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Government Spending, Rights, and Civil Liberties

Luiz de Mello and Randa Sab

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Prepared by Luiz de Mello and Randa Sabi

Authorized for distribution by Sanjeev Gupta

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Abstract

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Government spending plays a critical role in protecting and enforcing rights and civil liberties. Empirical evidence for a sample of industrial and developing countries shows that government expenditures on defense, law and order, social security, education, and health care are associated with three rights indicators—property rights, equality of citizens before the law, and economic freedom. In particular, an increase in spending on law and order seems to improve the indicators of rights and civil liberties, and lower budget deficits seem to improve property rights and equality before the law. Of great importance is the finding that corruption is associated with worse rights indicators.

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Author's E-Mail Address: Ldemello@imf.org, rsab@imf.org

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I. INTRODUCTION

Institutional capacity-building has become a key element of reform in transition and developing countries in recent years. Underlying this trend is the presumption that homegrown, well-functioning legal institutions—especially those that protect and enforce property and consumer rights—are instrumental in the consolidation of promarket reforms.² More recently, it has been argued that the protection of human rights and civil liberties, as well as democratic freedoms, plays a crucial role in human development and poverty alleviation by enhancing the capabilities of the poor (UNDP, 2000). Although most of the recent literature focuses on the relationship between “legal capital”—a country’s legal institutions—and economic and human development, little is said about the costs borne by the government in building legal capital through expenditures on the protection and enforcement of rights and civil liberties.

The definition of rights is complex and multidimensional. The political science literature distinguishes different types of rights, which range from the individual intangible entitlements and freedoms enshrined in Western constitutions, to the rights guaranteed by civil law. As discussed below, a distinction that has become standard in the literature is between the rights can take the form of protection from governmental and societal interference, and those that require positive action to defend acquired entitlements.³ The social choice literature, on the other hand, focuses on how rights can be protected and enforced given the complex relationships between people’s preferences and society’s decision-making institutions.⁴

The basic tenet of this paper is that the protection and enforcement of rights and civil liberties entail public costs. In microeconomic terms, these resources can therefore be thought of as an input in a “rights-production function.” As seen in the literature on the efficiency of government outlays, public spending can be treated as an input in the production function of

² The IMF recently hosted a conference on second-generation reforms in which academics and representatives of international financial institutions highlighted the role played by institutional development, particularly legal capacity-building, in high-quality growth. Further information is available via the Internet: www.imf.org/external/pubs/ft/seminar/1999/reforms/index.htm

³ This negative-positive distinction is also found in the political philosophy literature on civil liberties (Berlin, 1967). Negative freedom is defined as “. . . the area within which a man can act unobstructed by others” (p.141). Also, “. . . the ‘positive’ and ‘negative’ notions of freedom historically developed in divergent directions not always by logical reputable steps, until in the end, they came into direct conflict with each other” (p. 150).

⁴ A well-known example of how the social choice literature deals with rights can be formalized in a game-theoretic setup. In the “wall colors” game, two neighbors wish to paint the walls of their houses and, depending on the colors chosen and the neighbors’ utility orderings, the game is shown not to have a noncooperative solution. In other words, under very mild conditions, individual rights can only be fully exercised in a cooperative setup. See, e.g., Craven (1992).

a socially desirable indicator.⁵ Following this literature, rights and civil liberties can be considered as outputs produced by combining inputs such as government spending, political resolve, legal capital, as well as other socioeconomic variables.

Lack of data has been the main deterrent of cross-country empirical studies in this area. However, significant progress has been made in recent years in the empirical literature to construct indicators and proxies for rights and civil liberties and to estimate the statistical association between these indicators and economic performance. For example, to assess the impact of ethnic fragmentation on growth in Africa, Easterly and Levine (1997) construct a comprehensive data set, including a number of indicators and variables that can be used as proxies for rights and civil liberties.⁶ Isham and others (1997) show that civil liberties are a key determinant of the allocation of public expenditures and the performance of publicly funded investment projects.

Legal institutions have also been shown to have a bearing on economic performance. Johnson and others (1998) provide data on legal institutions, in their research on the determinants of the unofficial economy.⁷ Pritchett and Kaufmann (1998) show that civil liberties have a positive impact on governance and hence on the quality of government projects and overall economic performance. La Porta and others (1998) show an association between the quality of government and the country's legal system. Narayan (1999) analyzes the relationships between rights protection and enforcement, empowerment, and social capital. In related literature, de Mello (2000) provides cross-country evidence of an association between social capital and fiscal decentralization.

In this paper, rather than treating rights indicators as explanatory, right-hand-side variables in economic performance equations, we argue that government spending has a bearing on rights. Although we do not claim to fully analyze all the channels through which government spending affects rights and civil liberties, this empirical investigation is overdue in the literature. Because the statistical association between rights and government spending is unlikely to be unidirectional, considerable attention is focused on reverse causality in this paper, as well as on the choice of appropriate estimators and model specifications to overcome this difficulty.

This paper is organized as follows. Section II defines the types of rights and civil liberties under examination. Section III provides a simple theoretical framework within which testable hypotheses on the impact of government spending on rights can be derived. Section IV

⁵ E.g., Gupta and others (1999) present evidence on government spending as a determinant of outputs produced by the education and health sectors.

⁶ The authors show that ethnic fragmentation has a detrimental impact on the performance of government. Their data set is available via the Internet: www.worldbank.org/html/prdmg/grthweb/ddeale.htm

⁷ This data set is also available via the Internet: www.worldbank.org/html/prdmg/grthweb/dangerdt.htm

describes the data. Section V reports the main empirical findings. Section VI concludes and provides key policy recommendations.

II. WHICH RIGHTS AND CIVIL LIBERTIES?

This paper's basic hypothesis is of an empirical association between indicators of rights and civil liberties and the public resources devoted to their protection and enforcement. It is often argued that the relationship between government spending and rights is reflected in the choice of whether individuals should be protected from—or by—government. In other words, this relationship depends on the distinction between rights that require government action, and those that prohibit such actions.⁸ According to Weingast (1995) “a government strong enough to protect property rights and enforce contracts is also strong enough to confiscate the wealth of its citizens” (p. 1). To deal with this question, the literature distinguishes between positive rights, which reinforce entitlements to public assistance and regulation, and negative rights, which ban and exclude government intervention. Negative rights are thought to shelter individuals and businesses from abusive governmental actions, such as regulatory discretion. These negative rights “take the form of immunity from interference by others” (UNDP, 2000, p. 20).

Positive rights may encompass, for example, the provision of education and health care, welfare benefits, and publicly provided social safety nets; there is significant cross-country variation in these entitlements. As societies evolve, more sophisticated rights are often added to the list of entitlements. In most industrial economies, the list of so-called first-generation rights—such as freedom of speech, ban on slavery, protection of property rights, freedom of dissent and criticism—was extended in the postwar period to encompass second-generation rights—such as welfare benefits, and the provision of housing, education, and health care. It can be argued that the regulatory-welfare state is, in essence, justified on the grounds of positive second-generation rights. More recently, environmental protection (e.g., air quality standards, endangered species protection, and solid-waste disposal regulations) has been described as a positive third-generation right, requiring affirmative government action on behalf of future generations.

For given entitlements, both positive and negative rights entail public costs. Both the enforcement of rights and the deterrence of rights violations claim government resources and coordination between government agencies. The positive right to police protection requires government action;⁹ the right to protection from police brutality, unreasonable search and seizure requires monitoring of law and order institutions as well as access to courts. The right to welfare assistance and, in some countries, a basic health care package, generates entitlements that need to be financed through competing social budgets.

⁸ This is also referred to as the immunity/entitlement or forbearance/performance dichotomy.

⁹ E.g., the cost of U.S. Department of Justice witness-protection program was estimated at US\$23 million in 1996 (Holmes and Sunstein, 1999).

III. A SIMPLE THEORETICAL ARGUMENT

The rights-production function can be defined as:

$$(1) \quad R_i = f(X_i, Z_i),$$

where X denotes government spending, Z denotes nongovernmental inputs, and i is a country index

Let government spending in country i be disaggregated into m spending programs, such that

$\sum_{k=1}^m X_{ki} = X_i$. More important, to provide an input in the production function above, the government faces a budget constraint defined as:

$$(2) \quad \sum_{k=1}^m X_{ki} - T_i - D_i = 0.$$

Equation (2) includes all elements of the budget, including the budget balance (D_i), expenditures (X_i), and revenues (T_i). For algebraic simplicity, it is assumed that all government spending is on rights protection.

Not all elements in equation (2) can be included in the estimating equation at the same time.

Therefore, if equation (2) is re-written as $\sum_{j=1}^n G_{ji} = 0$, for simplicity, at least one G_j has to be omitted to avoid multicollinearity. Omitting G_n , equation (1) can be estimated as:

$$(3) \quad R_i = \alpha + \beta Z_i + \sum_{j=1}^{n-1} (\gamma_j - \gamma_n) G_{ji} + v_i,$$

where v_i is an error term, and α , β , γ_j and γ_n are parameters.

Equation (3) allows for two basic testable hypotheses:

Hypothesis 1: the expenditure variables are jointly significant even if $\gamma_j - \gamma_n = 0$, for γ_n and all γ_j ; and

Hypothesis 2: for a given k , $\gamma_j \neq \gamma_k$, for all $j \neq k$.

Hypothesis 1 implies that the m expenditure programs taken together have an impact on rights, although individually they may not. This hypothesis suggests that total government

spending, rather than individual programs, has an impact on rights protection and enforcement. Hypothesis 2 implies that the individual expenditure coefficients are not equal. In this case, particular expenditure programs may have a stronger association with the protection and enforcement of rights, as expected.

Three main econometric difficulties can be identified in estimating equation (3). First, it can be argued that rights create costly entitlements. The protection of positive rights, as well as the enactment of laws and regulations, affects the level of government outlays and the allocation of expenditures among competing functions (Isham and others, 1997; Holmes and Sunstein, 1999; UNDP, 2000).¹⁰ It can also be argued that the public costs of rights grow in direct proportion with the degree of rights enforced. In other words, the list of rights and civil liberties that create claims on government may be enlarged as a result of public largesse. In this case, the estimation of equation (3) by OLS would produce biased parameter estimates. To address the endogeneity of the government spending variables, the instrumental variables estimator is also used.

Second, it can be argued that the budgetary outlays needed to protect and enforce one type of right may displace resources that could be used to protect and enforce other rights. For example, expenditures on property rights enforcement may crowd out spending on environmental protection. Because the protection and enforcement of rights create claims on government, these expenditures will ultimately depend on the taxpayers' willingness to pay and the ability of the government to finance ensuing budget imbalances. In this case, the restrictions imposed by the government budget constraint equations need to be fully taken into account.¹¹

Third, failure to fully account for the government budget constraint leads to incorrect hypothesis testing of the impact of government spending on rights. Misspecification of government budget constraint produces different parameter estimates, which may be mistaken for lack of robustness.¹² For example, for a given spending function G_j , which is expected to affect rights, testing for $\gamma_j = 0$ fails to incorporate the impact of the omitted variable (G_n), which is also expected to affect rights. Instead, in this case, the correct null

¹⁰ E.g., the right to vote is estimated to cost US\$2 to US\$5 per voter in California, depending on the municipality's voting system (Holmes and Sunstein (1999)).

¹¹ In this regard, Holmes and Sunstein (1999) suggest that "some conflicts among rights stem from a common dependency of all rights on limited budgetary outlays. Financial limits alone exclude the possibility of all basic rights being enforced maximally at the same time" (p. 101).

¹² Kneller, Bleaney, and Gemmell (1999) show that misspecification of government budget constraints leads to omitted variable biases in endogenous growth equations in which government spending is used as an explanatory variable. The authors suggest that "non-robustness may in part reflect the widespread tendency to add fiscal variables to regressions in a relatively ad hoc manner without paying attention to the linear restriction implied by the government budget constraint" (p. 176).

hypothesis would be $\gamma_j - \gamma_n = 0$, for any $\gamma_n \neq 0$.¹³ Consequently, as suggested by Kneller, Bleaney and Gemmel (1999), the appropriate procedure for estimating equation (3) is, in this case, to test down from the most complete specification of the government budget constraint to less complete specifications where only the elements of the budget that are not expected to affect rights are omitted.

IV. GOVERNMENT SPENDING AND CIVIL RIGHTS: THE DATA

A. Rights Indicators

To cover a wide enough array of rights and civil liberties, the three indicators used in what follows are (1) the 1997 Heritage Foundation index of property rights, (2) the Freedom House index of equality of citizens before the law, and (3) the Freedom House index of economic freedom (Messick, 1996).

Index of property rights

This index measures the extent to which the government protects private property and how safe private property is from expropriation.¹⁴ The property rights index includes the following indicators: (1) freedom from government influence over the judicial system, (2) commercial code defining contracts, (3) sanctioning of foreign arbitration of contract disputes, (4) government expropriation of property, (5) corruption within the judiciary, (6) delays in receiving judicial decisions, and (7) legally granted and protected private property. The index is scored on a scale from one to five. The higher the score, the weaker the legal protection of property.

Index of equality of citizens before the law

This index measures the equality of citizens before the law with respect to the judicial system, rule of law, and legal protection.¹⁵ This index refers to the civil liberties listed in the Freedom House survey of political rights and civil liberties, and asks the following questions: (1) Is there an independent judiciary?; (2) Does the rule of law prevail in civil and criminal matters?; and Is the population treated equally under the law?, and Are police under direct civilian control?; (3) Is there protection from political terror, unjustified imprisonment, exile, and torture—whether by system supporters or opponents? Is there freedom from war and

¹³ Obviously, if the omitted variable is not expected to affect rights, then $\gamma_n = 0$ and, therefore, $\gamma_j = 0$ is the correct null hypothesis for testing the impact of G_j on rights.

¹⁴ Further information is available via the Internet: www.heritage.org/index/methodology.html

¹⁵ Further information is available via the Internet: www.freedomhouse.org/survey99/method

insurgencies?; and (4) Is there freedom from extreme government indifference and corruption? The index is scored on a scale from one to ten. The higher the score, the higher the equality of citizens before the law.

Index of economic freedom

This index measures the extent to which government hinders its citizens from exercising their right to: (1) own property, (2) earn a living, (3) operate a business, (4) invest their earnings, (5) trade internationally, and (6) participate equally in all aspects of the market economy. Each of these factors is assigned a score. The freedom to own property, earn a living, operate a business, and invest earnings are graded on a scale from zero to three, with three being the most free and zero reflecting little or no freedom. Freedom to trade and to participate in the market economy are scored on a scale from zero to two, with two corresponding to the greatest degree of freedom and zero to little or no freedom. Therefore, 16 is the highest score a country can obtain, and zero the lowest. Countries scoring 13 or higher are rated "free;" 10-12, "partly free;" 7-9, "mostly not free;" and 6 or less, "not free."

B. Other Variables

The explanatory variables used in the regressions are

- **Government spending.** Total government expenditures are used in the estimation of equation (3). Total government spending can be disaggregated to highlight different aspects of public outlays on the protection and enforcement of rights. The spending programs considered here are (1) **defense**, as property rights are preserved against foreign expropriation, as in the case of wars and international armed conflicts; (2) **law and order**, as ordinary rights are best enforced by a well-funded judiciary; (3) **social security**, as entitlements to public assistance and insurance are associated with empowerment and the enforcement of basic rights; and (4) **social spending**. The latter can be further disaggregated between **education** and **health care**, as the exercise of rights depends on social empowerment. In addition, well-targeted government spending on education and health care is known to empower vulnerable groups in society. Government spending data are available from IMF government finance statistics yearbooks.
- **Initial real GDP per capita.** Rights and civil liberties are better protected and enforced in wealthier societies (Dasgupta, 1993; and Isham and others, 1997). These societies can also afford more complex rights, because they are more willing to finance more sophisticated enforcement mechanisms and protect a wider range of entitlements.¹⁶ Initial GDP per capita data are available from the IMF World Economic Outlook database.

¹⁶ E.g., more generous social welfare provisions and a wider range of propoor affirmative state assistance in wealthier societies reflect more comprehensive entitlements than those affordable to poorer societies. Decisions

(continued...)

- **Initial secondary school attainment.** The higher the level of education, the more likely that rights are protected. Education is associated with the empowerment of society's vulnerable groups and hence an awareness of rights entitlements. Schooling increases the earning capacity of the poor, which limits the effectiveness of the wealthy to lobby policymakers. School enrollment indicators are available from the World Bank World Development Indicators database.
- **Corruption.** The protection and enforcement of negative rights—those which ban government intervention—depend on a well-functioning, corruption-free environment. Using the corruption index constructed by Tanzi and Davoodi (1997), the Transparency International (TI) index compiled by Goettingen University, and the ICRG index,¹⁷ we see that corruption affects economic performance (Schleifer and Vishny, 1993; Tanzi and Davoodi, 1997) and growth (Mauro, 1995). However, to our knowledge, no empirical study in the literature examines the statistical correlation between corruption and rights indicators.

The above-mentioned variables are expected to account for a significant share of the cross-country variation in rights indicators.¹⁸ Unfortunately, other important variables cannot be captured here: internationally comparable data on private outlays on rights protection, including private spending on lawsuits and protection from theft, are not available. Moreover, the coverage of the government spending indicators differs among countries and over time. Most social spending, for example, is financed by subnational levels of government, and data on consolidated general government spending may not be readily available, particularly for developing countries. In addition, rights protection and enforcement depends a great deal on ideology and political resolve, and such indicators are difficult to construct.

on whether to constitutionalize, on types of welfare rights (family allowances, unemployment benefits, antipoverty and job-training programs, and other social assistance and insurance entitlements) are also determined largely by the ability to pay.

¹⁷ The ICRG index measures a country's corruption as perceived by foreign investors. It varies from zero (most corrupt) to 6 (least corrupt). Corruption is defined as the likelihood of a government official to demand special payments, whether illegal payments are expected throughout lower levels of government in the form of bribes connected with import and export licenses, exchange controls, tax assessment, police protection, or loans. For further details, see Knack and Keefer (1997). The ICRG index spans 1985–1998, the TI index covers 1995 onward. To create a single continuous index from 1985 to 1998, the ICRG index was rescaled by multiplying it by 10/6, then splicing the two indices, as in Tanzi and Davoodi (1997). Mauro (1995) provides a detailed analysis of these and other corruption indices, and shows a high correlation between them.

¹⁸ The countries used in the empirical analysis are listed in Appendix I; descriptive statistics are given in Appendix Table A1; and raw correlations are presented in Appendix Table A2.

V. THE EMPIRICAL RESULTS

The results of the estimation of equation (3), based on cross-sectional data for up to 42 countries are summarized in Tables 1 through 5.

A. Preliminary Evidence

The baseline regressions are reported in Table 1. When total government spending was treated as an exogenous variable, the equations were estimated by OLS. The findings suggest that equality before the law is positively correlated with government spending. The parameter estimate is statistically significant at classical confidence intervals. In the case of property rights and economic freedom, the parameter estimates were not found to be statistically significant. As hypothesized above, initial GDP per capita and education enrollment were found to be positively associated with property rights, equality before the law, and economic freedom. When total government spending was treated as an endogenous variable, the equations were also reestimated by two-stage least squares (2SLS).

To deal with the possibility of misspecification of the government budget constraint, as suggested above, the equations were reestimated by including the budget balance in the set of regressors (full model).¹⁹ In the case of equality before the law, the budget balance was found to be positively signed and statistically significant at the 10 percent level. This suggests that equality before the law is higher in countries with lower budget deficits. This finding reinforces the results of the baseline regressions, in which the government budget constraint is not fully specified.

B. Disaggregated Spending Equations

Rather than dismissing an empirical association between government spending and property rights and economic freedom, it can be argued that the level of aggregation of the government spending variable may be too high to allow for closer scrutiny of the outlays that are more closely related to the enforcement and protection of rights and civil liberties. In this case, we focus on the five functions that are expected to affect rights: defense, law and order, social security, education, and health care. These outlays were also selected on the grounds of data availability, given that information on other spending functions and specific rights enforcement and protection programs is hard to come by for most countries in the sample.

The results reported in Table 2 show that higher-income countries tend to have better indices of property rights. When the 2SLS estimator is used, a higher initial school enrollment is found to improve property rights in the baseline model. Regarding government spending

¹⁹ At this level of aggregation, the inclusion of total revenues instead of the budget balance in the estimating equation would produce bias estimates, given the correlation between total revenues and expenditures in the government budget constraint.

variables, higher government outlays on education are associated with weaker property rights, regardless of the estimator used and whether other public finance variables are included in the set of regressors.²⁰ Because all these outlays may affect rights jointly, we carried out a joint significance test (Hypothesis 1). The test fails to reject the null hypothesis that the expenditure variables are not jointly significant. We also failed to reject the null hypothesis that the coefficients of the expenditure variables are equal (Hypothesis 2).

In the case of equality before the law (Table 3), initial GDP per capita and school enrollment were found to be positively associated with the equality indicator, regardless of the estimator used and model specification. In addition, nearly all government-spending variables were found to be positively associated with equality before the law. Outlays on law and order were not found to be statistically significant when the models were estimated by OLS. Health care spending was found to be negatively signed.²¹ The hypotheses tests confirm at classical confidence intervals the joint significance of the expenditure coefficients and that different expenditure programs affect the protection and enforcement of rights and civil liberties differently.²² In the full model estimated by 2SLS, outlays on defense and law and order were found to positively affect equality before the law.²³

In the case of economic freedom (Table 4), initial GDP per capita and school enrollment were found to be positively associated with the rights indicator, regardless of the estimator used and model specification. Government spending on law and order was found to affect economic freedom, regardless of the estimator used and model specification. Health care outlays were found to be positively associated with economic freedom when the OLS estimator was used. Public spending on education was found to be negatively signed in all models except for the full model estimated by OLS. Social security expenditures were found to be negatively signed in the baseline models and statistically insignificant in the full models. The F test fails to reject the hypothesis of joint significance of the expenditure coefficients for the full model estimated by OLS. The null hypothesis that the expenditure

²⁰ This may be attributed to inefficiencies in the composition of total education spending, which may favor tertiary, instead of primary, education. Data on the composition of social spending is nevertheless not readily available for most countries in the sample.

²¹ This may reflect a substitution effect between expenditures on education and health care. To overcome this difficulty, we estimated all models excluding education. The findings did not seem to suggest a substitution effect. Health care expenditures still entered with a negative sign.

²² The null hypothesis that the coefficients are not jointly significant cannot be accepted at the 11 percent level. All other statistics are significant at the 10 percent level.

²³ The statistically significant relationship between equality before the law and defense spending may be due to the fact that, in many countries, outlays on law and order and internal security are often classified as defense. Alternatively, it can also be argued that a higher share of spending on defense in GDP or total government spending may be associated with authoritarian regimes, where rights are not often protected or enforced.

programs affect equally the protection and enforcement of rights could not be accepted at the 10 percent level when both the baseline and the full models are estimated by OLS.

Table 5 shows the results of the OLS estimation of the full model, including the corruption perception indicator in the set of explanatory variables. The findings suggest that corruption is associated with worse rights indicators. Initial secondary education is negatively signed in the property rights regressions, and positively signed in the equality before the law regressions. This implies that higher initial secondary education attainment improves property rights and equality before the law. An increase in expenditures on law and order improves property rights and economic freedom. When controlling for corruption, the budget balance was found to be negatively associated with property rights and positively associated with equality before the law. This suggests that these indicators are better in countries with lower budget deficits.

We also assessed the sensitivity of the results above to the inclusion of other possible determinants of rights, experimenting with including the Gini coefficient and the ethnolinguistic fragmentation index as additional, right-hand-side variables in the estimation of equation (3).²⁴ It can be argued that, in more ethnically diverse societies, minority rights may not always be fully protected and enforced. Likewise, it can be argued that the rights of the poor may not always be fully protected or enforced in societies where income is unequally distributed. However, these variables were not found to produce robust estimates for a variety of model specifications and, therefore, the results of the sensitivity analysis are not reported.

VI. CONCLUSIONS AND POLICY IMPLICATIONS

The results reported above suggest that government spending plays an important role in protecting and enforcing rights and civil liberties. In particular, an increase in expenditures on law and order seem to improve the rights indicators used in the empirical analysis. Although the inclusion of expenditures on education in the regressions did not lead to conclusive results, the initial level of schooling was found to be an important explanatory variable in the rights equations. Also, property rights and equality before the law were found to be higher in countries with lower budget deficits. Of great importance was the finding that corruption is associated with worse rights indicators and that negative rights (i.e., those that require protection from governmental and societal interference) also require government intervention. The empirical evidence reported in this paper is in line with recent research on how to model government spending as an explanatory variable in a wide variety of

²⁴ The ethnolinguistic fragmentation index measures the probability that two randomly selected persons from a given country do not belong to the same ethnolinguistic group (Taylor and Hudson, 1972; Fox, 1996; and Knack and Keefer, 1997). Indices of ethnic heterogeneity have become a widely used regressor in studies of the determinants of economic performance. E.g., Easterly and Levine (1997) and Alesina and others (1997) show that more heterogeneous societies spend less on public goods, particularly education and health care, and have lower growth rates.

regressions. Failure to account for all the elements of the government budget constraint produces omitted-variables biases that are likely to underestimate the impact of government spending on the dependent variable.

The findings reported above are suggestive, but not conclusive, of an association between a variety of rights indicators and government spending. Some caution is nevertheless recommended in interpreting the empirical results. Common shortcomings of this type of analysis are (1) data inadequacies; (2) a possible bias in country selection toward industrial countries because of the relatively small sample of countries for which internationally comparable data are available, including 24 developing countries and transition economies; and (3) the problem of how to deal with the likely endogeneity of some of the explanatory variables. These weaknesses often preclude more sophisticated econometric modeling and hypothesis testing. Moreover, the dearth of cross-country empirical research on rights protection and enforcement suggests that much remain to be done. A wider array of indicators is needed to capture different aspects of the issue, particularly in developing and transition economies, where institutional development and capacity-building are most needed.

The findings reported above are not without policy implications. Measures aimed at protecting and enforcing rights have become part and parcel of the promarket reform envelope in a number of developing and transition countries. By encouraging capacity-building in the protection and enforcement of rights and civil liberties, as well as in legal institutions in general, entitlements are preserved and rent-seeking behavior is discouraged, thus fostering entrepreneurship and creating a proinvestment economic climate. To the extent that these measures promote empowerment of the poor and ensure their access to rights protection and enforcement services, they may be integrated into countries' poverty reduction and development strategies.

Table 1. Baseline and Full Regressions: Total Government Spending

| | Baseline | | Full Model | |
|---|--------------------|---------------------|--------------------|---------------------|
| | OLS | 2SLS | OLS | 2SLS |
| Dependent Variable: Property Rights | | | | |
| Constant | 3.33** (12.830) | 3.82** (17.179) | 3.33** (12.334) | 3.84** (17.027) |
| Initial GDP per capita (x 1000) | -0.1** (-3.612) | -0.04* (-2.294) | -0.1** (-3.643) | -0.04* (-2.298) |
| Initial secondary school enrollment | -0.004 (-0.565) | -0.02** (-3.385) | -0.004 (-0.579) | -0.02** (-3.456) |
| Total government spending | -0.004 (-0.562) | -0.003 (-0.484) | -0.003 (-0.399) | -0.005 (-0.652) |
| Budget balance | | | 0.003 (0.129) | -0.01 (-0.499) |
| Adj. R^2 | 0.67 | 0.78 | 0.66 | 0.77 |
| Nobs. | 30 | 28 | 30 | 28 |
| Dependent Variable: Equality Before the Law | | | | |
| Constant | -2.51* (-2.295) | -2.71* (-2.246) | -2.61* (-2.398) | -2.88* (-2.421) |
| Initial GDP per capita (x 1000) | 0.2** (5.864) | 0.1** (3.023) | 0.2** (6.155) | 0.1** (3.250) |
| Initial secondary school enrollment | 0.04*** (1.909) | 0.04*** (1.763) | 0.04*** (1.889) | 0.04*** (1.854) |
| Total government spending | 0.12** (4.705) | 0.12** (4.660) | 0.13** (5.307) | 0.14** (5.379) |
| Budget balance | | | 0.12*** (1.813) | 0.13*** (1.816) |
| Adj. R^2 | 0.79 | 0.79 | 0.79 | 0.79 |
| Nobs. | 30 | 28 | 30 | 28 |
| Dependent Variable: Economic Freedom | | | | |
| Constant | 6.97** (3.977) | 5.76** (3.819) | 6.98** (4.000) | 5.73** (3.856) |
| Initial GDP per capita (x 1000) | 0.2* (2.294) | 0.06 (0.989) | 0.2* (2.319) | 0.1 (0.940) |
| Initial secondary school enrolment | 0.05 (1.677) | 0.08** (3.393) | 0.05 (1.707) | 0.08** (3.462) |
| Total government spending | 0.01 (0.402) | 0.01 (0.390) | 0.01 (0.244) | 0.02 (0.492) |
| Budget balance | | | -0.05 (-0.390) | 0.03 (0.232) |
| Adj. R^2 | 0.58 | 0.66 | 0.56 | 0.64 |
| Nobs. | 27 | 25 | 27 | 25 |

Notes: t-statistics in parentheses. (**), (*), and (***) denote statistical significance at the 1, 5, and 10 percent levels, respectively. The numbers in parentheses are heteroscedasticity-consistent t -statistics.

Table 2. Baseline and Full Regressions: Disaggregated Spending
(Dependent Variable: Property Rights)

| | Baseline | | Full Model | |
|-------------------------------------|--------------------|----------------------|--------------------|----------------------|
| | OLS | 2SLS | OLS | 2SLS |
| Constant | 2.81** (5.890) | 3.90** (11.113) | 2.78** (5.680) | 3.73** (7.775) |
| Initial GDP per capita (x 1000) | -0.1** (-3.302) | -0.1 (-1.403) | -0.1** (-3.375) | -0.1 (-1.846) |
| Initial secondary school enrollment | 0.003 (0.324) | -0.02*** (-1.849) | 0.004 (0.337) | -0.21 (-1.660) |
| Spending on: | | | | |
| Defense | 0.06 (0.465) | 0.04 (0.350) | 0.04 (0.287) | 0.16 (1.269) |
| Law and order | -0.44 (-1.137) | -0.61 (-1.723) | -0.45 (-1.163) | -0.64 (-1.830) |
| Social security | 0.01 (0.336) | 0.02 (0.887) | 0.001 (0.016) | 0.02 (0.759) |
| Education | 0.16* (2.282) | 0.17* (2.514) | 0.14 (1.292) | 0.31* (2.834) |
| Health care | -0.05 (-0.707) | -0.03 (-0.602) | -0.05 (-0.747) | -0.04 (-1.078) |
| Budget balance | | | 0.003 (0.092) | -0.10*** (-2.037) |
| Total revenues | | | 0.01 (0.247) | -0.02 (-0.771) |
| Adj. R^2 | 0.63 | 0.73 | 0.57 | 0.71 |
| Nobs. | 22 | 17 | 22 | 17 |
| F-test | 6.05 [0.00] | 7.14 [0.00] | 4.05 [0.01] | 5.28 [0.02] |
| F-test (Hypothesis 1) | 0.50 [0.77] | 0.93 [0.50] | 0.40 [0.84] | 1.07 [0.45] |
| F-test (Hypothesis 2) | 0.62 [0.65] | 1.15 [0.39] | 0.43 [0.78] | 1.34 [0.34] |

Notes: t-statistics in parentheses. (**), (*), and (***) denote statistical significance at the 1, 5, and 10 percent levels, respectively. The numbers in parentheses are heteroscedasticity-consistent t -statistics. The F-statistic is a standard test that the regression slope is zero. The numbers in brackets are p values.

Table 3. Baseline and Full Regressions: Disaggregated Spending
(Dependent Variable: Equality Before the Law)

| | Baseline | | Full Model | |
|-------------------------------------|---------------------|---------------------|---------------------|---------------------|
| | OLS | 2SLS | OLS | 2SLS |
| Constant | -4.41** (-7.068) | -5.21** (-9.119) | -4.73** (-7.025) | -5.47** (-5.490) |
| Initial GDP per capita (x 1000) | 0.2** (4.637) | 0.1* (2.940) | 0.2** (5.071) | 0.1*** (1.927) |
| Initial secondary school enrollment | 0.05** (3.445) | 0.06* (2.644) | 0.05** (3.716) | 0.06*** (2.311) |
| Spending on: | | | | |
| Defense | 0.90** (5.584) | 1.11** (6.007) | 0.79** (4.698) | 1.09** (5.513) |
| Law and order | 0.83 (1.282) | 2.14** (3.636) | 0.81 (1.473) | 1.96* (3.209) |
| Social security | 0.15** (3.354) | 0.07* (2.596) | 0.07 (1.594) | 0.05 (1.203) |
| Education | 0.26*** (2.065) | 0.33* (2.317) | 0.05 (0.355) | 0.31 (1.637) |
| Health care | -0.20** (-3.114) | -0.24** (-4.810) | -0.22** (-3.824) | -0.25** (-4.740) |
| Budget balance | | | 0.08* (2.239) | -0.02 (-0.221) |
| Total revenues | | | 0.07 (1.644) | 0.02 (0.494) |
| Adj. R^2 | 0.91 | 0.95 | 0.92 | 0.93 |
| Nobs. | 22 | 17 | 22 | 17 |
| F-test | 33.10 [0.00] | 41.80 [0.00] | 26.65 [0.00] | 25.81 [0.00] |
| F-test (Hypothesis 1) | 6.03 [0.00] | 9.21 [0.00] | 2.26 [0.11] | 26.65 [0.00] |
| F-test (Hypothesis 2) | 3.40 [0.04] | 7.22 [0.00] | 2.81 [0.07] | 4.25 [0.05] |

Notes: t-statistics in parentheses. (**), (*), and (***) denote statistical significance at the 1, 5, and 10 percent levels, respectively. The numbers in parentheses are heteroscedasticity-consistent t-statistics. The F-statistic is a standard test that the regression slope is zero. The numbers in brackets are p values.

Table 4. Baseline and Full Regressions: Disaggregated Spending
(Dependent Variable: Economic Freedom)

| | Baseline | | Full Model | |
|-------------------------------------|----------------------|----------------------|----------------------|----------------------|
| | OLS | 2SLS | OLS | 2SLS |
| Constant | 7.45** (3.560) | 5.56* (2.811) | 8.08** (5.928) | 6.86** (4.786) |
| Initial GDP per capita (x 1000) | 0.4** (4.533) | 0.3** (3.818) | 0.4** (5.123) | 0.3** (4.156) |
| Initial secondary school enrollment | 0.0004 (0.014) | 0.06* (2.475) | -0.003 (-0.150) | 0.05*** (2.558) |
| Spending on: | | | | |
| Defense | -0.009 (-0.021) | -0.28 (-0.821) | 0.34 (0.814) | -0.16 (-0.434) |
| Law and order | 3.88** (5.214) | 3.43** (3.645) | 4.08** (6.566) | 4.39* (3.757) |
| Social security | -0.12*** (-1.934) | -0.16*** (-2.148) | 0.09 (0.756) | -0.08 (-0.763) |
| Education | -0.53*** (-2.038) | -0.63** (-3.817) | -0.16 (-0.568) | -0.47*** (-2.269) |
| Health care | 0.17* (2.347) | 0.12 (1.216) | 0.22* (2.597) | 0.18 (1.773) |
| Budget balance | | | -0.03 (-0.339) | 0.10 (0.695) |
| Total revenues | | | -0.16*** (-2.219) | -0.10*** (-2.389) |
| Adj. R^2 | 0.70 | 0.86 | 0.71 | 0.86 |
| Nobs. | 20 | 15 | 20 | 15 |
| F-test | 7.20 [0.00] | 13.47 [0.00] | 6.24 [0.00] | 10.38 [0.00] |
| F-test (Hypothesis 1) | 2.19 [0.13] | 2.20 [0.17] | 2.82 [0.08] | 2.19 [0.20] |
| F-test (Hypothesis 2) | 2.59 [0.09] | 2.72 [0.12] | 2.56 [0.10] | 2.64 [0.16] |

Notes: t-statistics in parentheses. (**), (*), and (***) denote statistical significance at the 1, 5, and 10 percent levels, respectively. The numbers in parentheses are heteroscedasticity-consistent t -statistics. The F-statistic is a standard test that the regression slope is zero. The numbers in brackets are p values.

Table 5. Rights and Corruption
(Full Model)

| | Rights Indicators | | |
|-------------------------------------|----------------------|-------------------------|---------------------|
| | Property Rights | Equality Before The Law | Economic Freedom |
| Constant | 4.63** (9.905) | -7.07** (-7.955) | 4.02* (2.398) |
| Initial GDP per capita (x 1000) | -0.02 (-0.778) | 0.1 (1.073) | 0.2 (1.733) |
| Initial secondary school enrollment | -0.01* (-1.423) | 0.07** (6.348) | 0.03 (1.283) |
| Spending on: | | | |
| Defense | 0.13 (0.911) | 0.70** (3.366) | 0.26 (0.652) |
| Law and order | -0.49*** (-2.023) | 0.89 (1.394) | 3.79** (5.347) |
| Social security | -0.01 (-0.157) | 0.08 (1.793) | 0.12 (1.188) |
| Education | 0.11* (1.442) | 0.06 (0.332) | -0.04 (-0.125) |
| Health care | -0.07 (-1.439) | -0.22** (-4.115) | 0.26* (3.016) |
| Budget balance | -0.05** (-1.279) | 0.13** (3.297) | 0.09 (1.484) |
| Total revenues | 0.03 (1.088) | 0.04 (1.278) | -0.21** (-3.465) |
| Corruption | -0.32** (-3.667) | 0.39* (2.821) | 0.75* (2.685) |
| Adj. R^2 | 0.67 | 0.93 | 0.78 |
| Nobs. | 20 | 20 | 19 |
| F-test | 4.80 [0.01] | 24.69 [0.00] | 7.28 [0.00] |
| F-test (Hypothesis 1) | 0.53 [0.75] | 1.92 [0.19] | 2.59 [0.11] |
| F-test (Hypothesis 2) | 0.43 [0.79] | 2.40 [0.13] | 1.84 [0.21] |

Notes: t-statistics in parentheses. (**), (*), and (***) denote statistical significance at the 1, 5, and 10 percent levels, respectively. All models are estimated by OLS. The numbers in parentheses are heteroscedasticity-consistent t-statistics. The F-statistic is a standard test that the regression slope is zero. The numbers in brackets are p values.

List of Countries

Argentina
Austria
Belgium
Bolivia
Brazil
Bulgaria
Canada
Chile
Colombia
Costa Rica
Czech Republic
Denmark
Ecuador
Estonia
France
Germany
Greece
Guatemala
Hungary
Ireland
Italy
Japan
Latvia
Lithuania
Mexico
Netherlands
Norway
Panama

Peru
Poland
Portugal
Romania
Russia
Slovak Republic
Spain
Sweden
Switzerland
Ukraine
United Kingdom
United States
Uruguay
Venezuela

Table 6. Descriptive Statistics

| Variables | Mean | Standard Deviation | Minimum | Maximum | No. of Observations |
|-----------------------------------|--------|-----------------------|---------|---------|------------------------|
| Property rights (PROP) | 2.2 | 0.9 | 1.0 | 4.0 | 43 |
| Equality (EQUAL) | 5.5 | 3.1 | 0.0 | 10.0 | 43 |
| Economic freedom (FREE) | 12.6 | 2.9 | 7.0 | 16.0 | 39 |
| Real GDP per capita (RGDP) | 10,207 | 10,185 | 553 | 44,267 | 150 |
| Secondary enrollment rate (SEC) | 66.8 | 29.7 | 7.5 | 130.0 | 149 |
| Defense expenditure (DEFEN) | 2.1 | 1.1 | 0.003 | 5.46 | 86 |
| Public order and safety (ORDER) | 0.9 | 0.6 | 0.0009 | 2.29 | 56 |
| Social security and welfare (SSW) | 9.9 | 6.0 | 0.01 | 21.8 | 88 |
| Education spending (EDUC) | 2.7 | 1.7 | 0.001 | 7.0 | 88 |
| Health care spending (HEA) | 2.7 | 2.1 | 0.0009 | 7.8 | 88 |
| Balance (BAL) | -3.1 | 3.1 | -12.0 | 4.3 | 102 |
| Revenue and grants (REV) | 26.4 | 11.6 | 0.04 | 50.6 | 105 |

Table 7. Raw Correlations

| | EXP | DEFEN | ORDER | SSW | EDUC | HEA | PROP | EQUAL | FREE |
|-------|-------|-------|-------|-------|------|-------|-------|-------|------|
| EXP | 1.00 | | | | | | | | |
| DEFEN | 0.39 | 1.00 | | | | | | | |
| ORDER | 0.38 | 0.04 | 1.00 | | | | | | |
| SSW | 0.85 | 0.19 | 0.21 | 1.00 | | | | | |
| EDUC | 0.52 | 0.00 | 0.48 | 0.33 | 1.00 | | | | |
| HEA | 0.51 | 0.24 | 0.15 | 0.46 | 0.23 | 1.00 | | | |
| PROP | -0.35 | -0.22 | 0.28 | -0.48 | 0.06 | -0.37 | 1.00 | | |
| EQUAL | 0.55 | 0.22 | -0.01 | 0.64 | 0.07 | 0.38 | -0.70 | 1.00 | |
| FREE | 0.37 | 0.17 | 0.00 | 0.49 | 0.14 | 0.43 | -0.77 | 0.68 | 1.00 |

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