INSTITUTE
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Executive Summaries

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INTRODUCTION

Development assistance programs increasingly emphasize policy reform as a key to economic development and growth. These reform initiatives strike at the fundamentals of political and economic systems: democracy, openness of economies, increased competition, and greater civil and economic freedoms.

While this approach to sustainable and increased economic growth is gaining wide acceptance in both developed and developing nations, methods of achieving the associated policy and institutional reforms are less clear. Transition of political and economic systems is a highly complex process.

The Institute for Policy Reform (IPR) has developed programs that will enhance the foundation for efficient transition processes and the design of institutions and policies that enable nations to change their political and economic systems to support accelerated economic growth.

The Institute engages as IPR Fellows some of the most creative and distinguished scholars available in the policy disciplines as well as policy practitioners to expand the foundations for policy based development assistance. IPR can provide developed and developing nations with access to these leading researchers and academics in economics, political science, and other policy disciplines. A list of IPR Fellows and Board members is enclosed.

The Agency for International Development supports the core research program of the Institute.

The goal of IPR is to undertake research in new and promising areas of economics and political economy directly supportive of policy reform initiatives emphasizing private competitive markets in pluralistic democratic societies. The program is also intended to contribute to more effective development assistance programs, to improve design of policy-based projects, and to better systems for monitoring performance and for evaluation of policy-related programs. The decline in the linkage between economic research and economic policy in recent years has reduced the quality and policy relevance of academic research. Such research is essential for more rapid reduction in poverty in poor countries, and for effective transition of socialist to market economies. IPR is designed as a vehicle to provide the opportunity for closer association between development practitioners and economic theorists to the benefit of both parties.

The basic written IPR product is the Fellows' research published as "Working Papers." This brochure contains the executive summaries of research papers IPR has published thus far in 1994. The brochure will be reissued periodically during the year to include the summaries of the remaining papers scheduled for 1994 publication as they become available. We are publishing the summaries for the convenience of readers. An attempt has been made to produce non-technical summaries, accessible to the non-economist, that capture the gist of the analysis and policy implications. For a full understanding of the research and reasoning involved, interested readers are invited to request copies of the full papers.

The research subjects chosen by the fellows each year for examination under the IPR program address areas of development and transition policy that are significant for policy makers in the countries undergoing these change processes, and that are of major interest to the Agency for International Development. The principal subjects for IPR research in 1993 (most of the research behind the papers summarized herein was conducted in mid-to-late 1993) were problems of structural reform in countries making a transition from socialist to market economies; problems of privatization; aspects of international environmental relations and policy; and selected problems of development and of political change in Sub-Saharan Africa.

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IPR63

New Goods, Old Theory, and the Welfare Costs of Trade Restrictions

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August, 1993

Most economic theory starts from an implicit assumption that policy interventions do not affect the set of goods available in the economy. Recent work in both "new trade theory" and "new growth theory" has shown that this restriction to a world with a fixed and unchanging set of goods severely restricts our analysis of trade and growth. It is not possible to understand invention, intraindustry trade, or the role of what Adam Smith called "the extent of the market" if we persist in assuming that all possible goods are already present in every economy.

This paper considers the implications that this emerging theoretical point of view has for development. The argument presented here shows that traditional models may vastly understate the welfare costs of trade restrictions and other kinds of government distortions for a poor country. A simple example shows that in a conventional model with a fixed set of goods, the welfare cost of a tariff varies with the square of the tariff rate, just as conventional theory says it should. But when we allow for the entirely reasonable possibility that trade can introduce entirely new inputs in production to a developing economy, the example shows that the welfare cost of the tariff can be proportional to two times the tariff rate. Thus the conventional model theory predicts that a 10% tariff should have a welfare cost of about 1% of GDP, whereas the model which allows for new goods predicts that the cost could be as high as 20% of GDP.

The paper also asks why a change in the assumptions we make about new goods leads to such different predictions. It suggests that the model with a fixed set of goods and the alternative model with new goods embody fundamentally different views about the nature of the world in which we live. The tension between these two points of view runs through all of Western thought, and economists, like most other people, have been slow to accept the broader implications that flow from admitting that new things can happen at every juncture. This is true even though the far reaching economic implications the potential for new goods were noted very early in the development of economics as a discipline.

The picture of the economy that emerges once we take the potential for new goods seriously differs in important ways from the classical picture. Path dependence and history are of decisive importance. Discovering new economic opportunities and introducing new goods become the most important economic activities, supplanting the conventional activity of allocating resources between a fixed set of alternatives. Markets cannot be perfect, and decentralized equilibria cannot be first-best Pareto optimal. But in this arguably more reasonable vision of the world, the theoretical support for free trade and limited government is paradoxically much stronger than it is in the idealized world of perfect markets and unchanging opportunities that has traditionally been invoked to support these classical policy positions.

IPR65

The Sequencing of Land and Credit Market Reforms in Developing Countries: A Theoretical Perspective

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This paper is about the sequencing of two kinds of policies in developing countries: the reform of indigenous land tenure systems in order to vest land transfer rights at the level of the individual rather than the community, and the extension of formal credit institutions in the rural sector.

The orthodox view is that the first policy improves efficiency and is virtually a prerequisite to the second policy of extending formal credit institutions. Because of high screening and enforcement costs, formal lenders base their lending decisions primarily on the value of collateral. Land is the main form of alienable wealth in most rural areas, and land tenure reform can make land mortgageable. Thus, it has been argued that land tenure reform plays an indispensable role in the expansion of formal credit in rural areas.

This paper suggests a need to qualify the orthodox view of the sequencing of reforms. First, we show that prior to the establishment of an integrated national credit market, limitations on land transfer rights may serve to increase efficiency by improving the performance of informal credit markets. The informal financial markets on which most farmers in sub-Saharan African and Asian developing countries rely are highly segmented. In such environments, the indigenous land tenure systems could be understood as the (not necessarily perfect) result of an attempt to diversify risk within each segment of the credit market. Diversification of group risk increases the ability of the informal credit market to mitigate the consumption and production risk faced by each household. Group controls on land transfers can thereby enhance efficiency.

Second, this paper contributes to the emerging literature on substitutes for mortgageable land as collateral in the formal credit markets of developing countries. We show that financial or physical collateral in credit markets is not limited to pre-existing wealth endowments. We analyze a novel tax-transfer-mortgaging scheme that was suggested by a program in Sri Lanka in which all households received ration coupons, and ration coupons were pledged as collateral for loans. The mechanism we consider entails a tax on labor output to finance a transfer to each individual equal to the average tax payment made. The individual can pledge this transfer payment as collateral. In a simple setting of moral hazard in the credit market, we show that this bootstrap collateral has the potential to make every individual better off by mitigating information problems that create inefficiencies in investment. Numerical simulations illustrate the resulting welfare gains.

IPR66

Restructuring and Privatising Electric Utilities in Eastern Europe

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The arguments for privatising all state-owned enterprises producing competitively marketed goods and services do not immediately apply to network utilities such as gas, electricity, telecommunications, etc., where the networks are natural monopolies. There are sound economic arguments for regulating such natural monopolies and the main question is whether this requires public ownership or whether the public interest can be adequately represented by regulating a privately owned network. Until recently, these industries were in public ownership in most European countries, and even now, Britain is unusual in having privatised telecoms, gas, electricity, and water.

The importance (and ultimate political necessity) of regulating privatised natural monopolies is clearly not widely appreciated in Eastern European countries, where regulation is identified with the dead hand of bureaucratic socialism. Perhaps as a result these countries are actively attempting to sell such utilities. The arguments for privatising telecoms are simple. Huge investment is needed for efficient financial systems and the market economy, most readily supplied by telecoms companies in America and Western Europe. These companies can supply technical expertise, management skills and access to foreign capital, all of which are essential. In addition, the problems of privatising capital-intensive network utilities can be overcome without great difficulty. Privatising electricity is harder, and in Hungary the lack of a clear objective has resulted in confusion, delay, and inappropriate legislative design. The paper draws on the lessons from privatising the English electricity industry in 1990, and asks what steps are needed to privatise the Hungarian electricity industry.

Compare the relative attraction of selling airlines, telecoms and electricity to a foreign buyer who must balance risk and return in deciding how much to pay. The return depends on the level of prices allowed, while the risk depends on the period over which the investment is recouped and the confidence that he can charge cost-reflective prices over the life of the investment. This will depend on the system of regulation, the demand for the service, and the bargaining power of the investor after he has made the investment. In the case of airlines, the capital is not sunk and can be reallocated or resold if the regulator fails to allow satisfactory tariffs. Telecoms are very different, as the investment is highly durable and specific, so that the investor cannot recover his sunk cost and move elsewhere. The regulator may be tempted to hold tariffs down to transfer rents to consumers after the investment is sunk, but will be deterred from this if the penalties are sufficiently high. In the event of disagreement between the regulator and the utility, the utility can retaliate at high cost to the country by refusing to invest in further capacity. The retaliation costs will be even higher if foreign expertise is needed to operate the system on a daily basis, or if foreign cooperation is needed to interconnect with foreign networks, for then the host country loses not only future expansion but risks the whole current system. In fact, the costs to the country of alienating a major foreign telecoms investor are probably so large relative to the benefits that all parties can be confident that it will not happen.

The electricity industry in contrast faces low demand growth and thus has little need for further investment, and can rely on indigenous technology and management, so the foreign owners have little power to retaliate if they are unhappy with regulation. It follows that regulation must be durable, credible and not prone to political manipulation if investors are to have the confidence to bid a reasonable price.

The Hungarian electricity industry was originally managed as a trust that had many similarities with the bureaucratic British Central Electricity Generating Board before privatisation. It systematically underpriced electricity to domestic consumers and skimped on investment in enhancing efficiency, concentrating instead on supply security and reduced import dependence. In 1992 it was reorganised into a corporate structure with a view to privatising up to half the state' s holding, as a means of reducing public (and foreign) debt and financing future investment. This objective was compromised by an unwillingness to create a regulatory framework that could guarantee the independence of tariff-setting. If prices of electricity could be raised and maintained at economic levels, most of the industry's fiscal problems would disappear, and privatisation would not be required on that account.

The evidence from Britain is that privatisation is primarily required to upset the political economic equilibrium that leads to the underpricing in the first place. For this, the industry probably needs to be vertically de-integrated, which in turn strengthens the case for careful regulatory design, specifying the duties and rights of the licence holder and the regulator, and laying down dispute resolution procedures. The main benefits from privatisation are that it forces the government to provide a robust and credible regulatory framework, whose efficacy can be tested by attempting to sell the industry. This test has already been applied in Hungary and the system found wanting.

If the industry is restructured to de-integrate component parts, so that the potentially competitive elements are exposed to market competition, then considerable improvements in efficiency should result, while effective regulation of the natural monopoly elements may also improve efficiency, though this is more difficult. The main problem lies in adequately regulating the transmission and distribution system to retain the benefits of coordination and optimising the overall system while providing incentives for improvements. The British experience suggests that this process can be lengthy, and may result in large mistakes before the price signals are adjusted. It may therefore make sense to delay the deintegration of generation and transmission, even though many of the benefits of competitive pressure on generation will thereby be delayed.

IPR67

Optimal Tax Rates and Tax Design during Systemic Reform

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The transforming countries of Central and Eastern Europe (CEE) are replacing Soviet-type institutions by those appropriate to a market economy. Soviet-type economies had little need for personal income or consumption taxes as state enterprises paid a net wage, with tax revenue collected out of profits. Private enterprise requires a shift to taxing persons rather than enterprises, so an important part of systemic transformation is tax reform. Hungary led the way in 1988 by introducing a personal income tax, a Value Added Tax, and a profits tax, modelled on western counterparts. Other countries in the region are following suit. Systemic reform therefore raises the question of the appropriate design of the tax system. This in turn requires choosing the balance between direct and indirect taxation, as well as its level and the degree of progression of personal income tax, and of the share of taxes in GDP.

The question is of considerable practical concern, as the transforming countries are subject to two offsetting pressures. On the one hand the population and external advisors argue that their tax shares are high by comparison with most western economies, and should be lowered to improve incentives and allow market forces to play a greater role. On the other hand, the costs of restructuring are high, revenues from the enterprise sector are falling sharply with increased competition and privatisation, and budgets are everywhere under pressure. Should the government recoup the lost enterprise revenue by higher personal income taxes, or should it cut transfers to individuals and hence lower the overall share of tax and public expenditure?

Questions about the desirable level of taxation and redistribution are most readily addressed using the machinery of optimal tax theory. This approach is not without its critics, but it provides the only systematic way in which the relative magnitudes of different influences on the desirable level of taxation can be estimated. It provides a coherent framework to guide the analysis, consistent with modern welfare economics, as exemplified, for example, by cost-benefit analysis.

Four factors influence the optimal tax rate. The first is the degree of inequality in skills. The higher the degree of inequality, the higher the tax rate is likely to be, other things equal. The degree of skills inequality appears to be lower in socialist economies than market economies, as measured by the wage dispersion, but is likely to increase as new skills are required for success in the market place, and many existing skills become obsolete. The second factor is the level of government expenditure required for non-redistributive purposes — the higher the fraction of GDP required, the higher the tax rate. CEE countries may have a higher non-redistributive revenue requirement for administration than comparable countries, which in the past was adequately covered by enterprise revenue. The main problem is that enterprise revenue has fallen sharply, while infrastructural investment demands (especially in transport and telecommunications) have increased, both increasing the uncovered component of required revenue.

The third factor is the elasticity of substitution between taxed and non-taxed activities (work and leisure in the benchmark case of a comprehensive tax system in which all goods and services can be taxed). The higher is this elasticity, the lower the tax rate, provided taxes are adequate to cover the fixed expenditure requirement. Soviet-type economies have remarkably extensive control over incomes (via state enterprises) and over access to consumption and work, greatly reducing the opportunities for substituting untaxed for taxed activities. The transition threatens this in various ways. The move to a market economy with numerous smaller firms leads to a loss of information about tax liabilities, while the reform of the tax system disrupts existing procedures. Lower tax efficiency reduces the fraction of income falling within the tax net, raising the marginal cost of tax collection and reducing the optimal tax rate. Finally, the more egalitarian the government, the higher the tax rate. Countries like Hungary appear exceptionally egalitarian by western standards, but the transition in Eastern Europe is eroding political commitment to the previous degree of equality, and with it, the desired marginal tax rate.

These theoretical considerations pull in different directions. The first two arguments suggest that an increase in taxes might be justified. Wages may become more dispersed, arguing for more redistribution. Required public expenditure net of enterprise receipts will almost certainly rise. The last two arguments suggest that optimal tax rates should fall as a result of transformation, as the ability of the tax system to collect revenue falters, and public support for equality erodes. If the theoretical arguments appear balanced, the issue can only be resolved by numerical calculations showing how the optimal tax rates vary with each factor.

The paper presents a model and calculations that allow these issues to be addressed, and finds that the most potent influence on redistribution is the coverage of the tax system, primarily through its effect on the degree of substitutability between taxed and untaxed goods and services. If we ask why some taxes are hard to collect, it becomes clear that there is an important difference between direct and indirect taxes. Indirect taxes may be hard to levy on some goods (casual services, farm produce marketed on street stalls, and other products of the informal sector), but where the taxes may be levied, they are paid by all. Direct taxes may be evaded by under- or non-reporting, but where paid affect disposable income and hence all expenditure. Relying on indirect taxes means that all people are taxed on some of their expenditure, while relying on direct taxes means that some people are taxed on all their expenditure. This suggests that the optimal design of the tax system in the presence of evasion will involve both direct and indirect taxation.

Although changing attitudes to inequality and changes in the inequality of skills may lead to roughly offsetting changes in the optimal tax rate, these effects seem small compared to changes in the efficiency of tax collection as measured by tax coverage. The other striking finding is that increases in non-redistributive expenditure (net of enterprise revenue) crowd out redistributive transfers to a considerable extent, so that for example a (permanent) fall in enterprise revenue of 1 per cent of GNP should lead to a cut in transfers of between one third and two-thirds of 1 per cent of GNP, and only a small rise in the total tax share in GNP.

IPR68

The Political Impediments to Economic Reform: Political Risk and Enduring Gridlock

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Economic reform generates a striking paradox. For developing countries, economic reform holds the prospect of greater prosperity for all. Yet in surprising range of cases, political gridlock prevents reform, maintaining the status quo of low or no growth. Entrenched interests commonly attempt to block or sabotage reform and are often successful. Examples are ubiquitous: labor unions in Argentina; farmers in Africa, India, or Russia; managers of state-owned enterprises in the former Soviet Union; and urban workers receiving subsidized food in Africa. The paradox is that under successful reform, increased prosperity allows all to be better off. So why do many interests oppose reform? Moreover, is there anything that can be done about this problem?

The analysis in this paper demonstrates the importance of the political underpinnings of economic reform. It does so by focusing on the need of all governments to maintain sufficient political support to survive. This requires that regimes in the developing world evaluate the prospects for economic reform in political as well as economic terms: How will it affect their chances for survival? Reform programs that require a regime to attack its major support constituency without a concomitant gain in political support from other elements of society are on dubious grounds. As the case in Zambia of the mid-1980s shows, such reform is launched at the regime's peril. The consequence is either reversal of the reforms or failure of the regime.

For parallel reasons, economic groups will evaluate a reform plan in political as well as economic terms. The latter concern the potential benefits and costs from the plan as designed. But these alone do not determine the success of the reforms. To the extent that the reforms are easily reversed, economic actors cannot take the reform and its promises at face value. Attending any reform program is a degree of *political risk* that arises over and above any economic uncertainty: Will the reforms succeed? Will they be reversed because of political pressure? Or will the gains be eroded via corruption? The uncertainty revealed by these questions suggests that an interest group's decision about whether to support the reforms is complex and depends on critical political questions as well as economic ones.

This perspective helps explain why political gridlock often prevents the introduction of meaningful reform. Under many circumstances, entrenched interests are reluctant to support reform despite the promise of large economic gains. To the extent that they believe that the promises of benefits are unlikely to be realized, they will oppose reform. If, for example, the group is outside the regime's constituency and thus without political leverage, it may rationally fear that the regime will not honor its promises. The consequence is either gridlock or reform failure.

Thus, the economic content and design of the reform package are of obvious importance; but they are not the sole determinant of its success. The political environment in which it is embedded matters as well. The analysis also suggests what types of measures make the reform package more credible and hence lower the political risk to the entrenched interest from supporting reforms rather than fighting to maintain political gridlock.

The principal conclusion of the analysis is this: Holding constant for the economic and technical aspects of a given reform, the ability of the government to commit credibly to the reforms is a critical variable in the reform's success. This implies that political development must accompany economic development. Political development is not something that automatically follows economic development. Successful development therefore requires that a country develop the appropriate political foundations for reform simultaneously with the adoption of the appropriate economic policies. Only the former have a hope of providing the secure foundation needed for long-run economic prosperity.

The approach is applied to topics such as agrarian reform in Africa and the former Soviet Union; the removal of exchange rate controls and patronage systems in Zambia; central political considerations underlying the rise of Korea and Taiwan; and sequencing considerations in China's successful economic reforms.

IPR69

Ethnicity, Leadership Succession and Economic Development in Africa

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1) We formulate and systematically test three hypotheses about the political implications of ethnicity in African politics. Our hypotheses pivot on the issue of leadership because if ethnicity is so important for political conflict, we should see an effect on leadership change. Our first hypothesis is that leaders from majority ethnic groups are more likely to stay in power than comparable leaders from minority ethnic groups.

2) African leaders who are military men may be able to overcome the liabilities of minority ethnic status better than civilians because they can employ coercion more easily than civilians can in order to stay in power. Our second hypothesis serves to address this issue. Perhaps ethnic minorities use military rule, and more generally nonconstitutional rule, as a shield against ethnic majorities. We test this second hypothesis using the set of exiting leaders in our sample. We expect nonconstitutional exit to be more common among exiting rulers with relatively small ethnic population shares. Our discussion further refines this hypothesis by noting the importance of ethnic context. In nations with one dominant ethnic group, we may expect minorities to perceive a greater threat from that group than they would in a country that is more ethnically diffuse. We develop measures of ethnic minority status which account for the interaction of minority status with the level of ethnic diffusion in a country.

3) Our third hypothesis also focuses on the salience of ethnic identity during the transition between leaders. While we might expect that individual leaders will strive harder to remain in power when the ethnic stakes are high, we hypothesize that leaders are disproportionately likely to be replaced by members of their own ethnic group. This third hypothesis can be tested by considering the impact of the size of a leader's ethnic group on the probability that when leadership change occurs, executive authority passes to another member of the leader's own ethnic cohort. We thus are testing for an elevated probability of intra-ethnic leadership succession. One might think of this as a kind of "incumbency advantage" for ethnic groups.

Our third hypothesis is appropriately compared with the alternative view that ethnicity is irrelevant to leadership change. In this view, a leader's ethnicity has as much political

impact as his blood type or shoe size. If this hypothesis is true, the size of a leader's ethnic group affects the probability of intra-ethnic leadership transition as a matter of accounting: leaders from large ethnic groups are more likely to be replaced by successors from the same ethnic group simply because there are more people from that ethnic group. In this view of "ethnicity as blood-type," the probability of intra-ethnic leadership succession is strictly proportional to the size of the exiting leader's ethnic group.

4) To test hypotheses about the importance of ethnicity to leadership transition, we have assembled data on leaders, on their ethnic affiliations, and on the ethnic mix of the countries they rule. Our biographical data emerge from Bienen and van de Walle (1991).

5) Another variable incorporated in our analysis is an indicator for the leader's means of gaining power. Those who come to power by nonconstitutional means are treated throughout their rule as nonconstitutional. In our dataset, no legitimizing plebiscite or democratic reform program will wash away the "original sin" of nonconstitutional entry.

6) In light of findings suggesting a role for economic variables in leadership transition (Londregan and Poole, 1990,1991, 1992), we have also drawn on economic data. Our economic variables come from the most recent version of the Penn World Tables (Summers and Heston, 1991). We include information on growth, the level of income, and international trade. Our growth variable is the proportional change in real per capita GDP between the previous year and the current one, both measured in 1985 US dollars. Our variable for the income level is the previous year's per capita income, also measured in 1985 US dollars. In other research, the natural logarithm of lagged per capita income has been found to perform better as a predictor of current growth, and of coups and nonconstitutional rule (Londregan and Poole, 1992). We therefore use the natural log of lagged income rather than the level itself.

To calibrate the impact of international trade, we construct a measure we refer to as "openness", defined by the sum of imports plus exports divided by GDP. This value ranges from a theoretical minimum of O for a country which engages in no trade, to a value of 2 for a country that exports everything it produces and which imports an equal value of goods and services.

Merging these variables results in a dataset of 836 observations, each matching a country/year of political and economic data with the relevant leader. Our sample period runs from 1962 or the date of independence, if it is after 1962, until 1987 and our data encompass 39 separate countries. The 1962 date was chosen to take advantage of economic data that report a country's involvement in international trade, as measured by the value of exports, plus the value of imports, both divided by GDP. Because of the late advent of independence for African states, little data was lost by discarding pre-1962 observations for our other variables.

7) A quick glance at Table 2 reveals that for the countries in our sample, the pace of leadership turnover is very slow. The average rate of leadership turnover in our sample is 8.01% per year, corresponding to an average reign of about 12 years. The probability of losing power is much lower for the leaders in our sample than for their counterparts in Europe and the Western Hemisphere. (See Bienen and van de Walle, 1991.)

8) The average leader in our dataset came from an ethnic group with just over 1/3 (36.2%) of the national population. Contrary to the belief that leaders from majority ethnic groups have a firmer grasp on the reins of power and in apparent rejection of our first hypothesis, Table 3 reports the insignificant correlation in our sample between leaders' ethnic shares and their exit risk ($\rho = -0.049$, $t = -1.374$). This insignificant correlation coefficient may be an artifact of our not having corrected for the influence of intervening variables, such as the rate of economic growth, that may mediate the effects of ethnicity. The insignificant correlation may also stem from our approach to measuring the size of the leader's ethnic group.

We need to be able to take a nuanced view of size variables by constructing a measure of the relative size of the leader's ethnic group. For example, a Yoruba leader in Nigeria, an Ndebele leader in Zimbabwe, and a Teke leader in the Congo each come from ethnic groups with population shares of about 20%. However, we would argue that the Yoruba leader in Nigeria, as a member of that country's second largest ethnic group, draws on a stronger ethnic base than the other two do. The ethnic mix of Nigeria is diffuse; there are two other ethnic groups of roughly comparable size to the Yoruba; the Ibo (17%) and the Hausa Fulani (29%), along with many small ethnic groups. Contrast this with the Congo, where the population share of the Teke is decidedly smaller than that of the Kongo, who account for 47% of the population, or with Zimbabwe, where the 20% share of the Ndebeles is dwarfed by the 80% share for the Shona. We contend that an ethnic group constitutes a stronger base of political power when the ethnic composition of the remainder of the population is relatively diffuse than when it is concentrated in one or a few ethnic groups.

Thus we create a measure which adjusts the ethnic share of the leader's group for the degree of diffusion among the country's ethnic groups. We call this measure "ESDl" (Ethnic Size Dominance). This measure accounts for both size and dispersion of ethnic groups, and is derived from what is called a Herfindahl index. (See Herfindahl, 1950; Stigler, 1968; Hart, 1971.) Our ESDl measure for leader L is defined as follows:

$$ESD_1 = \frac{S_L}{\sqrt{S_1^2 + S_2^2 + \ldots + S_N^2}}$$

Where there are N substantial or significant ethnic groups, S_L is the population share of the leader's ethnic group, and S_i, $i \in \{1,2, \ldots, N\}$ is the share of ethnic group i. We can thus estimate a value of ESDl for every leader in our sample. ESDl is bounded by 0 and 1. The closer ESDl is to 1 the greater the relative share of the ethnic group. In addition, this ethnic size dominance index has the advantage of being sensitive to the number of ethnic groups in a given country. Thus, the more diffuse a country's ethnic structure, the larger the value it attributes to a fixed population share. To return to our previous example involving Nigeria and Congo, we calculate a value of .484 for the Yoruba, but only a value of .371 for the Teke.

9) When we substitute our more contextually sensitive measures of ethnic size, ESDl and ESD2, (which gives more weight to relatively large groups) the results are no more favorable to the hypothesis that leaders from large ethnic groups are more deeply entrenched in power. In neither case is the correlation between our ethnic measure and the exit rate statistically significant. For ESDl the correlation is only -0.025 (t = -0.710), while for ESD2 it is -0.047 (t = -1.325).

10) The empirical regularity that political exit and low rates of economic growth tend to occur together raises an ambiguity: is this association the result of leaders being ousted when the economy performs poorly, or does political exit itself inhibit growth. This growth inhibiting effect may operate through uncertainty about future public policy during a protracted power struggle, or, in the case of coups d'état and civil wars, the very *process* of exit may be intrinsically destructive. Of course, it is more likely that some combination of these factors is at work, creating simultaneous feedback between political transition and economic growth. To control for this endogeneity, we use an instrumental variables approach in the parametric statistical analysis.

11) The estimated coefficients for current and lagged growth are surprisingly consistent with what a reading of the literature on the US and Western Europe would lead us to expect (Alesina *et al.* 1992, Erikson 1989, etc.): economic growth reduces the leader's risk of losing power. While our lagged growth coefficient is much smaller than the coefficient for current growth, it is also more precisely estimated. This almost certainly results from the efficiency loss from using an instrumental variables estimator of the impact of the current growth rate. When we substitute our ESDl measure for the leader's ethnic share, we obtain qualitatively similar estimates, which are reported in column 2 of Table 4.

12) Our third hypothesis is that when leaders leave power, their replacements are disproportionately likely to come from their own ethnic group. An alternative to this hypothesis is that the probability a leader is replaced by a member of another ethnic group is directly proportional to the population share of all other ethnic groups. If the alternative hypothesis is true, so that members of the exiting leader's ethnic group are no more likely to replace him than anyone else, the coefficients for the two leader characteristic variables and income should equal zero. In stark contrast, we find that all three variables have statistically significant effects on the probability a leader's successor comes from another ethnic group.

13) The positive coefficient for nonconstitutional rulers is consistent with the view that nonconstitutional rule is used to defend control of the government against ethnic outsiders. In an ethnically polarized authoritarian setting, we might expect that ethnic affines of the national leader, even ambitious ones, will be reluctant to move against their leader for fear the ensuing chaos will be exploited by ethnic outsiders. In contrast, the only way to achieve political power for ethnic outsiders in an ethnically based authoritarian regime may be to overthrow the government. If this were the case, nonconstitutional rulers, when they lost power, would tend to be replaced by successors from outside their own ethnic group.

14) Conclusion

This analysis uses cross-national data in which each country is followed over time to examine the role of ethnicity in African politics. Because of the relative ease and precision with which we can measure the entry and exit of national leaders, we formulate and test three hypotheses about the effect of ethnicity on leadership change.

The point of departure for our first hypothesis is the conjecture a leader's ethnic affines are natural political allies, helping him to remain in power. All else equal, the more allies the better, so our first hypothesis is the larger the population share of the leader's ethnic group, the lower the probability the leader loses power. We decisively reject this hypothesis. Only among leaders from the smallest ethnic groups do variations in the size of the leader's ethnic group have the hypothesized effect. For most of our sample, the results are directly opposite those predicted: leaders from larger ethnic groups run greater risks of losing power. All else held equal, leaders from the largest ethnic groups are the *most* likely to lose power.

Our second hypothesis is framed from the perspective that minority ethnic groups may use nonconstitutional rule as a shield against ethnic oppression by more populous groups. Accordingly, we expect rulers from ethnic minorities to more ruthlessly cling to power, and hence, we hypothesize the probability of nonconstitutional replacement declines with the size of the leader's ethnic group. Our results directly counter this claim. Except among leaders from the smallest ethnic groups, we observe the probability of nonconstitutional replacement actually *rises* with the size of the leaders ethnic group.

Our third hypothesis, and the only one which receives strong support from the data, is that rulers are disproportionately likely to be replaced by members of their own ethnic group. This is what we would expect to see if the ruling elite were drawn disproportionately from one or a few ethnic groups. In particular, we find that nonconstitutional rulers are more likely than other leaders to be replaced by people from outside their ethnic group, while the rulers of wealthy countries are less likely to be replaced by ethnic "outsiders". This is what we might expect if political support coalitions divided along ethnic lines, and were better able to control the process of succession in wealthy countries, and within constitutional environments.

IPR70

The Price of Power: Commodity Prices and Political Survival in Africa

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There are literatures in both economics and political science that investigate the relationship between political arrangements and economic growth. Development economists have investigated whether measures of political and civil liberties enhance the rate of economic growth, while political scientists have asked whether democracy is itself a luxury good, something that can only be afforded by wealthy nations. There is a literature on the effects of political instability on various economic outcomes, on public finance and debt, as well as on the rate of economic growth, and there is a literature on economic growth inhibiting the transfer of power, whether constitutional transfers such as elections, or unconstitutional transfers, such as *coups d'ētats.* In all of these studies, it is difficult to know whether the causality typically flows from economic to political events, or *vice versa.* Many studies simply assume a particular direction of causality, while others make use of timing, assuming that earlier events are causally prior. While some such assumption is likely to be necessary, it will be controversial in any context where agents look to the future. Incumbents often know the dates of future elections, or can engineer economic changes in anticipation of troubles ahead, so that it is quite possible for events to occur in advance of their ultimate causes.

An empirical investigation of causality requires an instrumental variable, something that affects economics, but not politics, or *vice versa.* For example, if variable x affects the growth rate of national income, but is plausibly unaffected by the political events in question, x should help predict the politics if economics causes politics, but it should be uncorrelated with political events if the correlation between politics and economics flows from the former to the latter. This paper proposes that fluctuations in the world prices of primary commodity exports be used as such an instrument in the context of Africa, and uses it to investigate one particular type of political phenomenon, the survival of leaders. For many African countries, a large share of GDP—and an even larger share of exports—is accounted for by exports of primary commodities. The world prices of these commodities are (in)famously volatile, and since they are typically set in world markets, to which African producers contribute only a share, they are not likely to be affected by political events in the African countries themselves. Increases in commodity prices increase producers' incomes—not only through the direct effects of higher prices—but also by stimulating government expenditure and domestic investment and, through a multi-prices—but also by stimulating government expenditure and domestic investment and, through a multiplier-accelerator process, gross domestic product. Fluctuations in world prices thus fulfil the conditions for an instrument; they are exogenous to the domestic political process, and they help predict economic outcomes.

The paper's first empirical task is to establish the links, first between political survival and the growth rate of GDP, and second, between the growth rate of GDP and fluctuations in the world prices of the commodities exported by African countries. In both cases, significant relationships are found, in confirmation of the previous literature. It is therefore possible to use the commodity prices to construct measures of economic growth that are free from feedbacks from political events, and to investigate whether they, like the raw measures of economic growth, appear to prolong leaders' survival. The answer is in the affirmative, and the study uncovers no evidence of important feedbacks from political turnover to economic growth. However, the results are weakened by the fact that, although commodity price growth has a strongly significant effect on economic growth, it predicts it quite poorly, so that the two-step link from prices to growth to survival is quite attenuated. As a result, the parameter estimates are imprecise, and are consistent with a number of different interpretations. Matters can be improved a good deal at the cost of assuming that at least some prior variables are also causally prior. In particular, if it is accepted that, conditional on the growth of GDP, political survival is unaffected by the earlier growth rates of GDP and its components, the results become much more precise, and once again are in favor of the original position, that economic growth helps leaders remain in power.

IPR71

Commodity Prices and Macroeconomic Management in Africa

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It is now widely believed that commodity price booms are bad for African countries, and that macroeconomic mismanagement is so severe as to turn potential blessings into curses. It is argued that although governments initially try to save windfalls, they finally invest far in excess of their saving, so that the final legacy of the windfall is debt, that such investments are usually of poor quality and have low returns, and that governments raise their current expenditures in a way that is difficult to reverse when the boom turns to slump, and thus destabilize the economy when sharp and often harmful cuts have finally to be made. In Deaton (1993), some of these contentions were tested by an econometric analysis of the dynamic effects of commodity price changes on GDP and its components, and few deleterious effects were found. Instead, commodity price shocks have both immediate and lagged direct effects on investment, with indirect effects on gross domestic product through a mechanism that bears a close resemblance to the textbook multiplier accelerator. Although there is a simultaneous expansion in government expenditure and in net imports—the last presumably the counterpart of the increase in real investment—the estimates show neither a sustained expansion of government expenditure nor the presence of sharp reversals some years after the shock. There is also no evidence of a long-term deterioration in net exports; a positive commodity price shock results in an *increase* in net exports from the second year on. These results can be (and were) challenged on a number of grounds: that they paid no attention to the country experience where the conventional story had been established, that they took no account of the ultimate effects of commodity price booms on debt and on inflation, and that they likely suffered from the usual ambiguities of interpretation associated with the weak data base for the continent as a whole. The current paper addresses these issues.

Section 1 re-establishes the original results using improved measures of commodity prices, and with the correction of a number of errors in the original data series. The 14-commodity indices are extended to 20-commodities, so that we now have good price indices for a number of countries whose commodity exports were not included in the original study. Section 2 looks at the individual country evidence, and explores the links between commodity prices and real GDP, using both purchasing-power-parity and 'official' national accounts data. There is a great deal of heterogeneity from country to country; some show an obvious link between output and commodity prices, some show none, and some show links in some periods that are not repeated in later episodes. Individual country regressions are hampered by lack of degrees of freedom, but the positive association between commodity price growth and the growth rate of GDP in the pooled data is replicated for more than three-quarters of the countries. Over all the countries together, there is a clear association between commodity price and output growth, so that perhaps one fifth of the decline in the rate of economic growth in Africa in 1980-85 as compared with 1970-75 can be attributed to the behavior of commodity prices.

Section 3 investigates the relationship between commodity prices, the accumulation of debt, and inflation. The econometric results show no effect of commodity price booms on long-term international debt, and the reason is transparent from inspection of the data. Although it is true that the countries that experienced commodity price booms in the late 1970s increased their long-term international debt then and in the early 1980s, so did countries that experienced no booms, or whose export prices fell, so that there is no systematic evidence of an association between commodity price booms and the accumulation of debt. There is more evidence of a link between commodity prices and inflation, though the effect is modest once domestic price deflators have been purged of the automatic effects associated with the increase in world prices of exports. Standard deflators, that divide nominal national income by a real output measure include the inflated commodity prices in the former but not in the latter, and generate 'domestic inflation' as a matter of mechanical accounting.

Section 4 investigates the robustness of the econometric results to alternative specifications, estimation strategies, and data sources. The major area of concern is the substitution of 'official' for purchasing power parity national accounts, where the dynamic effects of commodity price changes on the structure of national output are estimated quite differently. However, the differences between the two sets of results are largely differences of timing, and both sets of national accounts show the same positive effects of commodity price increases on output and growth in the medium to long-runs.

IPR72

The Public Economics of the Montreal Protocol on the Ozone Layer

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In recent years, the Montreal Protocol on ozone has been heralded as a monumental achievement in international cooperation. It has been suggested that the Montreal Protocol should serve as a blueprint for cooperative agreements for other global commons problems involving global warming, tropical deforestation, acid rain, and ocean dumping. We present theoretical and statistical findings that suggest that the Montreal Protocol may be more symbolic than a true instance of cooperation.

To support our claim, we apply the theory of the voluntary provision of a pure public good to derive an equation for emission reduction. Reduced ozone emission represents a pure public good, because the preservation of the stratospheric ozone shield provides benefits that are nonrival and nonexcludable on a global scale. That is, ultraviolet radiation protection provided by the ozone shield to one nation does not limit the protection provided and received by other nations. The theory-generated equation relates chlorofluorocarbons (CFCs) emission reductions to a country's income (GNP) and to two taste parameters, involving political rights and geographic location. We test this relationship for the 61 nations that reduced CFCs use between 1986 and 1989, and find support for the noncooperative theory. These emission reductions either took place prior to the Montreal Protocol taking effect or else before mandated cutbacks from 1986 emission levels were required. Moreover, these reductions involved ratifiers and nonratifiers. For the 61 nations in our sample, CFCs reductions from 1986 to 1989 amounted to 41.6 percent of their 1986 CFCs emissions. The treaty instituted a 20 percent reduction, using 1986 as a baseline, in the year commencing on 1 July 1993. Further support for our contention is provided by rank-ordered statistical tests, based on correlations. We also use the theory to simulate membership size for the Protocol under two alternative scenarios, and then compare the predicted to the actual participation. Our model under predicted membership, due, in part, to the sanctions and positive inducements (i.e., financial and technical assistance, delayed compliance) given to developing nations. We, therefore, conclude that these inducements had the desired effect of increasing the number of ratifiers.

We also examine the 1979 Convention on the Long-Range Transboundary Air Pollution and the 1985 Helsinki Protocol, which deals with acid rain in Europe. For sulfur dioxide emissions in the 1980s, our statistical analysis indicates that this noncooperative theory does not apply for this Convention and its Protocol, owing to localized effects and impure public considerations stemming from wind direction and location. The latter implies differential impacts on participants. The contrast between the application of the theory to the ozone and acid rain problems highlights that different global commons issues do not conform to the same underlying behavior of the participants. Inconsequence, policy reform and prescriptions must be tailored to the particular commons problem; generic policies and treaties are not expected to succeed.

A number of policy recommendations follow from the analysis. First, the Montreal Protocol may be a poor blueprint for other global agreements, especially those involving impure public goods or high abatement costs (e.g., global warming). Second, the wealthiest CFCs emitters can be expected to adhere to the Protocol without the need of an enforcement mechanism, because the net benefits from doing so is apparently positive. Self-interests motivate compliance Third, an increase in the number of democratic countries is apt to increase the number of nations that will take steps to curb transboundary emissions. Thus, increases in political freedoms, achieved after 1989 by the transitional countries of Central and Eastern Europe, may serve to increase compliance with the Montreal Protocol's provisions. Fourth, foreign aid that increases the GNP level of developing and transitional economies should accelerate the adherence to the required reductions in CFCs emissions. An environmental dividend can stem from foreign aid, because the preservation of environmental assets responds positively to augmented levels of GNP. Fifth, the use of side payments, a deferred adherence schedule, and the threat of trade sanctions augment the number of participants. The accomplishment, in terms of ozone protection in the future, from this increase in group size is yet to be known, since many of these countries did not emit CFCs. Sixth, the behavior of European nations with respect to the Helsinki Protocol and S02 emissions did not abide by the theoretical predictions of the voluntary provision of a pure public good. The acid rain problem will need controls that differ from those of the ozone-depletion problem.

IPR73

Do Low-Income Countries Have a High-Wage Option?

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Poor countries are supposed to take advantage of foreign trade by specializing in standardized, labor-intensive commodities which make good use of their economies' abundant resource: unskilled labor. Middle-income countries may have a richer menu of options available to them if their labor force is reasonably well-educated and skilled. This paper is motivated by the possibility that there may exist a multiplicity of specialization patterns for countries of the second type. In particular, specialization in skill-intensive sectors may be a viable option, alongside the more traditional low-tech route.

When such an option exists, the government's wage policy (either explicitly, or implicitly through the exchange rate, for example) can play an important role in determining the path that the economy takes. A policy that maintains wages low renders low-tech sectors more attractive to investors than skill-intensive sectors, and tends to foster specialization in the first type of goods. In other words, a low-wage policy may have the unintended consequence of crowding out potentially viable medium- and high-tech sectors.

To place these ideas in context, consider the countries of Eastern Europe. Judged by criteria such as secondary and tertiary school enrollment ratios or the ratio of R&D workers in the labor force, these countries are relatively well-endowed with skills and human capital. This has led some studies to conclude that the comparative advantage of countries like Poland, Hungary, and the Czech republic may well lie in skill-intensive manufactures rather than in labor-intensive goods. While plausible, it is also clear that this need not be the only possible outcome. If these countries embark on the transition with relatively cheap currencies that keep their labor costs low in dollar terms, as they indeed have done, they will tend to attract industries on the basis of their labor-cost advantages rather than the skill level of their work force.

The case of Eastern Germany provides an appropriate contrast to the strategies of Poland, Hungary and (former) Czechoslovakia. Here, the monetary conversion to the DM at the 1:1 rate and the subsequent push by trade unions for wage equalization with the Western part of the country have resulted in a sharp increase in nominal wages. Since labor productivity currently stands at a fraction of Western Germany's, many observers have concluded that this increase in wage costs threatens continued mass unemployment. However, the East German workforce is a well-educated and highly-skilled one. A priori, there is little reason to believe that this workforce cannot sustain labor productivity levels similar to that found in the West. And the high level of current wages may well have the desirable effect of drawing resources into high-tech industries that can utilize these skills, rather than into simple assembly operations. The real question is whether about ten years down the line the Eastern part of the country will end up with an industrial structure that can sustain higher living standards than it would have had otherwise.

That there might be a trade-off between maintaining low wages and achieving industrial upgrading has long been a concern in East Asian countries. The Singaporean government, in particular, has sought to discourage labor-intensive industries and promote high-tech industries by raising minimum wages and discouraging immigration.

What creates the multiplicity of equilibria is a coordination problem inherent in high-tech activities. In the model considered here, high-tech production requires a range of differentiated intermediate inputs that are *non-tradable*. For the high-tech sector to become viable, a sufficiently large number of intermediates has to be produced domestically. But if none is currently being produced, there is little incentive for any single firm to do so on its own. In view of the interdependence of production decisions, then, the economy may get stuck in a low-wage, low-tech equilibrium—even though the high-tech sector is viable. As long as the high-tech sector is more capital-intensive than the low-tech sector, an investment subsidy or a minimum-wage policy would get the high-tech sector going and be welfare-enhancing.

IPR74

Financing of Investment in Eastern Europe: A Theoretical Perspective

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When one faces complex decision problems, it is often more important to have the right conceptual picture than to get detailed analytical advice. In this paper I argue that traditional finance offers a misleading perspective on the financing of real investments. Information economics, which focuses on the reasons for asset illiquidity, provides a more useful conceptual framework. In this framework the basic problem of financing derives from an information gap between those who have excess money and those who have excess ideas. There are two main vehicles for matching money and ideas: collateral, which serves to secure investor funds, and intermediation, which helps bridge the information gap. Capital formation can be envisioned as a process in which firms transform prospective (illiquid) returns into proven (liquid) assets, using collateral and intermediation as the means of transformation. Through variations on a simple model, the paper studies the relative roles of collateral and intermediation in this transformation process.

There are three main messages from the analyses. The first is that a firm's net worth, the market value of its assets, largely determines its ability to raise funds; hence the distribution of wealth matters for growth. The second message is that if the funding capacity afforded by net worth is small, investment will require more information intensive sources of funds; intermediation substitutes for collateral and expands the firm's capacity to invest. The third message is that financial constraints affect investment decisions; firms facing a capital shortage will seek to build up their capital base via smaller, safer and shorter-term projects.

The first message implies that capital formation and growth in Eastern Europe is likely to be slow, both because the effective capital base is small and because capital and information are poorly matched. Privatization is an essential and urgent step to get the growth process restarted. Efforts to make markets of collaterizable assets more liquid, should also receive high priority. In this regard, real estate markets rather than stock markets should be targeted; real estate is the dominant form of collateral in the West, because it is less subject to informational problems than stocks.

The second message implies that financing will have to be more information intensive to compensate for the lack of collateral in Eastern Europe. Banks will play a different, more active monitoring role than in the West. Also, investment companies, which take equity positions, discipline management, and reallocate capital, will likely be significant intermediaries. Information intensive monitoring requires strong incentives, and hence intermediaries should be well capitalized and their managers have a significant stake in company performance.

Perhaps the most important message is that growth through smaller and shorter-term investments is the natural course of development for an economy that is severely capital constrained. Large, glamorous investment projects, backed up by government funds, will be politically tempting, but such efforts to speed up the rate of capital formation are likely to backfire, because large projects face more severe incentive problems. Instead, the situation calls for patience. The creation of an environment in which small and medium sized businesses can prosper on their own would seem to hold better long-term prospects than forced action. Subcontracting for foreign firms may be a particularly important activity, since it takes advantage of lower collateral requirements and provides access to trade credit and outside expertise.

IPR75

Compementarities in the Transition from Socialism

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One of the key issues in the implementation of economic reforms is the timing and coordination of the various reform elements. Much of the attention given to this question in the past has focused on money, banking, taxation, and the macroeconomy and on the safety net provided for workers who are certain to become at least temporarily unemployed in any mass privatization. We continue this investigation by examining the likely responses of firms to price reforms, privatization, free trade and competition policies. The first question is whether, for some packages of these incentive-related reforms, "the whole is greater than the sum of the parts."

The precise way to ask this question is to ask whether a package of reforms is *mutually complementary*. The reforms in a package are mutually complementary when two conditions hold: (i) implementing some parts of the package does not preclude implementing the other parts and (ii) the sum of the benefits from implementing one part of the package alone or another part of the package alone is less than the benefits from implementing the two parts together.

As we show, there are ample reasons--both theoretical and from case studies--to suppose that incentive-related reforms can be mutually complementary. For example, price rationalization without privatization leads to only limited responses on the part of the firm, since the firms have only a limited incentive to respond properly to the prices. Privatization without price rationalization similarity can enable and encourage firms to make large profits with negative value added activities, as when Polish producers grew tropical flowers in greenhouses using state-subsidized energy sources. Together, however, a system of market-determined prices and private ownership can provide powerful private incentives for firms to engage in value-creating activities. The tropical flower example can also be interpreted as one of complementarities among price reforms in different markets: allowing the price of tropical flowers to be high while maintaining an artificially depressed price of energy distorts firm-level decisions.

The same logic can be applied to complementaities among instruments used a different points in time. Price rationalization this year and next year are complementary instruments, because firms respond to anticipated future price changes by such unproductive activities as hoarding underpriced goods and dumping inventories of overpriced goods. That problem is solved when anticipated future price changes are implemented today. Together, the points of the last two paragraphs constitute an argument in favor of carrying out price reforms quickly and comprehensively once the decision to reform has been made.

There are two important caveats that need to accompany the message about complementary packages of reforms. The first is that not all reforms aimed at improving private incentives are mutually complementary. In China, for example, freeing the prices of goods beyond the quota has been an effective reform that would probably not be made more effective by freeing the prices for the goods produced up to the quota. Our theoretical analysis illustrates the proper pattern for evaluating complementarities, but the details need to be considered on a case-by-case basis.

The second point is that complementarities concern just one term in a benefit-cost analysis. The actual magnitude of the complementarity effect needs to be balanced with other benefits and costs in determining the best policies for encouraging value-creating decisions by firms.

IPR76

Tax Reform in Sri Lanka

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Fiscal pressures in Sri Lanka are severe, with government revenue around 21% of GDP and expenditure around 31% in 1990 and 1991 (although expenditure has been reduced to around 28% in 1992, largely through, possibly temporary, reductions on the capital side). The fiscal challenge is to make substantial inroads into this deficit. Whilst this paper has not discussed expenditure in detail it seems that the fiscal change required will be unlikely to arise solely from expenditure reduction. This position, taken together with the deficiencies in the current tax system and desires for greater liberalisation, indicates that the task for tax policy is to raise substantial extra revenue, whilst restructuring the system to provide greater simplicity, efficiency and consistency with a more trade- and market- oriented economy. The paper provides reflections on the possibilities for extra revenue, following visits to Sri Lanka in September 1992 and June 1993.

The Sri Lankan government is fortunate in having before it the valuable report of the Tax Commission of 1990 and much of the way ahead would seem to be charted in that report. The government has made a start in implementing the proposals but some of those recommended policies which might raise substantial extra revenue have not yet been vigorously pursued.

Given Sri Lanka's high debt to GDP ratio, real interest rates and growth rate it is argued that a primary surplus is necessary to stop the debt to GDP ratio from rising still further. Interest payments are currently around 6% of national income and the underlying primary deficit (the deficit excluding interest payments) is of the order of 5% (based on the 1990 and 1991 position). Hence an apparently necessary (if the debt to GDP ratio is to be held at current levels) target would be to reduce the deficit by at least 5 percentage points (relative to 1990 and 1991). Given the size of the debt to GDP ratio (around 100%) and the burden of interest payments Sri Lanka should be looking for a reduction in this ratio over the medium-term and serious inroads would involve cutting the deficit by a few percentage points above 5%. Some of the reduction in the deficit would have to come, no doubt, from pruning expenditure but there are major dangers to the type of growth Sri Lanka envisages. A 'newly-industrialising country' needs physical infrastructure and a healthy, well-educated population. Sri Lanka's achievements in health, education and social welfare are striking amongst developing countries and there is understandably a desire to see them preserved both as ends in themselves and as contributors to growth. Whilst the size and generosity of some of the welfare programmes do, however, suggest some scope for economy, a target of 5% for extra revenue would seem to be a prudent one.

Building on the recommendations of the Tax Commission Report and drawing on comparisons with other fairly poor countries a number of areas for extra revenue which look to be possibilities are described. As potential major sources of extra revenue the discussion identifies the personal income tax (possibly an extra 2 percentage points), the value-added tax (1/2-1), excises (around 1 percentage point), corporate income tax (1/2-1 percentage points) and, as a short-run measure, customs (1/2-1 percentage point). Together such a strategy might yield the extra resources required whilst being consistent with simplicity, growth and efficiency objectives. Not all of these measures could be expected to yield speedy results, hence the need for especially tight expenditure control in the short term. It is possible that some short-run pressures could be partially relieved by privatisation proceeds.

Advance in the personal income tax collections of the order indicated is likely to come from improved enforcement and compliance. These can be helped by the VAT, by computerisation and by the taxation of public-sector emoluments. In this respect the close integration of VAT and income tax administration is important. Improvement in corporate tax revenues should be available from the rolling back of exemptions and holidays. Excise taxation could be increased by expansion of the base to motor fuel, cars and some luxury goods.

IPR77

Western Prudential Regulation: Assessment and Reflections on Its Application to Central and Eastern Europe

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Achieving a safe and efficient financial intermediation is a complex matter. Examples of recent large-scale problems in banking alone abound in the west (e.g., in the USA, Japan,Scandinavia and Latin America). That such debacles occurred in countries with substantial experience in private banking and in prudential oversight provides material for reflection for the emerging banking systems in the substantially riskier environments of Central and Eastern Europe (CEE).

CEE central banks tend to be subordinated to the finance ministry and do not fully take on the traditional tasks of prudential regulation. They typically encourage state-owned banks to direct most of their loans to failing state-owned enterprises; they also substitute for the tax authorities by imposing high unremunerated reserve requirements to raise revenue. Most commercial banks are likely to be insolvent. Poor capitalization, loose regulation(despite the recent tightening), and conflicts of interest set the stage for a potential worsening of the situation. The proclaimed goal of imposing western-style prudential standards is hard to implement. For one thing, banks would have incentives to take large risks if they were confronted with real performance requirements; gambling for resurrection would then be their only option. Furthermore a credit squeeze might not work well in the current environment, because state-owned enterprises when pressured by their bank might borrow from other firms or refuse to pay their suppliers.

In view of this complex and new environment, it is useful to develop a conceptual framework in which one can analyze financial regulation in the CEE countries. The first part of the paper develops such a framework and draws some of its general implications. The theoretical model stresses the importance of capital adequacy for intermediaries. Capital requirements play a dual incentive role. They threaten bank management with a shift of control away from shareholders in case of poor performance. They also adjust shareholders' incentives, in particular by preventing gambling for resurrection in case of poor capitalization.

Understanding that prudential regulation must address the double moral hazard problem for bank insiders and outsiders is the key to most of our insights. Consider for instance the debate about whether capital requirements should be adjusted along the business cycle. Relative ratio advocates call for substantially lower solvency standards in recessions while international regulations have set an absolute solvency requirement. Both viewpoints are one-sided. Absolute ratio advocates fail to insulate management from macroeconomic risk while relative ratio advocates ignore shareholders' incentives (despite the painful lesson learned by relaxing the S&Ls solvency standards). The debate between market value and historical cost accounting can be analyzed along similar lines.

We then study public regulation and its political economy: Which mission should be conferred on the regulators? Is a partisan objective appropriate? Can proper incentives be provided for regulators?

A discussion of the difficulty of letting large banks fail concludes the first part of the paper. Two policies are suggested, that might reduce the occurrence of bailouts motivated by the possibility that some banks are "too big to fail."

While the general insights all have implications for Central and Eastern Europe, one should be extremely careful before applying them in this context. Part two of the paper lists specificities of the CEE banking environment. The banks' management of loans is observed to be particularly complex. On the liability side, the lack of familiarity of CEE depositors with privately-owned banks and financial markets exposes them to much risk. While the lack of sophistication and the free-riding of western depositors is, in my view, a major argument in favor of regulation of part of the banking sector, it is so with a vengeance in the short run in the CEE countries. Last, prudential regulation is particularly hard to set up and enforce.

We then review various issues in the light of CEE specificities: market value accounting, relative ratios, systemic risk, deposit insurance, and the timing of reform.

IPR78

The Evolution of the Pattern of Exchange in Developing Counties

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In this paper, the exchange configuration approach has been used as an analytical framework to understand the evolution of the different patterns of exchange in developing countries. An exchange configuration is defined in terms of the underlying elements (which are the characteristics of the <u>item</u> exchanged, the participating <u>actors</u> and the <u>environment</u>). In turn the nature of the transaction is endogenously determined through the interaction of these various elements. The study reveals how different kinds of transaction modes such as "gift giving" and "kinship units" can be rationalized as emerging from the specific characteristics of the elements prevailing during a given historical period and setting. Changes in the characteristics of these elements--brought about by exogenous forces, such as wars, colonization, new technologies; or endogenous forces, such as the appearance of an agricultural surplus in traditional agriculture resulting in expanding markets--lead to new patterns of exchange.

The present paper has illustrated various ways in which this approach can help to integrate, expand and provide new insights into the evolution of exchange relations. First, by identifying the key characteristics of the item exchanged, the actors and the physical, policy, legal, and cultural environment; this approach is able to capture in a fairly systematic way, the multiplicity of factors that shape the evolution of exchange transactions. Thus, it provides a useful framework for integrating the work of various anthropologists, sociologists, historians, political scientists and economists on this subject.

Secondly, it provides a consistent methodology to analyze the different types of market and nonmarket exchange configurations that have existed over time. Until quite recently, social scientists believed that economic theory was not useful for analyzing nonmarket forms of exchange. However, by complementing standard economic analysis with the transaction costs approach, the whole range of exchange systems--occurring within or outside markets--can be explained and understood better. Within a given exchange configuration the resulting transaction is that which minimizes transaction costs. In particular, the process of transition from nonmarket to market exchange configurations is clarified. Various exogenous and endogenous forces that trigger this transition, such as opening up of new trade routes, population growth, diffusion of new technology and imposition of colonial rule were identified.

In section III, some general trends based largely on the historical experience of the presently developed countries were highlighted. It was pointed out how different patterns of economic development are likely to emerge depending on the initial conditions and the role of exogenous and endogenous forces. This was illustrated in the case of SubSaharan Africa (SSA) where, in particular, the role of exogenous forces in the form of colonial rule, and later population growth (through the adoption of modern medical and health practices) and the emergence of nationalist governments, was described. It was shown how the inappropriate application of western notions of property rights led to a disintegration of the traditional systems of production and exchange based on the lineage system. Further, the imposition of various state-run institutions in the economy, such as state farms and marketing boards, contributed to a forced and artificial institutional change and led to inefficiency and stagnation. Past experience has shown that such top-down development without any local participation cannot succeed.

Since the early 1980's almost all developing countries have undergone some extent of market liberalization. The issue of the pace and sequence of this process is critical.. In the SSA case, traditional land tenure systems that do not allow private property rights to be fully recognized still predominate in most of its rural areas. There is growing recognition of a fundamental disequilibrium between the existing land arrangements, that reflect the earlier practices of extensive agriculture, and the requirements of growth in the context of modern intensive agriculture.

Given the pronounced dualism between the modern, large-scale, export oriented agricultural subsector and the small-scale, subsistence-oriented subsector in most of SSA, unleashing the forces of competition in such a setting may lead to a very inequitable pattern of land distribution. Thus, it is important that land markets operate in such a way that the poor and vulnerable groups gain better protection of their rights to access to land than they possess in the present dualistic structure. In a setting characterized by marked dualism and the imperfect and incomplete nature of labor, credit and insurance markets, issuing group titles has certain advantages over individual titles.

To conclude, one can say that though it is true, that as the process of development goes on, there is likely to be greater dominance of market configurations, yet "community type" nonmarket configurations are likely to coexist. Public action is likely to continue to be important in certain critical areas such as the provision of basic amenities and social services, transport and communication facilities, and diffusion of new technology and extension services. In these roles, public action leads to speedier evolution of markets and thus plays a complementary and catalytic role in rendering exchange relations more efficient and equitable.

IPR79

Macroeconomic Stabilization in Latin America: Recent Experience and Some Sequencing Issues

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The debt crisis generated serious economic dislocations throughout the Latin American region. Even those countries that had traditionally followed exemplary macroeconomic policies and had experienced low inflation rates, suffered very rapid price increases after 1982. Balance of payment deficits soared and, in most countries, the foreign debt burden virtually paralyzed investment. Growth became negative and real wages plummeted. In spite of early signs that the macroeconomic disequilibria had become extremely serious, many analysts argued that the crisis was a mere short-run liquidity problem, that could be solved through (minor) debt restructuring and new monies.

During the early years of the crisis, a number of countries — most notably Argentina (Austral Plan), Brazil (Cruzado Plan) and Peru (APRA Plan) — tried to solve their problems by implementing traditional policies based on increased controls, heightened protectionism and a higher degree of government involvement in economic matters. As time passed, however, it became increasingly apparent that these programs — sometimes referred to as heterodox programs — had badly failed. They generated run-away inflation, further declines in real wages, and prolonged stagnation.

Towards the late 1980s, and in part as a result of these failures, a new consensus on economic policy began to emerge in Latin America. At that time, an increasing number of Latin American leaders began to agree that the region was facing a-serious crisis and that the transition to the 21st century required major economic reforms. Politicians that for decades had advocated an increased involvement of the state in everyday economic life, began to argue in favor of macroeconomic stability, international openness, privatization and a greater role for market forces.

Some Analytics on the Sequencing of Reform

During the early phases of the crisis, the question of the sequencing between macroeconomic stabilization and structural reform — especially trade reform — became an important policy issue in Latin America. Analysts asked whether fiscal reform should precede structural reform, or whether both types of policies should be implemented simultaneously. By the late 1980 most analysts began to agree that in countries with serious macroeconomic imbalances the most appropriate sequencing required early and decisive action on the macroeconomic front, including solving the "debt-overhang" problem. It was argued that the reason for this was that the uncertainty associated with very high inflation, including high relative price variability, would reduce the effectiveness of market-oriented structural reforms. In particular, this high degree of uncertainty would result in low investment and, in some cases, could even direct investment towards the "wrong" sectors.

A second argument for the "stabilization first" sequencing refers to the contribution of foreign trade taxes to public revenues. It has been argued that if the public finances have not been brought under control, the reduction of import tariffs would make things worse by increasing the fiscal deficit. This argument is considered to be particularly valid for low income countries, that rely very heavily on taxes on international trade.

But perhaps the most important argument surrounding the sequencing debate is related to the behavior of the real exchange rate during trade reforms, on the one hand, and stabilization programs, on the other. The importance placed by liberalization strategists on nontradables, on the reduction of the anti-export bias has resulted in a significant emphasis on the role of exchange rate policy during a trade reform effort. A number of authors have argued that a large devaluation should constitute the first step in a trade reform process. However, under a set of (very) plausible conditions macroeconomic stabilization programs will tend to result in an appreciation of the real exchange rate. This suggests that trade reform should not proceed at the same time as a major stabilization effort is underway. Some authors have argued that the reform of the labor market—and in particular the removal of distortions that discourage labor mobility—should precede the trade reform, as well as the relaxation of capital controls.

Maintaining a depreciated and competitive real exchange rate during a trade liberalization process is also important in order to avoid an explosion in imports growth and a balance of payments crisis.

An Overview of the Latin American Reforms

Although there are still some important—and often deep—differences of opinion among Latin American leaders, we find that the region is today enjoying a degree of agreement on basic economic policy never seen before in the post-World War II period. It is possible to identify general areas of convergence: First, there is wide recognition of the need to generate macroeconomic stability, through the control of public sector deficits. The second broad element of the emerging consensus refers to the importance of opening the external sector to foreign competition. The third component of the new consensus refers to the recognition that the state should have a greatly reduced role as a producer.

The Latin American and Caribbean trade reforms have been characterized by four basic elements: (1) The reduction of the coverage of non-tariff barriers, including quotas and prohibitions; (2) The reduction of the average level of import tariffs; (3) The reduction of the degree of dispersion of the tariff structure; (4) The reduction or elimination of export taxes. These measures were initially supported, in most countries, by exchange rate policies aimed at maintaining a competitive real exchange rate.

Fiscal Imbalances and Macro Disequilibrium

Fiscal imbalances have traditionally been at the heart of Latin America's macroeconomic disequilibrium. Governments inability, or unwillingness, to raise sufficient tax revenues to cover expenditures have forced them to rely on money creation, or seignorage, to finance the public sector deficit. Additionally, in many countries the tax system has traditionally relied on an array of inefficient taxes. In particular, a large number of countries have historically relied on indirect taxes and taxes on international trade.

The reliance on money creation to finance public expenditure affects the macroeconomy in several ways. First, it generates inflationary pressures. The magnitude of these forces will depend on a number of factors, including the size of the public deficit, the rate of growth of the economy, and the elasticities of the demand for money. Second, under predetermined nominal exchange rates, the creation of domestic money at a rate that exceeds the growth in money demand will generate serious balance of payments difficulties, and real exchange rate overvaluation. Under these circumstances, an increase in the rate of monetary growth will be translated into higher demand for tradable goods, nontradable goods, and financial assets. The increases in the demand for tradables will generate a trade deficit, rapid increases in foreign borrowing, and a loss in international reserves. The higher demand for nontradables, on the other hand, will result in a higher price for nontradables and a real exchange rate overvaluation. This situation will eventually become unsustainable, and generate a major balance of payments crisis whose solution will require a substantial nominal devaluation and austere policies.

The fundamental policy implication of the preceding discussion is that the credible reduction (or elimination) of the public sector deficit should be at the center of stabilization programs. Although in many successful anti-inflationary episodes fiscal action has been supplemented by other measures—including incomes policies—the correction of the public sector finances has invariably been the most important component of those programs.

Fiscal Austerity in the Late 1980s

During the latter part of the 1980s and early 1990s, most Latin American countries made efforts to reduce their public sector imbalances, as a way to restore macroeconomic equilibrium and foster economic growth. These efforts were based on a combination of revenue increasing policies—including tax reforms, privatization of public firms, and improved tax administration—and expenditure cuts.

In most countries the improvement in the public sector accounts has been accomplished through a combination of higher revenues and lower expenditures. On the revenues side, most programs included: (a) tax reforms aimed at improving the efficiency and effectiveness of the tax system; (b) improvements in tax administration, including efforts to reduce evasion; (c) increases in public services prices in order to cover costs; and (d) sales of state owned enterprises.

Credit Policy

An important component of the Latin American stabilization programs has been the control of domestic credit, to the public sector and private sector—see Figure 1 for data on selected countries. During the early years of the adjustment (1982-87), most of the burden of credit reduction fell on the private sector. This was, in part, a consequence of the sudden cut in the availability of foreign funds to finance public expenditures. Most governments reacted by borrowing heavily from the domestic banking system, crowding out the private sector. As a consequence real interest rates increased sharply, and aggregate demand declined. However, as the adjustment proceeded, and foreign financing was partially restored through debt restructuring, interest capitalization and debt reduction, it was possible for governments to ease credit restrictions to the private sector.

The financial deregulation reforms undertaken by most countries during the last few years have had important effects on the conduct of monetary policy in the region. In particular, Central Bankers have had to learn how to manipulate monetary policy through indirect instruments, as opposed to the traditional quantitative control of credit. For example, the reduction and harmonization of reserves requirements has increased commercial banks ability to intermediate funds, reducing the authorities' direct control on liquidity.

The analysis suggests that the fact that most Latin American nations did not follow the often-recommended "stabilization first" sequencing, does not appear to have hurt in a serious way their adjustment programs. In spite of the losses in government revenues associated with the lowering of tariffs, the authorities in most cases were able to find alternative sources of revenue. As the evidence shows, most countries have in fact made important progress in fiscal adjustment and macroeconomic stabilization.

Savings and Investment

Most Latin American countries have implemented financial reforms as part of the broad structural adjustment reforms if the 1980s and 1990s. The early financial liberalization literature argued that one of the most important objectives of these reforms was to generate, among other things, a significant increase in domestic savings. In that regard, financial reforms would supplement the stabilization effort: increases in savings would help reduce current account imbalances. In the original models of financial repression, allowing (real) interest rates to rise to market levels altered the intertemporal rate of substitution, encouraging aggregate savings. However, empirical studies for a large number of countries—both advanced and developed—have found only a weak interest rate elasticity of aggregate domestic savings.

Investment and Infrastructure

Private investment experienced a drastic dip in the mid-1980s, only to recover in the early 1990s. While in some countries the recovery has been complete, in others the private investment ratio is still significantly below its 1980 level. However, the volume of private investment is only part of the story. In most countries there has been an significant change in the composition of private investment. For instance, after decades of stagnation, investment in agriculture and agriculture-related activities has soared in Chile. This has resulted in a surge in productivity growth and in an increase in agriculture-related exports from less than U.S. $40 million in the early 1970s, to almost U.S. $1.3 billion in 1991. Moreover, and as discussed in the preceding sections, the real return to investment in Chile has been extremely high in the past few years, helping generate a significant growth in the privately administered pension funds.

Public investment was affected in a particularly severe way in the aftermath of the debt crisis. An important consequence of the decline in public investment during the 1980s is the deterioration in the region's infrastructure, including roads, bridges, ports and power generation. Recent empirical studies for a number of countries—including the United States—have pointed out that investment in infrastructure has a particularly large effect on growth.

Direct Foreign Investment

For many years the Latin American countries imposed serious restrictions on direct foreign investment. As a result of these regulations, and of the inward looking policies pursued in most countries, direct foreign investment played a very minor role in the process of capital accumulation in the region during the 1970s; in most countries it amounted, on average, to less than one percent of GDP per year.

A number of studies have indicated that one of the most important determinants of the distribution of DFI across countries is the soundness of economic policies. Foreign investors will tend to stay away from countries with major distortions and controls, and will be attracted to those nations with consistent and predictable macroeconomic policies. For example, in a recent study based on a fifty eight-country data set, Edwards (1991) found out that policies that move the economy toward greater openness and international competitiveness, as well as reduce the size of the government, will tend to have an important positive effect on DFI.

Exchange Rates, Disinflation and Trade Liberalization

As many Latin countries have painfully learned, in the long run it is not possible to maintain a fixed nominal exchange rate under conditions of major fiscal imbalances financed by domestic credit creation. If domestic inflationary pressures exceed "the" international rate of inflation, international reserves will decline, overvaluation will take over, and a speculative attack on the Central Bank foreign exchange holdings will eventually take place. A number of countries in the region that historically suffered from chronically high inflation dealt with this situation by adopting an adjustable, or crawling peg, system characterized by periodical adjustments of the nominal exchange rate according to inflation rate differentials.

The proposition that fixed exchange rates should become an integral component of the region's efforts to achieve macroeconomic stability has generated a number of questions among policymakers and their advisers: How is this system exactly supposed to work? How has it actually performed in history? What are the tradeoffs between fixed rates and a more flexible system? Do preannounced declining pegs, of the "tablita" type, operate in a similar way? If a fixed exchange rate is adopted, how should the transition to this regime be engineered? How does this system affect real exchange rate behavior and competitiveness?

Exchange Rates as Anchors

Much of the recent enthusiasm for fixed nominal exchange rates is intellectually rooted on the modem credibility and time consistency literature. According to this approach governments that have the discretion to alter the nominal exchange rate will tend to abuse their power, introducing an inflationary bias into the economy. The reason for this is that under a set of plausible conditions, such as the existence of labor market rigidities that preclude the economy from reaching full employment, it will be optimal for the government to "surprise" the private sector through unexpected devaluations. By engineering these unexpected devaluations the government hopes to induce a reduction in real wages and, thus, an increase in employment and a boost in output. Naturally, in equilibrium the public will be aware of this incentive faced by the authorities, and will react to it by anticipating the devaluation surprises and hence rendering them ineffective. As a consequence of this strategic interaction between the government and the private sector, the economy will reach a high inflation plateau.

A key policy implication of this literature is that, along the lines of the fiscal adjustment discussion presented above, defining (and implementing) constraints that will make government pre-commitments credible, will result in an improvement in society's welfare. It is here where fixed exchange rates come into the picture. It has been argued that the adoption of a fixed exchange rate will constrain governments ability to surprise the private sector through unexpected devaluations. Promises of fiscal discipline will become credible and private sector actions will not elicit successive rounds of inflationary actions. In particular, it has been argued that fixed exchange rates provide a reputational constraint on government behavior. The authorities know that if they undertake overly expansive credit policy they will be forced to abandon the parity and devalue.

Latin American Experiences with Nominal Exchange Rate Anchors

The evaluation of fixed exchange rates as nominal anchors in real world situations, should concentrate on two features of this system. First, to what extent have these regimes constrained governments behavior in the long run? And, second, how do these regimes work during the transition from high to low inflation? More specifically, does the adoption of a fixed exchange rate indeed accelerates the convergence of the domestic rate of inflation to "world" levels?

In order to be effective, an exchange rate anchor should be adopted from a situation of undervaluation, and be accompanied not only by consistent fiscal policies, but also by strong and convincing deindexation policies. This was the case, for example, in Mexico during 1988-91, and in Nicaragua between mid-1991 and 1992. If, however, other contracts, and especially wages, continued to be indexed with respect to past inflation the system will maintain a considerable degree of inertia, generating a sizeable depreciation as in Chile during the late 1970s. If this type of situation is not managed carefully the country can run into a very serious situation, where a speculative attack on the currency will provoke a major crisis, and a return to macroeconomic instability. The appendix to this paper addresses these issues in detail.

Recent Real Exchange Rate Behavior in Latin America

In the last years, competitive real exchange rates have been at the center of the vigorous performance of most of Latin America's external sectors. In fact, it is not an exaggeration to say that the trade reforms have been driven by highly competitive real exchange rates, that have made Latin products very attractive in world markets. Recently, however, in most Latin countries real exchange rates have experienced rapid real appreciations and losses in competitiveness. These developments have generated considerable concern among policymakers and political leaders.

These real appreciations (and losses in international competitiveness) have been the result of two basic factors: first, the use, in many countries of the exchange rate policy as an anti-inflationary tool — in the spirit of the nominal anchors approach discussed above — and, second, massive capital inflows into Latin America that have made foreign exchange "overabundant".

IPR80

Economic Reform, Labor Markets, and the Social Sectors: A Latin American Perspective

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In recent years there has been a growing interest on the social consequences of structural reform programs. Critics of the market-oriented reforms have argued that the implementation of these policies have resulted in severe increases in poverty and income inequality. The World Bank and the IMF have been under growing scrutiny and are being pressured by the NGOs lobby to change their policies. The social effects of reform have become particularly important issues in the former socialist countries, where the reform process has dented the traditional social safety net, and where income inequality has moved to historical highs. In spite of its obvious importance, the debate on the relationship between economic transition and the social sectors has been characterized by a remarkable degree of fragmentation.

For many decades the Latin American countries used labor legislation as a fundamental tool for achieving social goals. Minimum wages, job protection and related measures were thought to be an efficient way of transferring income and protecting the poor. Although these policies were well intentioned, they ended up creating overly rigid labor markets that were unable to respond to the changing conditions of the world economy. Interestingly enough, the market-oriented reforms that have swept through Latin America during the last few years have barely touched labor market legislation. In many ways, labor markets have become the "forgotten"sector of the Latin American reforms.

Poverty and Income Distribution in Latin America

The inability to effectively deal with poverty and inequality in Latin America is,perhaps, the clearest and saddest illustration of traditional policies. Decades of government intervention and regulations did little to reduce income inequality in the region. Latin America is the only region in the world where the share of income going to the poorest 20% of the population consistently declined between 1950 and the late 1970s. Moreover, income inequality precedes the debt crisis and the adjustment programs of the 1980s. In the late 1970s the percentage of income received by the poorest 20% was lower in Latin America than in any other part of the

A decade after the debt crisis, one of the main—if not the main—challenges in Latin America is to reduce poverty and reverse decades of increasing inequalities. Addressing the needs of the poorest strata of society is not just a social issue, but also a political one. Only to the extent that poverty is reduced, the living conditions of the poor are improved, and income distribution becomes more equal will the structural reforms implemented during the last decade become sustained and not be reversed. Moreover, attending to the needs of the poor for education, nutrition, and health will have important direct effects on economic growth in the region: as a larger proportion of the population acquires basic human capital, growth will tend to accelerate significantly.

Although between 1960 and 1980 economic growth resulted in an improvement of living standards in Latin America—as measured by educational attainment, health conditions, nutrition, and other social indicators—by the early 1980s a large percentage of the region's population still lived in poverty. Even though many of the policies aimed at reducing poverty in the 1960-80 period—including agrarian reforms, minimum wage laws legislation, and labor market regulations—were well intentioned,they made limited progress in this area. In fact, the data in Table 3 indicate that in 1981, more than one third of Latin America's population had incomes below the poverty line. Today there are more than 10 million malnourished children under the age of five in Latin America, and a large proportion of the region's population does not receive appropriate health or educational services. Although many countries in the region reacted to the crisis by implementing emergency social programs, the overall level of poverty and inequality nevertheless increased in many of them.

From 1982 through approximately 1988, a number of countries tried to solve their problems by implementing traditional policies based on increased controls,heightened protectionism and a higher degree of government involvement in economic matters. As time passed, however, it became increasingly apparent that these programs—sometimes referred to as heterodox programs—had badly failed. They generated run-away inflation, further declines in real wages, and prolonged stagnation. This first subperiod can be characterized as one of crisis without adjustment.

The second subperiod begins towards the late 1980s, when as a result of these failures, a new consensus on economic policy began to emerge in Latin America. At that time, an increasing number of Latin American leaders began to agree that the region was facing a serious crisis and that the transition to the 21st century required major economic reforms. Politicians who for decades had advocated an increased involvement of the state in everyday economic life, began to argue in favor of macroeconomic stability, international openness, privatization and a greater role for market forces.

An important direct consequence of the adjustment programs of the late 1980s and early 1990s was the reduction, in most countries, of government spending devoted to social programs. Additionally, the restructuring of the economy generated, in many countries, a significant increase in the segmentation of labor markets with the informal sector growing drastically. Somewhat surprisingly, however, many social indicators—infant mortality, school enrollment, life expectancy, for example—have continued to improve despite these problems. Possible explanations for this "puzzle" are, first, that there may be a significant lag between changes in "inputs" that go into social programs (i.e., public social spending) and changes in "outcomes," summarized by social indicators. Second, aggregate data may be misleading, hiding what is really going on within each country. And third, in many countries the reduction in the level of social spending has been coupled with an increase in the efficiency with which funds are used, and with an increase in private non-government organizations' (NGOs) support to social programs.

Poverty and Income Distribution

Available data indicate that poverty is not only widespread in Latin America—the bottom 20% of population received less than 4% of total income—but that it has also increased during the last decade. For some time the public policy literature has moved away from relative measures of well-being, such as income distribution, and has emphasized absolute social indicators, including the percentage of the population living under poverty conditions. As a result of this, serious efforts have been made to construct poverty lines in Latin America. These are generally defined as the income required by a household of a predefined size to meet a "minimal" standard of living. This standard of living is, in turn, constructed around food consumption.

There is generalized recognition that the unequal distribution of income that has traditionally affected Latin America is at the heart of poverty in the region. A number of authors have attempted to explain the determinants of income inequality in different countries at a given moment in time. The level of education appears to be the single most important determinant of inequality at a given moment in time. Besides, a number of studies have found that, with other things given, the probability of being at the bottom of the distributional scale is higher for females.

In many countries, ethnicity is directly related to poverty and inequality. For example, in 1989, almost 60% of Guatemala's indigenous population had O to 5 years of education, compared to only 24% of the non-indigenous population. In Bolivia, 12% of the indigenous population had no education, while only 2% of the nonindigenous population fell in that category.

The Macroeconomy and the Social Sectors

The relationship between macroeconomic stability and the social sectors has become increasingly important in the policy debate. For decades the conventional wisdom in Latin America was that there was little, if any, connection between these two areas. Structuralist thinkers believed that there was a stable trade-off between inflation and growth, and that under most circumstances it was possible to increase income through permissive macroeconomic policies. The generalized experiences of the 1970s showed that this was a highly misleading view. More often than not macroeconomic disequilibria led to rapid inflation and the erosion of real wages,reduced returns in the rural area and major economic crises. New research based on time series data for some Latin American countries suggests that, as a result of inconsistent macroeconomic policies, income distribution can exhibit very large changes in relatively short periods of time.

There are two fundamental reasons why macro instability has negatively affected poverty. First, in many of these countries real exchange rate overvaluation hurt labor intensive exports, and thus employment and wages. Second, the poor are significantly more vulnerable to macroeconomic imbalances, as they do not have the ability to protect themselves from the direct and indirect consequences of the inflation tax. These findings provide support to the view that programs aimed at reducing macroeconomic imbalances—and in particular programs that reduce inflation—will tend to have a positive effect on income distribution.

Faster economic growth reduces poverty through two fundamental channels. First, it will tend to increase employment, improving the opportunities for productive activities among the poor. This suggests that the "type" of growth will be important in determining how fast poverty is reduced. Growth that emphasizes labor-intensive sectors will generally be more effective in reducing poverty than growth that is biased against exports and employment generating activities. The second channel through which growth reduces poverty is related to wages. To the extent that growth is associated with productivity increases, wages will also improve and, under most circumstances, the poorest segments of society will see an improvement in their life conditions. Investment in human capital accumulation—especially at the preschool or primary level—will greatly help increase productivity, real wages growth and reduced inequality.

Labor Markets Regulations in Latin America

Policy discussions on the mechanics of structural adjustment and market-oriented reforms have tended to ignore labor markets. And yet, in many countries labor markets are highly distorted, introducing efficiency costs and making adjustment more difficult. Most of these distortions were introduced in an attempt to protect labor from abuses and to protect the poor. Contrary to politicians original intent, however, these policies created highly segmented labor markets and discouraged employment. After the eruption of the debt crisis, the combination of labor market distortions and macroeconomic austerity contributed to create an increasingly large informal sector in many countries. Removing the most serious distortions will usually tend to increase the unprotected sector wage rate, reduce the protected sector wage rate, increase overall employment, and reduce the formal-informal sector duality.

The most serious labor market distortions in Latin America can be classified in three categories: (a) high costs of dismissal that reduce flexibility and make a firm's restructuring difficult and slow; (b) high payroll taxes that reduce the incentives to expand employment, and negatively affect the degree of international competitiveness of local firms; and (c) the nature of labor-management relations, which encourage confrontation and costly settlement procedures.

The State of Human Development in Latin America

A broad evaluation of life conditions requires understanding how a series of social variables, including nutrition, health, and education, behave through time. In this section the evolution of some of the most important indexes of human development during the last decade is discussed. The analysis concentrates on health and population, nutrition, education and human capital formation, social security and water and sanitation.

A traditional problem with health provision in Latin America, is that in many countries the emphasis has been on funding and subsidizing curative medicine, rather than concentrating on basic preventive care. This approach is not only inefficient, but also highly regressive, since its benefits tend to accrue to the middle and upper classes. Recent efforts to tackle this problem have been hampered by the lack of adequate medical support staff, including nurses, technicians, and nurses aides. Also, the World Bank has recently identified the lack of proper distribution of drugs as an element standing in the way of an effective expansion of curative care.

For decades, the lack of adequate sanitary conditions has been at the heart of Latin America's health problems. Diarrhea and other water-related diseases have been the cause of a high percentage of the region's infant mortality. During the 1980s more than 80 million urban dwellers and 18 million people in the rural sector obtained drinkable water services. However, in spite of these improvements, sanitary conditions in the region are still far from optimal. A particularly serious problem refers to the inadequate treatment and disposal of sewage. In many countries this problem has been related to the neglect of infrastructure maintenance during the 1980s. There is increasing evidence suggesting that most countries in the region lack the required institutional support for adequately maintaining infrastructure investment. Additionally, approximately $10 billion will be required during the next decade to provide water and sewage to those that currently lack these services.

For more than two decades, serious efforts have been made to control the rate of growth of population. An expansion in family planning, including an increase in the use of contraceptives, has resulted in a significant decline in total fertility rates in the region. However, in the poorer countries, the total rate of fertility still remains high, exceeding in some cases—Bolivia, Guatemala, Honduras, and Nicaragua—five children per mother.

A large number of studies have discovered a clear link between nutritional programs and the efficiency of the educational system. Well-fed children are more attentive in school, and are able to learn at a faster rate. More specifically, programs aimed at increasing the nutritional intake of children aged 0-3 are likely to have a significant effect on learning abilities and will have very large social returns,increasing productivity and, eventually, the ability to obtain high-paying jobs.

Education, Human Capital Formation and Social Conditions

For a long time economists have argued that the accumulation of human capital,through increases in the coverage and quality of education, constitutes one of the fundamental pillars of successful development strategies. In the last few years this idea has gained renewed popularity thanks to the development of a new family of growth models that incorporates the possibility of increasing returns to scale and positive externalities.

Education, then, plays a multiple role in the development process. It has important effects both at the macro aggregate level, where it is a key source of growth,and at the microeconomic level where it is a fundamental vehicle for moving out of poverty.

In most countries there is insufficient access to early and preschool education. Additionally, women lag in almost educational category, including "head start" type of programs. This, in spite of the fact that recent research has shown that social return on early training of women is exceedingly high. It not only increases productive employment opportunities, but it also has a number of positive indirect effects on fertility and nutritional attainment.

Policy Recommendations

The design of human resources policy, should recognize two basic dimensions on social problems. First, there are deep structural deficiencies in the delivery of social services. Second, the immediate need to provide relief to the poorest segments of society that traditionally have been neglected and have been hit particularly hard during the adjustment period. In the aftermath of the debt crisis a number of countries undertook programs aimed at strengthening the safety net. However, in spite of these efforts, poverty continued to be extremely serious.

In the years to come progress in poverty reduction is likely to come from two mutually reinforcing sources: First, stronger growth that will result in higher employment and faster growing salaries. Second, governments will have to increase the provision of basic social services targeted to the poorest segments of the population.

Politically, a fundamental challenge is to raise the availability of resources to fund social programs. In particular, there maybe a temptation to slide back into populism, using the inflation taxes as a way to fund these programs. History has shown, however, that the inflation tax is one of the most regressive instruments.

IPR81

Federalism, Chinese Style: The Political Basis for Economic Success in China

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The remarkable success of China's economic reforms seems to defy conventional wisdom. Not only does economic reform appear to be successfully pursued without fundamental political reform, but the central government seems to retain considerable political discretion, including the ability to reverse suddenly the reform process or to impose onerous exactions on successful enterprises. Without political reform, economic returns remain at the mercy of politics. Because economic agents know in advance that political discretion affords no protection for their economic success, they are unlikely to put their effort and wealth into undertakings that put them at risk, and hence the reforms will fail.

The actual performance of the Chinese reforms provides a striking contrast to these expectations. The juxtaposition between the conventional wisdom and experience demands an explanation.

The purpose of this paper is to provide such an explanation. We argue that the problem with the conventional wisdom is several-fold. First, it provides too narrow a definition of political reform. Second, its concern with political discretion asks the right question. But an inappropriate definition of political reform leads to the wrong conclusion about political discretion. In fact, political reform in China has provided considerable limits on the discretion of the central government. These limits, in turn, provide the beginnings of a strong and credible political foundation for many market-oriented enterprises throughout the successful regions of China.

Along the important—and, to many, the paramount—dimension of political reform, democracy, China has made little progress. But along other political dimensions, China has made fundamental reform: First, political decentralization has not only enhanced the powers of local government, it has altered center-local government relations in several critical ways that would prove difficult—though not impossible—to reverse. Second, underpinning the reforms is a major shift in ideology, moving from a dogmatic focus on the Maoist version of Marxist-Leninism to a pragmatic, market-oriented approach. Although much of the rhetoric of socialism has been retained (for example, the recent emphasis on the "socialist market economy"), the staunch anti-market, anti-private initiative, anti-private gain focus has been removed. Third, China has for the first time under the Communists opened its economy.

These changes have resulted in a new political system that we characterize *as federalism, Chinese style.* This system, in turn, provides considerable political protection for the economic reforms, including strong new limits on the central government. Viewed from the perspective of the individual, this system differs considerably from federalisms in the developed West. Federalism in the West is nearly always associated with political freedom and the protection of individual rights.

Viewed from the perspective of the political relationships among the different levels of government, China's political decentralization shares much in common with Western federalisms. The modern Chinese system includes a division of authority between the central and local governments. Importantly, the latter have gained primary control over economic matters within their jurisdiction. And, critically, there is an important degree of political durability built into the system that limits the ability of the central authorities to reverse these political reforms.

The Chinese system provides a partial basis for a special kind of federalism called *market-preserving federalism.* Two features are central to the success of market-preserving federalism. First, an important element of political durability is built into the arrangements, meaning that the decentralization of power inherent in the system of federalism is not merely at the discretion of the central political authorities. Second, the incentives created by political decentralization have fundamentally changed the relationship between all levels of government and the economy. At the national level, the government has greatly reduced the scope of the planned economy. At the local level, political reform provides governments with the incentive to foster the economic prosperity within their jurisdictions, a central feature of the Chinese economic success.

Nonetheless, the new economy is not without its limitations. An understanding of how China's current system differs from a more complete system of market-preserving federalism provides some guide to both current problems and solutions to them. The absence of private property rights and a commercial law is one, as many have noted. So, too, is the absence of the appropriate political underpinnings of an internal common market. This, in turn, explains why a good deal of local governments have focused on trade barriers and aggressive anti-market policies within their jurisdiction. Finally, political decentralization has yet to be institutionalized to ensure its long-term stability. These limitations should not be seen as economically debilitating, but rather as problems that need to be addressed in the near future.

IPR83

Intra-Regional Risk Sharing in Thailand

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The data used in this study were obtained from TDRI (Thailand Development Research Institute) in Bangkok by permission of the National Statistical Office (NSO). The Thai SES Survey (Socio-Economic Survey) is large with over 10,000 households sampled each of four years, 1975, '81, '86, and '88. The SES data is highly regarded as yielding direct and more or less reliable estimates of consumption and income.

The hypothesis of full risk sharing supposes that households will insure one another against household-specific shocks in order to smooth out potential fluctuations in consumption, but they will do so only up to their ability to smooth as a group. Sporadic crop disease is insurable but fluctuations in regional or national income may not be. Thus, adding up over individuals, changes in county consumption should be related to changes in regional or national consumption (aggregate risk), and not related to changes in county income (idiosyncratic risk). Alternatively, one can derive a relationship in logs so that the corresponding implications hold in annualized growth rates of consumption and income. Statistical tests along these lines are implemented as follows. First, county consumption changes are regressed on county income changes. Second, measured regional (or national) consumption changes are subtracted from the left hand side, avoiding potential econometric problems when an average of the dependant variable is included as a right-hand side variable. Finally, following Deaton, one replaces measured regional (or national) averages with unobserved time and regional fixed effects. All three methods indicate that within-region risk sharing in consumption is good for farmers in the North and Northeast; indeed, full risk-sharing is not rejected. On the other hand, risk-sharing is less evident for other occupations in these regions and for all occupations in all other areas of the country. These results are not inconsistent with the hypothesis that risk sharing is inversely related to levels and growth rates of income. Indeed, marginal propensities to consume out of income are significantly higher in Bangkok and in the Central plains than elsewhere. Sensitivity of these results to alternative categories of consumption, e.g., food only, and alternative measures of income, e.g., income excluding income in-kind, are also reported in the paper.

One wonders if these results are spurious due to the presence or absences of comovements in income. They are not. Procedures are implemented here as follows. There is a search for significant regional or national fixed effects in explaining county level income changes. That is, one is looking for a decomposition of county level income changes into regional (or national) effects--aggregate risk--and residual county-specific changes--idiosyncratic risk. Results to date indicate there are significant time and regional effects in county level income changes in the North, and Northeast, where there is insurance, but these are also present as well in the Central region, where there is not. Intraregional income comovements are particularly striking when attention is restricted to sampled households who indicate their principal occupation is farming (other regions are then also included) but intraregional income comovements are much less striking when attention is restricted to entrepreneurs (few regional effects are then significant). Entrepreneurs also lack insurance, and since risks are idiosyncratic, there would appear to be a gain to pooling these risks. This has not happened in practice.

The importance of this work lies in its efforts to explore the sensitivity of risk-sharing results to other methods and other data sets. In particular the results appear to indicate that risk-sharing systems can be lost as a country grows. This is inconsistent with various growth models. If such results are sustained in this research, then government and nongovernment organizations should either make greater efforts to document and preserve indigenous risk sharing systems or extend implementation of more formal risk sharing systems. Social security, health and disability insurance come to mind as systems which need to be evaluated, especially in view of the impending AIDS epidemic in Thailand. Also, if the logic behind the growth model is correct, improved insurance may increase growth rates and lead to a more equitable distribution of income.

IPR84

Public and Private Bureaucracies: A Transaction Cost Economics Assessment

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Bureaucracy in general and public bureaucracy in particular suffer from a bad name. Sometimes that bad name is well deserved, but sometimes it reflects a failure to appreciate that the problems with which public and private bureaus deal are intrinsically difficult.

This paper examines bureaucracy from the transaction cost economics perspective, according to which the public bureau is one of several governance structures and is evaluated comparatively in relation to other feasible modes of governance. Although the main comparison is between public and private bureaus, comparisons with market and hybrid forms of contracting and with nonprofit organization are included as well. Redistributional purposes aside, the public bureau is reserved for very special transactions and is usefully regarded as the organization form of last resort.

That it is employed as a last resort reflects both its weaknesses and its strengths--which, as it turns out, are both attributable to the very low powered incentives that operate in public bureaus. These low powered incentives and the associated bureaucratic cost burdens that are borne by public bureaus are defining characteristics and indwelling features. Both obtain because the public bureau is a creature of politics and is embedded in politics and because the contract law of public bureaus (Civil Service Law in combination with administrative law) elicit these properties. Also, and related, the public bureau, as compared with the private bureau, is subject to less competition from the product market and still less competition from capital markets.

The very real incentive limitations of the public bureau for the delivery of standard goods and services notwithstanding, there are some goods and services that benefit from the very low powered incentives and/or confidence infusing properties of public bureaus. Nonstandard transactions for which the public bureau enjoys comparative advantages include (1) sovereign transactions, (2) emergency preparedness, (3) some quality assurance measures, and (4) redistribution.

The analysis proceeds comparatively and employs a remediableness standard, according to which hypothetical ideals are operationally irrelevant. Attention is therefore focused on alternatives that are feasible, implementable, and the source of expected net gains. Benign governance is disallowed.

IPR85

Decentralization, Externalities and Efficiency

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Recent history has been marked by renewed attempts to decentralize governments. Economists and political scientists alike have viewed this as a positive step, with decentralization in middle-income and developing countries, most recently in Russia and Eastern Europe, receiving enthusiastic applause. The World Bank and IMF have also jumped onto the decentralization band-wagon; while simultaneously advocating democratic reforms, they have made the transfer of key duties to local authorities a fundamental part of many structural adjustment programs.

The advantages of political decentralization mirror the benefits of economic decentralization. Because they can take advantage of information not available to centralized authorities, decentralized governments tend to be more responsive to local conditions than centralized systems. They also allow citizens greater choice over the public expenditures, and provide a political check on potential abuses by central authorities.

However, decentralization also entails making tradeoffs. A critical disadvantage is that coordination can usually best achieved under centralized systems. Such coordination may be desirable, for example, in the case of public goods provision, public action in other areas with significant returns to scale, income redistribution or poverty alleviation, and other instances when actions in one region directly affect another region (positively or negatively).

The importance of these concerns is seen in the way that most governments are structured. Most governments usually keep decisions on matters requiring coordination in the hands of the highest reaches of the government -- for example, matters surrounding macroeconomic stabilization, national security, and redistribution always remain centralized. For other matters, like "sectoral" expenditures on health, education, the environment, and infrastructure, local authorities are usually given fairly wide discretion to develop programs in line with local needs and preferences.

Of course, there is often a need for coordination of these sectoral issues as well. The consequences of aquifer contamination, acid rain, and ozone layer depletion have dramatized the need to coordinate environmental policies across regions, and, similarly, the spread of infectious diseases has led to a call for health policy coordination. Spillovers due to reduced crime and labor force improvements provide examples of ways in which education decisions have consequences which are not purely local, and many issues surrounding infrastructure provision have clear global ramifications.

Do these arguments suggest that in fact centralization must be the answer? No: many would argue that, in principle, coordination can be achieved in a decentralized system without heavy-handed central government involvement. This can be achieved either through the use of carefully chosen taxes or subsidies (e.g., tax rates which force polluters to consider the consequences of their actions for others) or through voluntary negotiation between the concerned parties. Here, the central government's role is minimal. The center's only role is to enforce property rights and to ensure that the taxes are paid or the terms of contracts are carried out. These views are held widely in the economics profession, and they have had great force in the design of economic policy.

In this paper, we demonstrate that these arguments rest on special assumptions: (1) that the people of a given locality do not have better information on their own affairs than outsiders or (2) that localities can be forced to abide by policies which are not in their best interests. Since both of these assumptions are inconsistent with the basic premises on which decentralization rests, we consider the nature of coordination in more realistic situations.

The analysis leads to several conclusions which differ in important ways from previous economic analyses. First, we make precise the notion that coordination is more difficult in a decentralized system, and we show that, as a result, coordination will occur less frequently (and be less effective) when compared with coordination under a centralized government. Second, coordination will be most likely to occur and be most effective when the "stakes are high" -- that is, when the "spillovers" (e.g., inoculating against cholera) can turn out to be less of a problem than those with small spillovers (e.g., reducing under-nutrition). Third, focusing just on the traditional costs of doing business (e.g., legal fees) ignores important costs of coordination associated with the lack of information. When all parties do not share equally in information (say about the cost of installing pollution control equipment), parties can -- and often will -- systematically take advantage of their better information, resulting in "over-charging." Thus, understanding the role of information is critical in understanding both the strengths and weaknesses of decentralization.

The analysis provides broad guidelines for policy design. Most importantly, decentralizing is not costless: The advantages of fully decentralizing all sectoral decisions need to be weighed against the costs due to increased difficulties with coordination. Not surprisingly, despite a high degree of local discretion, decentralization is limited in education and health policy in the United States, with indications that health policy will likely become much more centralized. This lesson from the United States should provide balance to policy discussions in developing economies.

On the other hand, we also show how the judicious use of subsidies in the form of matching grants and simple taxes can be used effectively to minimize -- but seldom eliminate -- problems associated with spillovers in decentralized systems. Thus, ensuring that there will be mechanisms for responsive tax and transfer policies ought to constitute a critical part of discussions of the decentralization process.

IPR86

Military Expenditure and Economic Development

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Military expenditure is a significant share of central government expenditure and gross domestic product in many developing countries. It is often argued that military expenditure leads to reduced growth in developing countries by crowding out productive investment. This paper considers the impact of military expenditure on economic growth in both developed and developing countries, using data from the US Arms Control and Disarmament Agency (ACDA) from 1973 to 1989.

The results suggest that the impact of military expenditure on economic growth depends on the way in which it is financed. In OECD countries, military expenditure crowds out investment and provides a partial explanation for the relatively slow growth observed in those OECD countries carrying large defense burdens during this period. This pattern is not repeated in developing countries. In low and lower middle income countries, high defense burdens are associated with high levels of investment; where resource mobilization is possible, it appears to lead to greater military spending, greater investment, and higher GDP growth.

Time series evidence suggests that military expenditure does not "cause" higher investment in developing countries. The correlation between the two appears, instead, to be due to the channel through which both are financed. In developing countries with lower levels of political freedom, military expenditure, general government consumption, and gross domestic investment are financed out of reduced private consumption. Strong dictators appear to have the power to channel resources into both investment and military expenditure using means unavailable in weak dictatorships or in democracies. This result stands in contrast to that found in low and lower middle income democracies, for which we find no evidence that military expenditure is financed by reducing consumption.

The results for the OECD countries and the developing world suggests that the relationship between military expenditure and investment mirrors the relationship between general government consumption and investment in a given country. Military expenditure appears to have the same implications for private consumption and gross domestic investment as do other government expenditures.