords and clergy, subordinated the peasantry, built extensive bureaucracies, and stifled their bourgeoisie" (Tilly 1990). Not surprisingly, these colonies

³⁴ Community institutions often remained the foci of popular life and potential bases for resistance against the power elite, as long as there were no alternative representative institutions through which the elite could be held accountable. In both England and France the importance of community institutions declined once households were able to appeal to independent national courts to define and enforce their property rights, suggesting that the development of accountable and predictable rules governing the exercise of elite power are necessary, though not always sufficient conditions for the transformation of community-based institutions (Magagna 1991).

were characterized by low levels of private investment, relatively high levels of resource dissipated in internal power struggles, and a large role for the state and the military.

- *Capital-intensive societies.* These societies are characterized by high levels of private investment and the existence of representative institutions, which often emerged through lengthy bargaining between groups of comparatively equal power. Examples include city-states, such as Venice or the Low Countries, which initially prospered from cheap transport by sea and relatively high population densities (Tilly 1990). These societies obtained the bulk of their revenues from taxes on trade and achieved a relatively high degree of independence from agriculture and landlord interests. Furthermore, the relatively low cost of communication, the organization of subjects into trading organizations (guilds), and international competition between different trading centers made it difficult for the rulers to extract taxes and made investment in public goods more desirable. Establishing representative institutions was by no means a smooth process, generally involving lengthy bargaining between rulers and subjects.³⁵ As the state became increasingly dependent on revenues from individual entrepreneurs making decentralized investment decisions in increasingly integrated financial markets, it became perilous for rulers to adopt obviously growth-reducing policies.

The bargaining power of subjects and the establishment of representative institutions advanced greatly where a state's financial crisis required an immediate solution. The much-quoted case of the United Kingdom shows how this occurred (North 1989; Tilly 1990). For centuries neither the king, the merchant elite, nor the landlords were able to establish a clear supremacy of power. Through the concentration of commercial activity in a single location, London, the commercial elite established a strong power base. Because population was low-density and high dispersed throughout the rest of the country, the king depended on powerful intermediaries to collect taxes and maintain law and order. Given

³⁵ For example, in Genoa most of the population was initially excluded from the benefits of trade and economic development, leading to political instability, civil wars, and low growth. Exogenous shocks in the form of repeated foreign aggression triggered policy reforms that established a representative form of government and, through the separation of legislative and executive power, brought about greater security of property rights. This change led to a spurt of technological and organizational innovations, and rapid increases in trade volume that soon made the city a major economic power (Greif 1994).

these conditions, fiscal crises that brought the monarchy close to bankruptcy forced the king to concede political and legal rights to the landlords and merchant elites in return for their support, leading to the establishment of independent institutions.³⁶ Once a parliament had been established that represented the political views of the three interest groups, the king lost his power to control redistribution, and thus his power to adopt growth-reducing extractive policies. Still, while the bargaining between politically vocal groups prevented adoption of the most obviously efficiency-reducing forms of taxation, the new system did have a negative impact on nonelites. The peasantry lacked political representation, paid the bulk of the taxes, and lost most of their land rights in the process.

The more recent literature on policy reform supports the general view that reform attempts are most likely to be initiated and succeed when the state is facing fiscal crisis, and that efficiency-enhancing policies will be sustained only when groups that benefit from the policies defend them against pressure from groups that benefit from the alternatives. Becker's model, emphasizing the importance of equal access to "lobbying technology" by contenders as a precondition for constrained-efficient outcomes, is the counterpart of this set of historical findings.

6.3 Class-relations

Some of the most complete and insightful descriptions of the patterns found above are discussed in a large literature inspired by historical materialism. Within this framework of analysis, self-interested classes—defined as groups of individuals who, given their ownership of productive factors such as land, labor, and capital, behave in economically similar ways—are the main political and economic actors. The material determinants that govern relations of production, surplus appropriation, and the interests and power of classes are described in detail, and the state is viewed as an instrument that serves the economic interests of the dominant classes or ruling elites. Political decisionmaking mechanisms are

³⁶ In Spain, by contrast, where the colonies offered the possibility of almost unlimited resource extraction through repression and physical force, there was no pressure to prevent the emergence of an extremely wasteful apparatus of unproductive bureaucrats, which eventually reduced economic growth directly and indirectly.

used or altered by the dominant classes to further their economic interests. Ideology is not an independent factor but a policy tool.³⁷

The most elaborate and original application of a Marxist framework to explain relations of production in agriculture at the periphery of the industrial world has been provided by de Janvry (1981). He shows how in Latin America class alliances led to the establishment of dualistic structures characterized by a concentration of industrial production on luxury goods and dependence on imports for other goods, such as capital and basic consumption goods. In this situation of economic disarticulation "development" was equated with minimizing labor costs, leading to regressive and repressive labor policies, and proletarianization of labor.

De Janvry (1981) shows how these patterns of development led to stagnation, impoverishment, and destruction of peasant and artisan spheres. These outcomes came about through several channels: the import-substitution strategy for growth depended on the import of capital goods and technical knowledge, which drained resources from the domestic economy; savings rates were low and the market limited, so capital for investment had to come from heavily taxed peasant and artisan sectors; to keep wages in the export sector low, food prices were kept low at the expense of small domestic producers; and large farmers often received credit subsidies and other special benefits intended to bring about rapid technical change and mechanization in the "modern" agricultural sector.

Thus a functional dualism emerged between the large-scale farms and the small plots cultivated by farm workers or small landowners. These workers earned below-subsistence wages on the large farms and fulfilled their subsistence needs with output from their tiny farms. The two farm sectors were mutually dependent in a single dualistic system.

With population growth and mechanization (often subsidized), labor supply outstripped labor demand, and peasant households tended to disintegrate. Workers and

³⁷ Most Marxist theories assume a marked dichotomy between feudal and capitalist economies. In feudal economies surplus is expropriated through direct coercion or control over labor, possibly backed up by distortionary policies. In capitalist economies, by contrast, surplus can be expropriated even under perfectly competitive markets with voluntary transactions. Roemer (1982) shows this to be a consequence of wealth inequality and credit constraints.

peasant families migrated to cities in search of work, where a protected modern sector generating large profits and high wages for a few coexisted with a growing informal sector characterized by low wages. Thus functional dualism was recreated in urban areas.

According to this view the main factor influencing the pattern of development prevails is whether or not the bourgeoisie is aligned with or against the working class. Where the bourgeoisie was weak, it joined forces with foreign capitalists and the landed elite against workers, resulting in dualistic patterns of development. By contrast, where the bourgeoisie was strong, it aligned workers and peasants against the landed elite, leading to articulated development.³⁸

Therefore, to de Janvry, increasing the political participation by the poor, by enhancing their potential for collective action, is key to bringing about increased efficiency and sustained and equitable growth. In the long run the only feasible way to achieve this is to increase the productive capacity of the rural population. De Janvry strongly advocates that governments increase their spending on schools and health care facilities for the rural poor. to improve their ability to participate in the political process. But the adoption of such "social pact" policies is itself a political decision. Few social pacts have survived in Latin America for prolonged periods of time.

The Marxist analyses discussed above aim to explain the entire circle of economic and political interactions presented in Figure 1. Yet they often fail to recognize sufficiently that in predominantly capitalist systems there are a wide range of growth-reducing policies that will, in the long run, not benefit any of the interest groups involved in policymaking. The resource dissipation and economic stagnation so prevalent in many developing countries is attributed largely to the peripheral role of these economies in the international division of labor. Little attention is paid to the wide range of growth-reducing policies that would not in the long-run benefit any of the interest groups involved in policy-making. This tends to divert attention away from analyzing the impact of the distortions and from pursuing alternative explanations of their origin. What needs to be better understood are the

³⁸ Note the similarity to the discussion of the capital intensive path to state formation by Tilly (1990).

conditions under which rational pursuit of economic self-interest can lead to political outcomes that are detrimental to growth.

Rueschemeyer, Stephens, and Stephens (1992), building on earlier work by Moore (1966), further explain the role of political coalitions in affecting policy outcomes. General policy outcomes are the result of a contest between (repressive) landlords, whose wealth resulted from access to cheap labor and sometimes protection from foreign competition, and a bourgeoisie whose interests were more closely aligned with broad-based economic growth and democratic development. Rueschemeyer Stephens, and Stephens observe that at early stages of development all over the world, large landlords derived their wealth from cheap labor, the availability of which was assured by coercive legislation or discriminatory taxation of free peasants. By contrast, the bourgeoisie were in an ambivalent position, supporting landlords where they had originated in a landlord-based nobility, but aligning with workers where they had not. Societies in which the bourgeoisie aligned with landlords were often characterized by low product diversification, concentration on heavy industry, and protection from foreign competition (upon which the nobility depended for its economic welfare). Their transition to democracy was often hindered by autocratic and dictatorial episodes. By contrast, societies in which landlords were never powerful (because of material conditions) were characterized by a relatively high degree of mobility, high specialization, economic growth, openness, and a smooth transition to democracy.

In this context an authoritarian coalition comprising the state, labor-repressive landlords, and a dependent bourgeoisie was most likely to arise where economic activity was concentrated in agriculture and a large number of the high-level bureaucrats came from the landed class; landowners were economically more important than the industry-based bourgeoisie (either because there were few industries or because landlords owned most of them); the bourgeoisie was dependent on the state, which provided industrial protection or cheap credit and infrastructure; and the peasantry had little or no ability for politically vocal resistance or revolution because of material conditions, a past history of extractive taxation, and the abolition of communal institutions.

7. THE ADOPTION OF GROWTH-REDUCING POLICIES

In this section we return to the key questions that motivate this essay: what induces societies to adopt growth-reducing policies and why do such policies persist? Historical analysis and the theory of public choice suggest that inefficient policies are likely to be adopted when the conditions for competitive bargaining between interest groups are not met—an issue that is closely related to material conditions and initial endowments of specific groups. Here, we elaborate on this point and consider the importance of institutions and organizational residues for policy formulation.

7.1 Initial conditions

An unequal distribution of initial endowments in environments where financial markets are imperfect and credit is rationed can prevent a large proportion of the population from making productive investments. In fact, a number of recent cross-sectional studies have found a robust negative relationship between initial levels of inequality in the distribution of income or wealth and subsequent growth (Alesina and Rodrik 1994; Persson and Tabellini 1994; Deininger and Squire 1996). Several early studies sought to explain this relationship as resulting from an unproductive but costly redistribution from the rich to the poor which was imposed by the “median voter”.³⁹ However this explanation does not accord with the observation that the poor are less likely than others to participate in the political process and with the failure to find an empirical association between the degree of redistribution and lower growth. Recent models that incorporate a richer set of empirical regularities point to the possibility of multiple steady states, which are determined by a combination of initial conditions and endogenous institutional arrangements in the economy.

Bourguignon and Verdier (forthcoming) develop a model in which political participation depends on the educational status of a person (only educated individuals can

³⁹ The argument is that the more unequal is the distribution of wealth or income, the further from the average will be the median voter, and the higher is the tax rate he approves on wealth or income. The higher is the tax rate, the lower are the incentives for the wealthy to invest in productive activities, and thus the lower is the growth rate of the economy. Societies with very unequal distribution of wealth or income should therefore be characterized by high tax rates on the rich and low growth.

vote). Because of the absence of capital markets, individuals with endowments below a minimum level will not be able to acquire human capital—even though it is privately profitable—unless they receive an education subsidy. They will not therefore be able to participate in the political process. Educating the poor will always result in higher growth. But, educating the poor will lead to the ultimate loss of political control of the oligarchy (the class of individuals with the means to privately finance education). Depending on the initial distribution of income and the size of the educational externality (the benefits to society from educating the poor), the steady state will involve a pure oligarchy with no growth, a ruling oligarchy that accommodates a middle class without giving up power and moderate growth, or a democracy with income redistribution and fast growth.

Benabou (1994) goes one step further, using a stochastic growth model with incomplete asset markets. In his model the rich have more political influence than the poor, and citizens vote democratically on proposed progressive taxation and redistribution schemes. Thus redistributions that would increase aggregate welfare receive less political support in societies with unequal wealth and income distributions than in egalitarian societies (leading to further increases in inequality). Two stable steady states emerge, one with high income and wealth inequality, and little redistribution, and one with low income and wealth inequality, and higher redistribution. Economies with greater redistribution will grow faster if the productivity advantage from reallocating resources outweigh the distortions introduced by redistributive taxation.

What is common to these models is that initial conditions determine which of the feasible equilibria will be attained. Without significant exogenous changes in these conditions (including the underlying technical relationships, or the power structure within society), it is unlikely that an economy will move from one equilibrium to another.

7.2 Lack of institutions

The importance of institutions can be explained in a context of self-interested politicians who myopically or strategically pursue short-term goals, even when the resulting policies would reduce long-term growth. The state's ability to commit to taking particular actions can be crucial in a strategic setting (Rodrik 1992). A weak state, which has little

ability to enforce contracts or take actions, will systematically underprovide economically desirable public goods and, at the same time, undertake politically motivated interventions that are economically harmful. While all states may be using the same instruments, the weak state consistently chooses wrong policies, encouraging rent seeking and unproductive spending rather than productive investment.⁴⁰

Evidence has accumulated over the past decades that macroeconomic stability, the real exchange rate, and nonagricultural protection are major influences on agricultural growth (Gardner forthcoming; Krueger, Shiff, and Valdés 1991). We therefore need to look at the types of institutions that can ensure macroeconomic stability and an appropriate foreign exchange regime.

A large number of empirical studies comparing institutions across countries show that the existence of independent central banks and mechanisms that ensure budgetary discipline, political stability, fiscal decentralization, and free trade are generally associated with better economic performance, even if other factors are taken into account.

The existence of independent central banks seems to be consistently associated with better economic performance (Cukierman, Webb, and Neyapti 1992). Independent central banks have forced even countries of the Organisation of Economic Co-operation and Development (OECD) to adopt sounder fiscal policies (Alesina, Grilli, and Milesi-Ferretti 1993). Furthermore, institutional arrangements, such as a "no deficit carryover" rule, and expenditure limitations, such as those adopted in many states of the United States, are strongly correlated with more rapid—and less costly—adjustment to unexpected fiscal deficits, such as occurred during the economic downturn of the 1980s (Poterba 1994).

⁴⁰ The importance of the state is shown by the example of Korea, which provides subsidies to industries. In contrast to attempts in other countries, the subsidies have succeeded in stimulating productive investment, which appears to be related to the government's ability to base the subsidies on transparent criteria and to credibly threaten to withdraw them in case of noncompliance. Grabowski (1994) proposes a similar game-theoretic explanation, based on a game between a government that provides investment subsidies and the private sector. In his model everyone would be better off in the long run if the subsidies were invested. But, the firm with a sufficiently short time horizon would rather consume the subsidies and bribe government officials just enough to make them collaborate, leading to a net loss for society. In a repeated game context, the credible threat of immediate withdrawal of the subsidy can lead to a Pareto-optimal outcome.

Theory also suggests that free trade can reduce a government's ability to rely on and benefit from monetary expansion, since monetary expansion affects exchange rates more in open economies than in closed ones. A study looking at empirical evidence for 114 countries found that the degree of openness is highly and significantly correlated with lower inflation, greater political stability, and greater independence of the central bank—thus also demonstrating the mutually reinforcing character of these institutions (Romer 1993). The result is robust for different subsamples, but vanishes for a sample containing only OECD countries. This breakdown suggests that OECD countries have other institutions preventing short-sightedness on the part of politicians.

A system of fiscal federalism can limit arbitrary behavior of the central government (Casella and Frey 1992). Establishment of independent but accountable institutions at lower levels of government can strengthen the state, while at the same time placing limits on its ability to confiscate the wealth of its citizens by arbitrarily changing the rules of the game (Weingast 1992). The more mobile are its citizens, the more important is competition between different levels of government. But, this competition could be jeopardized if strong and enforceable systems of accountability and monitoring by citizens and the central government are lacking, leading to dominance of local institutions by the rural elite.

The term political stability has often been used to describe the presence of strong, impartial, and accessible institutions; an unambiguous division of power between different branches of government; and their mutual control and vigilance. Political stability promotes private as well as public investment.⁴¹ Political instability will reduce private investment as it directly or indirectly threatens the security of such investment. The empirical evidence contains many examples of the close relationship between political instability, low private investment, and low growth (Edwards and Tabellini 1991; Edwards 1994).

Political instability would also likely affect the nature of public investment. In strong states rulers can invest in public goods that enhance growth. In weak states, the lack of broad popular support and the inability to hold on to power indefinitely shortens the rulers'

⁴¹ Political stability is a necessary, but not sufficient condition for economic growth. There are many examples of stable, but repressive states, which failed to promote investment or growth.

time horizons and forces them to redistribute resources as bribes to potential contenders (Moe 1990; Wintrobe 1990). Redistributing resources may eventually require more revenue than can be sustainably extracted from the farm sector, causing small farmers to revert to subsistence production (or the informal urban labor market), and outputs and tax revenue to fall. Additionally, the policies may lead to a collapse of foreign exchange reserves needed to purchase imported inputs for agriculture and manufacturing, leaving the state with crises of fiscal revenue, foreign exchange, and domestic output. Empirical studies have found some evidence that government weakness played an important role in the accumulation of foreign debt in many countries during in the 1980s (Özler and Tabellini 1991) and that low growth and political instability are mutually reinforcing (Alesina, *et al.* 1992).

Many developing countries inherited institutions that benefit ruling groups at the expense of large portions of the population. The resources available to the elite—natural resources, rents, revenues from commodity exports, and, often, outside economic and military assistance—helped maintain productivity-reducing policy regimes for prolonged periods of time and eliminated the budget constraint that is critical for the attainment of optimal policy outcomes. This outflow made political leadership a highly desired source of patronage and led to the dissipation of resources on a grand scale through rent seeking. In such situations, domestic interest groups may fiercely resist the establishment of independent institutions, such as judiciaries and independent central banks.

8. Policy change

How, and under what conditions, can policies that facilitate growth and reduce inequality and poverty (equation 4) be enacted and sustained? Experience suggests that external shocks do not generally trigger or lead to the maintenance of major growth-enhancing policy reforms. Nor does internal revolt. However, if exogenous shocks lead to a fiscal crisis of the state, then the resulting changes in the bargaining position of groups can provide the opportunities to initiate reform and establish institutions that—possibly irreversibly—change the character of subsequent political interaction between interest groups.

8.1 Exogenous shocks

The impact of exogenous shocks depends critically on the fiscal position of the state and the institutional and political environment. On the one hand, the state may wish to compensate groups that are hurt as a result of the shock (Magee, Brock, and Young 1989). On the other hand, negative shocks may reduce the state's ability to provide compensation, thus decreasing the payoff to redistribution and providing an opportunity for comprehensive policy reform (Drazen and Grilli 1993). The outcome depends on the state's overall fiscal capacity. A government with liquid assets and an unrestricted ability to borrow can compensate small groups hurt by adverse shocks or, conversely, initiate redistributive policies in response to positive shocks. But, a government without such resources may be forced to undertake policy reform.

It is not surprising that external shocks, such as changes in the terms of trade or the cost of borrowing in international markets, result in unpredictable outcomes. An external shock will have differential impacts on individual interest groups, depending on the nature of the shock and the country affected. Interest groups will agree to changes only when the result of the change would be better than the alternatives. Thus even when reforms would enhance aggregate efficiency, they may be delayed if they are not acceptable to certain interest groups (Alesina and Drazen 1991). Inequality in income, wealth, or composition of assets may provide opportunities to some groups to hold out in the process of reform and impose the cost of adjustment on others (for example, holders of wealth may shift assets abroad to avoid an inflationary tax, an option not available to all). In highly polarized societies, the rich may be able to wait until the poor are willing to shoulder most of the burdens associated with reform.

This model can also explain other behaviors of individual economic agents or interest groups. An industry hurt by an adverse shock will decide to lobby for compensation—rather than adjust—if it expects politicians to react favorably to the request. The expectations of the industry will depend on the past history of awarding protection to specific sectors, in addition to the state's aggregate fiscal capacity (Brainard and Verdier 1994).

The effect of the population collapse that occurred with the Black Death shows how identical exogenous shocks can have highly varied impacts. This catastrophe, which killed between one-third and one-half of the population in Western Europe between 1350 and 1500 (most seriously between 1347-51), led to an improvement of peasant rights in the western zone of Europe, but to a second enserfment and reduction of peasant rights in the eastern zone (for example, Poland and the former East Germany). Brenner (1977) was the first to suggest that differences in the institutional environments of the two regions may have led to the different outcomes. The western zone, which was more densely populated, was characterized by strong village institutions that developed to protect and regulate village commons, and provided peasants with bargaining power to establish rents, the ability to enforce rights of inheritance, and the right to elect village mayors and priests. These institutions were independent of state control and could defend their rights against incursions by landlords. By contrast, the eastern zone was characterized by a high degree of centralization, the strong leadership of landlords, an absence of common lands, and little tradition of protecting rights of peasants.

Evidence contradicts the hypothesis that external shocks, on their own, bring about growth-enhancing policy reforms. Positive external shocks often did not lead to an improvement in the fiscal position of governments. Where governments, rather than private entrepreneurs, unexpectedly gained access to large amounts of export revenues, they were often unable to either save the revenue inflows for use when the conditions returned to normal or to resist political pressure for redistribution.⁴² Some countries experiencing commodity booms went on spending binges that, in political environments characterized by clientélism and lack of planning capacity, did not increase the long-term productive capacity of the economy. Often, the exchange rate appreciation that accompanied the commodity boom (Dutch disease) and government spending hurt agricultural producers, increasing polarization rather than reducing it. Cross-country evidence clearly shows that in the vast majority of cases commodity booms reinforced preexisting social, political, and economic

⁴² The only examples where such a result was at least partly achieved are cases in which the foreign exchange revenues partly accrued to private organizations such as the coffee growers' association in Colombia (Cárdenas and Pontón 1995), or in Kenya (Bevan, Collier, and Gunning 1993).

divisions rather than reducing or eliminating them (Little, *et al.* 1993). In response to negative shocks occurring later, governments often imposed import restrictions as they tried to protect the import substitution industries founded during the boom (and possibly the ruling party's power base)—a goal that prevented them from devaluing the currency. These policies generally hurt the tradeable sectors (including agriculture), worsened existing social inequities, and set in motion further rent seeking efforts and pressures for higher deficits.

Empirical and historical studies show that when external shocks trigger or aggravate a fiscal crisis, changes in the institutional and policy environment often result. A fiscal crisis makes the aggregate budget constraint more binding, reducing the potential for obfuscation and other forms of misinformation, and increasing the bargaining power of groups that have access to resources or information. However, reform efforts, once initiated, may not be sustained.

A fiscal crisis can make it impossible for those in power to buy off or suppress an emerging alternative coalition. Historically, state financial distress, a high degree of inraelite competition, and a potential for mass mobilization have been identified as important preconditions of reform (Goldstone 1991).⁴³ Most developing-country reforms were initiated in response to deteriorating economic conditions, such as balance of payment crises, inflation, capital flight, and the obvious failure of the state to provide the social services or favors demanded by politically influential groups (Bates and Krueger 1993). By contrast, reform has often been avoided, or stabilization plans abandoned, where there were alternative ways to avert crises, such as by increasing taxation of politically powerless groups or by exploiting and selling natural resources. This is in line with the importance of fiscal crises in eliminating well-established interest-group equilibria, as emphasized by Olson (1993) and recently confirmed empirically by Ben-David and Papell (1995).

⁴³ The endogeneity of these variables, which may be related to lack of economic growth and a high degree of unproductive activity, is not explicitly considered.

8.2 Revolt

Exogenous shocks and resulting fiscal crises can trigger revolt. But revolt may also occur independently, as illustrated by a number of theoretical models that focus mainly on the use of revolt, or the threat of revolt, in a bargaining game between interest groups. Peasants who are disadvantaged by existing policies are unlikely to initiate revolt without strong coalition partners. Even if successful in achieving immediate demands, peasant revolts have rarely brought about lasting reforms and improvements in peasant welfare.⁴⁴

Successful peasant revolts occurred only when the state was weak or in fiscal crisis, making it difficult for rulers to co-opt the revolutionaries and their coalition partners through concessions, and making it possible for peasants to enlist powerful allies inside or outside the state apparatus, in particular those with financial and military resources to support their cause. Revolts were also more likely where the state had attacked peasants' collective identity, where revolutionary leaders had promised tangible improvements and addressed specific grievances, where the potential benefits and/or the probability of success were high, and where other avenues of political articulation (or co-optation of a part of the peasantry) were not available (Tilly 1990).⁴⁵

Even if numerically superior, peasants' low potential for collective action makes it virtually impossible for their revolts to succeed without militarily powerful coalition partners. Such a coalition enables urban-based revolutionaries—who appreciate the access to food

⁴⁴ Revolt may take many forms, from passive resistance and small scale violence to massive rebellions. Persons or groups harmed by existing policies often engage in passive or small scale active resistance by (Scott 1985). The theoretical literature has recently explored these activities. If the poor do not have the ability to expropriate resources from the wealthy through the ballot box, they may try to obtain resources by pilfering and other kinds of extralegal expropriative activities. If the marginal return to banditry exceeds the marginal return to wage employment, landlords would favor distributing just the quantity of land needed to prevent peasants from engaging in banditry (Grossman 1994). This may explain why in some countries, land reform was undertaken only after more coercive means to ensure peace were no longer feasible. A similar Nash "equilibrium path of land reform" can be derived by treating the power of landlords and peasants as exogenously given (Horowitz 1993).

⁴⁵ Elimination of the traditional insurance and judicial methods practiced in communal systems appears to be at the root of many peasant revolts in the history of industrial and developing countries alike. Threats to communal tenure and peasants' right to elect the village mayor and priest were a key issue in the German Bauernkrieg. In this case, the other conditions for revolt were satisfied as well: other avenues had been tried unsuccessfully, the traditional establishment was in financial crisis, its ideological basis was weakened by the Protestant reformation, and there was a potential for tangible improvement in the material situation of the average peasant (Magagna 1991).

and the local knowledge of places to serve as a hideouts—to harness peasant discontent through promises or coercion (Kriger 1992; Palmer 1977). Most revolutionaries, therefore, supported programs that selectively met peasants' demands, such as those providing access to land or eliminating legal discrimination. Additionally, states seeking to quiet peasant unrest adopted such programs.

Rural discontent can, even without the threat of major revolt, cause powerful groups to undertake limited reform and accept the associated loss of some resources. However, such reforms are not necessarily socially beneficial, as is clearly illustrated by the failures of poorly designed land reform programs and the modernization of hacienda systems in reaction to the threat of massive peasant unrest in the early 1960s in many Latin American countries (de Janvry and Sadoulet 1990).

Peasants' lack of potential for collective action appears to be responsible for the almost universal failure of revolts to improve their welfare, even in cases where the revolts succeed and are characterized by strong peasant participation. There are numerous cases of measures being enacted after a revolt which directly favored the urban against the rural population (Nicaragua), settled political cronies on marginal lands but provided little more than promises for the rest (Zimbabwe), or simply avoided distributing land to individual farmers because doing so would conflict with the ideological goals of the state (Cuba). Because these measures were often associated with large inefficiencies—by forcing agriculture onto an excessively capital-intensive path or by collectivizing farms—they did not increase the stability of the postrevolutionary systems.

8.3 Factors that enhance sustainability of reforms

While a fiscal crisis is usually necessary for initiating reform, a politically vocal coalition supporting reform is necessary to ensure that reform is durable and successful. Sustained improvements in policy outcomes appear to have been limited to situations in which the fiscal crisis led to the formation of institutions that allowed the participation of more groups in the political process or increased individuals' ability to demand enforcement of rules. In the context of fiscal crises technical advice, assistance that helps specific interest groups articulate their demands politically, and provision of resources by outside

agents can strongly affect the outcome of the reform process. Reforms are more sustainable when the outcomes are viewed as fair, rather than being challenged by losers.

- *Character of supporting coalition.* The durability of reform requires the support of a coalition of groups benefiting from reform. Building coalitions is easier if the distortions associated with earlier policies are large or groups benefiting from earlier policies are weakened, a range of feasible policy options is available, the state has sufficient technical and administrative capacity, and the reform effort is credible (Haggard and Kaufman 1992).

The creation and strengthening of a coalition supporting reform appears critical to ensuring success. Where potential beneficiaries are not sufficiently organized politically or where there is little policy dialogue that allows the government to explain and fine-tune its policies, reform programs often encounter great difficulties. Increased political representation is particularly important where the beneficiaries of reform are peasants or small traders who are dispersed and have little political voice.

- *Institutions supporting fiscal discipline.* Ability to exercise strong central fiscal control, through the central bank and the ministry of finance is critical to maintaining budgetary discipline, keeping inflation down, and preventing special interest groups from undermining reform efforts.⁴⁶ For a number of reasons, the ability to exert such control is greatly enhanced if reform is undertaken swiftly. First, rapid action is likely to return economies to a growth path faster; step-wise implementation of reform can be justified on economic grounds only if rapid action risks backlash and policy reversal (Wei 1991). Second, quick implementation of reform allows an incoming government to use honeymoon periods and signal its commitment, which enhance its credibility (Rodrik 1989). Third, where reforms are implemented quickly, opportunities for interest groups to organize in opposition are minimized.

⁴⁶ Experience does not confirm the conventional wisdom that military regimes have an advantage in exercising such control. The cases (Argentina, Brazil, Nigeria) where populist or ethnic cleavages frustrated military and civilian governments alike, as well as examples presented in the literature on the coup-trap (Londregan and Poole 1990), caution against such a romantic view of strong leadership.

- *International support* can make reform efforts more credible and provide access to international credit and technical assistance (Santaella 1993). However, the availability of international finance can also delay stabilization, for example, by propping up an unsustainable regime. In highly polarized countries an important side effect of external assistance may be the initiation of a comprehensive policy dialogue that includes the opposition (Haggard and Kaufman 1994).

- *Analytical capacity.* In many reform efforts analytical capacity, often provided by technocrats in enclaves isolated from political pressures, is indispensable for analyzing the current economic situation, providing technically-sound solutions, and ensuring continuous adherence to the reform effort. A necessary technical condition for the ability to exercise fiscal control is that basic information on the economic situation is available and that the incentive structures in the bureaucracy ensure impartial implementation.⁴⁷ Combining macroeconomic stabilization, which produces large gains, with trade liberalization, in which most of the social gain comes at the expense of well-defined interest groups, has made policy reforms much more acceptable to citizens (Rodrik 1992).

Since policy reform presents risks for some individuals and groups, an important issue is the provision of social safety nets.⁴⁸ Providing a basic level of insurance for losers greatly increases political support for reforms.⁴⁹ Eichengreen (1992) argues that the presence of social safety nets and investments that improved citizens' access to education

⁴⁷ If policy reform requires significant reallocation of factors across industries, it is essential that the financial system functions well. For Sri Lanka, Athukorala and Rajapatirana (1993) show that financial sector policies supported the beneficial effects of trade liberalization on both the demand and supply sides. On the demand side, attractive returns on financial assets encouraged people to save their increased incomes rather than spend it on nontradeables—which otherwise would have led to premature appreciation of the real exchange rate and undermined the competitiveness of the tradable sector. On the supply side, increased savings provided funds to invest in the export sector—as indicated by the increasing credit flows to small enterprises.

⁴⁸ Hardy (1992) argues that lack of social safety nets is the main reason for governments' inability to close obsolete and inefficient state-owned enterprises. In many of the transforming economies state enterprises are the sole institutions reaching the poor. This issue is even more important where state-owned enterprises recognize their significance and behave strategically.

⁴⁹ Concerning the potential importance of insurance, Fernandez and Rodrik (1991) demonstrate that because the beneficiaries of reform cannot be known *ex ante*, efficiency-enhancing reforms may not be adopted. Once reforms have been adopted, the uncertainty is resolved. This can explain why reforms undertaken by autocratic regimes (Pinochet in Chile) may survive even when the countries adopt democratic political regimes.

and health facilities were instrumental in bringing about a social consensus during the reconstruction in Western Europe after World War II. The existence of social safety nets weakened support for nationalist forces, prevented conflict between groups with long-standing animosity, and led to rapid economic growth.⁵⁰

The process of reforming agricultural policies has accelerated in the 1990s in the developing world. The triggers have been fiscal crises. Enhanced international support through the General Agreement on Tariffs and Trade (GATT) negotiations, from the World Trade Organization (WTO), and from the World Bank and bilateral donors has also been important. Still, reforms of agricultural and agrarian policies have often lagged well behind general macroeconomic reforms and structural adjustment.

A recent study of six developing countries, chosen because of their commitment to agricultural policy reform in the 1980s and early 1990s, shows just how difficult the reform process has been and how incomplete it remains (Gardener forthcoming).⁵¹ This result is not surprising: distortionary agricultural and agrarian policies are often fully consistent with underlying material conditions and the prevailing features of the political environment. They are frequently linked to organizational residues, such as commodity boards, parastatals, or collective farms. Their elimination and overall agrarian reform would benefit groups who have poor potential for collective action and who are hard to include in postreform coalitions, such as peasants, the landless, or dispersed consumers. Both governments and beneficiaries have limited analytical capacity to evaluate the economic impact of reform. And the real impact of policies is easy to obfuscate.

⁵⁰ Eichengreen (1992) argues that the most important impact of the Marshall Plan for Western Europe was that it facilitated a social pact and reduced the political instability that had caused individuals to “hoard commodities and withhold effort.” This provision of safety nets not only facilitated economic stability, allowed governments to balance budgets, and removed the danger of confiscatory taxation that had caused potential investors to wait, but also provided critical support for proponents of a more market-oriented, rather than command-driven economic approach.

⁵¹ The countries were Chile, Ghana, Honduras, Indonesia, Madagascar, and Mexico. The study also included New Zealand, an OECD country, and Hungary, an economy in transition.

8.4 From taxation to protection: Is agriculture a special case?

A paradox that needs to be resolved is why countries of Western Europe, Japan, Korea, and Taiwan have, during the past fifty years, enjoyed rapid industrial and agricultural growth and dramatic reductions in rural poverty. Farms that rely primarily on the labor and management of owner-operators dominate their agricultural sectors. Agricultural output has risen dramatically in these countries in response to high real prices (usually above world market levels) and other supports, turning most of the countries from net importers into net exporters. Countries with the least comparative advantage in agriculture, such as Japan, Norway, and Switzerland, have supported agriculture the most. The agricultural policies of these countries have been modestly successful in supporting rural incomes, but they have been costly to consumers and the state.

The shift of these Western European and East Asian countries to greater and greater agricultural protection during the second half of the twentieth century illustrates how the elements and processes discussed in this paper can illuminate complex political

processes.⁵² At the conclusion of World War II countries were left with a great number and variety of policies, programs, and organizational residues put into place to manage food and agricultural raw materials during the war. These could readily be put to different uses such as agricultural protection and income support.

The land reforms implemented in Japan, Taiwan, and Korea led to rapid growth in agricultural output and rural incomes. In all of the countries rising urban productivity and incomes increased the opportunity cost of farming, and encouraged workers to migrate from rural areas to cities. Reduced numbers of rural dwellers and rising incomes increased the collective action potential of rural groups in general. Greater commercialization and specialization of farming increased the collective action potential of narrowly focused commodity-based groups. Rural-urban migration reduced the number of farmers, but did not diminish the political representation of rural areas, since voting rules were not adjusted to fully reflect changes in population distribution.

The commodity price boom brought about by the Korean War strengthened the resolve of governments to maintain the security of national food supplies, further boosting the political power of farmers. The food shortages of the early 1970s similarly spurred countries to adopt policies to ensure national food supplies. Many of the policies initiated during these years remain in place today.

In recent years attempts to reduce the distortions of farm policies have led to adjustments in the Common Agricultural Policy of the European Union and the inclusion of agriculture in the framework of the World Trade Organization. An in-depth analysis of the factors contributing to these changes would be one important way of testing the empirical usefulness of the principles outlined above. There seems to be a consensus that the two main factors responsible for this change have been fiscal considerations (Gardner 1996) and the establishment of international institutions, such as the GATT and the WTO, which linked liberalization of agriculture to freer trade in other commodities.

⁵² A number of articles reviewed here (for example, Hayami and Anderson 1986) have emphasized that many of the factors that have been discussed in this review have been very relevant in explaining the transition to higher production.

9. MAIN IMPLICATIONS

In this section we discuss implications under three headings. First, we ask what are the key regularities, and how can they be explained better with the theories and empirical evidence assembled in this essay? We then discuss how the systematic introduction of these elements would change the appropriate policies for agricultural development and agrarian relations. We conclude the essay with suggestions on how to further improve knowledge in this area through theoretical and applied research.

9.1 Elements and regularities with explanatory power

The review of the literature shows that the political outcomes—which influence agrarian relations and determine agricultural taxation, subsidization, and the provision of public goods—result from political bargaining between interest groups, which usually takes place within an economywide budget constraint. The decisions reached through bargaining are more likely to be efficiency- and growth-enhancing when equally powerful interest groups, which are aware of the aggregate government budget constraint and know the economic implications of different policy options, participate; and when impartial institutions facilitate participation of all groups in economic and political activities, and enforce decisions. The greater is the deviation from these conditions, the greater is the potential for efficiency-reducing outcomes. In addition, the costs will fall disproportionately on politically underrepresented or powerless groups. The differences in the potential for collective action and the degree of political articulation among groups involved in bargaining about agricultural and agrarian policies is particularly striking.

- *Peasants' potential for collective action.* Clearly, if other markets are functioning reasonably well, organization of agricultural production in owner-operated family farms would maximize production efficiency. Paradoxically, these family farmers are very unlikely to act collectively. The material conditions of agricultural production—spatial dispersion, seasonal work cycles, covariance of risk, and the associate market imperfections under which family farmers operate—make it difficult for them to act collectively and to be aware of the implications of different policy options. This difficulty also limits their ability to use ideas, ideologies, and information and misinformation to their

advantage. The low potential for collective action among poor peasants explains why many inefficient policy regimes persist. It also explains the striking inability of peasants to initiate revolts in the absence of a nonrural coalition partner, and to transform successful revolts into lasting political change.

- *Rural elites' potential for collective action.* On the other hand, rural elites—whether nobility or large-farmer interest groups—have very high collective action potential, as experience in both industrial and developing countries demonstrates. Rural elites have often been able to secure privileges and avoid taxation, while small family operators have not been able to do so. And when fiscal crises, food supply emergencies, or threats of peasant revolts forced the state to implement reforms, rural elites were frequently able to preserve their privileges. For example, rural elites were often able to steer policies and programs meant to increase rural productivity into capital-intensive investment programs for large farms, thus perpetuating inequality and inefficiency. Where urban groups implemented low food price policies, programs to compensate farmers benefited rural elites almost exclusively, to the detriment of rural growth and the rural poor.

- *Variations in material conditions.* Such variations in agriculture over space and time, and in the associated imperfections in financial, insurance, and land markets have powerful impacts not only on economic outcomes and accumulation processes, but also on the political and institutional environment and a broad range of political outcomes. Population density, in particular, has been used as an explanatory variable in many sections of this paper. Material conditions do change, although slowly, through accumulation processes. While the government's ability to alter the underlying material conditions is therefore limited, there are many examples of how central government-financing of basic health, nutrition, infrastructure, research and extension, and services can reduce the impact of spacial dispersion, covariance of risk, and lack of knowledge—and enhance growth and diversification of rural activity. In the process many of the market imperfections so prevalent in rural areas of low-income countries are reduced.

- *Institutional and political environment provides incentives to individuals and groups to invest, accumulate, and engage in political activity.* In particular, the presence or absence of clearly defined rights to own or use property, and of independent institutions

affects the propensity and ability of different groups to engage in political bargaining and rent seeking, rather than in productive activities. While in the long-run the features of the institutional and political environment are endogenous, they also embody organizational residues, which, at any given time, have independent impacts on the bargaining processes that determine political outcomes.

- *The negative impacts of inequality.* The literature reviewed here indicates that in environments characterized by imperfections in financial and insurance markets, income inequality may help perpetuate poverty and dualistic development. Credit rationing, imperfect insurance and land markets, and the lumpiness of investments prevalent in rural areas limit the ability of the poor to acquire land, draft animals, machinery, and other equipment required to operate even small farms. The same conditions often force poor people to liquidate stocks of productive capital in times of distress.

Income inequality may also increase the likelihood that governments will adopt policies and programs that reduce efficiency. There are three main reasons why. First, inequality reduces the participation of the poor in political processes, both directly and indirectly. This in turn, reduces the likelihood that the poor have access to education and health care services, and other services that would contribute to growth. Inequality may hinder the establishment of independent and impartial institutions, and the enforcement of binding rules, because these might reduce the benefits of the privileged. Inequality makes it easier for the wealthy to hold out in political bargaining, either directly through capital flight. It therefore makes it more difficult for societies to respond quickly and optimally to external shocks, rather than adopting growth-reducing policies, which, nonetheless, protect the privileges of the wealthy.

- *External shocks, the fiscal position of the state, and policy change.* The historical and institutional economics literature shows clearly how fiscal crises of the state—often triggered or aggravated by an external shock—frequently bring about lasting changes in policies and institutions. Fiscal crises, under certain conditions, force the state to devolve some of its power to independent institutions in exchange for financial assistance to meet its immediate needs. This devolution may give rise to independent legal, political, and

economic institutions, which subsequently have positive impacts on policy choices and growth.

External shocks such as changes in the terms of trade can have widely varied impacts, depending on the material and political environment, and depending on the fiscal position of the state. In the event of negative exogenous shocks the state may attempt to compensate influential coalition partners. If the state has sufficient cash reserves or access to credit, it is able to assist them through the use of borrowing or temporary and relatively nondistortionary transfers from fiscal resources. If, on the other hand, the government is in financial difficulty, it may provide compensation by introducing distortions that have no fiscal cost—for example, by allocating large tracts of frontier land or restricting the importation of goods competing with those produced by coalition members. People who are not members of the coalition pay the costs. Positive external shocks can also have negative consequences. If a government has difficulty saving the temporary inflow, income inequality is likely to rise, which may increase the country's economic and political vulnerability to negative shocks.

Finally, under certain conditions the political and economic reforms brought about in response to a fiscal crisis may not be stable. Policy reversals are most likely to occur when the state has insufficient means to finance growth-enhancing public goods, social safety nets, and transfers to politically articulated groups to reinforce support for reform. Paradoxically, therefore, a fiscal crisis, the main initiator of reform, may also ultimately mean that the reforms cannot be sustained. Rapid restoration of fiscal balance following the fiscal crisis, and renewed access to international credit markets, are therefore likely to be key to producing lasting reform.

- *External alliances.* Because of the importance of fiscal crises in triggering reform and because of the critical need for access to fiscal resources to sustain reform, external firms, international organizations, or foreign governments that provide financial resources, military hardware, or food to states in fiscal crisis have exceptional leverage in shaping policy. Whether they encourage the adoption of growth-enhancing and poverty-reducing policy changes depends on their motives and wisdom of those providing the assistance.

9.2 Policy advice when policies, organizations, and institutions are endogenous

Economists and international institutions generally advise countries to adopt efficiency- or growth-enhancing policies. Nevertheless, it is well known that countries are most likely to initiate reform when fiscal or foreign exchange crises make reform essential, and, at the same time, weaken the state's ability to reward members of the coalition who supported the old policy regime. When these conditions prevail, domestic or foreign donors or lenders can use their financial leverage to persuade countries to adopt their policy prescriptions. It is no accident that the World Bank, regional development banks, and bilateral aid agencies adopted policy-based, quick-disbursing loans just as the second oil shock created fiscal crises for many governments.

Consistent with conclusions of the literature reviewed here, studies examining the impact of World Bank policy-based lending show that the reforms will not lead to sustained improvements in policies unless they are supported by a strong postreform coalition. Thus the World Bank's emphasis on "government ownership" of the reform agenda. Indeed, this review suggests that bargaining equilibria among self-interested groups may often lead to stable but inefficient policy outcomes. In these situations the leverage of policy-based lending may not be enough to force adoption of first-best policies.

An additional complication shown in the literature review is that policies and programs that are normally very desirable may not enhance efficiency under some material conditions. For example, fully private land rights where population densities are very low may not lead to higher efficiency and greater growth. In addition, material conditions may affect the sustainability of reform: where population density is very low, rural elites are strong and have ample opportunities to form alliances with other interest groups resistant to change. Policy advice must take account of these complicating factors.

Policy advice should also be based on a greater understanding of the opportunities for reform that are associated with crises, including—in addition to fiscal crises—political crises caused, for example, by the threat of peasant revolts. Several of the successful East Asian land reforms were reactions to communist takeovers following World War II, while the

less successful Latin American ones were associated with the Alliance of Progress following the Cuban Revolution. The emergence of land reform programs in Brazil has also been triggered by massive peasant mobilization, threatening a political crisis. It is during times of crisis that urban elites may be more willing and able to check the power of rural elites.

Policy change, in addition to affecting efficiency and income distribution, also modifies the bargaining power of interest groups and their ability to participate in the political process. Successful land reform improves the political articulation of the beneficiaries. Privatization of parastatals not only reduces fiscal costs and improves competition, but may also eliminate organizational residues that could lead to the adoption of future distortionary policies. Similarly, openness of the trade regime reduces the power of domestic interest groups and encourages governments to maintain budgetary discipline. The international institutions and bilateral donors should systematically consider these possible outcomes when formulating their policy advice.

The importance of income equality. The finding that increased income equality can generate superior economic and political outcomes leads to several conclusions. Primary education and health services, especially for the poor, rural inhabitants, and women, are important not only because they foster growth and help reduce poverty through several well-known channels, but also because they reduce income inequality, and thereby enhance the collective action potential of the poor. Safety nets are necessary because they enable the poor to avoid liquidating their stocks of productive assets in times of crisis, leading to more equal distribution of wealth—which is important for the political environment in the long-run. Redistributive land reform not only gives land to more efficient producers, but also reduces credit market imperfections, which lead to improved investment decisions by the poor. Greater wealth also increases the ability of the poor to directly participate in the political process.

In view of the importance of independent institutions for the sustainability of policy reforms, it is not surprising that new types of policy conditionality in adjustment lending programs have recently been introduced that focus on enhancing the power of independent institutions—including the establishment of independent central banks and judiciaries. Decentralization of political, fiscal, and administrative power may change incentive

structures for political participation and the ability of previously powerless groups to participate, thus creating conditions for bargaining which are more conducive to efficiency. Reforming local governments to allow for greater competition improves transparency and reduces the power of rural elites to appropriate benefits. The rise of civil society institutions, especially in a context of greater decentralization, leads to greater participation. Groups that were previously unrepresented, such as small farmers, can become much more involved in choosing and implementing projects that they benefit from. Participation also strengthens the social capital of poor beneficiaries to influence policy decisions. Finally, documenting and measuring the impact of policies, organizations, and public expenditures on efficiency, growth and rural poverty are needed to reduce the possibility that interest groups succeed in using misinformation and obfuscation as a political tool. But it is not sufficient to produce the knowledge. Poor and vulnerable groups must have access to it so that they no longer have to operate at a disadvantage.

9.3 Toward greater predictive power

We are a long way from being able to explain the differences between the four groups of countries, and individual countries more generally. Instead, we have identified a number of key factors that must form part of an explanatory framework. We have also identified the factors and regularities that can be used to explain major changes in agricultural policy and that need to be taken into account in providing policy advice. But our knowledge is very limited in certain areas—for example, the impact of ideas as generators or facilitators of policy change—and remains poorly integrated across subfields and schools of social science.

Thus there is a great need to develop a more unified theory of a political economy of agriculture and agrarian relations that can be tested empirically. Such a theory must be embedded in the theories of institutional development, state formation, and political decisionmaking, which deal with issues well beyond agriculture and the rural economy. Insights from many disciplines and analytical traditions, from neoclassical economics to historical materialism, provide important elements of such a theory.

How would one develop a better theoretical framework and test whether it is capable of quantitative analysis and predictive power? Developing a theoretical framework is most difficult when all changes in a country—the political and institutional environment, the political and economic outcomes, and the material conditions—are endogenous. Partial theories that try to explain only some elements can omit important explanatory variables, or treat all the right-hand side variables as exogenous. These theories often lead to erroneous attribution of causality, especially in cross-country comparisons. While it is possible to circumvent this problem by using sequential approaches and taking the material and/or political and institutional conditions as largely exogenous, unobserved or unaccounted for variables (such as “fixed effects”) may still undermine the analysis. In truth, only natural endowments and external events are strictly exogenous.

One may therefore initially look only at the impact of changes or shocks in the external environment on the policies, institutions, and programs of a country. Fully modeling the long-term dynamics of political, institutional, and economic change—even though desirable in order to focus on the long-run consequences of alternative agricultural and agrarian policies—is a much more distant goal. Predictions of how the political environment will change in response to external or exogenous shocks—including natural disasters and changes in ideas, the potential for alliances, prices, opportunities for trade and borrowing, and technology—can be tested. The first task, then, is to build a model or theory capable of predicting changes in the political environment in response to external shocks. For this job one can use comparative static models and take many of the material conditions and features of the political environment as constant, even though in a long-term dynamic model they will change—mostly as a consequence of the policy changes initiated by a shock. The models could then be tested by an evaluation of how identical exogenous shocks affect political outcomes differently in different countries, or in the same country at different times, depending on the prevailing material conditions, social and political environments, political institutions, organizational residues, and the degree of participation of the major interest groups. This would lead to more insights on the role played by the factors held constant in the analysis of shocks.

What are the key features of a predictive framework? It is clear that one cannot analyze the impact of external shocks on economic and political outcomes just by looking at agricultural producers or rural groups. First, distortionary and compensatory policies are not confined to only traditional agricultural policies, but include a much wider range of rural and non-rural policies, institutions, taxes, and expenditures. Second, because the economywide budget constraint plays such an important role in whether or not policy changes will be implemented and what the outcomes are, the framework must incorporate all of the key actors who bargain over the political outcomes potentially triggered by a shock. This implies that the analysis must include the small farmers (politically active or not), rural elites, urban elites, urban organized workers, and the unorganized and usually politically uninvolved urban informal sector. Third, the impact of shocks and policies on economic outcomes should be analyzed using frameworks in which exchange rates, prices, interest rates, and wages are endogenous. Otherwise, the impact of the shocks and policies on the incomes of the participants in the bargaining game, and on the state's fiscal position, cannot be measured accurately.

Such models cannot be built on the assumption that constrained maximization of growth is being pursued, since the empirical evidence suggests clearly that agricultural and agrarian political outcomes have often been much more inefficient and growth-reducing than would be consistent with constrained optimization with distributional objectives. Any modeling strategy must admit the possibility of such highly inefficient outcomes.

A model composed of the features discussed above would not allow for much prediction of specific policy outcomes. In order to achieve greater predictive capability, constraints must be added that limit actions by individual groups and the government—and that thus therefore restrict the range of possible policy outcomes. These include the constraints and regularities that have been reviewed extensively in the main sections of the paper: material conditions of rural areas and the broader economies, the striking differentials in the power of interest groups, regularities of bargaining processes, the fiscal position of the state at the time when shocks occur, and the political and institutional environment of the economy at the time when shock occurs.

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