

Property Rights, Political Rights, and the Development of Poor Countries

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Abstract

Two distinctive institutional features of the U.S. are well-defined property rights and broad-based political rights. Cross-sectionally and longitudinally, the two institutions tend to go together, but not all that closely. In particular, among the sixty poorest countries in the world there is relatively little correlation between measures of democracy and measures of property rights and the rule of law. The relatively good-law-poor-voice group includes China, Ethiopia, Uganda, and Vietnam. Examples from the good-voice-poor-law group include Ukraine, Nicaragua, Nepal, Madagascar, and Bangladesh. Looking at the impact of these different dimensions of governance, we find that better rule of law raises per capita income and income of the poor (bottom 20% of the income distribution), whereas democracy has no strong effect on income (either mean income or income of the poor). Despite the evidence that foreign aid has more impact on growth and poverty reduction in countries with good economic governance (including rule of law), the allocation of aid discriminates mildly *against* countries with good rule of law, while favoring ones with political democracy.

*Poverty in all its forms is the greatest challenge to the international community.
What are the obstacles? Weak governance. Bad policies....*

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There is broad agreement that “good governance” is an important input into development (and an output as well). However, what exactly is meant by “good governance” is not always clear. While there are a range of possible meanings for the concept, the two most common concern (1) property rights and the rule of law or (2) democracy and political freedom. In this paper we explore the relationships among these different aspects of governance, economic development, and foreign aid.

We want to acknowledge upfront that many people (including us) value both the rule of law and democracy as direct inputs into the quality of life. Still, it is interesting and useful to inquire whether these institutional features have broader effects. Are they mutually reinforcing? And, do either rule of law or political freedom promote advances in material well-being, especially for poor countries and poor people? What we find about governance and development leads us to make three broad points, each of which is developed in detail in a section of the paper.

First, across all countries rule of law and democracy tend to go together -- that is, measures of the rule of law and the extent of political freedom are highly correlated. The correlation, however, depends to a large extent on the fact that all of the developed countries rank highly in both domains. Among the sixty poorest countries in the world, the relationship is much weaker – almost non-existent. India is measured to be good in both aspects of governance. And a fair number of countries are poor at both – these are the crisis-prone countries that often appear in the news (Angola, Sudan, Sierra Leone,

Nigeria, ex-Zaire, to name a few). But there are also quite a few developing countries in which the assessments of rule of law and democracy are at variance. The relatively good-law-poor-voice group includes China, Ethiopia, Uganda, and Vietnam, while the good-voice-poor-law group includes Ukraine, Nicaragua, Nepal, Madagascar, Bangladesh, and Mozambique. Since many of these countries are recent reformers in either the economic or political domain, the lack of correlation between rule of law and voice suggests that there is no strong relationship between these institutional features over relatively short time periods (one to two decades). On the other hand, the fact that all of the OECD countries have both good economic and good political governance suggests that in the long run there is likely to be a mutually reinforcing relationship.

Our second point takes off from the empirical growth literature, which finds that rule of law is important for economic growth, whereas democracy has no strong effect, after controlling for rule of law and other policies. We extend this analysis by examining the impact of rule of law and voice on income of the poor (defined as the poorest 20% of the population in each country). Essentially, we ask whether there is any relationship between these governance measures and income distribution, using a panel of household distribution data covering 80 countries. We find no significant effect of either rule of law or democracy on the distribution of income. This finding means that rule of law has a powerful effect on income of the poor (raises the growth rate without affecting distribution), whereas democracy has no strong effect on income of the poor (affects neither growth nor distribution). In fact, in growth regressions restricted to a poor country sample there is a modestly strong negative relationship between voice and growth. Thus, the good-law-poor-voice countries tend to grow rapidly and have strong

poverty reduction – Uganda and Vietnam are two good examples in the 1990s. On the other hand, the good-voice-poor-law group tends to fare poorly. Concerning the relationship between governance and economic development, it appears to be property rights and the rule of law that are particularly important, rather than democracy and political freedom.

The third issue that we take up is foreign aid. Recent work has established that the effect of aid on GDP growth and income of the poor is conditional on the quality of economic policies, including the rule of law. In the Cold War period, however, the allocation of aid favored strategic partners of donors and also was clearly allocated in favor of democracies, but was not related to economic policy or the rule of law. We update this work on the allocation of aid, looking at all OECD aid in 1998. There is a strong tendency for aid to go to democracies, while at the same time there is a modest tendency to discriminate against good rule of law. The good-voice-poor-law group gets about twice as much aid as the good-law-poor-voice countries.

It is reasonable for donors to give aid to democracies, especially new democracies, if they want to promote this institution. However, they should recognize that there is no evidence that this aid will simultaneously address the objective of reducing poverty. To accelerate the reduction of poverty, more assistance should be given to the poor countries that have reasonably good economic governance. Such assistance will have an immediate impact on poverty and is likely to sustain economic reform. This may turn out to be an effective way to promote democracy as well: economies that have maintained good policies and grown well for several decades have

typically had political liberalization as income rose and a substantial middle class developed (as in Chile, Korea, and Taiwan).

1. What Do we Mean by “Good Governance”?

There is a lot of confusion surrounding governance and its measurement. The word “governance” is used to capture a number of related, but nonetheless distinct aspects of the relationship between the mass of people in a country and the government. In some references “governance” is meant to convey the rule of law and the protection of property rights; in other cases it means democratic participation in government or the effectiveness of the government in providing services. In each of these meanings, it is difficult to find an *objective, quantifiable indicator*. In practice, measures of governance are subjective, and come from surveys either of private business people or of international “experts.”

Kaufmann, Kraay, and Zoido-Lobaton (1999) have taken a large number of different governance measures that come from agencies such as Economics Intelligence Unit, Freedom House, the Global Competitiveness Survey, and the International Center for Research on Governance and Enterprises (ICRGE) and organized the data two ways. First, the different measures have been divided into distinct aspects of governance. In this paper we are going to focus on two of these, which essentially correspond to political and economic governance:

- ***Voice and participation***: includes in it a number of indicators measuring aspects of the political process, civil liberties, and political rights. These indicators measure the extent to which citizens of a country are able to participate in the selection of

governments. Also included in this category are indicators measuring the independence of the media which serves an important role in monitoring those in authority and holding them accountable for their actions; and

- **Rule of law:** measures the extent to which people have confidence in and abide by the rules of society. These include perceptions of the incidence of both violent and non-violent crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts and property rights. Together, these indicators measure the success of a society in developing an environment in which fair and predictable rules form the basis for economic and social interactions.

Appendix Tables 1 and 2 list the specific concepts that these measures are trying to capture.

The second aspect of the KKZ effort was to create an average figure for each country, in cases in which there were multiple measures from different sources. Averaging the different measures should reduce any errors in the measures. Their indexes of voice and rule of law are standardized to have zero mean and a standard deviation of 1.0. Table 1 shows these measures for more than 100 developing countries.

Across all countries, there is a strong correlation (0.72) between voice and rule of law (Figure 1). It is not the primary purpose of this paper to explain rule of law or democracy, but we can easily think of reasons why *in the long run* democracy and rule of law may be mutually reinforcing. As we will go into more detail below, rule of law is one important factor creating a good environment for growth of per capita income, which in turn may expand the demand for democracy. On the other hand, political accountability may help ensure adequate rule of law and curb abuses of government

officials or the judiciary. The most developed countries – the OECD countries – are all clustered in the upper right of the figure, with democratic political systems and good rule of law: it is unlikely to be a coincidence that these two institutional features go hand-in-hand in the countries that have successfully developed.

The association between democracy and rule of law is much weaker, however, among developing countries, particularly among poorer countries. If we take the poorer half of the developing countries in Table 1, there is very little relationship between voice and rule of law (Figure 2). If we leave out three war-torn countries in the lower left (ex-Zaire, Sudan, and Tajikistan), the correlation between voice and rule of law is only 0.29. We view this figure as reflecting something about the shorter term relationship between democracy and rule of law (over, say, ten or twenty years). Some of the countries with relatively good rule of law here (Ghana, Uganda, China, Vietnam) are well-known market-oriented reformers of the past 15 years. Income is rising rapidly in these countries, and education and literacy are expanding. These trends may eventually result in greater political liberalization (as happened earlier in market-oriented developing economies such as Chile, Taiwan, or South Korea), but the process could easily take several decades. Similarly, in the lower right of the figure are some recent democratizers (for example, Bolivia, Nicaragua, Ukraine, Benin, and Mali). If democracy helps establish the rule of law in the economic domain, again this may take a substantial period of time.

The simple point we want to establish here is that among poor countries there is not much of a tendency for democracy and rule of law to go together. For the poor countries, the median of both the voice index and the rule of law index is around -0.5 .

We can use those points to break the sample depicted in figure 2 into four quadrants. Table 2 lists examples of countries in each quadrant. India is the best example of a poor country measured to be relatively good both on political and economic governance. There are also quite a few countries that are weak in both dimensions of governance: examples are Sierra Leone, Angola, Nigeria, Ex-Zaire, and Sudan. But the lack of a strong correlation between law and voice among the poor countries means that there are also quite a few countries whose measures of economic and political governance are at variance. For example, Uganda, China, Ethiopia, Vietnam have relatively good economic governance without political freedom, while Bangladesh, Nepal, Nicaragua, Madagascar, Honduras, Ukraine, and Mozambique all are relatively democratic but have poor rule of law.

Thus, when we ask, which poor countries have relatively “good governance,” we get largely different answers depending on whether we are talking about political freedom or property rights and the rule of law.

2. Governance, Growth, and Poverty Reduction

What is the relationship between the different aspects of governance, on the one hand, and growth and poverty reduction, on the other? Based on theory, one would expect that the rule of law would be an important determinant of investment and growth. Poor rule of law is akin to a tax on accumulation in that it reduces the expected benefit from any particular investment. On the other hand, it is not obvious why the extent of democracy would affect investment and growth, after controlling for the extent of property rights and other economic policies.

The vast empirical growth literature provides support for this intuition. Starting with Knack and Keefer (1995), a range of studies have found that some measure of rule of law or property rights or corruption is significantly correlated with growth of per capita GDP. For democracy, Barro (1999) found at most a weak, non-linear relationship (the fastest-growing countries tend to be in the middle of the democracy index), but the finding is not that robust to the inclusion of other variables.

In a recent paper we have taken this analysis further and looked at the impact of governance measures on income of the poor (Dollar and Kraay, 2000). In particular, we ask whether democracy or rule of law has an effect on income of the poor, different from its effect on mean income. It is possible that democracy is an important mechanism for giving voice to the poor and that their share of the benefits of growth would be higher under democratic regimes.

We use two approaches to measuring the income of the poor, defined as the poorest 20% of the population, using an augmented version of the Deininger-Squire (1996) dataset.¹ This dataset reports Gini coefficients for a large number of countries and years, and five points on the Lorenz curve for a subset of these country-year observations. As noted by these and other authors there are substantial difficulties in comparing income distribution data across countries. Countries differ in the concept measured (income versus consumption), the measure of income (gross versus net), the unit of observation (individuals versus households), and the coverage of the survey (national versus subnational). We restrict attention to distribution data based on nationally representative

sources identified as high-quality by Deininger and Squire (1996). We adjust the Gini coefficients and Lorenz curves for the remaining differences using the procedure similar to that of Lundberg and Squire (1999).² This results in a set of distribution data that notionally measures the national distribution of household income for all countries and years.

Whenever Lorenz curve data are available we measure mean income in the poorest quintile directly, as the share of income earned by the poorest quintile times mean income, divided by 0.2.³ For those observations for which we have information on the Gini coefficient but not the Lorenz curve, we estimate mean income in the poorest

¹ We use the version of the Deininger and Squire (1996) data set as augmented by Lundberg and Squire (1999). We are grateful to the latter authors for providing the data and for help with comparability adjustments. We add to this data a further 75 observations from the 1999 and draft 2000 World Development Indicators of the World Bank. We are grateful to Shaohua Chen for providing preliminary data from this last source.

² Specifically, we regress the logarithm of the Gini coefficient on a full set of country dummies, and five dummies which take the value of one if (i) the survey measures net income; (ii) there is no information whether the survey measures gross or net income; (iii) the survey measures expenditure; (iv) the survey uses individuals rather than households as the unit of observation; and (v) there is no information on whether the survey uses households or individuals as the unit of observation. The results of this regression are shown in Table 1. Under the assumption that the Gini does not systematically change too much within countries over time, the estimated coefficients can be interpreted as the mean percentage difference between the corresponding type of Gini and a Gini based on household gross income. We then adjust all the non-household, non-gross income Ginis by these estimated coefficients. We adjust the income share of the bottom quintile using the same procedure. It is worth stressing that these adjustments are identified using only within-country changes in the concept measured. While this has an obvious appeal, the disadvantage is that there are relatively few within-country changes in the concept measured, and so these adjustments are not very precisely estimated and are very sensitive to the observations included in the regression. Fortunately, our main results do not appear to be very sensitive to the precise adjustments used. See Atkinson and Brandolini (1999) for a detailed discussion of the limitations of these types of adjustments, as well as additional caveats about the use of the Deininger-Squire dataset.

³ We measure mean income as real per capita GDP at purchasing power parity in 1985 international dollars, based on an extended version of the Summers-Heston Penn World Tables Mark 5.6. In general, this need not be equal to the mean level of household income, due to a variety of reasons ranging from simple measurement error to retained corporate earnings. We nevertheless rely on per capita GDP for two pragmatic reasons. First, for many of the country-year observations for which we have information on income distribution, we do not have corresponding information on mean income from the same source. Second, using per capita GDP helps us to compare our results with the large literature on income distribution and growth that typically follows the same practice. In the absence of evidence of a systematic correlation between the discrepancies between per capita GDP and household income on the one hand, and per capita GDP on the other, we treat these differences as classical measurement error.

quintile under the assumption that the distribution of income is lognormal. Given a lognormal distribution of income, it is possible to show that approximately:

$$(1) \quad y^P = -\gamma \cdot G + y$$

where y^P denotes the logarithm of per capita income in the poorest quintile of the population; G denotes the Gini coefficient; y denotes the logarithm of average per capita income in the entire population; and $\gamma=0.036$ is a constant.⁴ While this lognormal approximation is simple, it works surprisingly well. An OLS regression of this approximate measure of mean income in the poorest quintile on the corresponding measure derived from the Lorenz curve yields a slope coefficient of 1.05 and an R-squared of 0.97. In any case, observations based on this approximation constitute less than 15 percent of our sample.

A difficulty with the data on income distribution is that it forms a highly unbalanced and irregularly spaced panel of observations. For some rich countries and a few developing countries a continuous time series of annual observations on income distribution is available for long periods. For most countries only one or a handful of observations are available. Since we are interested in growth over the medium- to long-

⁴ If the distribution of income is lognormal, i.e. $y \sim N(\mu, \sigma)$, and the Gini coefficient on a scale from 0 to 100 is G , the standard deviation of this lognormal distribution is given by $\sigma = \sqrt{2} \cdot \Phi^{-1}\left(\frac{1+G/100}{2}\right)$ (Aitchison and Brown (1966)). Using the properties of the mean of the truncated lognormal distribution (e.g. Johnston, Kotz and Balakrishnan (1994)) it can be shown that $y^P = y + \ln\left(\frac{\Phi(\Phi^{-1}(0.2) - \sigma)}{0.2}\right)$. Combining these two results and numerically linearizing the term involving G gives Equation (1) in the text. In the empirics, we rely on the exact, rather than the linearized, estimate of y^P . However, in most of the discussion we use the linearized version for clarity. Quah (1999) provides a number of similar results for the lognormal and other parametric distributions.

run we do not want to rely on potentially adjacent annual observations in our estimation. There are two solutions to this problem. The most common is to average available distribution data over pre-specified periods such as decades or quinquennia. Other than convenience, we do not find this approach very compelling. The main difficulty is that it introduces noise into the timing of the distribution data and the other variables we consider. Since one of the most interesting of these, income growth, is very volatile, this mismatch in timing is potentially very serious. In addition, the argument that averaging over time smooths out measurement error in the income distribution data is probably overstated. For reasonably short periods such as quinquennia, there is often only one observation per period for many countries. Moreover, to the extent that measurement error reflects differences in the concepts measured by the survey, as discussed above, these are highly persistent and will not be smoothed by averaging over time.

We therefore prefer to follow Chen and Ravallion Chen (1997) who instead work with an irregularly spaced panel of distribution data using the actual years to which the surveys refer. To avoid relying on adjacent annual observations or on growth over overlapping intervals, we filter the data as follows. For each country we begin with the first available distribution observation. Moving forward in time we then choose the next observation subject to the constraint that at least five years separate observations, until we have exhausted the available data for that country. This results in an unbalanced and irregularly spaced panel of 370 observations on mean income of the poor separated by at least five years within countries, of which 323 are based directly on the Lorenz curve and the remainder are estimated using a lognormal approximation. These data cover a total of 125 countries. In our econometric estimation we restrict the sample further to the set of

236 observations covering 80 countries for which at least two spaced observations on mean income of the poor are available, so that we can consider within-country growth in mean incomes of the poor over periods of at least five years. When we consider the effects of additional control variables, the sample is slightly smaller and varies across specifications depending on data availability.

In levels, there is a tight link between income of the poor and per capita income (Figure 3). In the bottom panel of the figure it can be seen that the growth rate of income of the poor and mean income is also clear, but that there is much more variation here. We take it from the empirical growth literature that good rule of law raises income, whereas democracy has no strong relationship to growth. We are interested then in whether these governance measures can help explain variations in income distribution (that is, deviations around the relationship between mean income and income of the poor).

Our data set is not ideal for running growth regressions, because it is irregularly spaced and because the sample size is limited by the availability of distribution data. Nevertheless, it is useful to start by showing that we can replicate the main results of the empirical growth literature (Table 3). We find that rule of law is positively related to growth, whereas our voice measure has an insignificant, negative coefficient. We also find that growth is enhanced by low inflation (as in Fischer 1993), low government consumption (Easterly and Rebelo 1993), and openness to foreign trade (Frankel and Romer 1999).

In light of the earlier point that rule of law and democracy are not very correlated among poor countries, it is interesting to run this regression only for the poorer half of

countries in the data set. This sample is small, so the results should be taken with caution. But what we find is that rule of law has a positive relationship with growth, whereas voice actually has a negative relationship (with a t-statistic of 1.63) among the poor country sample. If we refer back to our “governance quadrants,” poor countries that have relatively good rule of law without democracy tend to grow rapidly (an average per capita growth rate of 4.9 percent per annum in the 1990s) (Table 4). On the other hand, countries with more democracy but poor rule of law have grown slowly (1.8% on average in the 1990s). Note that countries that are poor on both rule of law and democracy do very badly (average per capita growth of zero). There are several recent papers that show that either democracy or rule of law can help mitigate social or ethnic conflict (Collier 1999; Easterly 2000; Rodrik 1999). Countries that have neither one of these institutional strengths are prone to conflict and crisis and have weak economic results.

We then proceed to investigate the impact of different institutions and policies on income of the poor (bottom 20% of the income distribution). In particular, we estimate variants of the following regression of the logarithm of per capita income of the poor on the logarithm of average per capita income:

$$(2) \quad y_{ct}^P = \alpha_0 + \alpha_1 \cdot y_{ct} + \alpha_2' X_{ct} + \mu_c + \varepsilon_{ct}$$

where c and t index countries and years, respectively; X_{ct} is a vector of other determinants of mean income of the poor; and $\mu_c + \varepsilon_{ct}$ is a composite error term including unobserved country effects.⁵

⁵ It is straightforward to generalize the discussion to include year effects. We do not do so here because in our empirical results we do not find time effects to be significant.

We are interested in two key parameters from Equation (2). The first is α_1 which measures the elasticity of income of the poor with respect to mean income. A value of $\alpha_1=1$ indicates that growth in mean income is translated one-for-one into growth in income of the poor. Estimates greater or less than one indicate that growth more than or less than proportionately benefits the poor. The second parameter of interest is α_2 which measures the impact of other determinants of income of the poor *over and above their impact on mean income*. In particular, we can see whether rule of law or voice affects income of the poor, after controlling for mean income.

Using Equation (1), we can equivalently write Equation (2) as a regression with the Gini coefficient (or some other measure of income distribution) as the dependent variable, and $(\alpha_1 - 1) \cdot y_{ct}$ on the right-hand side. Finding an estimate of $\alpha_1=1$ is equivalent to finding that the level of inequality does not vary systematically with the level of income. In this respect our work is closely related to the large literature on the determinants of inequality. Given the striking absence of any correlation between (changes in) income and (changes in) inequality documented by, among others, Chen and Ravallion (1997) and Deininger and Squire (1996), finding an estimate of $\alpha_1=1$ should not be very surprising. Our contribution to this literature is twofold. First, to our knowledge this is the largest, in terms of country and period coverage, assessment of changes in income and changes in income distribution. Second, after establishing that α_1 is very close to one, we turn our attention to deviations from this relationship and systematically attempt to relate them to other determinants of growth and poverty in this large sample of countries.

Simple ordinary least squares (OLS) estimation of Equation (2) is likely to result in inconsistent parameter estimates for (at least) three reasons: measurement error, omitted variables, and reverse causation from incomes of the poor to mean income. An additional issue in estimating Equation (2) is whether we want to identify our effects of interest using the cross-country or the time-series variation in the data on incomes of the poor, mean incomes, and policies. An immediate reaction to the presence of unobserved country-specific effects μ_c in Equation (2) is to estimate it in first differences.⁶ The difficulty with this option is that it forces us to identify our effects of interest using the more limited time-series variation in incomes and income distribution.⁷ This raises the possibility that the signal-to-noise ratio in the within-country variation in the data is too unfavorable to allow us to estimate our parameters of interest with any precision. In contrast, the advantage of estimating Equation (2) in levels is that we can exploit the large cross-country variation in incomes, income distribution, and policies to identify our effects of interest. The disadvantage of this approach is that the problem of omitted variables is more severe in the cross-section, since in the differenced estimation we have at least managed to dispose of any time-invariant country-specific sources of heterogeneity.

⁶ Alternatively one could enter fixed effects, but this requires the much stronger assumption that the error terms are uncorrelated with the right-hand side variables at all leads and lags.

⁷ Li, Squire, and Zou (1998) document the much greater variability of income distribution across countries compared to within countries. In our sample of irregularly-spaced observations, the standard deviation of the Gini coefficient pooling all observations in levels is 9.4. In contrast the standard deviation of changes in the Gini coefficient is 4.7 (an average annual change of 0.67 times an average number of years over which the change is calculated of 7).

Our solution to this dilemma is to implement a system estimator that combines information in both the levels and changes of the data.⁸ In particular, we first difference Equation (2) to obtain growth in income of the poor in country c over the period from $t-k(c,t)$ to t as a function of growth in mean income over the same period, and changes in the other X variables:

$$(2') \quad y_{ct}^P - y_{c,t-k(c,t)}^P = \alpha_1 \cdot (y_{ct} - y_{c,t-k(c,t)}) + \alpha_2' (X_{ct} - X_{c,t-k(c,t)}) + (\varepsilon_{ct} - \varepsilon_{c,t-k(c,t)})$$

We then estimate Equation (2) and Equation (2') as a system, imposing the restriction that the coefficients in the levels and differenced equation are equal. We address the three problems of measurement error, omitted variables, and endogeneity by using appropriate lags as instruments.

In the version of Equation (2) without control variables, these instruments provide us with three moment conditions with which to identify two parameters, α_0 and α_1 . We combine these moment conditions in a standard GMM estimation procedure to obtain estimates of these parameters. In addition, we adjust the standard errors to allow for heteroskedasticity in the error terms as well as the first-order autocorrelation introduced into the error terms in Equation (2') by differencing. Since the model is overidentified we can test the validity of our assumptions that the instruments are uncorrelated with the error terms using tests of overidentifying restrictions.

When we introduce additional X variables into Equation (2) we also need to take a stand on whether or not to instrument for these as well. On a priori grounds, difficulties

⁸ This type of estimator has been proposed in a dynamic panel context by Arellano and Bover (1995) and evaluated by Blundell and Bond (1998).

with measurement error and omitted variables provide as compelling a reason to instrument for these variables as for income. Regarding reverse causation the case is less clear. It seems implausible that many of the macro variables we consider respond endogenously to relative incomes of the poor. In what follows we choose not to instrument for the X variables. This is in part for the pragmatic reason that this further limits our sample size. More importantly, we take some comfort from the fact that tests of over-identifying restrictions pass in the specifications where we instrument for income only, providing indirect evidence that the X variables are not correlated with the error terms. In any case, we find qualitatively quite similar results in the smaller samples where we instrument, and so these results are not reported for brevity.

The basic results are shown in Table 5. The estimate of α_1 is 1.10, but is not significantly different from 1.0. Thus, there is no systematic tendency for growth to be biased for or against the poor (which is what one would expect, given other results on the lack of a relationship between per capita income and inequality). Concerning other determinants of income of the poor, the only robust non-zero result is that high inflation is especially bad for the poor. Concerning our governance measures, the point estimate on rule of law is negative and the point estimate on voice is positive, but neither is significant or large in magnitude.⁹

To obtain an estimate of the overall effect of governance measures on income of the poor, we need to combine the estimated impact on mean income and the estimated impact on income of the poor, controlling for mean income. In Figure 4 we show the

estimated long-run effect on income of the poor of a one standard deviation change in different variables, decomposed into a growth effect and a distribution effect. A one standard deviation improvement in the rule of law measure is associated with more than 50% higher income of the poor. This combines a large growth effect with a tiny effect on distribution (toward more inequality). For voice, the estimated effect of a one standard deviation increase is not significantly different from zero. It combines an insignificant negative estimate of the effect of voice on income with an insignificant positive estimate of the effect of the voice on equality.

In the interest of completeness we also run the regression for income of the poor using only the poorer half of countries in the sample. It is still the case that the coefficients on law and voice are not significantly different from zero, and now the point estimates are much smaller in magnitude. If we recalculate the estimated total effect of different institutions and policies on income of the poor, using the point estimates from only the poorer half of the sample, we get the same basic qualitative results. The effects of these variables comes primarily through growth, as generally they do not have large effects on distribution. The one interesting difference is that among low-income countries the more democratic ones have poor growth results and hence poor results for income of the poor. We emphasized that the poor-country sample is a small one for this kind of statistical analysis, so we do not want to make too much of the negative relationship between voice and income of the poor. But we do want to drive home the

⁹ Amartya Sen (1989) argues that democracies are better at responding to short-run crises, such as food shortages that could turn into famines without the proper public response. Our finding is about whether democratic institutions tend to raise the income share of the bottom 20%, which is more of a medium- to long-term question. Given that by definition the poor are roughly 20% of the electorate, it should not be surprising that democracy does not systematically transfer income to the poor. Varshney (1999) examines a number of reasons why poor democracies may not have especially pro-poor policies.

result that there is certainly no evidence that formal democratic institutions lead to good economic outcomes in poor countries over the time horizons considered here.

3. Aid and Governance

We began by noting that a number of major donors of foreign aid state as primary objectives of their support the reduction of poverty and the improvement of governance. While the exact definition of “governance” is often left vague, certainly for some donors the concept includes democracy and human rights. What has emerged from the analysis so far is that, over time periods of ten or twenty years, poverty reduction and democratization should be seen as *distinct objectives*. There is some weak evidence that there is actually a tradeoff between them, as the poor democratic countries have not done especially well in terms of growth or poverty reduction. However, the evidence on the tradeoff is not that strong. We subscribe to the view that improvements in the material well-being of the poor and democracy are largely independent (again, subject to the caveat that we are talking about ten or twenty year time horizons).

Now, there is no reason that donors cannot pursue two (or more) distinct objectives through their aid programs, though it is useful to recognize that the objectives are independent. In this section we are going to look at the relationship between the allocation of aid across countries and different aspects of governance.

We make use of two recent results in the literature on aid. The first is the finding that the impact of aid on growth and poverty reduction is conditional on the quality of economic policies in the recipient country (Burnside and Dollar, forthcoming). In their initial paper, Burnside and Dollar used an index of economic policy that contained only macroeconomic policies. However, in a follow-up paper (Burnside and Dollar, 2000)

they obtained even stronger results with a measure of economic management composed of the four components used in the growth regression in Table 3 (rule of law, macro stability, fiscal management, and openness to trade). For two countries that are equally poor, foreign aid will have a greater impact on growth in general and growth of income of the poor in particular, in the one that has a better policy environment, including better rule of law. This result is quite intuitive, once one accepts that giving large amounts of money to countries with bad policies has not generally led to policy reform. If the policy environment is independent of aid quantity, then it follows strongly from theory that a gift will have more of an impact on accumulation and growth where the incentives for accumulation are strong. Evidence supports this intuition. Hence the poverty reduction objective of donors is supported by giving aid to poor countries that have relatively good rule of law and other economic policies.

The second result we want to note is the behavioral analysis of bilateral donors in Alesina and Dollar (2000). Using data from the period 1970-94 (and hence dominated by the Cold War), they find that the allocation of bilateral aid is strongly influenced by strategic considerations such as colonial ties, Middle East politics, or voting patterns in the United Nations. However, after controlling for these influences, there has been a very clear tendency for donors to give more aid to democratic countries. Concerning rule of law or other economic policies, on the other hand, there was no strong tendency to allocate assistance in favor of these factors.

We are not going to replicate that full behavioral analysis, but it is interesting to look at the allocation of aid more recently to see to what extent – if at all -- donors still favor political governance versus economic governance. The most recent year for which

OECD data on total aid flows are available is 1998. Aid receipts relative to PPP GDP for each country were included in Table 1. Table 6 examines the allocation of Aid/GDP controlling for per capita income and population. After controlling for the latter two variables (in logs, entered quadratically), there is a strong correlation between aid and voice – the t-statistic is close to 4. Rule of law has a negative coefficient, with a t-statistic around 1. Thus, aid allocations favor more democratic countries, while there is some modest discrimination against ones with good rule of law.

India and China are both in this poor-country sample. With their huge populations, they get very small amounts of aid relative to GDP. Both also measure relatively well on the rule of law index. So, in column two we drop these two giants to make sure that they are not driving the results. The coefficients and standard errors are almost identical to those in column 1.

Again, we can relate these findings back to our governance quadrants. Table 4 shows the average aid receipts for countries in each group. Those with good rule of law and poor voice get 1.7% of GDP on average, while those with good voice and poor rule of law get roughly twice as much (3.5%). Ironically, the countries that are poor in both dimensions tend to get more aid (2.1%) than countries that are undemocratic but have good rule of law. Countries that are good in both dimensions do get the most – 3.8% of GDP on average – but the amount is about the same as democratic countries with poor rule of law. (We left India and China out of these averages – including them would strengthen our basic point here, as both have relatively good rule of law but very small amounts of aid.)

4. Conclusion

It is reasonable for donors to give aid to democracies, especially new democracies, if they want to promote this institution. However, they should recognize that there is no evidence that this aid will simultaneously address the objective of reducing poverty. To accelerate the reduction of poverty, more assistance should be given to the poor countries that have reasonably good economic governance. Such assistance will have an immediate impact on poverty and is likely to sustain economic reform. This may turn out to be an effective way to promote democracy as well: economies that have maintained good policies and grown well for several decades have typically had political liberalization as income rose and a substantial middle class developed (as in Chile, Korea, and Taiwan).

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Table 1. Aid, Growth and Governance

| Country | Code | 1998 GDPPC | GDPPC Growth Rate 90s | 1998 AID/GDP | Voice | Rulelaw |
|----------------------|------|------------|-----------------------|--------------|-------|---------|
| Sierra Leone | SLE | 458 | -4.9% | 4.8% | -1.62 | -0.91 |
| Tanzania | TZA | 480 | 1.2% | 6.5% | -0.28 | 0.16 |
| Malawi | MWI | 523 | 1.5% | 7.9% | 0.06 | -0.41 |
| Burundi | BDI | 570 | -2.5% | 2.1% | -1.29 | -0.88 |
| Ethiopia | ETH | 574 | 2.8% | 1.8% | -0.50 | 0.27 |
| Guinea-Bissau | GNB | 616 | -1.5% | 13.4% | -0.45 | -1.61 |
| Mali | MLI | 681 | 2.5% | 4.8% | 0.42 | -0.47 |
| Yemen | YEM | 719 | 1.0% | 2.6% | -0.41 | -1.01 |
| Zambia | ZMB | 719 | -0.3% | 5.0% | -0.05 | -0.40 |
| Niger | NER | 739 | 0.3% | 3.9% | -0.74 | -1.14 |
| Madagascar | MDG | 756 | -0.4% | 4.5% | 0.31 | -0.82 |
| Mozambique | MOZ | 782 | 5.9% | 7.8% | -0.17 | -1.05 |
| Nigeria | NGA | 795 | 1.7% | 0.2% | -1.23 | -1.10 |
| Congo, Dem. Rep. | ZAR | 822 | -5.3% | 0.3% | -1.57 | -2.15 |
| Eritrea | ERI | 833 | .. | 4.9% | -0.59 | .. |
| Chad | TCD | 856 | 1.8% | 2.7% | -0.85 | -0.83 |
| Benin | BEN | 867 | 3.6% | 4.1% | 0.69 | -0.42 |
| Burkina Faso | BFA | 870 | 3.6% | 4.3% | -0.21 | -0.35 |
| Kenya | KEN | 980 | 0.7% | 1.7% | -0.70 | -1.22 |
| Congo, Rep. | COG | 995 | -0.2% | 2.3% | -0.77 | -1.44 |
| Tajikistan | TJK | 1,041 | -7.3% | 1.7% | -1.56 | -1.33 |
| Uganda | UGA | 1,074 | 6.2% | 2.1% | -0.52 | -0.01 |
| Central African Rep. | CAF | 1,118 | 0.7% | 3.1% | -0.05 | .. |
| Nepal | NPL | 1,157 | 4.3% | 1.5% | 0.05 | -0.56 |
| Cambodia | KHM | 1,257 | 3.8% | 2.3% | -0.91 | -0.23 |
| Senegal | SEN | 1,307 | 1.8% | 4.3% | -0.29 | -0.10 |
| Bangladesh | BGD | 1,361 | 5.4% | 0.7% | -0.01 | -0.93 |
| Togo | TGO | 1,372 | 0.0% | 2.1% | -1.05 | -0.80 |
| Haiti | HTI | 1,383 | -1.7% | 3.8% | -0.71 | -1.50 |
| Sudan | SDN | 1,394 | 6.9% | 0.5% | -1.50 | -1.35 |
| Comoros | COM | 1,398 | -1.6% | 4.8% | 0.06 | .. |
| Gambia | GMB | 1,453 | 0.7% | 2.1% | -0.97 | 0.27 |
| Sao Tome & Principe | STP | 1,469 | 0.6% | 13.6% | 0.82 | .. |
| Cameroon | CMR | 1,474 | -0.7% | 2.0% | -0.70 | -1.02 |
| Bhutan | BTN | 1,536 | 4.0% | 4.8% | -1.25 | .. |
| Mongolia | MNG | 1,541 | -1.2% | 5.1% | 0.84 | 0.04 |
| Mauritania | MRT | 1,563 | 2.8% | 4.3% | -0.97 | -0.56 |
| Côte d'Ivoire | CIV | 1,598 | 1.8% | 3.4% | -0.57 | -0.33 |
| Lesotho | LSO | 1,626 | 6.0% | 2.0% | -0.15 | -0.24 |
| Viet Nam | VNM | 1,689 | 9.8% | 0.9% | -1.42 | -0.44 |
| Pakistan | PAK | 1,715 | 3.8% | 0.5% | -0.44 | -0.76 |
| Laos | LAO | 1,734 | 6.5% | 3.3% | -1.05 | -1.20 |
| Ghana | GHA | 1,735 | 3.1% | 2.2% | -0.43 | -0.01 |
| Guinea | GIN | 1,782 | 3.2% | 2.8% | -0.87 | -0.76 |
| Angola | AGO | 1,821 | -0.5% | 1.5% | -1.00 | -1.23 |
| Kiribati | KIR | 1,891 | 3.4% | 10.6% | .. | .. |

Table 1. Aid, Growth and Governance, cont'd.

| Country | Code | 1998 GDPPC | GDPPC Growth Rate 90s | 1998 AID/GDP | Voice | Rulelaw |
|-----------------------------|------|------------|-----------------------|--------------|-------|---------|
| Solomon Islands | SLB | 1,940 | 1.0% | 5.3% | 1.17 | .. |
| Moldova | MDA | 1,947 | .. | 0.4% | 0.16 | -0.02 |
| Uzbekistan | UZB | 2,053 | .. | 0.3% | -1.34 | -0.87 |
| Armenia | ARM | 2,072 | -4.6% | 1.8% | 0.02 | -0.15 |
| India | IND | 2,077 | 6.3% | 0.1% | 0.50 | 0.16 |
| Nicaragua | NIC | 2,142 | 4.2% | 5.5% | 0.07 | -0.73 |
| Azerbaijan | AZE | 2,175 | -6.8% | 0.5% | -0.92 | -0.56 |
| Bolivia | BOL | 2,269 | 3.7% | 3.5% | 0.39 | -0.35 |
| Kyrgyz Republic | KGZ | 2,317 | -4.4% | 2.0% | -0.25 | -0.47 |
| Papua New Guinea | PNG | 2,359 | 4.6% | 3.3% | 0.12 | -0.31 |
| Honduras | HND | 2,433 | 2.3% | 2.1% | -0.06 | -0.90 |
| Indonesia | IDN | 2,651 | 5.3% | 0.2% | -1.17 | -0.92 |
| Zimbabwe | ZWE | 2,669 | 1.5% | 0.9% | -0.67 | -0.15 |
| Albania | ALB | 2,804 | 0.7% | 2.6% | -0.01 | -0.92 |
| Syria | SYR | 2,892 | 2.6% | 0.4% | -1.36 | -0.29 |
| Sri Lanka | LKA | 2,979 | 6.0% | 0.9% | -0.16 | -0.36 |
| Ecuador | ECU | 3,003 | 1.8% | 0.5% | 0.27 | -0.72 |
| Egypt | EGY | 3,041 | 3.7% | 1.0% | -0.67 | 0.13 |
| China | CHN | 3,105 | 16.5% | 0.1% | -1.30 | -0.04 |
| Vanuatu | VUT | 3,120 | -0.2% | 7.1% | .. | .. |
| Ukraine | UKR | 3,194 | -6.2% | 0.2% | -0.01 | -0.71 |
| Cape Verde | CPV | 3,233 | 4.5% | 9.7% | 0.99 | 0.09 |
| Morocco | MAR | 3,305 | 2.4% | 0.6% | -0.24 | 0.68 |
| Jordan | JOR | 3,347 | 5.9% | 2.7% | 0.15 | 0.71 |
| Georgia | GEO | 3,353 | -7.5% | 0.9% | -0.29 | -0.49 |
| Jamaica | JAM | 3,389 | 0.9% | 0.2% | 0.75 | -0.73 |
| Guyana | GUY | 3,403 | 8.4% | 3.2% | 1.01 | -0.14 |
| Guatemala | GTM | 3,505 | 3.3% | 0.6% | -0.56 | -1.11 |
| Philippines | PHL | 3,555 | 1.9% | 0.2% | 0.61 | -0.08 |
| Swaziland | SWZ | 3,816 | 1.0% | 0.8% | -0.78 | -0.06 |
| Western Samoa | WSM | 3,832 | 3.3% | 5.6% | .. | .. |
| El Salvador | SLV | 4,036 | 5.0% | 0.7% | -0.10 | -0.66 |
| Maldives | MDV | 4,083 | 6.6% | 2.3% | -0.91 | .. |
| Tonga | TON | 4,101 | 2.7% | 6.3% | .. | .. |
| Fiji | FJI | 4,231 | 1.6% | 1.1% | 0.01 | -0.50 |
| Macedonia (former Yugoslav) | MKD | 4,254 | .. | 1.1% | 0.09 | -0.26 |
| Peru | PER | 4,282 | 6.5% | 0.5% | -0.69 | -0.52 |
| Paraguay | PRY | 4,288 | 1.3% | 0.3% | -0.42 | -0.70 |
| Lebanon | LBN | 4,326 | 14.4% | 1.3% | -0.40 | 0.26 |
| Kazakstan | KAZ | 4,378 | -3.8% | 0.3% | -0.71 | -0.59 |
| Belize | BLZ | 4,566 | 2.6% | 1.4% | 1.23 | 0.09 |
| Dominican Republic | DOM | 4,598 | 5.9% | 0.3% | -0.08 | 0.38 |
| St. Vincent and Gr. | VCT | 4,692 | 4.6% | 3.9% | .. | .. |
| Algeria | DZA | 4,792 | 0.7% | 0.3% | -1.31 | -1.10 |
| Bulgaria | BGR | 4,809 | -1.3% | 0.6% | 0.60 | -0.15 |
| Dominica | DMA | 5,102 | 3.7% | 5.2% | .. | .. |

Table 1. Aid, Growth and Governance, cont'd.

| Country | Code | 1998 GDPPC | GDPPC Growth Rate 90s | 1998 AID/GDP | Voice | Rulelaw |
|----------------------|------|------------|-----------------------|--------------|-------|---------|
| Iran | IRN | 5,121 | 4.4% | 0.1% | -0.56 | -0.36 |
| Namibia | NAM | 5,176 | 2.9% | 2.1% | 0.47 | 0.95 |
| St. Lucia | LCA | 5,183 | 2.9% | 0.8% | .. | .. |
| Panama | PAN | 5,249 | 5.2% | 0.1% | 0.66 | -0.39 |
| Tunisia | TUN | 5,404 | 5.1% | 0.3% | -0.59 | 0.65 |
| Thailand | THA | 5,456 | 5.3% | 0.2% | 0.22 | 0.41 |
| Romania | ROM | 5,648 | -0.9% | 0.3% | 0.41 | -0.09 |
| Latvia | LVA | 5,728 | -3.7% | 0.7% | 0.62 | 0.15 |
| Venezuela | VEN | 5,808 | 2.0% | 0.0% | 0.18 | -0.66 |
| Grenada | GRD | 5,838 | 4.2% | 1.1% | .. | .. |
| Costa Rica | CRI | 5,987 | 3.7% | 0.1% | 1.35 | 0.55 |
| Colombia | COL | 6,006 | 0.8% | 0.1% | -0.12 | -0.78 |
| Botswana | BWA | 6,103 | 3.5% | 1.1% | 0.78 | 0.50 |
| Belarus | BLR | 6,319 | -0.7% | 0.0% | -0.52 | -0.88 |
| Gabon | GAB | 6,353 | 2.4% | 0.6% | -0.31 | -0.53 |
| Turkey | TUR | 6,422 | 4.7% | 0.0% | -0.86 | -0.01 |
| Lithuania | LTU | 6,436 | .. | 0.5% | 0.77 | 0.18 |
| Russia | RUS | 6,460 | -4.3% | 0.1% | -0.31 | -0.72 |
| Brazil | BRA | 6,625 | 3.0% | 0.0% | 0.55 | -0.22 |
| Croatia | HRV | 6,749 | -0.1% | 0.1% | -0.32 | 0.15 |
| Trinidad & Tobago | TTO | 7,485 | 3.4% | 0.1% | 0.95 | 0.51 |
| Poland | POL | 7,619 | 4.7% | 0.3% | 1.07 | 0.54 |
| Estonia | EST | 7,682 | -0.1% | 0.8% | 0.79 | 0.51 |
| Mexico | MEX | 7,704 | 3.0% | 0.0% | -0.11 | -0.47 |
| Malaysia | MYS | 8,137 | 6.6% | 0.1% | -0.14 | 0.83 |
| Mauritius | MUS | 8,312 | 6.7% | 0.4% | 1.01 | 1.28 |
| South Africa | ZAF | 8,488 | 0.9% | 0.1% | 0.99 | -0.35 |
| Uruguay | URY | 8,623 | 5.8% | 0.1% | 0.77 | 0.27 |
| Chile | CHL | 8,787 | 10.3% | 0.1% | 0.62 | 1.09 |
| Antigua And Barbuda | ATG | 9,277 | 4.7% | 1.6% | .. | .. |
| Slovak Republic | SVK | 9,699 | 1.5% | 0.3% | 0.74 | 0.13 |
| Saudi Arabia | SAU | 10,158 | 0.1% | 0.0% | -1.10 | 0.49 |
| Hungary | HUN | 10,232 | 1.7% | 0.2% | 1.20 | 0.71 |
| Seychelles | SYC | 10,600 | 3.3% | 2.8% | .. | .. |
| St. Kitts-Nevis | KNA | 10,672 | 8.5% | 1.5% | .. | .. |
| Argentina | ARG | 12,013 | 7.7% | 0.0% | 0.48 | 0.32 |
| Czech Republic | CZE | 12,362 | 0.0% | 0.4% | 1.20 | 0.54 |
| Bahrain | BHR | 13,111 | 2.7% | 0.5% | -1.04 | 0.66 |
| Korea, Rep. | KOR | 13,478 | 7.1% | 0.0% | 1.00 | 0.94 |
| Slovenia | SVN | 14,293 | .. | 0.1% | 1.07 | 0.83 |
| Bahamas | BHS | 14,614 | 0.3% | 0.5% | 1.13 | 0.56 |
| Brunei | BRN | 16,765 | 0.9% | 0.0% | -0.92 | 1.25 |
| Israel | ISR | 17,301 | 4.0% | 1.0% | 1.08 | 0.97 |
| Cyprus | CYP | 17,482 | 4.8% | 0.2% | 1.11 | 0.93 |
| United Arab Emirates | ARE | 17,719 | -1.4% | 0.0% | -0.54 | 0.77 |
| Hong Kong, China | HKG | 20,763 | 3.7% | 0.0% | -0.07 | 1.33 |
| Malta | MLT | 23,306 | 25.9% | 0.2% | 1.41 | 0.86 |
| Singapore | SGP | 24,210 | 9.5% | 0.0% | 0.04 | 1.94 |

Table 2. Governance Quadrants, Example Countries

| | |
|---|--|
| <p style="text-align: center;"><u>Good Rule of Law</u> <u>Poor Voice</u></p> <ul style="list-style-type: none"> • Uganda • Vietnam • Ethiopia • China | <p style="text-align: center;"><u>Good on Both</u></p> <ul style="list-style-type: none"> • India |
| <p style="text-align: center;"><u>Poor on Both</u></p> <ul style="list-style-type: none"> • Sierra Leone • Angola • Nigeria • Ex-Zaire • Sudan | <p style="text-align: center;"><u>Good Voice</u> <u>Poor Rule of Law</u></p> <ul style="list-style-type: none"> • Ukraine • Nicaragua • Nepal • Madagascar • Bangladesh • Mozambique |

Table 3. Growth Effects of Governance and Policies

(Dependent Variable is $\ln(\text{Per Capita Income})$)

| | <u>Full Sample</u> | <u>Poorer Half</u> |
|--|--------------------|--------------------|
| Lagged $\ln(\text{Per Capita Income})$ | 0.892 (0.077) | 1.049 (0.106) |
| (Exports+Imports)/GDP | 0.021 (0.021) | 0.080 (0.074) |
| $\ln(1+\text{Inflation})$ | -0.184 (0.089) | -0.305 (0.053) |
| Government Consumption/GDP | -0.01 (0.003) | -0.014 (0.006) |
| Rule of Law | 0.075 (0.046) | 0.089 (0.059) |
| Primary Enrollment | 0.0004 (0.001) | -0.016 (0.013) |
| Voice | -0.009 (0.028) | -0.069 (0.043) |
| # of Observations | 148 | 57 |

Notes: This table reports the results of applying the system estimator to a standard growth regression. Standard errors are corrected for heteroskedasticity and for the first-order autocorrelation induced by first differencing using a standard Newey-West procedure.

Table 4. Governance Quadrants, Average Growth Rates in the 1990s

| | |
|--|--|
| <p style="text-align: center;"><u>Good Rule of Law</u> <u>Poor Voice</u></p> <p style="text-align: center;">4.9%</p> | <p style="text-align: center;"><u>Good on Both</u></p> <p style="text-align: center;">2.2 %</p> |
| <p style="text-align: center;"><u>Poor on Both</u></p> <p style="text-align: center;">0.0 %</p> | <p style="text-align: center;"><u>Good Voice</u> <u>Poor Rule of Law</u></p> <p style="text-align: center;">1.8%</p> |

Table 5. Governance and Income of the Poor

(Dependent Variable is $\ln(\text{Per Capita Income of the Poor})$)

| | <u>Full Sample</u> | <u>Poorer Half</u> |
|--|--------------------|--------------------|
| $\ln(\text{Per Capita Income})$ | 1.10 (0.092) | 0.90 (0.16) |
| $(\text{Exports}+\text{Imports})/\text{GDP}$ | 0.011 (0.048) | -0.157 (0.123) |
| $\ln(1+\text{Inflation})$ | -0.177 (0.085) | -0.069 (0.164) |
| Government Consumption/GDP | 0.239 (0.420) | 1.42 (0.78) |
| Rule of Law | -0.087 (0.060) | 0.01 (0.09) |
| Voice | 0.069 (0.062) | 0.014 (0.076) |
| # of Observations | 208 | 87 |
| P-OID | 0.593 | 0.475 |

Notes: This table reports the results of adding the indicated control variables to the system estimator of Equations (2) and (2'). The row labelled P-OID reports the P-value associated with the test of overidentifying restrictions. Standard errors are corrected for heteroskedasticity and for the first-order autocorrelation induced by first differencing using a standard Newey-West procedure.

Table 6. Aid and Governance, 1998

Dependent Variable: ODA/(PPP GDP), 1998

| | <u>All Poor Countries</u> | <u>Excluding China and India</u> |
|-------------------------------|-------------------------------|--------------------------------------|
| Log (GDP p.c.) | -0.276 (0.109) | -0.254 (0.109) |
| [Log (GDP p.c.)] ² | 0.018 (0.007) | 0.016 (0.007) |
| Log (pop) | -0.019 (0.006) | -0.021 (0.007) |
| [Log (pop)] ² | 0.002 (0.001) | 0.002 (0.001) |
| Rule of Law | -0.006 (0.006) | -0.006 (0.006) |
| Voice | 0.012 (0.003) | 0.013 (0.003) |
| R ² | 0.66 | 0.65 |
| # of Observations | 61 | 59 |

Note: Robust standard errors in parentheses.

Table 7. Governance Quadrants, Average Aid/GDP, 1998

| | |
|--|--|
| <p><u>Good Rule of Law</u> <u>Poor Voice</u></p> <p>1.7%</p> | <p><u>Good on Both</u></p> <p>3.8 %</p> |
| <p><u>Poor on Both</u></p> <p>2.1%</p> | <p><u>Good Voice</u> <u>Poor Rule of Law</u></p> <p>3.5%</p> |

Figure1. Voice and Rule of Law, All Countries

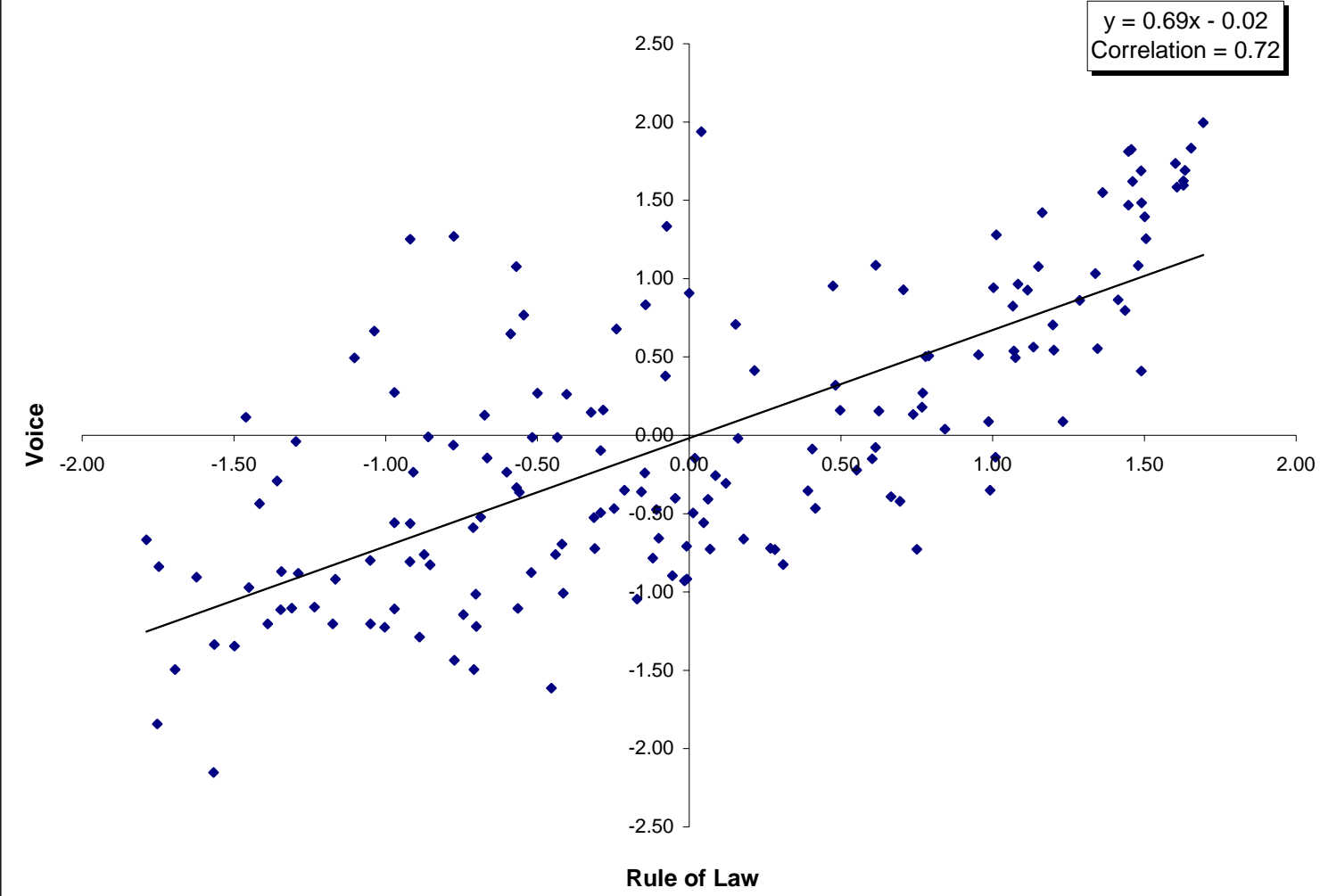


Figure 2. Voice and Rule of Law, Poor Countries

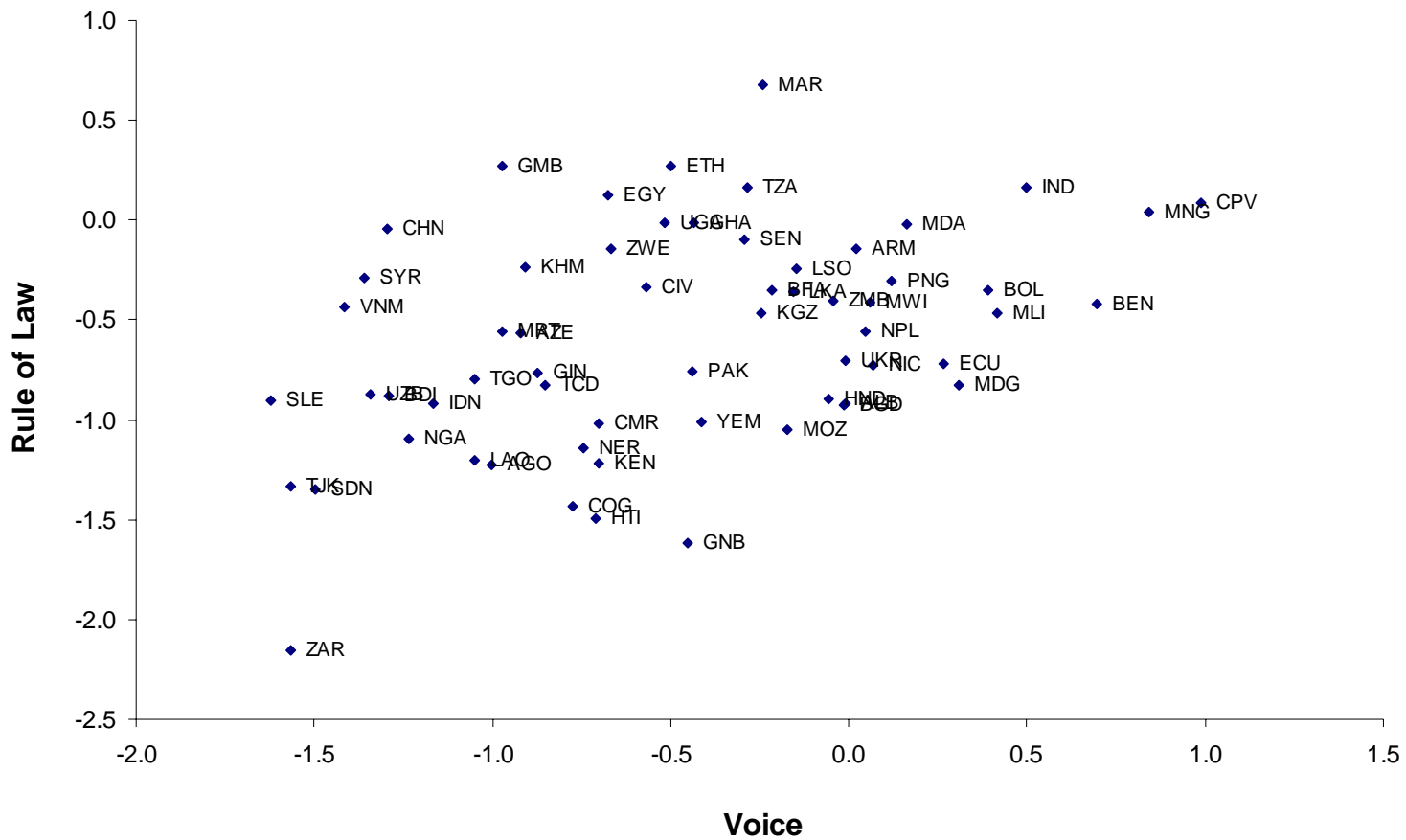
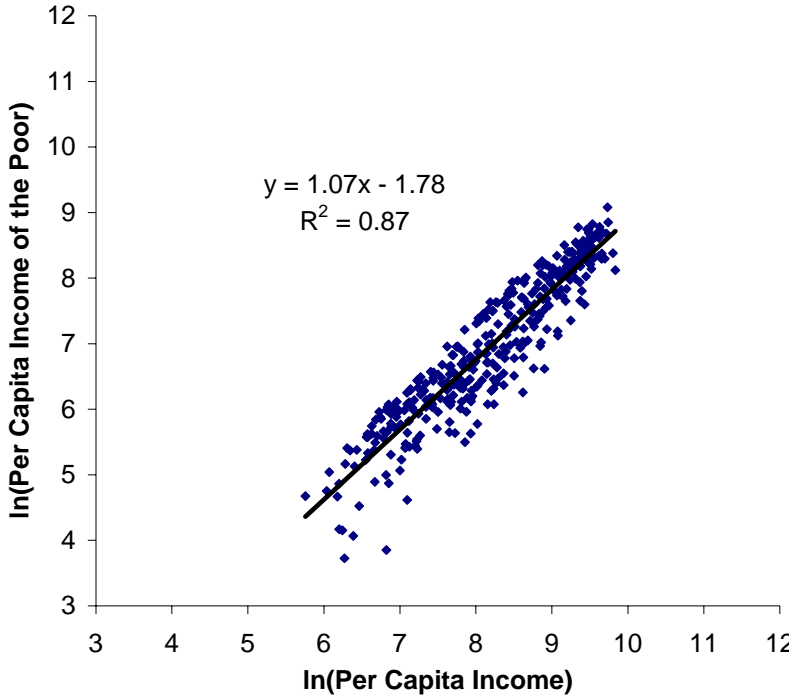


Figure 3. Growth and the Poor

Levels



Growth Rates

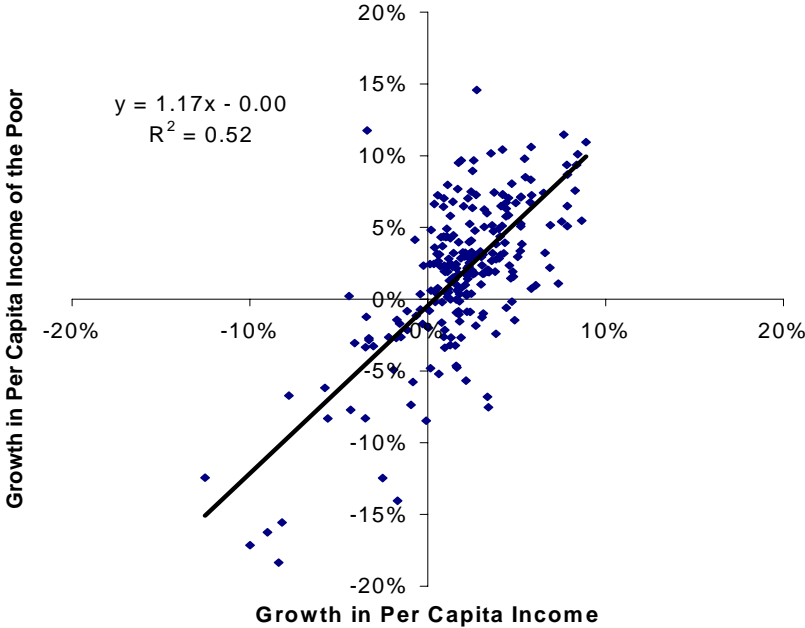
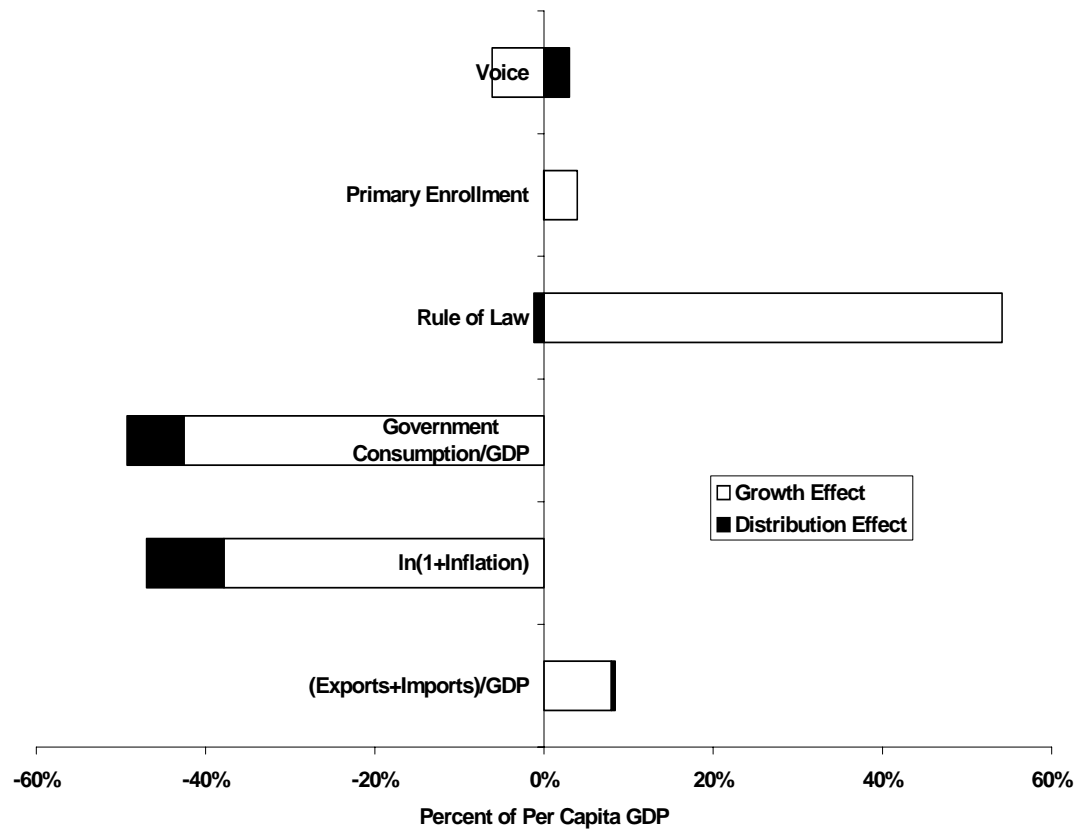


Figure 4. Growth and Distribution Effects of Governance and Policies: Long-run Effect on Income of the Poor



Appendix: Data Sources

| <i>Variable</i> | <i>Source</i> |
|------------------------------------|---|
| Real GDP per capita (PPP) | Summers and Heston (1991) |
| Official development assistance | OECD |
| Growth rates in table 1 | World Bank data base |
| Voice and accountability | Kaufmann, Kraay, and Zoido-Lobaton (1999) |
| Rule of law | Kaufmann, Kraay, and Zoido-Lobaton (1999) |
| Policy variables in tables 3 and 5 | Dollar and Kraay (2000) |

Appendix Table 1

Voice and Accountability

Concepts measured

Change in government, orderly transfer

Legal system, transparency, fairness

Civil Liberties: Freedom of speech, of assembly and demonstration, of religion, equal opportunity, of excessive governmental intervention

Political Rights: free and fair elections, representative legislative, free vote, political parties, no dominant group, respect for minorities

Free Press: Laws and practice, independence, and violations

Military in politics: Reduces accountability

Democratic accountability: Responsiveness of the government to its people, free and fair elections

Business is kept informed of important developments in rules and policies

Business has a voice to express its concerns over changes in laws or policies

Political process: Elections, party configuration, political competition, and participation

Civil society: Volunteerism, trade unionism, professional associations

Independent media

Media: independence and quality

Transparency of the business environment

Appendix Table 2

Rule of Law

Concepts measured

Losses and Costs of Crime
Kidnapping of Foreigners
Enforceability of private contracts
Enforceability of government contracts
Corruption in banking

Black Market
Property Rights
Law and order tradition
Unpredictability of the judiciary (now)

Extent of tax evasion
Costs of organized crime for business
Policy effectiveness in safeguarding personal security
Intellectual property protection
Compliance with court rulings and/or arbitration awards
Legal system effectiveness at enforcing commercial contracts
Independence of the judiciary from interference by the government
and/or parties to the dispute
Private business has recourse to independent and impartial courts for
challenging the legality of government actions
Likelihood of winning a court case filed against the government
Legal system effectiveness at enforcing commercial contracts
Private business capacity to file lawsuits at independent and impartial
courts against government
Citizens' willingness to accept legal means to adjudicate disputes
rather than depending on physical force or illegal means