Globalization, Democracy, and Effective Welfare Spending in the Developing World

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GLOBALIZATION, DEMOCRACY, AND EFFECTIVE WELFARE SPENDING IN THE DEVELOPING WORLD

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The literature on the effects of globalization on social policy and welfare, and the parallel literature on the effects of democracy, operate in mutual isolation to a surprising degree. This article extends the debate on the welfare state in the developing world by examining the social policy reactions of democratic and authoritarian governments to globalization. Using unbalanced panel data on 57 developing nations, and considering social security and health and education spending, the authors examine whether democratic and authoritarian regimes exhibit similar or different social spending priorities in the context of increasing economic openness. The results show that social spending in "hard" authoritarian regimes is more sensitive to the pressures of globalization than in democratic or intermediate regimes.

Keywords: *democracy; social spending in developing countries; globalization; redistribution; social welfare*

How do regimes of different types respond to globalization? This article focuses on a sample of 57 less developed countries (LDCs) and explores potential differences between democracies and authoritarian

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regimes in one particular issue area: social policy.[1] Our analysis is distinct in that these two literatures—on democracy and on globalization—have to some extent grown up in mutual isolation.[2] The democracy literature presents strong arguments for why democratic countries care more about redistribution than their authoritarian counterparts. At the same time, critics of globalization argue that the pressures of international market integration can offset these effects and even render domestic politics impotent.[3] This article seeks to reconcile these conflicting expectations through a research design that considers the joint effects of regime type and globalization.

The expectation that democracies might spend more on social welfare programs can be derived through several distinct theoretical routes. The most influential formal model yielding this result focuses on how political competition (under some assumptions about political parties) tends to push policy toward the interests of the median voter (which vary depending on the distribution of income). But similar results can be derived from models of politics that focus on interest group pressures and the incentives for democratic rulers to provide public goods.

The debate on the relationship between economic openness and social policy generates almost diametrically opposed expectations. One strand of research contends that exposure to international markets stimulates political demands for social spending, in part to compensate for the increased risk associated with openness (Cameron, 1978; Katzenstein, 1985; Rodrik, 1997). In this view, domestic political forces and institutional arrangements continue to influence government spending and commitment to social welfare even in the face of international constraints. For example, a long line of research argues that social democracy remains a viable political project even in an increasingly globalized economy (Garrett, 1998).

By contrast, research on the LDCs suggests that globalization and the extent of social welfare commitments appear to be inversely correlated (Kaufman & Segura-Ubiergo, 2001; Rudra, 2002). Openness to trade, and particularly capital flows, forces "convergence" toward conservative fiscal policies that constrain social spending. Indirectly, economic integration weakens political forces such as leftist parties and labor groups that support the expansion of social insurance and services.

We address these conflicting views of globalization and democracy by systematically examining how political factors—and particularly regime

1. The sample size is based on data availability.

2. Adsera and Boix (2002) are one exception, although they focus on explaining the size of the public sector rather than welfare spending.

3. Globalization in this article is operationalized by the level of trade and capital flows as a percentage of GDP.

type—mediate the relationship between international market forces and domestic social policy in developing countries. Although there are strong theoretical reasons to expect that democracy is consequential for social policy making, many developing country democracies are relatively recent in origin and exhibit a variety of well-known institutional weaknesses. There are good reasons to believe that the constraining effects of globalization might be more potent in small, open developing economies that lack strong tax bases to begin with and have been subjected to a variety of external shocks. Moreover, authoritarian regimes also have incentives to use social policy for political ends that could mute the differences between regimes of different types. Using time-series and cross-sectional data for 59 developing countries during the period from 1975 to 1997, and building on models developed by Kaufman and Segura-Ubiergo (2001) and Rudra (2002), we examine the determinants of social spending, defined to include central government expenditure on social welfare, health, and education.

Our findings cast substantial doubt on the hypothesis that globalization necessarily has an adverse effect on welfare spending in developing countries. We find that political institutions and the rules governing political competition matter. In the face of increasing trade openness, in particular, authoritarian regimes are less generous than democracies with respect to social spending and do worse with respect to several key social performance indicators. Also of significance, we find that under conditions of globalization, "intermediate" authoritarian regimes show different social spending patterns than "hard" authoritarian regimes and in some cases, behave more similar to democracies.

DOES DEMOCRACY MATTER?

The historical literature on the advanced welfare state focus on the expansion of the franchise and gradual democratization. But the literature on the postwar period has dealt with countries that are consistently democratic and as a result, regime type does not typically enter the analysis. Developing countries, by contrast, continue to exhibit substantial heterogeneity with respect to regime type.

Although some skeptics fail to find any consistent relationship between democracy and social policy, there are three strong theoretical reasons to think democracy might be associated with greater attention to social welfare. The most simple, but nonetheless powerful, formal model to generate this result can be traced to Meltzer and Richards (1981) and focuses on the effects of electoral competition. Their model assumes that the government sets the tax rate and then redistributes revenue equally among all citizens; the provi-

sion of basic social services such as health and education constitutes an example of such redistribution. Under a number of plausible assumptions, the policy positions of competing political parties will converge on the interests of median voters and, therefore, on their preferred tax rate and level of redistribution. The central insight of the Meltzer-Richards model is that the extent of redistribution is a function of the level of inequality. The more skewed the income distribution, the greater the wedge between the mean and median income, the greater the demand for redistribution.

Boix (1998, p. 26) provides a succinct explanation of how the median voter model of redistribution can be turned to understanding the comparative-static difference between democratic and authoritarian regimes. In modern democracies, the franchise typically extends to all adults.[4] Authoritarian regimes effectively limit the franchise to some subgroup of the population. Once the distribution of voters is effectively censored in this fashion, the median voter is no longer a poor citizen favoring progressive redistribution and social insurance. Rather, she or he is a richer, low-risk type who sees no gain from transferring income or from compulsory risk pooling.

Similar results can be obtained if we adopt a view of the policy-making process that focuses on the influence of interest groups (e.g., see Brown & Hunter, 1999; Grossman & Helpman, 2002). As Mancur Olson (1982) points out in *The Rise and Decline of Nations*, interest groups form with the fundamental aim of redistributing resources toward themselves. If we assume the most simpleminded interest group model of social policy—a single-dimensional issue space in which the extent of redistribution is the weighted average of the ideal points of all organized groups—it is again easy to see how democracy generates more redistribution. Democracy does not guarantee that the disadvantaged overcome their collective action problems and organize, but authoritarian rule censors the distribution of interest group organization from the outset, again limiting opportunities for groups who would benefit from progressive social policy.

A third and final strand of thinking, which can be traced to Cox (1987), treats social policy as a public good and argues that democracies are more prone to supply such goods (Bueno de Mesquita, Smith, Siverson, & Morrow, 2003; Lake & Baum, 2001). Bueno de Mesquita et al. (2003) assume that all leaders secure support through the provision of a mix of private and public goods. When the franchise is narrow, political leaders maintain support with their smaller number of constituents by providing predominantly private goods. As the franchise expands, it becomes increasingly

4. This does not mean that all eligible voters vote; the difference between the median citizen and the median voter can in fact be quite substantial.

costly and inefficient to do so and leaders shift toward greater provision of public goods.

These arguments about the effects of regime type have not gone unchallenged. In the important book *Political Economy of Dictatorship*, Wintrobe (1998) argues that authoritarian leaders are more insecure than democratic ones and, thus, more prone to redistribution. At a minimum, authoritarian leaders must maintain the loyalty of the military and police forces required to coerce and of the bureaucratic or administrative class necessary to rule. Although Wintrobe notes that such redistribution typically has perverse consequences (i.e., distributing away from the poor), we know from Bismarck's institution of limited social insurance policies that autocracies can have their own political reasons for adopting more progressive forms of redistribution. Indeed, authoritarian governments may be more dependent on such instrumental forms of legitimation than democracies.

The foregoing arguments rest on a stylized, dichotomous distinction between democracies and authoritarian regimes. Empirically, it has long been recognized that authoritarian regimes exhibit a tremendous variety. The past decade has seen a renewal of interest—and puzzlement—regarding intermediate regimes that exhibit some features of democratic rule but at the same time, retain important authoritarian elements (e.g., Collier & Levitsky, 1997; O'Donnell, 1992; Zakaria, 2003). First, although some authoritarian regimes do not allow elections at all, or completely monopolize the electoral process, a surprising number subject themselves to some electoral test. Even controlled elections provide opportunities for oppositions and encourage authoritarian elites to use social policy as a "survival strategy" (Ames, 1987).

In a similar manner, although some authoritarian regimes, such as Communist ones, seek to eliminate all forms of independent social organization, many authoritarian systems allow controlled interest group organization. These constraints may take the form of bans on certain types of groups (leftist parties, unions) or activities (strikes, lobbying) or organizational restrictions of various sorts ("state corporatism," government vetting or even appointment of organizations' leaders, etc.). For the sake of theoretical simplicity, we can think of the dictator as "sorting" the population into different groups. Those that are repressed are taxed and receive limited goods from the state, whereas groups that are allowed representation receive benefits such as those provided through social policy. The extent of this sorting varies and with it, so should the nature of social policy.

In sum, we have strong theory suggesting that democracies should pursue more expansive social policies than authoritarian regimes, ceteris paribus. The border between regime types is porous, however, suggesting that we should take account of intermediate regimes. We expect "soft" authoritarian

regimes that allow some degree of competition and interest group organization to pursue more responsive social policies than hard authoritarian regimes that restrict them more completely.

GLOBALIZATION AND SOCIAL SPENDING

Despite the persuasive arguments on the significance of democracy for social spending, the globalization literature has cast a more skeptical eye on the potential significance of such domestic political arrangements. This has particularly been the case in the LDCs, where leftist parties, labor, and other interest groups in favor of social policies are relatively weaker than they are in the industrialized nations. But are they ineffective in all developing nations, particularly when faced with the increased risks and uncertainties of globalization? Or do political incentives in democracies—whether from political competition or interest group pressures—lead to more expansive social policy as market integration increases?

A series of studies by Cameron (1978) and Katzenstein's (1985) work on the historical origins of corporatism argue that openness and external shocks, respectively, were important determinants of increased welfare commitments in economically advanced countries (see also Quinn, 1997; Rodrik, 1997, 1998). Democratic governments had incentives to offset the increased vulnerability and insecurity associated with economic openness either through countercyclical Keynesian policies or by expanding the scope and depth of social insurance on a more permanent basis.

Beginning in the 1980s, however, a more skeptical view of globalization began to gain both popular and scholarly attention. Also focusing largely on the advanced industrial states, this literature argues that increasing trade and investment constrains government spending, including on welfare. Capital mobility can place pressure on the capacity of individual jurisdictions to tax mobile assets. Greater reliance on exports—although not necessarily trade liberalization per se—might have similar effects if export-oriented firms see taxes as a drag on competitiveness. Unless governments are capable of compensating for the loss of revenue through other sources, greater economic openness could constrain spending (Franzese & Hayes, 2004; Stephens, Huber, & Ray, 1999; Swank, 1998).[5]

Much less empirical work has been done on the effects of globalization on welfare spending in LDCs. The small number of studies that look directly at social spending—rather than aggregate spending, as in the studies noted above—have come to pessimistic conclusions (Kaufman & Segura-Ubiergo,

5. We also have benefited from extensive conversations with Robert Franzese on this point.

2001; Rudra, 2002). These studies suggest that globalization and in particular, increasing openness to trade, has adverse consequences for at least some types of social spending (Garrett, 2001; Kaufman & Segura-Ubiergo, 2001).

A striking feature of several important publications in this area is the failure to consider domestic political determinants alongside international ones. Rodrik (1998) is particularly noteworthy in this regard. Although he controls for a variety of economic factors, Rodrik pays no attention to the actual political processes that he postulates drive social spending, namely, the political demand for the government to mitigate the risk associated with greater exposure to international market forces. The failure to consider domestic political factors is even more puzzling in Garrett's (1998) case because he has long argued that partisanship has persistent effects on the Organization for Economic Cooperation and Development countries.

Both the optimistic and pessimistic views of globalization make important assumptions about the political process through which globalization affects welfare spending. Those predicting a positive correlation between globalization and social spending adopt an implicit stimulus-response model of politics. Globalization creates risk and uncertainty, which in turn stimulate domestic political demand for compensatory policies. However, the "translation" of political demands into public policy should depend on the responsiveness of government to such demands, which is clearly a variable. The more skeptical view of the effects of globalization, by contrast, suggests that political factors such as democracy have little or no mediating effect on the relationship between globalization and social spending; governments of very different sorts are presumed to respond similarly to external constraints. But this proposition must be tested by explicitly considering the effects of mediating domestic political factors.

Given the distinct theoretical expectations about democracy, globalization, and social spending, it is surprising that few studies directly join these two sets of literature. We consider the following three simple hypotheses:

Hypothesis 1: Globalization constrains welfare spending and democracy is irrelevant in offsetting these effects. Democratic and authoritarian regimes react similarly to the economic constraints of increased openness to trade and investment.

Hypothesis 2: Globalization has constraining effects on social spending in authoritarian regimes but not in democracies.

Hypothesis 3: Globalization does not have constraining effects on social spending, but democracies spend more on social insurance and services than do nondemocracies.

VARIABLES, RESEARCH DESIGN, AND MODEL SPECIFICATION

THE DEPENDENT VARIABLES

The effects of democracy and globalization may vary by type of social spending and policy area. We therefore follow the approach pioneered by Kaufman and Segura-Ubiergo (2002), which disaggregates social spending into social security and welfare, education and health. (See Appendix A for detailed summary statistics on education, health, and social security and welfare spending.)

Social security and welfare spending captures governments' provision of certain types of social insurance. Recent theoretical work on social insurance suggests how such spending may be efficient given pervasive failures in insurance markets (Barr, 2001; Mares, 2003). Moreover, the fact that such spending takes the form of widely held entitlements has made it somewhat less vulnerable to retrenchment than was once thought (Pierson, 1995). In the developing country context, however, social security and welfare spending is typically targeted at narrower constituencies and, therefore, may be even more vulnerable to the "efficiency" pressures of globalization than it is in the advanced industrial states.

Spending on education and health, by contrast, reflects the priority governments give to investment in human capital and could well be complementary to the exigencies of a more open economy. Economies that are more open to trade and investment may be more likely, as opposed to closed economies, to increase spending on education and training as a means of enhancing their competitiveness.

Distinguishing welfare, health, and education policy still leaves the question of whether social spending should be measured as a share of GDP, as a share of total spending, or on a per capita (dollar) basis. Each measure has advantages as well as drawbacks. Most studies use social spending as a share of GDP, thus, capturing the overall allocation of societal resources. However, this measure is strongly affected by the size of the government and arguably does not capture how governments allocate the resources directly under their control. Korea and Singapore, for example, rank among the lowest percentile for education spending as a proportion of GDP but are among the 75th percentile for education spending measured as a share of the total budget. In fact, using spending as a percentage or GDP places Korea in the same percentile grouping as LDCs such as Mali, Malawi, and Liberia. Although these different measures are all defensible, social spending as a share of total government spending seems to provide a more direct measure of government

priorities and has the additional benefit of increasing the variance across countries.

A recurrent critique of spending measures is that they may not capture effective government commitment. We therefore also consider several outcome variables in the education and health areas.[6] First, we consider gross enrollments in primary and secondary education as a measure of governments' commitment to basic education. Infant mortality can be seen as a measure of the commitment of governments to the provision of basic health services. These measures are important because they provide additional information on the redistributive nature of spending; Appendix B provides details on measurement and sources for the data used in this analysis.

ECONOMIC VARIABLES

Globalization: Trade, private capital flows. In considering the effects of globalization, we look at both trade and capital flows. Our measure of trade is the standard one of exports plus imports as a share of GDP.[7] Private capital flows are measured as gross capital flows (inflows plus outflows as a percentage of GDP), a measure that we believe captures total exposure to risk from international capital movements even if it does not capture the direction of flows. We believe this measure is a more direct indicator of exposure to risk than the measures based on the coding of capital controls, which may or may not correlate highly with actual capital flows.

Economic growth, GDP per capita, and debt. GDP per capita and economic growth are clearly among the more important controls in any study of this sort. It is often observed that social spending rises with income per capita. The influence of short-run economic performance is somewhat more controversial. In the advanced industrial states, welfare expenditures are countercyclical because of the presence of automatic Keynesian stabilizers. Spending on unemployment insurance and other transfers goes up during recessions and falls with recovery. Governments in developing countries typ-

6. Note that as an added check on the education and health spending variable, we use literacy rates, number of physicians per 1,000 people, and measles immunization rates. The findings reveal a similar statistical pattern. In each case, trade had a positive and significant effect on literacy, physicians, and measles immunization but no effect in nondemocracies.

7. Note that we do not follow Avelino, Brown, and Hunter (2005) and use trade measured as a percentage of GDP based on purchasing power parity. Because purchasing power parity conversions for our dependent variables do not exist, we retain our trade openness measure (export + imports/GDP) to maintain consistency in measurement.

ically lack such stabilizing policies. It might therefore be hypothesized that developing countries' social policy are procyclical rather than countercyclical and that social commitments expand in times of robust growth and contract during recessions or crises (Haggard & Kaufman 2004; Wibbels, 2003). Finally, we also consider the stock of external debt as a potential constraint on government spending. The stock of debt constitutes an important measure of external financial constraints on governments because pressures to fulfill external obligations may limit domestic spending.

POLITICAL VARIABLES

Democracy (democ). We use Marshall and Jagger's (2002) 10-point scale for measuring democracy from the *Polity IV Dataset*. Countries are ranked according to three main criteria: regulation, competitiveness, and openness of executive recruitment; executive constraints; and regulation and competitiveness of political competition. The first and the third of these dimensions correspond closely to the two main theoretical mechanisms through which we expect democracy to operate, namely, electoral competition and freedom to organize. The use of these scalars of democracy has the well-known disadvantage that not all movements along the scale are of equal significance; some may capture a genuine regime change, whereas others represent more marginal changes within a given regime type. Nonetheless, this approach has the advantage of capturing marginal changes in political competitiveness, restraints on the executive, and political and civil liberties that might nonetheless be important for understanding government responsiveness to demands for social spending.[8]

The effect of democracy is captured both by entering the variable directly and by separating the sample into democratic and nondemocratic regimes; we consider this a small but in fact quite important departure from previous studies. By separating democracies from nondemocracies, we are able to directly compare if and how social spending patterns vary in countries with fundamentally different political institutions.

DEMOGRAPHIC FACTORS

An important influence on both social security and health spending is the relative size of the elderly population. However, interpreting this variable is

8. We also ran the regressions using Marshall and Jagger's (2002) Polity scale that ranges from 10 to –10, another conventional approach to assessing democracy. This scale was constructed by subtracting the Polity "autoc" measure from the "democ" measure. The results were almost identical.

complex. On one hand, pure demographic and economic factors may be at work. For example, a given entitlement to pensions and health care will result in rising spending as the cohort of the elderly expands. On the other hand, we concur with Brown and Hunter (1999) that this constraint must also be seen in political terms. Entitlements are not an automatic response to demographic trends but instead, the result of some political process; just as they can be expanded, they can be reversed as well. Thus the size of the elderly population might be interpreted not only as a demographic constraint but as a political one as well.

A similar set of issues arises with respect to education spending. Once a country has committed to universal schooling, we might expect spending to rise or fall depending on the sheer size of the school-aged cohort; we therefore control for this factor. Yet because primary and secondary education are likely to have redistributive components, we can also interpret significant coefficients on this demographic variable as reflecting responsiveness to poorer parents whose children benefit most from basic schooling. It is important to emphasize that this variable is highly (negatively) correlated with GDP per capita because family size tends to decrease in richer countries. Consequently, each of the models is estimated in three ways: first, by including both variables; second, by including only GDP per capita; and third, by including only the population 0 to 14 variable. Differences in results, if they occur, are reported in the tables.

POTENTIAL LABOR POWER (PLP)

Labor has played an important role in the evolution of the welfare state in Western Europe. The most common method of assessing labor strength in the Organization for Economic Cooperation and Development is by union density or unionization rates. Given the unreliability, weakness, and paucity of direct organizational measures for developing countries, we adopt Rudra's (forthcoming) index of PLP, which combines two direct measures of structural conditions in LDC labor markets. The index is motivated by the observation that the political power of labor is increasing in the ratio of skilled to unskilled workers, given the greater capacity of the former for collective action, and decreasing with the size of "surplus" labor, measured as the working age population minus the economically active population and students in secondary and tertiary schools. To create an index, we divide each country's score by the highest value in our larger data sample (i.e., Sweden = 87) and multiply by 100. Assuming that there is always some surplus labor and some low-skilled laborers, the PLP is

$$PLP = \left(\frac{\left(\frac{\text{Number of skilled workers}}{\text{Number of low-skilled workers}} \right) * \left(\frac{1}{\text{Surplus labor as \% of working population}} \right)}{87} \right) * 100.$$

PLP, thus, falls as the ratio of low-skilled workers to skilled workers increases and as surplus labor rises. To the extent that surplus labor shrinks and labor markets become tighter, PLP increasingly depends on the ratio of skilled to low-skilled workers. An increase in PLP, thus, indicates that labor's bargaining power has increased.[9] Because high PLP suggests that labor is more likely to overcome their collective action problems and organize and because democracies do not censor interest group formation, we expect that PLP will be positively associated with social spending in democracies.

THE MODEL

To test the hypotheses outlined above, we first develop a model that includes both globalization and democracy. If we find that the effects of democracy are significant in the pooled sample, we then check whether the coefficients of the regression model are different when divided into two subsamples (democracies and nondemocracies).[10] This allows us to test whether globalization has a more adverse effect on social spending in authoritarian regimes than it does in democracies. It also enables us to determine how other political and economic factors behave in democracies compared to nondemocracies.

If Hypothesis 1 is true, then the coefficients for trade and capital flows will be negative and significant in both democratic and nondemocratic LDCs. In

9. See Silver (2004) for a discussion of the importance of greater "marketplace bargaining power." See Rudra (in press) for more detailed arguments on the relationship between potential labor power, labor's marketplace bargaining power, and labor's overall political power.

10. The following list reflects less developed country democracies with a Polity value (Marshall & Jaggers, 2002) of greater than or equal to 7 during some portion of the period from 1972 to 1997: Argentina 1983 to 1997; Bangladesh 1972 to 1973; Bolivia 1982 to 1997; Botswana 1972 to 1997; Brazil 1985 to 1997; Chile 1989 to 1997; Colombia 1972 to 1997; Costa Rica 1972 to 1997; Cyprus 1972 to 1997; Dominican Republic 1996 to 1997; Ecuador 1979 to 1997; El Salvador 1991 to 1997; Fiji 1972 to 1986; Greece 1975 to 1997; Guatemala 1996 to 1997; India 1972 to 1997; Israel 1972 to 1997; South Korea 1988 to 1997; Lesotho 1993 to 1997; Malawi 1994 to 1997; Mali 1992 to 1996; Mauritius 1972 to 1997; Nicaragua 1995 to 1997; Nigeria 1979 to 1983; Pakistan 1973 to 1976 and 1988 to 1997; Panama 1989 to 1997; Paraguay 1992 to 1997; Peru 1980 to 1991; Philippines 1987 to 1997; South Africa 1972 to 1997; Sri Lanka 1972 to 1977; Thailand 1992 to 1997; Trinidad and Tobago 1972 to 1997; Turkey 1973 to 1997; Uruguay 1985 to 1997; Venezuela 1972 to 1997; and Zimbabwe 1972 to 1978.

other words, regime type does not matter when faced with the pressures of globalization. Hypothesis 2 is confirmed if trade and capital flows have a negative and significant coefficient in the nondemocratic countries but not in democratic LDCs. Hypothesis 3, or the null globalization hypothesis, is confirmed if the globalization variables are not significant, but democratic LDCs spend more on social programs than nondemocracies.

Based on estimation procedures that Beck and Katz (1995) advocate, we estimate the following model using panel data with fixed effects. Panel-corrected standard errors are used to take into account heteroskedastic standard errors. In addition, problems of potential serial autocorrelation within each panel are addressed by estimating and adjusting for a panel-specific AR(1) process. This model follows Achen's (2000) recommendation against applying the standard practice of simply using a lagged dependent to correct for serial autocorrelation. These results provide Prais-Winsten coefficients with panel-corrected standard errors:[11]

$$\text{welf}_{it} = \alpha + b_1\text{democ}_{t-1} + b_2\text{trade}_{t-1} + b_3\text{capitalflows}_{t-1} + \Sigma(b_k\text{controls})_{t-1} + \varepsilon_t.$$

Welf represents the sum of education and health spending which we take as an indicator of investment in human capital, social security and welfare spending, and the outcome measures of gross enrollment in primary, secondary, and tertiary enrollment and infant mortality rates. The globalization variables are trade and capital flows. Political control variables are PLP and the share of the population older than 65 years of age. Economic controls are GDP per capita, growth, and debt. All the independent variables are lagged to increase confidence that the direction of causality occurs from the exogenous variables to the dependent variable.

We do not include the level of spending in the outcome models (gross enrollment ratios and infant mortality) for a very important reason. Recall that the primary purpose for estimating the outcome models is to assess if social welfare spending is more effective in democracies than in nondemocracies. Consequently, the implicit assumption in these models is that increases in education and health spending are not always associated with better outcomes, enrollment, and mortality rates in this instance (see, e.g., World Bank, 2004). To check this, we apply the Lewbel (1997) procedure

11. Estimating a measure of first-order correlation (ρ) has the effect of making the time-series data stationary. This measure is used to transform all variables in the model according to the formula: $y * t = yt - (\rho * yt - 1)$. This partial differencing procedure reduces suspicions about spurious results, particularly the concern that the effects of a potentially high degree of institutional inertia exhibited by the dependent variable are not captured.

and estimate a more complicated set of equations using the two-stage least squares method for the outcome variables.[12] It is interesting that the instruments for spending (and even spending itself) are not significant. In conjunction with other studies, we do not interpret this to suggest that spending per se is irrelevant. But we do believe that increasing spending does not necessarily have a positive effect on welfare outcomes in all countries; nor does a decrease in spending necessarily have uniformly adverse consequences across countries (see, e.g., Gupta, Verhoeven, & Tiongson, 1999; Hanushek, 1995).

RESULTS

We emphasize three main findings. First, our findings show systematic differences in the way that democracies and nondemocracies respond to increased economic openness and, thus, support Hypothesis 2. Although democracies do not necessarily have higher levels of social spending, they pay greater attention to protecting basic needs as economic integration increases. Authoritarian regimes, on the other hand, have not only lower levels of social spending in the context of globalization than democratic regimes but also an inferior record with respect to the outcome measures we employ. Second, we find that democracies and authoritarian regimes respond differently to the other political constraints included in our model, particularly those defined by our labor power measure and by the demographic variables. Democracies are more attentive to the interests of the elderly, but authoritarian regimes are not immune from the influence of social groups. Somewhat to our surprise, we find that social spending is affected by our labor power index in authoritarian regimes. We interpret this to suggest support for the Wintrobe (1998) hypothesis that authoritarian regimes may be responsive to the interests of labor—at least through social spending—even if the overall political context for labor organization is restrictive. Finally, we find that intermediate authoritarian regimes that allow some scope for electoral competition and/or interest group organization do behave differently than their hard authoritarian counterparts and in some cases, exhibit spending patterns similar to the democracies.

12. The conventional method for coping with the endogeneity issue and mitigating bias of the regression estimates is to use the instrumental variable approach. The difficulty, however, is to find outside data (or instruments) that are uncorrelated with the error of the equation and at the same time, highly correlated with the explanatory variables. Therefore instead of using conventional variables as instruments, the Lewbel (1997) procedure of using higher moments of the spending variable as the instrument is applied in this model. Results are not shown here.

RESULTS FOR POOLED SAMPLE

Looking across Table 1, it is clear that democracy has consequences for social policy and outcomes. Democracy is associated with higher levels of social welfare spending but is not significant with respect to health and education spending. But when we consider several important outcome variables, we find that spending in more democratic countries appears more effective; higher levels of democracy are associated with both lower levels of infant mortality and higher primary and secondary enrollments. The relatively sizeable coefficients on the democracy variable further suggest that the impact of regime type is quite strong. As countries become more democratic, the positive effects on social security spending, infant mortality (a negative sign suggests improvements), and primary and secondary enrollments are increasingly pronounced.

The problem with the pooled sample is that it does not allow us to directly compare the determinants of social welfare in democracies and nondemocracies. Countries that are structurally different may be forced to exhibit identical coefficients. This issue can be resolved only by separating the data into two sets—democracies and nondemocracies—and then computing the effects of the political and economic variables on the welfare proxies for each set.[13]

The results from this procedure should be interpreted with some caution. By separating the samples, we reduce the variance in the dependent variables in the two separate samples. Consequently, the correlations and the slopes may be biased (see Lewis-Beck & Skalaban, 1990). However, the Chow test assesses whether the behavior of one group, in our case democracies, is the same as the other group, or nondemocracies (i.e., the null hypothesis). Applying the Chow test to our sample, we learn that the two groups are not the same (i.e., rejecting the null hypothesis) and, thus, there is indeed a justification to split the samples.[14]

Another advantage of splitting the sample is that we can address the question of how different levels of democracy behave and whether there are important break points. At what point is the level of democracy sufficient to have an effect on the spending and welfare? Given our theoretical priors, we

13. To ensure that neither the democratic nor authoritarian transition process is driving the results, we created two dummy variables representing each and ran tests to assess whether the democratic transition dummy and the authoritarian dummy were significant in the pooled sample. The dummy variables were not significant and thereby suggest that transitions are not affecting the primary results. We thank a reviewer for bringing this to our attention.

14. To check this, we "pooled" the model by interacting each of the coefficients by the democracy dummy, including the country and decade dummies, and then tested for joint significance. Results are not shown here.

Table 1
Results From Pooled Sample

	Social Security and Welfare Spending	Health Spending	Infant Mortality	Education Spending	Gross Primary and Secondary Enrollment	Gross Tertiary Enrollment
Trade	–0.014	–0.002	0.064**	–0.023**	–0.032	0.007
	(1.05)	(0.32)	(2.16)	(2.48)	(1.22)	(1.16)
Capital flows	0.012*	0.001	–0.012	0.003	0.012	0.001
	(1.95)	(0.26)	(1.35)	(0.69)	(1.56)	(0.15)
Democracy	***0.421****	***0.046***	***–0.481****	***0.010***	***0.360****	***0.104****
	(5.01)	(1.25)	(3.48)	(0.12)	(2.73)	(3.06)
External debt	–0.007	–0.008	–0.070***	–0.011*	0.041***	0.003
	(0.88)	(1.62)	(4.54)	(1.72)	(3.31)	(1.18)
Dependency	–7.094**	–7.697***				
	(1.97)	(4.82)				
Growth	–0.018	–0.002	–0.007	–0.015	0.062*	0.006
	(0.83)	(0.28)	(0.18)	(0.96)	(1.78)	(0.71)
Potential labor power	0.148	0.025	–0.006	0.239	0.889**	1.236***
	(0.96)	(0.44)	(0.01)	(1.48)	(2.17)	(5.38)
Population < 14			2.794***	–0.071	–1.563***	
			(5.87)	(0.79)	(5.16)	
GDP per capita	–3.226**	–0.617	–0.481	0.452	15.666***	3.921***
	(2.27)	(1.54)	(0.14)	(0.42)	(7.03)	(6.92)
Seventy	–1.838**	–0.122	9.928***	0.270	–5.585***	–1.390***
	(2.45)	(0.38)	(3.94)	(0.47)	(3.49)	(3.49)
Eighty	–1.613***	–0.381	4.362**	–0.516	–2.731**	–0.573**
	(2.99)	(1.62)	(2.33)	(1.38)	(2.43)	(1.98)
Observations	625	650	793	651	794	774
R^2	0.78	0.86	0.94	0.85	0.99	0.93

Note: Parentheses contain *z* statistics.
*$p < .10$. **$p < .05$. ***$p < .01$.

want to be able to compare the behavior of hard authoritarian regimes, through intermediate regimes of various sorts, to countries that are unambiguously democratic. To check this, we create three dummy variables: one for democracy, representing countries scoring from 7 to 10 on the Polity scale (Marshall & Jaggers, 2002); a second for intermediate, representing countries scoring from 3 to 6; and a third for hard authoritarian regimes, representing countries scoring from 0 to 2.[15]

The primary results in Tables 3, 4, and 5 represent "democracy" for when the Polity (Marshall & Jaggers, 2002) scores rank 7 and higher. We do not estimate results for democracies that score higher than 7 because after that, the number of observations and countries included in the democracy group falls by almost 80% (see Table 2) and considerably weakens the reliability of the estimates.[16]

RESULTS FOR EDUCATION

The estimates in Table 3 are designed to compare how education variables in democracies and nondemocracies are affected by globalization and other controls we identify. Focusing first on spending, we find that globalization affects the spending behavior of democracies and nondemocracies in different ways. Our measure of gross capital flows has no effect on education spending in either subsample. However, education spending in nondemocracies is adversely affected by trade, whereas in democracies, external debt is a constraint.

The spending results are difficult to interpret because of the well-known inadequacies of social spending as a measure of redistribution. Education spending in many developing countries is geared toward politically powerful groups rather than the poor. For example, a number of developing countries spend proportionately more on tertiary education than primary education. India and Egypt are good examples. In such circumstances, a negative coefficient might not necessarily imply a regressive outcome if governments are reducing education spending that favors the middle and upper classes and redistributing resources toward basic education that favors the lower ones.

We do not have comparable data on spending by educational level, but primary, secondary, and tertiary enrollment figures provide additional informa-

15. Note that we also applied the Chow test to assess if intermediate and nonintermediate regimes are jointly different and if hard authoritarian regimes are jointly different from intermediate and more democratic countries. In each case, we reject the null hypothesis.

16. Note that the drop in the number of observations when democracy takes on the value of 8 and higher was not as dramatic. The results for democracy equals 7 and higher (results reported in Tables 3, 4, and 5) and democracy equals 8 and higher were almost identical.

Table 2
Distribution of Democracy

Value	Frequency	Marginal	Cumulative
0	640	42.9	42.9
1	62	4.2	47.1
2	74	5.0	52.1
3	31	2.1	54.1
4	28	1.9	56.0
5	37	2.5	58.5
6	100	6.7	65.2
7	97	6.5	71.7
8	158	10.6	82.3
9	177	11.9	94.2
10	87	5.8	100.0
Total	1,491	100	100

tion on the priorities of democratic and authoritarian regimes. Viewing the results for enrollments alongside those for spending generates a sharper contrast between the two regime types. Although trade has no effect on education spending in democracies, it is positively related to enrollment rates at all levels. This suggests that democratic governments respond to greater trade openness by being more efficient and assuring higher enrollments. In nondemocracies, by contrast, not only does trade have an adverse affect on spending but it has an adverse affect on primary and secondary enrollments as well. By contrast, tertiary enrollments are unaffected by trade. Democratic governments, thus, appear to place a higher priority on improving human capital in the context of greater trade openness than do authoritarian ones.

The size of trade coefficients in this model reveals that the magnitude of the difference between regime types is noteworthy. For example, a democratic LDC experiencing an increase in trade from the 25th percentile level (32%) to the 50th percentile (55%) would experience an increase of 2 percentage points in primary and secondary enrollment, whereas enrollment would decrease in nondemocratic nations by 1.2 percentage points. More telling still is education spending. In response to the same increase in trade, education spending would decrease in authoritarian regimes by almost 2% but witness no change in democracies. This is a significant amount given that 30% of the cases in our sample (most of which are nondemocracies) spend between 2% and 10% of the government budget on education.

The addition of the enrollment results also sheds some light on the finding that external debt constitutes a constraint on education spending in democra-

Table 3
Results for Education

	Education Spending		Gross Primary and Secondary Enrollment		Gross Tertiary Enrollment	
	Democracy	Nondemocracy	Democracy	Nondemocracy	Democracy	Nondemocracy
Trade	–0.027	–0.050***	0.070**	–0.062**	0.028**	0.004
	(1.37)	(4.98)	(2.25)	(2.22)	(2.32)	(0.48)
Capital flows	–0.004	0.004	0.008	–0.001	0.001	–0.004
	(0.78)	(0.48)	(1.13)	(0.06)	(0.28)	(0.97)
External debt	–0.026*	–0.003	–0.015	0.024*	–0.020**	0.006**
	(1.71)	(0.58)	(1.06)	(1.66)	(2.39)	(2.32)
Population < 14	–0.035	–0.227**	–1.378***	–1.584***		
	(0.19)	(2.39)	(3.64)	(3.76)		
Growth	–0.053*	0.010	0.026	0.021	0.007	0.003
	(1.88)*	(0.54)	(0.65)	(0.42)	(0.51)	(0.27)
Potential labor power	0.325	0.649**	–0.123	1.292**	1.499***	0.706***
	(1.51)	(2.40)	(0.24)	(2.13)	(4.91)	(3.24)
GDP per capita	1.293	–2.864**	20.948***	15.908***	3.082***	5.279***
	(0.71)	(2.22)	(4.69)	(5.02)	(4.38)	(6.41)
Seventy	0.784	–1.268**	–2.576	–5.122***	–1.721***	–1.076***
	(0.74)	(2.08)	(1.43)	(3.16)	(3.37)	(2.89)
Eighty	0.535	–1.675***	–1.785*	–2.569*	–0.962***	–0.204
	(1.05)	(3.73)	(1.72)	(1.87)	(2.63)	(0.81)
Observations	234	418	294	482	294	482
R^2	0.93	0.93	0.997	0.99	0.97	0.98

Note: Parentheses contain *z* statistics.
*$p < .10$. **$p < .05$. ***$p < .01$.

cies. The adverse effects of debt on enrollment figures show up primarily at the tertiary level, which is generally considered the sector that is least accessible to the poor in LDCs. In sum, spending may be adversely affected by external debt in democracies, but primary and secondary enrollments are protected.

A final finding of interest is the differential effects of labor power across the two regime types. Neither spending nor primary and secondary enrollments are affected by labor power in democracies; curiously, only tertiary enrollments are affected. In authoritarian regimes, by contrast, education spending appears highly responsive to labor power. These findings appear to corroborate with McGuire (1997), who finds that labor in LDCs tends to represent better-off urban groups.

RESULTS FOR HEALTH

Table 4 further confirms interesting differences in the behavior of democracies and nondemocracies in the face of globalization. Trade openness has no effect on health spending in democracies but is associated with lower levels of spending in nondemocracies.[17] However, the coefficients on infant mortality, used to approximate the equity and effectiveness of public health spending, suggests that democracies might be using existing resources more effectively as both trade and capital flows increase (dropping the population < 14 variable).[18] The negative coefficients for debt in the democracy–infant mortality model are harder to interpret, although it is noteworthy that the signs on debt are negative across all specifications and significant in one of the nondemocracy models as well (again, dropping the demographic variable). These findings provide some tentative support for Haggard and Kaufman's (1992) argument that debt constitutes a constraint on governments regardless of regime type.

With respect to other domestic political constraints, in democracies, the elderly population is the most significant predictor for health spending. For nondemocracies, on the other hand, higher scores on the labor power index are associated with higher levels of health spending and lower infant mortality rates, again supporting the Wintrobe (1998) hypothesis that nondemocracies may be responsive to labor under some circumstances. The results for

17. Note that substituting the variable population < 14 for the percentage aged variable in the health spending model did not affect the results.

18. Recall that because population < 14 and GDP per capita are highly (negatively) correlated, each of the regressions that include both variables was rerun, keeping only GDP per capita. Results are reported only when there is a substantial effect on the coefficient estimates, such as in the infant mortality results in Table 4.

Table 4
Results for Health

	Health Spending		Infant Mortality		Infant Mortality	
	Democracy	Nondemocracy	Democracy	Nondemocracy	Democracy	Nondemocracy
Trade	–0.000	–0.011*	–0.015	0.085***	–0.055*	0.075***
	(0.03)	(1.93)	(0.65)	(2.67)	(0.30)	(0.036)
Capital flows	0.001	0.008	–0.014***	0.008	–0.016***	0.008
	(0.23)	(0.94)	(2.65)	(0.65)	(2.65)	(0.006)
External debt	–0.006	–0.002	–0.025	–0.066***	–0.016***	–0.079***
	(0.49)	(0.84)	(1.52)	(3.81)	(0.005)	(0.019)
Percentage aged	0.650**	0.369				
	(2.46)	(1.29)				
Population < 14			3.210***	2.855***		
			(9.34)	(4.07)		
Growth	0.001	0.004	–0.005	0.018	–0.037	–0.011
	(0.06)	(0.49)	(0.15)	(0.30)	(0.44)	(0.061)
Potential labor power	–0.098	0.263***	0.615*	–1.186	–0.313	–2.47***
	(1.07)	(4.06)	(1.82)	(1.17)	(0.430)	0.878
GDP per capita	–1.276	–1.386***	–2.222	0.697	–13.9***	–6.66**
	(1.45)	(3.12)	(1.04)	(0.14)	(2.42)	(3.33)
Seventy	–0.538	–0.868***	5.348***	11.501***	13.02***	14.88***
	(0.87)	(3.42)	(3.79)	(3.52)	(2.25)	(3.43)
Eighty	–0.591	–0.704***	2.983***	5.388*	6.37***	7.48***
	(1.25)	(3.98)	(3.79)	(1.94)	(1.49)	(2.84)
Observations	234	417	294	501	294	501
R^2	0.90	0.91	0.99	0.95	0.99	0.95

Note: Parentheses contain *z* statistics.
*$p < .10$. **$p < .05$. ***$p < .01$.

democracies are consistent with Brown and Hunter (1999). They also find that democracies are more likely to mollify the elderly constituency than are authoritarian regimes.

In this model, once again, the size of the trade coefficients reveals the magnitude of difference between democratic and authoritarian regimes. The model predicts that democratic LDCs approaching the median level of trade from the 25th percentile range will experience a 1.4 percentage point fall in infant mortality. By contrast, infant mortality in nondemocracies will worsen by almost 2 percentage points. In other words, taking the average level of infant mortality in nondemocracies (55 per 1,000 births), infant mortality would decrease by 3.6% in nondemocracies and improve by 3.5% in democracies (where the average level of infant mortality is 29 per 1,000 births).

RESULTS FOR SOCIAL SECURITY AND WELFARE

We turn finally to welfare spending, dominated by pensions and other types of transfers. The results in Table 5 reinforce many of the statistical patterns found for education and health. The most pronounced findings have to do, once again, with trade. In democracies, trade openness has no effect on social welfare spending. In nondemocracies, by contrast, trade has an adverse impact. The effect of capital flows in the democracy–social security and welfare model is also positive and significant, but this finding is sensitive to the model specification. In contrast to the health models, we find that external debt has no effect on social welfare spending in either regime type.

We expected that democracies might be more sensitive to increased vulnerability associated with trade openness, so it is worth reflecting on why the coefficient on the democracy variable is not in fact positive. Several different hypotheses are consistent with this result. First, it may be that the presumed effects of globalization are exaggerated in the first place and, therefore, there is no reason to expect that increased openness to trade in developing countries would necessarily create greater vulnerability. A second possibility is that increasing openness does in fact limit the ability of democracies to spend more on social transfers. Greater openness to trade implies the increasing weight of export-oriented activities in the economy. These groups are more likely to be adversely affected by taxes and by the specific payroll taxes that higher spending on social security and welfare often entail. Contribution formulae vary, but pension financing typically involves payroll taxes that fall on employers and employees as well as the government. In the context of a more open economy, the pressures of international competition and the declining capacity to shift costs forward through mark-up pricing might combine to

Table 5
Results for Social Security and Welfare

	Social Security and Welfare Spending	
	Democracy	Nondemocracy
Trade	–0.017	–0.022*
	(0.80)	(1.69)
Capital flows	0.011*	0.016
	(1.92)	(1.07)
External debt	0.006	–0.001
	(0.27)	(0.09)
Percentage aged	5.396***	0.072
	(4.79)	(0.07)
Growth	0.016	0.000
	(0.46)	(0.01)
Potential labor power	0.239	0.206
	(1.08)	(0.93)
GDP per capita	–10.038***	1.680
	(4.26)	(0.98)
Seventy	–2.423**	–0.854
	(2.55)	(1.28)
Eighty	–2.099***	–0.977**
	(3.00)	(2.15)
Observations	231	395
R^2	0.94	0.92

Note: Parentheses contain *z* statistics.
*$p < .10$. **$p < .05$. ***$p < .01$.

generate strong pressures on social security spending across governments of all sorts.

A final possibility —and one that is most consistent with previous results in this analysis—is that the social welfare variable is not necessarily capturing progressive spending. Several studies report that government transfers might be associated with patronage or benefits to a relatively narrow, urban, formal sector constituency instead of wider redistribution (Mesa-Lago, 1994; Rudra, 2004). Although this interpretation is plausible, authoritarian governments appear to behave differently toward this constituency than democracies.

With respect to the other domestic political constraints, we again see a positive and significant coefficient for the elderly population in the democracy model. These findings once again support Brown and Hunter's (1999) argument that democracies respond to the elderly.

RESULTS FOR WELFARE VARIABLES AT DIFFERENT LEVELS OF DEMOCRACY

Finally, we compare the behavior of hard authoritarian regimes to intermediate regimes and established democracies (see Tables 6, 7, and 8). Creating a dummy variable for the three regime types and reestimating the results reveals that the threshold for the components of democracy to have policy consequences is relatively low. Social spending is most sensitive to trade in the more severe authoritarian regimes. The intermediate regimes show mixed results and confirm the argument that such regimes should be constrained to pay more attention to social spending than hard authoritarian regimes. In most cases, intermediate regimes do not cut social spending in response to trade and in fact, increase education spending as the level of capital flows rises. However, primary and secondary enrollments and infant mortality rates appear to suffer as the level of globalization increases. It is possible that these governments are redistributing existing resources from those in need to more politically sensitive groups such as teachers, civil servants, and the armed forces. Nonetheless, these results need to be viewed with some caution because the number of observations in the intermediate category is small.

IMPLICATIONS

In recent years, the influence of globalization on welfare spending has become a major topic of empirical research, but with mixed results. Some research sees a positive relationship over the long run, but other findings point to adverse consequences of globalization. We argue that the effects of globalization can be adequately measured only in the context of a careful consideration of the effects of domestic political mediations. Among the developing countries of interest to us here, democracy remains one of the most plausible candidates for consideration. Democracies allow for electoral competition, interest group organization, and incentives for the provision of public goods, all of which suggest that they may behave differently in the face of globalization than nondemocracies.

We find, first, that the conventional wisdom that emphasizes the adverse effects of globalization is not particularly robust. In our pooled sample, education spending seems the most vulnerable to external pressures, being adversely affected by both trade and external debt. But capital flows appear to have little effect on the social indicators we use here, and some of the coefficients on the other globalization variables show directly opposite effects, with globalization having positive consequences for social spending or outcomes.

Table 6
Results for Education in Three Regime Types

	Results From Education							
	Education			Gross Primary and Secondary			Gross Tertiary[a]	
	Democracy	Intermediate	Nondemocracy	Democracy	Intermediate	Nondemocracy	Democracy	Intermediate
Trade	–0.027	–0.003	–0.067***	0.070**	–0.097*	–0.066**	0.028**	–0.002
	(–1.37)	(–0.18)	(–5.02)	(–2.25)	(–1.79)	(–2.45)	(–2.32)	(–0.08)
Capital flows	–0.004	0.192**	0.007	0.008	0.427	–0.004	0.001	0.076
	(–0.78)	(–2.02)	(–0.76)	(–1.13)	(–1.39)	(–0.32)	(–0.28)	(–0.54)
External debt	–0.026*	0.032**	–0.002	–0.015	0.026	0.002	–0.020**	–0.016
	(–1.71)	(–2.16)	(–0.25)	(–1.06)	(–0.88)	(–0.13)	(–2.39)	(–1.47)
Population < 14	–0.035	0.304	–0.269**	–1.378***	–2.269***	–1.421***		
	(–0.19)	(–1.18)	(–2.27)	(–3.64)	(–3.09)	(–4.57)		
Growth	–0.053	0.142***	0.005	0.026	–0.202	0.017	0.007	–0.106
	(1.88)*	(–2.88)	(–0.23)	(–0.65)	(–0.71)	(–0.51)	(–0.51)	(–1.21)
Potential labor power	0.325	–0.339	0.469*	–0.123	1.867	1.068**	1.499***	0.255
	(–1.51)	(–0.77)	(–1.88)	(–0.24)	(–1.16)	(–2.25)	(–4.91)	(–0.51)
GDP per capita	1.293	7.986***	–3.055**	20.948***	24.084**	16.122***	3.082***	14.799***
	(–0.71)	(–2.73)	(–2.47)	(–4.69)	(–2.22)	(–6.84)	(–4.38)	(–5.57)
Seventy	0.784	1.752*	–1.049	–2.576	3.195	–2.218*	–1.721***	0.088
	(–0.74)	(–1.96)	(–1.57)	(–1.43)	(–1.40)	(–1.93)	(–3.37)	(–0.18)
Eighty	0.535	–0.163	–1.707***	–1.785*	1.564	0.516	–0.962***	0.533
	(–1.05)	(–0.35)	(–3.10)	(–1.72)	(–1.09)	(–0.63)	(–2.63)	(–1.59)
Observations	234	92	326	294	121	361	294	121
R^2	0.93	0.98	0.94	0.99	0.99	0.99	0.96	0.95

Note: Democracy represents countries that score from 7 to 10 on the Polity scale (Marshall & Jaggers, 2002), *intermediate* represents countries scoring from 3 to 6, and *nondemocracy* represents authoritarian regimes that score from 0 to 2. Parentheses contain *z* statistics.
a. We were unable to estimate the model for gross tertiary enrollment in the nondemocracies. The Stata option "pairwise" specifies that for each element in the covariance matrix of the disturbances, all available observations that are common to the two panels contributing to the covariance be used to compute the covariance. The estimated variance-covariance matrix for this model is, thus, not positive definite because of insufficient data or because of collinearity problems.
*$p < .10$. **$p < .05$. ***$p < .01$.

Table 7
Results for Health in Three Regime Types

	Results for Health								
	Health			Infant Mortality			Infant Mortality		
	Democracy	Intermediate	Nondemocracy	Democracy	Intermediate	Nondemocracy	Democracy	Intermediate	Nondemocracy
Trade	0.000	–0.004	–0.026***	–0.015	–0.020	0.119***	–0.055*	–0.015	0.121***
	(–0.03)	(–0.31)	(–3.45)	(–0.65)	(–0.48)	(–3.92)	(–1.85)	(–0.29)	(–3.73)
Capital flows	0.001	0.003	0.009	–0.014***	0.248**	0.005	–0.016***	0.370**	0.005
	(–0.23)	(–0.06)	(–1.06)	(–0.65)	(–2.09)	(–0.4)	(–2.63)	(–2.18)	(–0.63)
External debt	–0.006	0.017	0.001	–0.025	–0.078*	–0.065***	–0.064***	–0.109**	–0.074***
	(–0.49)	(–1.18)	(–0.26)	(–1.52)	(–1.71)	(–2.83)	(–2.62)	(–2.33)	(–3.16)
Population < 14				3.210***	3.510***	2.196***			
				(–9.34)	(–5.01)	(–4.7)			
Percent aged	0.650**	1.048**	0.303						
	(–2.46)	(–2.00)	(–1.45)						
Growth	0.001	0.058**	0.000	–0.005	–0.068	–0.037	–0.037	–0.139	–0.066
	(–0.06)	(–2.17)	(–0.01)	(–0.15)	(–1.01)	(–0.55)	(–0.84)	(–1.55)	(–0.96)
Potential labor power	–0.098	0.336	0.191**	0.615*	0.800	–0.729	–0.313	0.926	–1.711***
	(–1.07)	(–1.27)	(–2.29)	(–1.82)	(–0.59)	(–1.08)	(–0.73)	(–0.69)	(–2.64)
GDP per capita	–1.276	–1.468	–2.591***	–2.222	–6.288	–7.266*	–13.908***	–28.312***	–10.482***
	(–1.45)	(–0.79)	(–5.17)	(–1.04)	(–0.91)	(–1.75)	(–5.74)	(–6.1)	(–2.93)
Seventy	–0.538	–0.169	–0.991***	5.348***	2.045	12.566***	13.016***	6.554***	14.625***
	(–0.87)	(–0.28)	(–3.92)	(–3.79)	(–1.29)	(–5.29)	(–5.77)	(–2.88)	(–5.39)
Eighty	–0.591	–0.471	–0.825***	2.983***	2.141***	6.437***	6.377***	4.777***	7.982***
	(–1.25)	(–1.26)	(–4.91)	(–3.79)	(–3.2)	(–3.67)	(–4.27)	(–2.97)	(–3.92)
Observations	234	92	325	294	121	380	294	121	380
R^2	0.9	0.92	0.96	0.99	0.99	0.98	0.99	0.99	0.97

Note: Democracy represents countries that score from 7 to 10 on the Polity scale (Marshall & Jaggers, 2002), *intermediate* represents countries scoring from 3 to 6, and *nondemocracy* represents authoritarian regimes that score from 0 to 2. Parentheses contain *z* statistics.
*$p < .10$. **$p < .05$. ***$p < .01$.

Table 8
Results for Social Security and Welfare in Three Regime Types

	Results from Social Security and Welfare		
	Welfare		
	Democracy	Intermediate	Nondemocracy
Trade	–0.017	–0.002	–0.028
	(–0.8)	(–0.11)	(–1.47)
Capital flows	0.011*	0.024	0.015
	(–1.92)	(–0.24)	(–1.03)
External debt	–0.006	–0.035*	0.007
	(–0.27)	(–1.95)	(–0.67)
Percentage aged	5.396***	–1.398	–0.55
	(–4.79)	(–1.14)	(–0.42)
Growth	0.016	0.041	0.005
	(–0.46)	(–1.1)	(–0.22)
Potential labor power	0.239	0.069	0.122
	(–1.08)	(–0.09)	(–0.43)
GDP per capita	–10.038***	6.780**	1.881
	(–4.26)	(–2.22)	(–0.87)
Seventy	–2.423**	1.883	–1.795**
	(–2.55)	(–1.63)	(–2.36)
Eighty	–2.099***	–0.514	–1.428***
	(–3.00)	(–0.60)	(–2.69)
Observations	231	86	309
R^2	0.94	0.93	0.93

Note: Democracy represents countries that score from 7 to 10 on the Polity scale (Marshall & Jaggers, 2002), *intermediate* represents countries scoring from 3 to 6, and *nondemocracy* represents authoritarian regimes that score from 0 to 2. Parentheses contain *z* statistics.
*$p < .10$. **$p < .05$. ***$p < .01$.

The more significant findings have to do with the differential behavior of democratic and authoritarian regimes. Particularly with respect to trade, we see that democracies and nondemocracies respond quite differently. Democracies do not show a consistent tendency to spend more in the face of increasing trade openness—calling into question the compensation hypothesis. But authoritarian governments clearly spend less and show a weaker record with respect to a number of physical quality-of-life measures. The results with respect to the other economic constraints are less consistent, but there are interesting patterns of difference. For example, although external debt appears to constitute a constraint on education spending in democracies, it does not appear to adversely affect enrollments, suggesting that democracies are more progressive in how spending is allocated.

We also find some interesting differences in how democracies and authoritarian regimes respond to our demographic-cum-political variables. Democracies are more responsive to the elderly, a broad group that cuts across social strata. By contrast, we find that authoritarian regimes are surprisingly responsive to labor, an outcome that might reflect a strategy of co-optation.

When confronted with the pressures of globalization, nondemocracies have lower levels of social spending. They also show weaker performance on the outcome measures used here—enrollments and infant mortality. The actual level of social spending appears to matter less in democracies during globalization, but the positive effects of trade on the outcome variables suggest that there are pressures in democracies (e.g., emphasis on stability) to make existing spending more effective for the poor.

Results in this analysis thus reveal an important relationship between globalization, regime type, and the effectiveness of spending. Given our theoretical expectations, it is not surprising that electoral competition and, particularly, interest group pressures might drive democracies to be more concerned than nondemocracies about the poor. Faced with the greater risks and uncertainties caused by globalization, democratic leaders have greater incentives to respond to calls for redistribution—particularly from those more vulnerable to international market fluctuations.

A central pillar of the economic reform agenda in the developing world centers on openness to the international economy through increased trade, foreign direct investment, and portfolio capital movements. There are reasons to believe that such opening can increase aggregate social welfare, as well as reasons to believe that it has distributional implications and can increase insecurity. If globalization simultaneously limits the political capacity of governments to respond to these problems, then both reform efforts and the prospects for an adequate social safety net may be in jeopardy. We show, first, that these fears are exaggerated, but second, that democracy remains an important factor guaranteeing that social concerns are taken into account.

APPENDIX A
Summary Statistics: Mean of Social Security and Welfare, Education, and Health Spending (as Percentage of Total Government Expenditures), 1972-1997

Country	Social Security and Welfare	Education	Health
Argentina	37.0993	7.9886	2.2809
Bangladesh	4.7513	10.7125	5.1937
Bolivia	10.0445	21.9683	6.3558
Botswana	1.5313	19.5633	5.4450
Brazil	31.5392	4.6290	6.8907
Cameroon	4.6185	14.6303	4.3032
Chile	32.3589	13.6051	8.3360
China	0.0942	2.1790	0.3250
Columbia	13.0208	21.5967	6.7633
Costa Rica	17.2991	23.7610	21.9582
Cyprus	19.1555	11.1936	6.1656
Dominican Republic	5.6182	12.1221	10.6335
Ecuador	1.2420	25.8440	8.1775
Egypt, Arab Republic	10.2517	11.4808	2.6822
El Salvador	4.1890	18.0900	8.5268
Fiji	4.4413	20.9606	8.7293
Ghana	6.8587	20.9943	7.9279
Greece	23.2087	9.1319	8.2435
Guatemala	4.8438	15.2332	8.4115
Guyana	4.0564	11.1620	5.1302
Honduras	6.1166	19.9993	11.2456
India	4.1264	2.0986	1.8144
Indonesia	6.1368	8.9780	2.2719
Iran, Islamic Republic	9.7531	15.9690	5.9446
Israel	18.1375	10.2065	5.1983
Jordan	12.0308	12.5039	5.2070
Kenya	0.4011	20.6975	6.6625
Korea, Republic	7.3083	17.9401	1.3631
Kuwait	9.9503	10.8390	5.7264
Lesotho	1.0027	18.8116	7.9150
Liberia	1.2236	14.3344	7.0251

(continued)

APPENDIX A (continued)

Country	Social Security and Welfare	Education	Health
Malawi	1.8113	11.9634	6.1787
Malaysia	4.3231	20.7403	5.7887
Mali	4.5917	14.2786	3.6511
Mauritius	16.3454	13.8779	7.6294
Mexico	17.2896	17.2425	2.8259
Morocco	6.0389	16.8212	3.2164
Nepal	0.6769	11.2991	4.6218
Nicaragua	13.3862	10.0582	7.6617
Pakistan	3.3790	2.4106	1.2946
Panama	15.1733	16.7903	16.6857
Paraguay	20.1818	13.2022	4.0700
Peru	0.2159	17.1744	5.4469
Philippines	2.1394	16.3062	4.3088
Singapore	2.0903	18.6257	6.6116
South Africa	5.6452	6.4788	1.9005
Sri Lanka	15.7622	9.6030	5.2959
Syrian, Arab Republic	3.5548	8.7102	1.6340
Tanzania	0.6584	12.1614	5.8737
Thailand	3.5040	20.4295	5.7119
Trinidad and Tobago	9.1552	13.3808	7.0858
Tunisia	11.9506	18.3091	6.6297
Turkey	2.5532	16.1200	2.7193
Uruguay	53.3685	8.4236	4.7184
Venezuela	6.6622	17.5545	8.8996
Zambia	1.7325	13.1284	6.5316
Zimbabwe	6.3679	17.8935	6.4236

APPENDIX B

Variable	Description	Source
Dependent variable: Social security and welfare spending; education spending; health spending; gross primary and secondary enrollment ratios; tertiary enrollment ratios; infant mortality	Social security and welfare, education, and health spending as a percentage of total government spending. The gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education (primary and secondary). Infant mortality rate is the number of infants dying before reaching 1 year of age, per 1,000 live births in a given year. Note that we use Stata to interpolate the missing data for enrollments.	International Monetary Fund (1972-1997)
Economic and fiscal factors: GDP; total debt; growth	GDP is the total gross domestic product of a country divided by total population. Total "debt" service is the sum of principal repayments and interest paid in foreign currency, goods, or services on long-term debt and interest payments only on short-term debt—as a percentage of central government current revenue. Growth is the annual percentage growth rate of GDP at market prices based on constant local currency.	World Bank (1972-1997)

(continued)

APPENDIX B (continued)

Variable	Description	Source
Globalization: Trade flows; gross capital flows	The amount of total trade (EX + IM/GDP) and gross capital flows (Privk) as a percentage of GDP.	World Bank (1972-1997)
Demographic variables: Elderly population as a percentage of total population; population between ages 0 and 14	Population aged 65 and older is the percentage of the total population that is 65 or older; population ages 0 to 14 is the percentage of the total population that is in the age group 0 to 14.	World Bank (1972-1997)
Political factors: Democracy	Using scale 0 to 10; this indicator is derived from the codings of the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive.	Marshall and Jaggers (2002)
Potential labor power	([The ratio of the numbers employed in skill-intensive manufacturing industries relative to numbers employed in labor-intensive manufacturing industries] * The number of surplus laborers in the economy/divided by 87) * 100.	United Nations (1972-1997)

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