Politics and Redistribution

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Abstract

How does democracy affect income inequality? What would be a causal pathway to translate from social demands for redistribution to more egalitarian outcomes in the developing world? Analyzing an unbalanced pooled time series dataset for domestic government spending, welfare state generosity, and income inequality in the developing world from 1971 to 2008, we find that (partial) democracies promote higher levels of domestic government spending, but they are not associated with higher levels of welfare state generosity. Our results also indicate that in developing countries, welfare state generosity is slightly related to more equality regardless of regime type. However, domestic government spending does not have any significant impacts on income inequality even in democracies.
How does political regime type affect income inequality? Are democracies better at delivering material benefits to the poor? If so, what would be a key mechanism to translate from welfare demands to better redistributional outcomes in the developing world?

Many theoretical studies have argued that democracy is somehow related to lower levels of income inequality (Haggard and Kaufman 2008; Lenski 1966; Lipset 1959; Sen 1999). The main mechanism addressed by the conventional wisdom to explain the relationship between democracy and income inequality is arguably the increase in social pressures for redistribution. A democratic government is more subject to demands from citizens. In theory, by promoting political equality, democracy provides various groups, such as interest groups, labor unions, and political parties, with open spaces of political competition to represent their own interests and welfare.

Despite theoretically less-controversial reasoning for the negative effect of democracy on inequality, these arguments have received little empirical support. Not only have very few studies attempted to explain the effect of regime type on temporal and cross-sectional variations in income inequality (Gasiorowski 1997; Huber et al. 2006; Reuveny and Li 2003), but the empirical results of those studies are controversial. Given that the politics of income inequality has been a crucial issue of concern and discussion for several areas of academics and policy, it is surprising that little scholarly attention has been devoted to this topic. More important, although a number of studies hypothesize that democracy will influence inequality, the causal pathways identified by analysts still remain open to question.

The paper takes off from this unknown. Building on the previous literature on the politics of inequality, a key contribution of the analysis we develop is to clarify how democracy may shape various policies and thereby influence levels of income inequality. Following Rueda’s
In the 2008 analytical framework, we begin with separating the effect of democracy on policy (efforts) from the effect of policy on income inequality (consequences). Democracy cannot affect the distribution of income automatically, but can accomplish this mainly through the use of a variety of policies. Therefore, to accurately understand the influence of regime type, one must distinguish between the effect of democracy on policy and of policy on income inequality.

When analyzing the effects of different policies, it should be clearly identified that their redistributive impacts may vary. It can be argued that some policies are more effectively associated with income inequality than others. To make clear the veiled dynamics of different policies, here we consider two general policies that are theorized as having an influence on income inequality: the size of domestic government spending and the generosity of the welfare state.

The remainder of the paper is organized as follows. In the next two sections, we review the theoretical and empirical studies on the issue of the link between democracy and policy, and then develop the theoretical framework of our analysis. The two sections following those describe the dataset and empirical models we have constructed to test the hypotheses generated by this framework. The subsequent sections present and discuss our empirical results, and we conclude by addressing issues for further inquiry.

**Democracy, Policy, and Inequality**

Many scholars develop guiding political economic models in which democracies produce more public goods and improve an egalitarian distribution of income by illuminating the mechanisms of the democratic institution itself, such as electoral competition and the expansion

A simple but important analytical model, relating democratic institutions and redistribution, comes from Meltzer and Richard (1981), who focus on the effects of electoral competition. This model assumes that the median voter is the critical voter in determining the size of government, which is measured by the share of income redistributed. It implies that the size of government hinges on the relationship between mean income and the income of the decisive voter, depending on the regime types. Whereas before the spread of the franchise the median voter may be one of the rich or the upper class, after democratization the median voter may be a below-average incomer in an unequal society, one of the poor who favors higher taxes and more redistribution. Therefore, compared with authoritarian regimes, democratic governments are likely to redistribute income more equally and to provide more public goods to numerous low incomers.

In an extension of the model of Meltzer and Richard (1981), Boix (2001; 2003) and Acemoglu and Robinson (2006) have developed a framework for the nexus between democracy and redistribution. Analyzing the dynamic of the advent of democracies and authoritarian regimes as a consequence of different levels of inequality and different mixes of assets in the economy, Boix (2003) builds a comprehensive theory to explain the distributional results of different political regimes: Democracies prefer more economic redistribution because they support a broader range of interests of the masses, whereas authoritarian regimes do not because they bolster the interests of the elite. Examining the creation and consolidation of democracy,

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1 Boix (2003), Persson and Tabellini (2000, chap. 6), and Drazen (2000, chap. 8) provide overviews of this issue.
Acemoglu and Robinson (2006) also construct a sophisticated yet simple model that suggests democracy is preferred by the majority of citizens and is more prone to redistribution.

Another line of inquiry investigating the redistributive effects of democracy focuses on lobbying and the influence of interest groups and activists who provide political resources to certain parties in exchange for policy compromises. The classic studies of the existence and role of interest groups date back to Olson (1965) and Becker (1983). Organized interest groups contribute to parties and politicians in a more or less direct attempt to require an expansion of expenditures and to influence their policy formulation through a variety of political actions. Lobbying and campaign contributions are prime examples. Thus, as the number of interest groups increases, we may begin to expect that level of government spending will rise (Mueller and Murrell 1986), and also that as interest groups overcome the collective action problem, they can bias policy significantly toward their positions more easily than non-organized groups can.

This model of lobbying implies, first, that redistribution is likely to be greater in democracies than non-democracies because, in principle, democracies produce larger numbers of powerful, independent interest groups, and, second, that the distribution of government spending becomes vastly unequal in societies with a number of well-defined interest groups because lobbying draws the government to ignore the welfare of unorganized individuals. As for the first implication, studies of interest groups argue that, intuitively, organized interest groups receive more benefit than unorganized individuals, but state that lobbying does not distort the provision of public goods, which influences unorganized individuals just like anyone else, as beneficiaries, because “lobbies might plausibly consist of individuals with a high preference for the public good, who have a higher stake on the policy outcome and hence are more likely to overcome the

2 For an overview, see Grossman and Helpman (2001) and Persson and Tabellini (2000, chap. 7).
free-rider problem of getting organized” (Persson and Tabellini 2000, 174). As a consequence, lobbying brings about higher levels of government spending.³

The second implication concerns the disproportionate allocation of government spending in democracy. The interest group theory posits that benefits are concentrated on a few organized groups, but the costs are dispersed throughout the society at large through generalized taxation. Suppose a politician has the authority to distribute some budgetary amount to two different groups and one group is politically well defined but the other is not. In this context, government spending is likely to be unequally distributed, that is, the organized group is overprovided and the non-organized group is underprovided. The organized lobbying groups gain more if their members have a higher interest in a policy’s impacts or if politicians pay more attention to lobbying groups’ preferences to maximize expected votes and win elections. Accordingly, government spending may not have positive ramifications for income inequality unless a greater diversity of interests is represented in the policymaking process, regardless of their power.

Most of the empirical findings from a variety of samples are consistent with their theoretical inference, that is, the positive link between democracy and larger government spending.⁴ Lindert (1994), looking back to the 19th century (1880-1930), reaches the conclusion

³ Empirical work has, however, failed to support the first implication, a tight nexus between interest group activity and the size of government (Holsey and Borcherding 1997). Results are often conflicting, and the fact that there is little consensus on how to measure interest group influence makes it difficult to evaluate the theoretical hypothesis.

⁴ A small number of empirical studies have disputed these political economic models, including two early contributions of Jackman (1975) and Peltzman (1980), and more recently Mulligan, Gil, and Sala-i-Martin (2004).
that the expansion of a voting franchise helps interpret the rise of redistribution among mostly OECD countries after World War I. The analysis of U.S. time series data (1950-1988) by Husted and Kenny (1997) shows that the rise of voting rights is positively associated with the growth of redistributive programs in state and local governments in the United States. A sequence of the empirical work on Latin America also suggests that a democracy funds welfare spending on some subcategories at higher levels than a non-democracy does. Finally, from his sample of 44 African countries, Stasavage (2005) shows robust empirical evidence that democracies have spent more on education.

Besides the region-specific studies above, some cross-regional studies support the claim that democracies are likely to produce more government spending than authoritarian regimes. They find evidence that, with respect to increasing globalization, democracies ensure higher levels of social welfare than authoritarian regimes, based on panel data for 65 developing and developed countries (Adsera and Boix 2002), for 57 developing nations (Rudra and Haggard 2005), and for all developing countries (Nooruddin and Simmons 2009).

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5 The extent to which subcategories are positively associated with democracy varies. For instance, democracy increases aggregated social spending (Brown and Hunter 1999), education and health spending (Kaufman and Segura-Ubiergo 2001), and education and social security spending (Avelino, Brown, and Hunter 2005). These researchers as well as Stasavage (2005) seem to reach a consensus on one positive effect of democracy: education spending in Latin America and Africa.

6 Rudra and Haggard report that “democracies do not show a consistent tendency to spend more in the face of increasing trade openness” but that “authoritarian governments clearly spend less” (2005, 1041). Although they do not report that democracy has a robust and significant effect on
The Argument

The starting point for this analytical inquiry into the causes of income inequality is the proposition that regime type influences income inequality. Democracies can have an impact on the distribution of income through the design and implementation of policy. The argument supporting the existence of a connection between regime types and income inequality can be expressed in very simple terms. By preferring more government spending or favoring a higher level of welfare state generosity, for example, democracies are likely to compensate market losers and, more generally, to boost the relative living conditions of the poor.

Yet, it may not the case in countries that have not had enough time to make political institutions work. In the context of new democracies, it is likely that the procedures of making decisions and of carrying out policies are not as transparent as assumed and as successful as those in old democracies. It is likely that political institutions may not be effective or strong enough to block the influence of economically and politically privileged groups. Even when governments have the best intentions to increase redistribution, it is likely that welfare expenditures are prone to disproportionately benefit upper income groups and fail to serve the intended goal of alleviating inequality.

welfare spending in the face of globalization, democratic and authoritarian regimes act quite differently. Democracy makes a difference. From the sample of developed and developing countries, Lake and Baum (2001) also find that democracies do provide a higher level of public services than non-democratic countries. Democracy works.
Political scientists, particularly specialists in Latin America, have expressed some skepticism about the positive effects of size of the welfare state in Latin America (Ferreira et al. 2004; Huber 1996). The implication is that redistributional politics, that is, democratic governments’ efforts (policy) and their economic outcome (inequality), in developing countries might not be monolithic. Diffuse policies may bring the same consequences, and the same policy may bring different consequences, depending on various political arrangements and the extent of the effectiveness of political institutions.

Accordingly, we wish to make one basic point concerning the relationship between regime type and income inequality. As mentioned above, democracies cannot influence the distribution of income directly but depend on the use of a variety of policies. To arrive at a richer and more accurate picture of redistribution across developing countries, it is critical to first inspect whether regime type influences specific policies to accomplish any degree of income distribution and then whether these policies influence income inequality. To solve the puzzle of whether politics produces changes in redistributional efforts and outcome among developing countries, we focus on two policies that are clearly assumed to have an effect on levels of income inequality: the size of domestic government spending and the generosity of the welfare state.

The reasons for considering these two policies as the product of democracies seem clear. Following two lines of inquiry mentioned above, it would be reasonable to expect that democracies are likely to have a larger government and to spend more to provide public goods and services to the relatively poor majority due to the mechanism of elections and the power of interest groups. How these policies influence income inequality, in particular, across developing countries is rather ambiguous, however. Of course, little needs to be said about the expectation
that welfare state generosity would promote the egalitarian distribution of income. As we shall discuss later, it is operationalized to gauge democracies’ efforts to target relatively poor people.

However, as for government spending, we want to emphasize two contradictory expectations. If everyone receives the same transfer (a universal flat-rate benefit), as Meltzer and Richard (1981) assume, increased government spending in democracies would be expected to reduce inequality. However, if this is not the case, i.e., if the phenomenon of “concentrated benefits and dispersed costs” (Persson and Tabellini 2000, 160) derived from a model of lobbying comes true, there will be no guarantee that higher levels of government spending will boost the actual living conditions of the poor. Moreover, it would be more common to witness the phenomenon of unequal redistribution among the developing world than the advanced world.

The theoretical predictions outlined in the previous sections are summarized in Figure 1. The figure shows why it is critical to distinguish between aggregate levels of policy and relevant allocations. In a nutshell, if all else is equal, (partial) democracies are more likely to increase government spending and welfare state generosity, and welfare generosity is more likely to reduce income inequality. The theoretical hypothesis regarding the effect of government spending on inequality is somewhat ambiguous, for the reasons discussed earlier.

The Variables of Interest

Income Inequality

The dependent variable, income inequality, comes from the Gini coefficient in the World Income Inequality Database (United Nations University-World Institute for Development Economics Research [UNU-WIDER] 2008). This is by far the largest Gini dataset, including
5313 observations from 159 countries. Because the dataset is a collection of various surveys with different methods, indicating that all the data are not of the same quality, and some countries have more than one observation for certain years, we built the selection criteria to reduce the number of observations. Furthermore, to control for remaining possible measurement errors created by income source variations, we include dummy variables: whether the definition of income is income (coded 1) or consumption/expenditure (coded 0), defined income is net of taxes (coded 1) or gross (coded 0), information on the definition of gross versus net income exists (coded 1) or not (coded 0), and adjustment for household size has been made (coded 1) or not (coded 0).

**Domestic Government Spending**

We employ total central government spending as a fraction of gross domestic product (GDP) derived from the International Monetary Fund (the International Financial Statistics [IFS] database). This dataset, however, has a well-known disadvantage for large-N studies of public spending: Annual data are available only for central government spending. This can cause a serious problem for the analysis if the sample includes a number of federal governments that have experienced widespread fiscal decentralization. We deal with this issue by adding the dummy variable of *Federalism* to control its potential effects.

Most studies on the public sector pay little attention to the components that influence the scope of military spending. Instead, our analysis is based on the nature of domestic government spending. Given that our concern is redistributitional differences among political regimes with regard to the proper role of government, we measure domestic government spending by excluding military spending from total government spending. Two critical reasons are worth
noting. First, in theory, because military spending is the typical case of a public good and is contingent upon external conditions such as the Cold War and severe military tension with other countries, it has no connection with a government’s efforts toward compensating the poor in the market (see especially Berry and Lowery 1987).

Second, in practice, the developing world may be the case in which inferences from total government spending is problematic. Figure 2 displays the percentages of democracy and total democracy, as well as the mean of military spending among developing countries from 1960 to 2008. As Figure 2 presents, the global wave of democratic transition was accompanied by a global transformation, the end of the Cold War. The percentage of total democracies has increased from around 20% in the early 1970s to more than 60% in the 21st century (from 10% to more than 30% for democracy). In contrast, the mean of military spending reached its zenith in the mid-1980s (4.94% in 1984) and has dwindled consistently (2.15% in 2008), which indicates a trend opposite to that of global democratic transition. Therefore, we might underestimate democracies’ public spending efforts if we do not account for the worldwide pattern of decreased military spending. Table 1 confirms our concern by reporting the means of military spending of various regime types. Democracies clearly spend less on military affairs than other regime types: On average, non-democracies (4.14%) are prone to spend more than double the amount democracies spend (1.91%).

In this analysis, between two often-used datasets from the U.S. Arms Control and Disarmament Agency (ACDA) and Stockholm International Peace Research Institute (SIPRI),

7 Two extremely exceptional countries in democracy and non-democracy, Israel (40.8% at maximum) and Kuwait (117.4% at maximum), respectively, are excluded.
we employ the data from SIPRI because it systematically offers standardized amounts (military spending/GDP) for a large number of countries and consecutive years.

**Welfare State Generosity**

Total government spending and social spending as a percentage of GDP have been widely used as the measures of the welfare state because they are available, easy to compare, and differ across countries and time. Although these may be sound indicators for some purposes, scholars have also acknowledged that there are clear drawbacks in their potential to measure welfare state generosity (Castles 2002; Clayton and Pontusson 1998; Scruggs 2008). Their essential shortcomings, among others, concern the fact that such measures mostly fail to take account of the size of the recipient population, differential rates of economic growth, and tax systems. That is, even though public spending ratios are constant, the extent of real benefits recipients will receive from welfare programs can be reduced if social demand for welfare is increasing as a result of rising levels of insecurity or aging or if the tax treatment of transfers is regressive (see Scruggs 2008, 63-65).

Some scholars have developed more refined categories of social spending to evaluate welfare state generosity across advanced industrial countries (e.g., Castles 2002; Scruggs 2008; Scruggs and Allan; 2006). Unfortunately, however, these alternatives are particularly unsuited for the study of the welfare state in the developing world due to lack of availability. In this analysis, following Iversen and Cusack (2000) and Rueda (2008), we measure welfare state generosity as the ratio of social transfers to GDP over the ratio of the nonworking to the total population. This is better than measures about absolute levels of spending because it takes into consideration at least one factor that may cause a measurement bias, such as the size of the
dependent population. The data on the ratio of social transfers to GDP and the ratio of nonworking to the total population come from *World Development Indicators*.\(^8\)

*Democracy*

It has been a considerable challenge for scholars to deal conceptually with a great variation of post-authoritarian regimes that have emerged beyond advanced industrial countries because the “diminished subtypes” (Collier and Levitsky 1997) of democracy vary greatly from one another, in terms of degrees of democracy and conceptual emphasis. To sketch the world as either democratic or authoritarian may ignore the possibility of an intermediate case. Both Huntington (1996) and Diamond (1996) point out that a growing number of countries exist “somewhere in the middle” of the “democratic-nondemocratic continuum” (Huntington 1996, 10). Moreover, in reference to welfare programs, “[I]ntermediate regimes…exhibit greater attention to social policy than do ‘hard’ authoritarian regimes” (Haggard and Kaufman 2008, 15).

To empirically measure a democracy in our sample from 1971 to 2008, we depend on the Polity IV dataset (Marshall and Jaggers 2010). Because the Polity IV dataset does not provide a dichotomous category of democracy, the researchers are required to draw an arbitrary cutting point for where democracy starts. To develop the trichotomous measures of democracy, we employ two dummy variables: *Partial Democracy* is coded 1 for any country scored from 1 to 7 on the *Polity Scores* index, 0 for others; and *Democracy* is coded 1 for any country scoring 8 or above, 0 for others. Although a cutting point for *Partial Democracy* (*Polity Score* 1) can be regarded as much more generous than the others, this measurement matches well with our theoretical hypotheses that emphasize the democratic institution mechanism itself, such as

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\(^8\) The data, the ratio of social transfers to GDP, are available only for the years since 1990.
electoral competition and the expansion of political participation, to see the association between regime types and social policy. Consequently, this quantitatively broad operationalization of democracy allows us to examine whether election and participation make some difference in terms of a change in the size of social policies. Polity IV offers the reasoning behind our selection of 8 and above as Democracy. In the dataset, 8 points is the threshold to be a “mature and internally coherent democracy” (Marshall and Jaggers 2010, Dataset Users’ Manual).

**Control Variables for the Analysis of Policy**

Alongside the key variables of interest, a number of economic and demographic control variables traditionally used in the government spending literature are included. Globalization in this article is operationalized by the level of Trade integration and FDI inflows as a percentage of GDP. Here, the measure of trade openness is the sum of the total imports and exports as a share of a country’s GDP (trade openness = [imports + exports]/GDP), FDI inflows is the value of net inflows of FDI as a share of a country’s GDP. To account for Wagner’s Law, we control for the GDP, defined as the log of Gross Domestic Product per capita (in constant dollars, Chain Index, expressed in international prices, base 2000), taken from the Penn World Tables. For the possibility of the curvilinear relationship between them, the square of GDP, GDP^2, is added. These two variables are centered to control for collinearity.

We include three demographic control variables, the percentage of Elderly Population who is 65 years old or older, the Youth Population which is under 15 years of age, and Total Population (log), because health care, social security, and education spending are sensitive to how many people are old or young. Also, we account for population to control for a negative

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9 See Yi (2011) for a more thorough discussion of the control variables.
association between the burden of government and country size due to economies of scale in the
service of public goods (Alesina and Wacziarg 1998). The data for all the aforementioned control
variables, except for GDP per capita, come from The World Bank World Development Indicator.

To address the possibility of spatial contemporaneous correlation of errors, we introduce
time-specific factors into the models in the form of a dummy variable for the 1st Oil Crisis
(1973-74) and the 2nd Oil Crisis (1979-80), except for oil exporting countries. Given that it is
plausible to expect that the impact of an increase in oil prices differs between oil exporting and
oil importing countries, we develop the variable of Oil Exporter. Finally, to take into account the
effects of the different type of political and economic regimes, we use a dummy variable for Left
Totalitarian countries because they have claimed and showed universal provision of basic social
insurance and services through the state. As the last dummy variable to control fiscal
decentralization, we construct Federalism, which has been theorized as one of the factors
slowing the expansion of the public sector among advanced industrial countries (Obinger et al.
2005).

Control Variables for the Analysis of Income Inequality

Following previous pooled time series analyses (Alderson and Nielsen 2002; Huber et al.
2006; Nielsen and Alderson 1997; Rudra 2004), we include several economic and demographic
control variables to catch the impacts strongly related to inequality. The distributional
implication of globalization on inequality among developing countries is somewhat complicated.
On the one hand, an international trade theory anticipates that trade openness should reduce
inequality in developing countries because higher trade openness is expected to benefit unskilled
labor but hurt capital owners in developing countries (Stolper and Samuelson 1941). On the
other hand, the capital mobility thesis argues that the outflow of direct investment increases inequality by promoting deindustrialization among advanced industrial countries (Alderson and Nielsen 2002; Nielsen and Alderson 1997), but that the inflow of direct investment also increases inequality by decreasing labor unions’ bargaining power and precipitating unemployment among unskilled labors among developing countries (Muller 1979). As mentioned above, globalization in the second regressions is operationalized by Trade and FDI inflows.

The next economic variable is the GDP per capita, defined as the log of GDP per capita (in constant dollars, Chain Index, expressed in international prices, base 2000), taken from the Penn World Tables. In addition, to check the existence of the Kuznets curve, which predicts that as a country develops, inequality of income seems to expose specific patterns of the initial rise and consequent fall (Kuznets 1955), our calculations include the square of GDP per capita, \( GDP \) per capita (log)².

Another control variable is Sector Dualism, which we measure as the absolute difference between the percentage of the labor force in agriculture and agriculture’s share of the GDP. Previous researchers (Alderson and Nielsen 2002; Huber et al. 2006; Nielsen and Alderson 1997) have found evidence that sector dualism is significantly likely to have a positive impact on overall inequality. Finally, we use a measure of the percentage of the Youth Population under 15 years of age for the model, predicting that an increasing percentage of youth within a population will have a positive effect on income inequality. Except for GDP per capita, the data for the control variables globalization, Sector Dualism, and Youth Population come from The World Bank World Development Indicator.

With respect to distributional outcomes, three regional implications are of particular importance. The first one is the positive correlation among democracy, globalization, and
inequality in post-communist countries. Due to its specific political and economic transformation, this region exhibits an increase in inequality that happened amid the period of entering into global markets and the third wave of democratization. The next region of concern is Latin America. It has remained the region with the worst system of distribution in terms of the depth and breadth of inequality, largely due to extraordinarily unequal land distribution that has continued since the colonial period without any significant reforms. Finally, East Asia has presented a specific set of factors that contribute to high economic growth and a relatively more equal distributional structure. For these reasons, we include three regional dummy variables, *Post-Communist, Latin America*, and *East Asia*, to control for historical, region-specific effects on income inequality. In addition, we use two more dummy variables for region, *South and Southeast Asia* and *Africa*, treating the rest of the countries as the reference category.

**Model Specification**

We test the hypotheses about the relationships among regime type, policy, and income inequality with an unbalanced, pooled time-series cross-sectional data of spending and Gini that cover 107 and 42 developing countries, respectively, during the period 1971-2008.

To control for the possibility of nonspherical disturbances, Beck and Katz (1995) introduce an econometric technique that runs an ordinary least squares (OLS) regression with the lagged dependent variable plus unit and period dummies and calculates panel-corrected standard errors. Whether unit dummies and a lagged dependent variable should be included in the model is, however, still an open question because running an OLS model with them may remove some of the nonspherical disturbances problem, but it may also kill much of the beneficial story about
the variables of interest. Thus, this widely used technique may run the risk of throwing out the substantial and theoretical baby with the residual’s and methodological bathwater.

Some concerns about the consequences of specifying unit dummies have been discussed. Even though the estimators of unit dummies absorb the effects of unobserved time-invariant variables, generally they eliminate much of cross-sectional variation in the dependent variable by capturing the unit-specific variation in a unit-specific intercept (Kittel and Winner 2005, 272). More specifically, the inclusion of unit dummies turns out to be questionable, first, if the model embraces variables that are constant over time for a given unit, or, second, if it tests the hypothesis about differences in the level of the exogenous variables. The first point is relatively well known. Due to almost perfect collinearity, unit dummies do not allow estimating the influence of time-invariant explanatory variables, and then, accordingly, they often bias the estimate of largely time-invariant variables (Beck 2001).

The second point is somewhat new. Plumper et al. (2005) suggest that if the theory predicts the level effects of an exogenous variable on levels of the endogenous variable, unit dummies should not be included, because “unit dummies completely absorb differences in the level of explanatory variables across units” (p. 331, emphasis in the original). In our analysis, one of the main interests is whether the political variables capture cross-sectional variation of income inequality, and one of the main hypotheses is about the effects of levels of the explanatory variables on the level of the dependent variable. Moreover, our key explanatory variables, Democracy and Partial Democracy, are almost constant over time for many countries. For these reasons, it seems clear that including unit dummies is not preferable in our models.

Additionally, whether to include or exclude in the model a lagged dependent variable that, in itself, is required to eliminate serial correlation of errors, has recently stimulated a lively
debate in the literature. The key argument of some econometricians and applied researchers who are warning against the inclusion of a lagged dependent variable is that the autoregressive term may generate serious bias through capturing large parts of the trend in the dependent variable and pressing down the effects of the other variables because it falsely presumes identical persistent effects of all explanatory variables (Achen 2000; Greene 2003, 534; Plumper et al. 2005, 335). In particular, when high serial correlation and high heavy trending exit in the explanatory variables, as often bedevil the panel world, a lagged dependent variable will dominate the regression equation even though it is theoretically uninteresting and meaningless.

Therefore, we employ OLS estimation using panel-corrected standard errors (PCSE) to deal with panel heteroscedasticity but do not include a lagged dependent variable and unit dummies. Following the recommendation of Plumper et al. (2005), we use the Prais-Winsten transformation to eliminate serial correlation of errors, assuming first-order autocorrelation within panels (an AR1 process). “AR1 error models tend to absorb less time-series dynamics,” thus they allow applied researchers to “explain not only cross-sectional variance and cross-sectional differences in changes, but also average changes in levels” (Plumper et al. 2005, 343). All explanatory variables are lagged by one year to control for the potential exogenous effects of income inequality.

Admittedly, it is also plausible to suspect that our empirical results can be biased simply due to excluding the lagged dependent variable and the unit dummies that have been widely included in econometric models of the recent comparative political economy literature. However, models with them are not appropriate for this analysis, not only due to the methodological reasons argued earlier but also due to some technical issues: The data on inequality (Gini coefficient) are greatly unbalanced (18 countries have fewer than six observations, and almost
half of the observations are excluded if the lagged dependent variable is added), and key explanatory variables of theoretical interest are almost perfectly correlated with unit dummies. Accordingly, in order to further assess the robustness of the results, we consider the random-effects models.

It is necessary to test whether there is a simultaneity problem. If there is such a problem, alternative models should be applied, such as two-stage least squares (2SLS) and instrumental variables, because OLS estimators are not consistent. A Durbin-Wu-Hausman test indicates there is no need for employing an alternative model in our analysis (Davidson and MacKinnon 1993).

**Results and Discussion**

As discussed above, there are two groups of empirical results required for testing the hypothesis in this analysis (see Rueda 2008 for a similar analysis). The first group of regressions catches the impacts of the regime type on policy outcomes (domestic government spending and welfare state generosity). For each policy, there are two specifications of the model, the Prais-Winsten regressions with PCSEs and the random effects generalized least squares (GLS) regressions. The second group of regressions catches the impacts of policies on inequality. Like the first set, there are two specifications for each policy, and in order to see how different its impacts are in each regime type, we add the interaction terms between policy and regime type.

Turning back to the substantive variables summarized in Figure 1, (partial) democracies were expected to relate to higher levels of domestic government spending. The relationship between domestic government spending and inequality, however, was ambiguous given the logic of the interest group theory. The results in Tables 2 and 3 provide a somewhat significant amount
of support to these hypotheses. They show that (partial) democracies promote higher levels of domestic government spending, but the impacts of this spending on inequality are not statistically significant.

The empirical results for the relationships involving welfare state generosity are also reported in Tables 2 and 3 and in Figure 3. Again going back to Figure 1, (partial) democracies were hypothesized to be associated with higher levels of welfare state generosity and welfare state generosity with lower income inequality. In Tables 2 and 3, our findings do not confirm the former hypothesis but do confirm the latter. The results indicate that, in developing countries, regime types have nothing to do with welfare state generosity, but welfare state generosity may be related to more equality regardless of regime type.

In sum, the evidence clearly suggests that democracies are likely to increase domestic government spending, but they are not associated with higher levels of welfare state generosity, and that welfare state generosity only, not government spending, is likely to decrease income inequality in the developing world. How can those findings be explained? More specifically, if democracies spend more money, why does this have so little impact on levels of welfare state generosity and income inequality in the developing world? Theoretically, there may be two ways to explain these unexpected empirical findings. The first focuses on how to allocate spending (efforts) and the second, whether democracies actually have the capability to achieve what they want (consequences).

First, intuitively, it makes sense for welfare state generosity to have negative effects on income inequality because it can directly influence the actual living conditions of people below median income levels (in our analysis, a population measured by the share of non-working people). The finding of the lack of a relationship between democracies and welfare state
generosity is, however, unexpected. Although the standard explanation of the Meltzer-Richard model is that democracy is likely to increase the size of government, for, at least, welfare state generosity, this is not the case in the developing world.

It looks like a puzzle, but, strictly speaking, there is no reason to believe that democracies will provide more public goods and services than authoritarian regimes to people below median income levels (see Ross 2006). Even if one concedes that the politics of redistribution is working as Meltzer and Richard assumed, that is, a democratic government tries to target the median voter, it does not mean that relatively poor people get more benefits from a democratic government. Furthermore, one of their assumptions, a universal flat-rate benefit, is not plausible in reality: “governments are adept at channeling benefits to the constituencies they wish to favor” (Ross 2006, 870).

As we mentioned previously, this argument is compatible with the logic of the interest group theory. It implies not only the increase in the size of government spending but also the disproportionate allocation of government spending in democracies, which leads to the general phenomenon of concentrated benefits and dispersed costs. It is reasonable to infer that the organized or more powerful groups more frequently receive preferential treatment from democratic government than do unorganized or less powerful groups. Our findings, the increase in government spending but no incremental benefits for the non-working population in democracies, largely confirm this model.

This is also consistent with the results of some empirical studies. The World Bank and the United Nations argue that public spending in developing countries has been inclined to help people belonging to non-poor households (Human Development Report 2002; World Development Report 2001). More specifically, poor democracies usually distribute public
spending on education unequally and, thus, relatively fewer poor people get more (Alderman et al. 1995; Reinikka and Svensson 2004). Along the same lines, government health spending is also regressive, indicating that the additional health benefit derived from the increase in public spending on health is considerably smaller for the poor than for the non-poor (Bidani and Ravallion 1997; Deolalikar 1995; van de Walle 1995).

The second way to explain these findings concerns democracies’ capacity to achieve what they want. Welfare-friendly policies, such as a generous social policy and higher level of spending, may not produce better outcomes of redistribution automatically. Even if democracies have the good intention to redistribute more and use a variety of policies to decrease income inequality, these policies have a negative impact on inequality only when they actually deliver benefits to people as intended. This implies that social policies will have no impact on income inequality unless democracies have the capacity to function well and efficiently.

Robinson and Torvik (2005) propose a theory of “white elephants”\textsuperscript{10} to explain a particular type of inefficient redistribution. Reviewing many cases of the location of public investment projects in Africa, Bates argues that “governments are often willing to lower the profits of firms in order to secure other objectives – such as a plant location that is politically desirable though economically disadvantageous” (2005, 25). White elephants seem to be politically rational because they can be targeted at supporters, but the cost may be inefficient redistribution because these projects are basically chosen to increase the income of a particular constituency.

This argument is also related to a model of a “visibility effect” in government resource

\textsuperscript{10} They define \textit{white elephants} as “investment projects with negative social surplus” (Robinson and Torvik 2005, 197).
allocation (Mani and Mukand 2007). It implies that the government, maximizing electoral utility, is motivated to distribute relatively more resources to highly visible public goods and neglects provision of essential public goods, despite their contribution to considerable benefits.\footnote{Mani and Mukand (2007) define public goods as being highly visible if they make it easier to estimate government competence, based on observed performance.}

Moreover, and probably most connected with the point of this analysis, they argue that the resource allocation gap between the more and the less visible public goods becomes the largest at some intermediate level of democracy. This may be the case particularly in developing countries.

The skeptical view of the effects of social policies in the developing world is consistent with several recent studies. Rudra (2004) finds that social spending has much less favorable impacts on income inequality in the developing world. According to Huber (1996), targeted emergency welfare programs increase political leaders’ and bureaucrats’ incentives for patronage and corruption, which leads to a waste of resources in Latin American welfare state programs.

All in all, a broad policy and higher level of government spending are probably a necessary but definitely not a sufficient condition for an equal society.

Finally, our results seem to be in conflict with Lee’s (2005), who finds from a worldwide sample that a larger public sector leads to relatively equal distributional outcome only in highly institutionalized democracies, but not in nondemocracies and weakly institutionalized democracies. This is not a surprise, however, because most of the democracies in our sample that represent the developing world are not democracies according to Lee’s high threshold (Polity2 score, 9). Although the gap in the numbers of country-year observations with Polity2 scores 9 and 10 for democracies in our sample and advanced industrial countries in Lee’s model periods (1970-1994) might not be that large (290 and 409, respectively), the gap in the numbers of Gini
observations with Polity2 scores 9 and 10 between the two sample is much wider (48 and 202, respectively). This pattern clearly indicates that democracies in Lee’s models may be highly biased in favor of advanced industrial countries (almost 80%), and thus the negative effect of the public sector (Domestic Government Spending) on inequality in (partial) democracies does not show up in our models that exclude them.

Conclusion

This paper attempts to answer the question of how political regime influences income inequality. We argue that the starting point lies in the differentiation between democracy’s efforts (the effect of democracy on policy) and their consequences (the effect of policy on income inequality). The empirical results in our analysis clearly suggest that democracies are likely to increase domestic government spending, but they are not associated with higher levels of welfare state generosity, and that welfare state generosity only, not government spending, is likely to decrease income inequality in the developing world.

Our analysis is preliminary, mirroring the current state of the art. The statistical findings should be considered as plausible but not a definitive causal relationship until further data are compiled and detailed case studies are accomplished. We intend this empirical work not to definitively explain which causal mechanisms actually affect outcomes but to raise some questions that will require further elaboration.

First, the analysis may be expanded to develop a more sophisticated model by including one potential determinant of levels of income inequality, good or efficient governance, which has been rarely addressed in the literature on the politics of inequality. This factor may be critical for
redistributive demands to be completely reflected in the process of decision making and policy implementation. This is particularly the case in the developing world because, in the context of relatively higher levels of clientelism and corruption, more generous social policies may not work as mechanisms to help people below median income levels even when government spending is increasing. To answer the question of whether good governance actually reduces income inequality in developing countries can provide practical suggestions for advocates of pantisocracy.

Next, what is missing in discussion thus far is a systematic inquiry into “varieties of welfare capitalism” beyond advanced industrial countries. The mainstream of comparative political economy has focused on the effects of the economic structure on the patterns of welfare states and redistributive politics (Moene and Wallerstein 2003; Rueda 2008; Scheve and Stasavage 2009). The field for the varieties of capitalism of the developing world still remains as virgin soil, with the exception of Rudra (2007), who exploits and maps the political economies of developing countries. She discovers three different types of welfare states, including a productive welfare state, a protective welfare state, and a dual welfare state. Given systematic differences among welfare regimes of developing countries and the scant attention it has received in the existing literature, we contend that future studies must develop multidimensional approaches that merge domestic structures of politics and economy to deepen our theoretical understanding of the dynamics of redistribution.
References


Table 1. Military Spending in Developing Countries by Regime Type, 1960-2008

<table>
<thead>
<tr>
<th>Regime Type</th>
<th>Observations</th>
<th>Mean</th>
<th>Std. Dev.</th>
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<th>Maximum</th>
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Table 2. Determinants of Domestic Government Spending and Welfare State Generosity

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<tr>
<th></th>
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<tr>
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<td>GLS</td>
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<td>3.068***</td>
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<td>(0.028)</td>
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<td>4.662***</td>
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<td>(0.544)</td>
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<td>(0.005)</td>
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<td>R^2</td>
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Note: All explanatory variables are one-year lagged.
^p ≤ .10; *p ≤ .05; **p ≤ .01; ***p ≤ .001.
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<th>Prais-Winsten</th>
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<td>(5.841)</td>
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</table>

**Note:** All explanatory variables are one-year lagged.

^p ≤ .10; *p ≤ .05; **p ≤ .01; ***p ≤ .001.
Figure 1. Theoretical Expectation: Regime Type, Policy, and Income Inequality
Figure 2. Trends of Democratization and the Average of Military Spending in Developing Countries, 1960-2008
Figure 3. Empirical Results: Regime Type, Policy, and Income Inequality

Note: D, PD, and ND refer to democracy, partial democracy, and non-democracy, respectively. The asterisk refers to the significance of p values.