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DANGERS OF DIVERSITY: ETHNIC FRACTIONALIZATION AND THE RULE OF LAW

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ABSTRACT. Research linking ethnic cleavages to economic underdevelopment is a hallmark of recent efforts to explain economic growth. Similarly, the rule of law as a credible commitment to property rights and contract enforcement is also identified with economic development. Rather than treating these factors as rival explanations for economic development around the world, I propose the rule of law as the causal mechanism through which ethnic fractionalization (EF) influences growth in many countries. I argue ethnic diversity negatively impacts the rule of law due to the prevalence of ethnically-based patronage networks in developing countries. Public officials, I argue, face greater incentives to undermine the rule of law in societies with pervasive ethnic cleavages than in those without. I employ pooled cross-sectional, time-series data for 55 developing countries between 1996 and 2010 to test my theoretical argument. Ultimately, my research demonstrates ethnic fractionalization's deleterious effect on the rule of law and provides a uniform framework linking demographic inputs to economic outcomes.

JEL Classification: K2, O47, Q01

Keywords: ethnic fractionalization, rule of law, economic development, corruption

1. Introduction

The drive to explain underdevelopment occupies a significant portion of recent economic and political science scholarship. Explanations in the literature hinge upon largely endogenous factors such as political institutions or exogenous concerns such as geography or international markets.¹ Increasingly, research highlights the negative influence of ethnic heterogeneity in fostering growth and cooperation in society. For example, Easterly and Levine (1997) tie ethnic fractionalization (EF) to slow economic development, low income and inequitable distribution of wealth. Nauro et al. (2011) use a sophisticated instrumental estimation technique and still find evidence con-

necting high levels of ethnic fractionalization to low levels of economic growth (see also Scheuler and Weisbrod, 2010 and Campos, et al., 2007). Additionally, Habyarimana et al. (2007) describe how EF undermines public goods provision while La Porta et al. (1999) connect it to the low quality of governance in many countries. Feldmann (2012) finds a connection between high levels of ethnic fractionalization and high unemployment due to labor-market inefficiency and Cerqueti et al. (2012) identify a relationship between high levels of fractionalization and high levels of corruption. Finally, Hodler and Knight (2012) demonstrate the negative impact of ethnic fractionalization on the effectiveness of foreign aid. Previous literature associates EF with the distribution of resources and economic outcomes, but for the most part only provides untested speculation as to the underlying mechanism driving these relationships.² Scholars still do not know precisely *why* high levels of ethnic fractionalization lead to slow economic development. To help inform policy, we must understand the mechanisms underpinning growth and development to comprehend what any macro-level relationships between ethnic fractionalization and economic development truly represent.

I argue ethnic cleavages in society limit economic development by undermining the rule of law. The institutional elements comprising the rule of law currently occupy a privileged position in explanations of growth.³ In this framework, societies governed by the rule of law feature the enforcement of codified regulations and equitable adjudication of disputes. The rule of law therefore influences economic development since economic decisions rest, in part, on whether contracts and property rights are enforced. The rule of law also influences investment decisions by altering the costs and risk of doing business. Growing evidence demonstrates its importance for development, yet we know relatively little about how the rule of law comes to exist in the first place. Some recent work emphasizes institutions: regime type (democracy/authoritarian), electoral rules, or the strength of institutional checks and balances. Ignored, however, are a country's demographics. This omission is important because many developing countries contain a wide variety of ethnic groups within their borders. Institutional solutions to bring about the rule of law will fail unless they take into account the ethnically driven socio-economic context in which they are implemented. Moreover, it stands to reason perceptions of the rule of law are driven by more than institutional phenomena. Most analysis on the rule of law centers on the need for functioning legal institutions that foster economic development. However, phenomena that influence *perceptions* of a state's commitment to uphold contracts and enforce statutes may be equally as important (Barro and Gordon 1983; Mauro 1995). Unexplored in the literature is how sociological variables such as ethnic diversity, linguistic cleavages or religious schisms may influence perceptions of governance.

This investigation resolves problems in the literature in several ways. First, I propose the rule of law as an intermediary conduit connecting ethnic fractionalization to economic development. A large literature already ties components of the rule of law such as property rights, contract enforcement and equitable treatment in the legal system to economic development. I provide a rationale for ethnic fractionalization's influence on these phenomena and in turn on economic development. Second, I test my theoretical argument against panel data encompassing 55 developing countries from 1996–2010. Developing countries exhibit substantial variance in their levels of EF, types of political institutions and levels of the rule of law. They therefore offer an excellent natural laboratory in which to explore potential relationships between ethnicity, politics and economic development. In this vein, I explore whether the relationship between ethnic composition and the rule of law is robust to the inclusion of institutional variables often thought to influence assessments of governance. I find a strong, consistent relationship between ethnic fractionalization and perceptions of the rule of law. The rule of law suffers as ethnic divisions become more acute – even after controlling for factors thought to influence the rule of law such as regime type, political institutions or the level of wealth within a country.

The remainder of the paper proceeds as follows. The first section summarizes the theoretical rationale for linking ethnic fractionalization to the rule of law. The second section describes the variables and methodology of the project, while the final section describes the results, discusses their implications and identifies a direction for future research.

2. Theory

Recent scholarship identifies ethnic fractionalization (EF) as an important barrier to achieving economic development and political stability (Eifert, et al., 2010, Annet, 2001; Easterly and Levine, 1997). Easterly and Levine (1997) and Habyarimana et al. (2007) attribute EF's negative influence on economic growth to struggles over scarce resources that divide along ethnic lines. For example, low spending on public goods may reflect ethnic divisions generating disagreements on the distribution of state resources. In turn, low provision of public goods maintains poverty for large segments of the population and may limit long-term economic growth. In a different vein, other scholars contend ethnic fractionalization leads to dissatisfaction with government and *increased* public expenditure aimed at placating the populace (Annet, 2001). Alesina et al. (1999) even identify this phenomenon in the United States. Finally, several other studies have found evidence for ethnic heterogeneity's negative impact on social capital and trust in society, which are in turn linked to economic development (Keefer and Knack, 1997;

Alesina and La Ferrara, 1999). However, none of the aforementioned studies directly address and test ways in which ethnic divisions discourage investment and promote underdevelopment. Scholarship will suffer and policies will fail to bring about economic development if policymakers cannot determine the channels through which ethnic cleavages exert their influence. For instance, the literature on EF describes a negative relationship with development, yet prematurely promotes institutions to mitigate its consequences. Easterly (2000) demonstrates the mitigating effects of legal protection for minorities, property rights, contract enforcement on economic decline in ethnically heterogeneous states. Such solutions are inadequate, however, if these institutions depend directly on the ethnic divisions in society. We currently do not know whether the economic gains Easterly observes stem from establishing the rule of law in general or if the specific ethnic emphasis of the policy generated economic growth. It is not possible to assess these arguments and craft appropriate policy until we know why or how EF undermines economic development. Institutional solutions to ethnic cleavages should only be proffered once scholars gain a complete understanding of the way in which ethnic fractionalization decreases growth.

Scholarship from economics helps to uncover the mechanism connecting ethnic fractionalization and economic development. For example, a mature body of work identifies several institutional elements necessary for economic development whose effectiveness may rest on a state's ethnic divisions. Components of the rule of law, such as property rights, contract enforcement and equitable treatment by the judiciary are deemed critical in stimulating growth (Keefer and Knack, 2002; De Soto, 2000; Maravall and Przeworski, 2003; Glinavos, 2008; Haggard et al. 2008; Hare, 2007; and Butkiewicz and Yanikkaya, 2006). Private enterprise, the argument goes, will be hindered if the public assumes that contracts and regulations will not be enforced or are unenforceable (North and Weingast 1989). Economic historians argue that the state's credible commitment to enforce property rights allowed for the development of capital markets in the West (North and Weingast 1989; Rapaczynski 1996; Riker and Weimer 1995). Another strain of literature identifies the ways in which transaction costs associated with entrepreneurial activity in the developing world are associated with a lack of enforceable property rights. Citizens lacking titled property or assurance against expropriation are neither able to obtain credit based on collateral holdings nor reinvest capital in the development of private enterprise. The result is chronic underdevelopment of state and society as inefficient informal markets drain capital, prevent the collection of tax revenues, and preclude the provision of public goods in areas such as health care and education (De Soto, 1989, 2000).

Perceptions of the rule of law can spur both foreign and domestic investment, yet, the few studies that have examined property rights regimes and the rule of law have focused mainly on their relationship to economic development. This begs an important question: what determines perceptions of the rule of law in the first place? Political institutions may be an important part of the explanation, but they are unreliable determinants due to difficulties posed by disentangling myriad institutional elements and the endogeneity problems their evolution generates. By contrast, the level of ethnic fractionalization in a state is largely determined before current institutions are established in the developing world.⁴ It is therefore possible to measure the potential impact of EF on the performance of state protections for the rule of law.

I anticipate a negative relationship between EF and the rule of law due to the incentives facing ethnically fractionalized public officials in developing countries. Clan, tribal and ethnic divisions in this environment often take precedence over national identity and may impact the credibility of national policies. EF can lead to opaque business transactions based on ethnic divisions and mistrust of the bureaucracy due to ethnic clientelism (Van de Walle, 2001). Economic development ultimately suffers as investment decisions become increasingly risky in ethnically-divided business environments. In general, I expect powerful groups holding the reins of government to treat out-group citizens disproportionately poorly due to pervasive ethnic cleavages. Countries with two or more major ethnic divisions are therefore likely to have more difficulty committing credibly to the rule of law than ethnically homogenous countries. Specifically, I expect large ethnic divisions to undermine any credible commitment to the rule of law through three main conduits: property rights, contract enforcement and equitable treatment by the judiciary. First, ethnic schisms can negatively impact perceptions of property rights if nationalization of out-group possessions is disproportionately common. It stands to reason that confidence in property rights will decrease if the probability of having one's assets nationalized is notably lower for in-groups than out-groups as in public goods provision of Habyarimana et al. (2007) and Easterly and Levine (1997). Second, contract enforcement and perceptions of equitable treatment also suffer if politicians and judges offer preferential treatment to members of their own ethnicity. By this logic, increasing the number of ethnic groups in a country will damage the credibility of contracts and the judiciary. This in turn will lead to declining assessments of the rule of law, decreased investment and derailed development.

In addition to ethnic fractionalization, I follow the theoretical literature and explore several institutional factors thought to influence the rule of law. These encompass the impact of regime type, proportional representation (PR) vs. single member plurality (SMP) systems, presidential vs. parliamentary

governance, a country's colonial heritage, income inequality and overall levels of wealth on assessments of the rule of law.

Democracy

Democratization, among other things, is a process that increases the number of veto players through political competition, constraints on the chief executive, and participation by an electorate. According to Kunicová and Rose-Ackerman (2005), participation, political competition, and constraints on the chief executive all increase the ability of the population to monitor and legally constrain politicians from engaging in corrupt behavior. Brown et al. (2011) find a strong relationship between political polarization in democracies and control of corruption. Competition in democracies creates incentives for politicians to hold one another accountable. In the early stage of democratization, rent-seeking behavior actually increases. Only after a certain level of democratization is reached will constraints be placed on malfeasance. These relationships are likely to emulate those concerning the rule of law—especially in the presence of high levels of ethnic fractionalization. There is also considerable evidence democracy improves the provision of public goods relative to authoritarian governance, which could indicate higher levels of cooperation and higher levels of the rule of law in democracies (Olken, 2008, Keefer and Khemani, 2005).

Authoritarian governments are likely to harm the rule of law (Maravall and Przeworski, 2003). For instance, military governments or other types of authoritarian regimes may negatively impact the rule of law. An important point of separation between the head of state and the head of the armed forces is fused when the chief executive is a member of the military. Without proper divisions, the military as an institution becomes exposed to politics: important decisions concerning promotion and retirement are made more on the basis of politics than on strict protocols set out in the military code. The military also becomes exposed to capture by private interests who now have to lobby the military in order to gain favorable dispensation from the government. The effect of each of these is likely exacerbated by high levels of ethnic fractionalization. Military leaders who belong to a minority group are likely to favor members of their own group over those of the majority, while leaders from the majority may exclude the minority group from many state programs. I expect military governments to produce negative assessments of the rule of law.

In contrast to the discussion above, there is some evidence suggesting democracy may have a *negative* impact on the rule of law. For example, Eifert et al. (2010) and Posner (2004) highlight the ways democratic competition politicizes and reinforces ethnic divisions. Democracy may very well deepen ethnic cleavages in society and undermine public goods provision,

cooperation and the rule of law *more so than in dictatorships*. Overall, I am ambivalent as to whether democracy increases or decreases the ability of leaders to favor one ethnic group over another and thereby undermine or improve perceptions of the rule of law.

Presidentialism vs. Parliamentarism

The second broad institutional variation emphasized in studies on assessments of governance is the choice between presidential and parliamentary systems. For example, some scholars argue the centralization of power under presidential arrangements offers executives greater opportunities for malfeasance than does the legislative authority wielded by the leadership in parliamentary systems (Kunicova, 2003; Kunicova and Rose-Ackerman, 2005; Mainwaring, 1995; Shugart, 1998). While in presidential systems both the party leadership and the chief executive must approve legislation, the president frequently controls certain forms of patronage independent of a legislative check, and may even create new types of distribution via executive orders. With this unconstrained authority over the creation and distribution of patronage, presidents are more likely to engage in inappropriate political behavior than are the heads of legislatures in parliamentary systems (Baldez and Carey, 1999; Cox and Morganstern, 2001; Kiewit and McCubbins, 1991; Sakwa, 2000). Parties are stronger in parliamentary systems, and checks are weaker because parties in presidential systems are not required to organize to form a government (Cox and Morganstern, 2001; Lijphart, 1984; Mainwaring, 1995; Shugart, 1998). Additionally, the uncertain timing of elections may act to constrain parliamentary leadership due to the constant threat of no-confidence votes and subsequent dissolution. I anticipate these arguments to gain strength in ethnically-divided states. Coalition governments under parliament are likely to represent broader interests in society than a solitary executive. A single executive of one ethnic group is frequently given the broad authority afforded presidents. The potential for unilateral action against members of other ethnic groups thus increases dramatically relative to parliamentary systems featuring coalition governments. I expect this phenomenon to generate more favorable assessments of the rule of law under parliamentary governments than in presidential systems.

Electoral Rules

Persson and Tabellini (2003) identify a number of reasons why PR and SMP systems are expected to create differing levels of governance. Individual ballots under majoritarian systems, the argument goes, provide direct accountability for politicians, reducing opportunities for malfeasance. Yet at the same time, Persson and Tabellini note that the higher barriers to entry normally

associated with the smaller districts in plurality systems may give politicians more room to maneuver. The more political competition is relegated to a relatively few number of candidates in each district, the less chance political outsiders will have to challenge corrupt incumbents. The theoretical expectation, therefore, is ambiguous for the rule of law: whether SMP or PR produces greater respect for property rights and equitable adjudication of grievances depends on the relative importance of each contradictory institutional mechanism (size of district vs. district magnitude). However, theoretical reasons exist to expect PR to generate favorable assessments of the rule of law. Powell (2000) argues that proportional representation systems generally outperform plurality systems in translating votes into either majority governments or coalitions close to the median voter. Plurality winners do not often hold views close to those of the median voter, yet are afforded a legislative majority. Consequently, plurality winners avoid negotiating with smaller parties across the ideological spectrum. As such, ethnically-based grievances may not be translated into acceptable policies, which may actually lead to *lower* public accountability in SMP systems. Furthermore, low barriers to entry in PR systems guarantee minority representation in government once a certain electoral threshold is met. This implies less accountability in plurality systems, which may produce selective enforcement of the rule of law – particularly for ethnically heterogeneous states. I expect systems featuring proportional representation to generate more favorable assessments of the rule of law than SMP arrangements.

Colonial Legacy

Former British colonies generally use a form of British Common Law whereas former French, Belgian, Spanish, Portuguese, German or Dutch colonies use a form of Civil Law. Two central differences between these families of legal systems may influence the rule of law and subsequently, economic development in former colonies.⁵ First, Common Law legal systems rely on judicial precedent rather than legislative precedent to interpret the law. Judges in these systems interpret legislation and set a binding precedent for future interpretation of the law. These justices effectively add to the body of laws, whereas judicial decisions often carry no lasting weight in countries with Civil Law systems. Instead, legislative revisions or interpretations of the law comprise the entirety of binding legal guidelines on a given matter in these countries. The freedom to interpret laws rather than simply enforce legislative wishes increases the probability judges with the power to set legal precedent will protect the rule of law. This protection extends to the rights of foreign firms and private property as demonstrated in La Porta et al. (2002) and Djankov et al. (2002). Furthermore, judges' independent decisions setting legal precedent protecting the rule of law generate expectations

of future protections against the violation of private rights because it is harder for judges to backtrack against legal precedent in the future. Judicial independence through the ability to set precedent in Common Law systems is thus a fundamental element of the legal system protecting both foreign and domestic investors and the rule of law.

Second, judges gain independence from public and private pressures through lifetime tenure in Common Law systems. The institutional context in which judges operate makes a difference in the types of decisions they make.⁶ For example, Besley and Coate (2003) find elected judges in the United States pursue more populist policies than appointed ones in the area of employment discrimination. This is not surprising: elected judges are beholden to the whims of the public because they must compete in popular elections at regular intervals. Elected judges cannot afford to make unpopular decisions if they want to keep their jobs. In contrast, appointed justices' insulation from political pressures translates into tougher stances against tyranny of the majority and greater protection of political rights. Still, judges with short appointments must concern themselves with their post-judicial careers in case they are not reappointed. This necessity gives some judges an incentive to provide selective benefits and preferential treatment to powerful litigants who are potential future benefactors. Similarly, the judges are vulnerable to future threats from the public and private sphere. Threats of punishment following judges' departure from the bench render them more likely to rule in favor of powerful litigants who could potentially harm them in the future as well. Instead, judges often have lifetime tenure in Common Law systems, but rarely do in Civil Law systems. Judges in Common law systems are free to focus on the legal merits of a case as well as ignore many of the positive and negative incentives associated with short judicial terms. Lifetime tenure thus allows judges to contradict majority opinion and anger powerful political constituencies if the judges' interpretation of the law demands it. The judiciary is therefore particularly important in preserving fragile political rights. However, the courts' ability to protect minority interests against powerful executive or legislative impulses hinges on an *independent* judiciary more prevalent under Common Law systems than in countries using legal frameworks based on Civil Law. I therefore include a measure of the legal code left behind as a measure of colonial legacy in my statistical models to determine if this legacy is connected to the rule of law.

Alternative Explanations

In addition to regime type and political institutions, I estimate the relationship between the rule of law and a number of variables representing plausible alternative explanations. For instance, low-income countries have a greater incidence of corruption than high-income countries (Brown, et al. 2011,

Treisman, 2000). Bureaucrats in developing societies receive salaries that are sufficiently low to entice corrupt behavior. Low-income societies may also lack the institutions for detecting public malfeasance – especially when such behavior follows ethnic patterns. Minority groups will bear the costs of systematic denial of public services in such systems and thus generate lower perceptions of the rule of law. I also expect poorer countries to exhibit low perceptions of the rule of law. Similarly, income inequality may fall along ethnic lines and decrease perceptions of government performance. Research on China notes a connection between social unrest and growing economic inequality (Khan and Riskin, 1998; Rozelle, 1996). Inequality, the argument goes, can generate the popular belief that distributional gains by the elite result from collusion with the government through corrupt practices. The polarization of ethnic, political, or social groups around the distribution of material wealth may frequently constitute the central issue in national politics (Lichbach, 1989), producing a heightened awareness or inegalitarian legislation or unprotected rights.

3. Model Specification and Estimation

I construct a pooled time series dataset for the years from 1996 to 2010 stemming from a variety of databases on the dimensions of governance, aspects of the political institutions in the included countries, and the countries' socioeconomic attributes. I use data from 1996–2010 because the World Bank Institute gathered data on governance, including an indicator for the rule of law over this timeframe. I use Alesina et al.'s (2003) data on ethnic fractionalization and the World Bank's Database of Political Institutions (Beck et al. 2010) for data on political institutions. I limit my dataset to developing countries for two reasons. First, developing countries face great barriers to economic development resulting in continued poverty and endangerment for the population of these countries. Determining whether the level of EF, which is often high in developing countries, influences the rule of law and in turn economic development may be critical for designing policies to overcome barriers to economic development. In contrast, industrialized countries face different challenges in continuing their economic trajectories relative to developing countries. Industrialized have for the most part already established the rule of law and do not exhibit very much variance from one country to the next. Developed countries are therefore not as interesting to study from a theoretical standpoint compared to developing countries because they have resolved any problems they may have had with EF and the rule of law. Second, I omit developed countries from my dataset for practical reasons. I want to know whether ethnic fractionalization influences the rule of law while controlling for the level of wealth in a country at the time EF

is observed as well as the political institutions in a country. Previous scholarship suggests the level of wealth is important for the rule of law along with the political institutions within a country. Wealth and the structure of the political system are therefore important control variables I cannot afford to omit from any model of the rule of law. However, the level of wealth within a country and the level of democracy are multicollinear with the level of ethnic fractionalization among developed, but not developing countries. Including observations from developed countries for wealth and political institutions in my dataset would thus bias my model and lead to mistaken inferences regarding any connection between EF and the rule of law. I therefore exclude developed countries from my model of the rule of law.⁷

I estimate my model using time-series, cross-sectional regression with panel corrected standard errors. I also estimate a second model using OLS with robust standard errors as a robustness check on the first model.⁸ The model I specify includes ethnic fractionalization, institutional variables, a number of control variables, as well as both regional and time effect dummy variables. I also account for rival hypotheses such as income (GDP per capita, PPP) and income inequality. The appendix includes a full discussion of the variables, their measurement, and sources for the data.

Table 1 Rule of Law Score Regressed on EF, Political and Economic Variables

Variable	TSCS Coefficient/(PCSE)	OLS, Robust SE Coefficient/(SE)
Ethnic Fractionalization	-0.409 (0.015)**	-0.357 (0.026)**
Polity	0.018 (0.007)*	0.093 (0.030)*
PR	0.136 (0.141)	0.054 (0.041)
Presidentialism	0.042 (0.066)	0.064 (0.032)*
Colonial Legacy	0.150 (0.035)**	0.192 (0.010)**
GDP/capita (logged)	0.446 (0.029)**	0.510 (0.030)**
Rule of Law (Lagged)	0.231 (0.092)*	
Income Inequality	-0.216 (0.082)*	-0.075 (0.063)
Constant	-1.140 (0.002)**	-2.451 (0.070)**
Region and Year Fixed Effects	Included	
Observations	624	712
R-squared	0.88	0.83

Panel Corrected/Robust standard errors in parentheses: *significant at 5%; **significant at 1%

4. Discussion

The most striking feature of my estimates is the strong negative relationship between ethnic fractionalization and the rule of law.⁹ As hypothesized, high levels of EF are associated with low levels of the rule of law. Moving from a mean level of EF to one standard deviation above the mean results in a 19% decline in estimates of the rule of law while holding all other variables constant at their means. Of course, there are considerable differences between countries aside from their levels of EF that could influence the rule of law observations in each country. The level of EF is certainly not the only factor determining the level of the rule of law a country experiences. However, my estimate does serve as a strong example of how important EF is for the rule of law in my dataset. The presence of political institutions in the model also produces substantively interesting results: democracy and wealth both improve perceptions of the rule of law. Conversely, income inequality and non-British colonial legacies damage those perceptions. The remaining institutional variables are not statistically significant.

5. Conclusion

Previous literature connects ethnic fractionalization and the rule of law to economic development, but not to each other. I clarify the relationships between these concepts and present evidence identifying EF as a strong determinant of the rule of law, which in turn leads to economic growth. Political institutions, when a full model is specified, are not privileged in the ranking of potential determinants of the rule of law. Instead, ethnic fractionalization informs our understanding of public perceptions of the rule of law in a fully-specified model. Political institutions do not.

A government's ability to make credible their commitment to the rule of law is contingent upon the ethnic composition of society. In one sense, my research does not provide reasons to be optimistic about taking institutional steps to address the perceptions of the rule of law in the face of high ethnic fractionalization, because EF does not change very quickly and colonial legacy does not change at all (although its impact may become weaker over time). However, the strong positive relationship between a country's wealth and the rule of law indicates pro-growth policies may improve the government's protection of the rule of law even if reforming political institutions does not. In this sense, governments do have some policy options at their disposals to mitigate the negative influence of EF on the rule of law. Furthermore, my results provide evidence for a causal chain between EF, the rule of law and economic development. They also carry the implication that policy solutions designed to increase economic development in countries with

high levels of EF will fail if they do not also address EF's relationship with the rule of law. Ultimately, my investigation demonstrates the utility of exploring the intermediate connections between macro-level indicators such as EF and economic development before policies can resolve problems in these areas.

Appendix

This appendix describes the variables collected for the countries included in this study. Much of the data was generated by projects at the World Bank: The Database on Political Institutions (DPI) and the Governance Matters database. The former offers cross-country data chronicling the political institutions of 177 states whereas the latter measures perceptions of governance in 199. The data stem from work performed by Beck, et al. (2000) and Kaufmann, et al. (2010). The variables I employ are catalogued below.

Dependent Variable

Perceptions of the Rule of Law: Preliminary explorations employ the World Bank's Governance IV indicator, which measures the extent to which agents have confidence in and abide by the rules of society. It is compiled through solicitation of survey responses from elite actors within a given state regarding the frequency of extra payments to "get things done" and responses to other broad questions regarding the predatory nature of the state. These include perceptions of the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts and property rights. This indicator measures the extent to which fair and predictable rules form the basis for economic and political interactions and the extent to which property rights are protected. Project researchers use a weighted average of the sources for each country as their best estimate of that state's governance with the weights being proportional to the reliability of each source. The resulting aggregate governance indicators have an expected value (across countries) of zero, and a standard deviation of one. This suggests that almost every score lies between -2.5 and 2.5, with higher scores corresponding to better governance. The original data was gathered from over twenty-five different sources by eighteen organizations such as the Afrobarometer, Freedom House, Gallup International, Political Risk Services, US Dept of State, World Bank, etc. Source: Governance Matters IV Database (Kaufmann, et al. 2010).

Independent Variables

Ethnic Fractionalization

My primary independent variable is ethnic fractionalization, which describes the level of ethnic divisions in a state's population. The variable I employ stems from Alesina et al.'s 2003 dataset. Alesina et al. calculate the likelihood that two randomly-selected individuals in a country belong to the same ethnic group. I use data from 2003, but EF does not change quickly; Roeder (2001) establishes this argument by comparing 1985 values with those of the 1961. I perform a robustness check with respect to the EF data's validity and reliability by comparing my results with new estimates using Fearon's (2003) data. The results of the regression analysis are very similar: all coefficients have same direction, same levels of statistical significance and similar magnitudes.

Democracy

I use the Polity score of each country as a proxy for the level of democracy vs. autocracy within its political system. These distinctions are based on the general "openness" or "closedness" of political institutions as determined by *Polity IV* scholars through examination of numerous indicators such as the constraints on the chief executive, the regulation and competitiveness of participation, the openness of executive recruitment, etc. Scores are generated by subtracting aggregate "autocracy" from "democracy" to create a range of -10 to 10 with ten being the most democratic and -10 the most autocratic for 2000. Following Montinola and Jackman (2002), we include in the regression both polity and its square. Inclusion or exclusion of the squared term does not affect the estimates reported in Table 1. Source: Polity IV data set developed by Gurr et al. (2010).

Ln GDP/Capita PPP

This variable records the natural log of each state's per capita Gross Domestic Product for each year in the database. GDP/per capita is in 2000 dollars and is adjusted for purchasing power parity. Source: World Bank, *World Development Indicators*, 2012.

Colonial Legacy

This variable records whether the country uses a Common Law or Civil Law legal system as a proxy for the legal institutions left behind by colonial powers. Common Law legal systems receive a score of "1" while all others are scored "0" for this indicator. Source: US State Department. *World Law* database 2012.

Income Inequality

The Gini index measures the level of income inequality within society and is recorded as a number between “0” and “1”, where “0” describes perfect equality (everyone has identical income) and “1” refers to perfect inequality (one person earns all income while all others earn nothing). If the area between the line of perfect equality and the Lorenz curve is A , and the area underneath the Lorenz curve is B , the Gini coefficient is $A/(A+B)$. This is expressed in the data as the numerical equivalent of this percentage, which is always between 0 and 100. Source: World Bank, *World Development Indicators*, 2010.

Proportional Representation

This variable describes whether a state uses proportional representation to elect all or a portion of its legislators. A political system is coded “1” if either chamber of the legislature is elected based on the percent of votes received by their party and/or if Beck, et al.’s sources specifically refer to the system in question as “proportional.” The state is coded “0” if these conditions do not apply. N/A is recorded if the Legislative Index of Electoral Competitiveness for the country is 4 or lower, meaning that there is competition for seats, albeit in a one-party system. Source: Beck, et al. (2010).

Presidential Systems

This variable designates political systems as either presidential, assembly-elected presidential or parliamentary. The system is coded presidential (0) if a single executive is elected by popular vote. Additionally, a system is coded presidential if the chief executive is elected by an assembly and can only be recalled by a two-thirds vote or dissolution of the assembly. The system is coded “1” if the assembly elects, but cannot recall the chief executive. Finally, in cases where both a president and prime minister exist, a system is deemed presidential only after passing a three-part test. First, the president must be able to veto legislation while the parliament may only override if it possesses a supermajority. Second, the president must be allowed to appoint and dismiss cabinet ministers (including the PM) and to dissolve parliament. Third Beck, et al. classify a system as presidential (0) if the available data does not clarify the executive’s abilities on the first two counts, yet Beck, et al.’s sources still refer to the president as the key decision-maker. The system is coded as parliamentary (2) if the preceding conditions do not hold. Source: DPI (Beck, et al. 2010).

Lagged Rule of Law

I include a variable for the previous year’s rule of law score to account for the possibility the rule of law score for a country in one year is dependent

on the previous year's score. I include a control for this potential temporal dependency in the TSCS model.

Geographic Region

I create regional dummy variables to control for a country's geographical location. Latin American and Caribbean, North America, Asia, Europe, the Middle East, and African dummies are included as I anticipate potential regional influence on perceptions of corruption. Each country is coded one for the region in which it is located and zero for all other regions.

Year Dummies (1998, 2000, 2002, 2003, 2004, 2006, 2007, 2008, 2009, 2010)

I create dummy variables for each year in the model to control for any unobserved phenomena imparting a temporal bias to my model.

NOTES

1. A summary of New Institutional Economics over the last 30 years provides an excellent source detailing institutional explanations in a number of important areas. See Brousseau and Glachant, 2008 or Williamson, 2000. Others privilege geographical arguments (Gallup, Sachs, Mellinger, 1998 or Hausman, 2001) or international market volatility (Radelet and Sachs, 1998).

2. Knack and Keefer (1997) surpass earlier efforts by demonstrating ethnic homogeneity's impact on the level of social trust, which is often tied to economic development while Habyarimana et al. (2007) go even farther and explain EF's ties to public goods provision. Despite these advancements, theoretical gaps remain when tying social trust to institutional channels of economic development. Low levels of social trust are associated with low levels of growth, but the relationship is devoid of a testable causal chain. Alesina et al. (2003) argue ethnic fractionalization influences growth through bad policy, but this claim is difficult to evaluate as well.

3. Institutional economists have made a cottage industry from these assertions. See North and Weingast (1989), De Soto (2000), Keefer and Stasavage (2003) among many others, Coase, Demsetz, etc.

4. See Glaeser et al. (2004).

5. See La Porta et al. 2002, 2004, Djankov et al. 2002, 2003.

6. See Brace and Gann-Hall (1995).

7. The countries I select are those in the World Bank's World Development Indicators Database that fall more than one standard deviation below the mean in 2010 GDP/capita PPP

8. There is a debate as to the appropriateness of time-series, cross-sectional regression and panel-corrected standard errors when the dependent variable (in this case the rule of law) does not change very rapidly over time. Furthermore, my data contains many more cross-sectional observations than temporal observations. In these cases the data more-closely resembles a cross-section than a time-series or a balanced panel. Times series, cross-sectional (TSCS) estimation with panel-corrected standard errors (PCSEs) might bias the estimates and limit inferences. I therefore also

estimate a model using ordinary least squares and robust standard errors appropriate for cross sectional data and present the results along with TSCS, PCSE estimation. The coefficients and significant levels are quite similar across both estimation techniques.

9. See Table 1. The magnitude of the relationship between EF and ROL is greater than all others' save GDP/capita and is significant at the .01 level. '7

REFERENCES

Acemoglu, Daron, Simon Johnson, and James Robinson (2000), "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review* 91(5): 1369–401.

Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg (2003), "Fractionalization," *Journal of Economic Growth* 8(2): 155–194.

Alesina, Alberto, Reza Baqir, and William Easterly (1999), "Public Goods and Ethnic Divisions," *Quarterly Journal of Economics* 114(4): 1243–1284.

Alesina, Alberto, and Eliana La Ferrara (1999), "Participation in Heterogeneous Communities," NBER Working Paper 7155, June.

Andrews, J. T., and Gabriella Montinola (2004), "Veto Players and the Rule of Law in Emerging Democracies," *Comparative Political Studies* 37(1): 55–87.

Annet, Anthony (2001), "Social Fractionalization, Political Instability, and Size of Government," *IMF Staff Papers* 48(3): 561–592.

Baldez, Lisa, and John Carey (1999), "Presidential Agenda Control and Spending Policy: Lessons from General Pinchet's Constitution," *American Journal of Political Science* 43(1): 29–55.

Bardhan, Pranab (1997), "Corruption and Development: A Review of Issues," *Journal of Economic Literature* 35(3): 1320–46.

Barros, Robert (2002), *Constitutionalism and Dictatorship: Pinochet, the Junta, and the 1980 Constitution*. New York: Cambridge University Press.

Beck, Thorsten, George Clarke, Philip Keefer, Alberto Groff, and Patrick Walsh (2001, updated 2010), "New Tools in Comparative Political Economy: The Database of Political Institutions," *The World Bank Economic Review* 15(1): 165–176.

Besley, Timothy, and Stephen Coate (2003), "Elected versus Appointed Regulators: Theory and Evidence," *Journal of the European Economic Association* 1(1): 1176–1206.

Bingham-Powell Jr., George (2000), *Elections as Instruments of Democracy*. New Haven, CT: Yale University Press.

Brace, Paul, and Melinda Gann-Hall (1995), "Studying Courts Comparatively: The View from the American States," *Political Research Quarterly* 48(1): 5–29.

Brown, David, Michael Touchton, and Andrew Whitford (2011), "Political Polarization as a Constraint on Corruption: A Cross-national Comparison," *World Development* 39(9): 1516–1529.

Brousseau, Eric, and Jean-Michel Glachant (2008), *New Institutional Economics: A Guidebook*. New York: Cambridge University Press.

Brown, David S. (2000), "Democracy, Colonization, and Human Capital in Sub-Saharan Africa," *Studies in Comparative International Development* 35(1): 20–41.

Butkiewicz, James, and Halit Yanikkaya (2006) "Institutional Quality and Economic Growth: Maintenance of the Rule of Law or Democratic Institutions, or both?" *Economic Modelling* 23(4): 648–661.

Campos, Nauro, Ahmad Saleh, and Vitaliy Kuzeyev (2011) "Dynamic Ethnic Fractionalization and Economic Growth," *Journal of International Trade and Economic Development* 20(2): 129–152.

Campos, Nauro, and Vitaliy Kuzeyev (2007) "On the Dynamics of Ethnic Fractionalization," *American Journal of Political Science* 51(3): 620–639.

Carey, John M., and Matthew S. Shugart (1995), "Incentives to Cultivate a Personal Vote: A Rank-Ordering of Electoral Formulas," *Electoral Studies* 14(4): 417–39.

Cerqueti, Roy, Raffaella Coppier, and Gustavo Piga (2012), "Corruption, Growth and Ethnic Fractionalization: A Theoretical Model," *Journal of Economics* 106(2): 153–181.

Cox, Gary, and Scott Morganstern (2001), "Latin America's Reactive Assemblies and Proactive Presidents," *Comparative Politics* 33(2): 171–89.

Djankov, Simeon, La Porta, Rafael, López-de-Silanes, Florencio, and Shleifer, Andrei (2002), "Courts: The Lex Mundi project," CEPR Discussion Paper 3344.

Djankov, Simeon, Glaeser, Edward L., López-de-Silanes, Florencio, and Shleifer, Andrei (2003), "The New Comparative Economics," CEPR Discussion Papers 3882.

Easterly, William (2000), "Can Institutions Resolve Ethnic Conflict?" World Bank Working Paper.

Easterly, William, and Ross Levine (1997), "Africa's Growth Tragedy: Policies and Ethnic Divisions," *Quarterly Journal of Economics* 112(4): 1203–50.

Ehrlich, Isaac, and Francis T. Lui (1999), "Bureaucratic Corruption and Endogenous Economic Growth," *Journal of Political Economy* 107(6): S270–S93.

Eifert, Benn, Edward Miguel, and Daniel Posner (2010), "Political Competition and Ethnic Identification in Africa," *American Journal of Political Science* 54(2): 494–510.

Fearon, James D. (2003), "Ethnic Structure and Cultural Diversity by Country," *Journal of Economic Growth* 8(2): 195–222.

Feldmann, Horst (2012), "Ethnic Fractionalization and Unemployment," *Economic Letters* 117(1): 192–195.

Frye, Timothy (2002), "The Perils of Polarization: Economic Performance in the Postcommunist World," *World Politics* 54(3): 308–337.

Gallup, John Luke, Jeffrey D. Sachs, and Andrew D. Mellinger (1998), "Geography and Economic Development," National Bureau of Economic Research Working Paper W6849.

Glaeser, Edward, Rafael La Porta, Florencio Lopez de Silanes and Andrei Shleifer (2004), "Do Institutions Cause Growth?" *Journal of Economic Growth* 9(3): 271–303.

Glinavos, Ioannis (2008), "The Law-Growth Nexus: The Rule of Law and Economic Development," *Development and Change* 39(2): 334–336.

Habyarimana, James, Macartan Humphreys, Daniel Posner, and Jeremy Weinstein (2007), "Why Does Ethnic Diversity Undermine Public Goods Provision?" *American Political Science Review* 101(4): 709–725.

Haggard, Stephen, Andrew MacIntyre, Lydia Tiede (2008), "The Rule of Law and Economic Development," *Annual Review of Political Science* 11: 205–234.

Hare, Paul (2007), "The Law-Growth Nexus: The Rule of Law and Economic Development," *Economics of Transition* 15(3): 625–627.

Hausman, Ricardo (2001), "Prisoners of Geography," *Foreign Policy* 122(1): 44–53.

Herron, Erik S., and Misa Nishikawa (2001), "Contamination Effects and the Number of Parties in Mixed Superposition Electoral Systems," *Electoral Studies* 20(1): 63–86.

Hodler, Roland, and David Knight (2012), "Ethnic Fractionalisation and Aid Effectiveness," *Journal of African Economies* 21(1): 65–93.

Kaufman, Daniel, Aart Kraay, and Massimo Mastruzzi (2003), "Governance Matters Iii: Governance Indicators for 1996–2002," World Bank Policy Research Working Paper.

Kaufman, Daniel, and S. J. Wie (1999), "Does 'Grease Money' Speed up the Wheels of Commerce?" National Bureau of Economic Research Working Paper.

Keefer, Philip, and Stuti Khemani (2005), "Democracy, Public Expenditures and the Poor: Understanding the Political Incentives for Providing Public Services," *The World Bank Research Observer* 20(1): 1–27.

Keefer, Philip, and David Stasavage (2003), "The Limits of Delegation: Veto Players, Central Bank Independence, and the Credibility of Monetary Policy," *American Political Science Review* 97(3): 407–423.

Keefer, Philip, and Stephen Knack (2002), "Polarization, Politics and Property Rights: Links between Inequality and Growth," *Public Choice* 11(1/2): 127–154.

Khan, Azizur, and Carl Riskin (1998), "Income Inequality in China: Composition, Distribution, and Growth of Household Income, 1988–1995," *The China Quarterly* 154(2): 221–5.

Kiewit, D. Roderick, and Matthew McCubbins (1991) *The Logic of Delegation: Congressional Parties and the Appropriations Process*. Chicago, IL: University of Chicago Press.

Knack, Stephen, and Philip Keefer (1997), "Does Social Capital Have an Economic Payoff? A Cross-country Investigation," *Quarterly Journal of Economics* 112(4): 1251–1288.

Kunicova, Jana, and Susan Rose-Ackerman (2005), "Electoral Rules and Constitutional Structures as Constraints on Corruption," *British Journal of Political Science* 35(4): 573–606.

La Porta, R, Florencio López-de-Silanes, and Andrei Shleifer (2008), "The Economic Consequences of Legal Origins," *Journal of Economic Literature* 46(2): 285–332.

La Porta, R, F. López-de-Silanes, C. Pop-Eleches, and A. Shleifer (2003), "Judicial Checks and Balances," NBER Working Paper 9775.

La Porta, R., F. Lopez de Silanes, A Shleifer, and Robert W. Vishny (2000), "Investor Protection and Corporate Governance," *Journal of Financial Economics* 58(1): 3–28.

La Porta, Rafael., F. Lopez de Silanes, Andrei Shleifer, and Robert W. Vishny (1997), "Legal Determinants of External Finance," *Journal of Finance* 52(3): 1131–1150.

- La Porta R., et al. (1999). "The Quality of Government," *Journal of Law, Economics and Organization* 15(1): 222–279.
- Landes, William M., and Richard A. Posner (1975), "The Independent Judiciary as an Interest Group Perspective," *Journal of Law and Economics* 18(3): 875–902.
- Lichbach, Michael (1989), "An Evaluation of 'Does Economic Inequality Lead to Political Conflict' Studies," *World Politics* 41(4): 43–470.
- Lijphart, Arend (1984), "Measures of Cabinet Durability: A Conceptual and Empirical Evaluation," *Comparative Political Studies* 17(2): 265–79.
- (1999), *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. New Haven, CT: Yale University Press.
- Mainwaring, Scott (1995), "Presidentialism, Multipartyism, and Democracy," *Comparative Political Studies* 26(2): 198–228.
- Maravall, Jose Maria, and Adam Przeworski (eds.) (2003), *Democracy and the Rule of Law*. New York: Cambridge University Press.
- Mauro, Paolo (1995), "Corruption and Growth," *The Quarterly Journal of Economics* 110(3): 681–712.
- Mauro, Paulo (1997), "The Effects of Corruption on Growth, Investment, and Government Expenditure: A Cross-Country Analysis," in Kimberly Ann Elliot (ed.), *Corruption and the Global Economy*. Washington, D.C.: Institute for International Economics, 83–109.
- Montinola, Gabriela, and Robert Jackman (2002), "Sources of Corruption: A Cross-Country Study," *British Journal of Political Science* 32(1): 147–70.
- Murphy, Kevin M., Andrei Shliefer, and Robert W. Vishny (1993), "Why Is Rent-Seeking So Costly to Growth?" *American Economic Review* 83(2): 409–414.
- Myerson, Roger (1993), "Incentives to Cultivate Favored Minorities under Alternative Electoral Systems," *American Political Science Review* 87(4): 856–69.
- North, Douglass C., and Barry Weingast (1989), "Constitutions and Commitment: Evolution of the Institutions of Public Choice in 17th Century England," *Journal of Economic History* 49(1): 803–832.
- Olken, Benjamin (2008), "Direct Democracy and Local Public Goods: Evidence from a Field Experiment Indonesia," National Bureau of Economic Research Working Paper 14123.
- Olson, Mancur (1965), *The Logic of Collective Action*. Cambridge, MA: Harvard University Press.
- Panizza, Ugo (2001), "Electoral Rules, Political Systems and Institutional Quality," *Economic and Politics* 13(3): 311–342.
- Persson, Torsten, and Guido Tabellini (2003), *The Economic Effects of Constitutions*. Cambridge, MA: MIT Press.
- Posner, Daniel (2004), "Measuring Ethnic Fractionalization in Africa," *American Journal of Political Science* 48(3): 849–863.
- Putnam, Robert D. (1993), *Making Democracy Work*. Princeton, NJ: Princeton University Press.
- Rozelle, Scott (1996), "Stagnation without Equity: Patterns of Growth and Inequality in China's Rural Economy," *The China Journal* 35(1): 63–92.
- Sakwa, Richard (2000), "From a Corrupt System to a System with Corruption?" in Robert Wilson (ed.), *Party Finance and Political Corruption*. London: Houndsmill Press.

Scheuler, Dana, and Julian Weisbrod (2010), "Ethnic Fractionalisation, Migration and Growth," *Empirical Economics* 39(2): 457–486.

Seddon, Jessica, Alessandro Gaviria, Ugo Panizza, and Ernesto Stein (2003), "Political Particularism around the World," *World Bank Economic Review* 17(2): 133–143.

Shugart, Mathew (1998), "The Inverse Relationship between Party Strength and Executive Strength: A Theory of Politicians' Constitutional Choices," *British Journal of Political Science* 28(1): 1–29.

Shugart, Mathew, and John Carey (1992), *Presidents and Assemblies: Constitutional Design and Electoral Dynamics*. New York: Cambridge University Press.

Shugart, Matthew S. (1999), "Presidentialism, Parliamentarism, and the Provision of Collective Goods in Less-Developed Countries," *Constitutional Political Economy* 10(1): 53–88.

Spiller, Pablo, and Mariano Tomasi (2003), "The Institutional Foundations of Public Policy: A Transactions Approach with Application in Argentina," *Journal of Law, Economics, and Organization* 19(2): 281–306.

Treisman, Daniel (2000), "The Causes of Corruption: A Cross-National Study," *Journal of Public Economics* 76(3): 399–457.

Tsebelis, George (1995), "Decision Making in Political Systems: Veto Players in Presidentialism, Parliamentarism, Multicmeralism and Multipartyism," *British Journal of Political Science* 25(3): 289–325.

——— (2002), *Veto Players*. Princeton, N.J.: Princeton University Press.

Van de Walle, Nicolas (2001), *African Economies and the Politics of Permanent Crisis, 1979-1999*. New York: Cambridge University Press.

Williamson, Oliver E. (2000), "The New Institutional Economics: Taking Stock, Looking Ahead," *Journal of Economic Literature* 38(3): 595–613.

World Bank (2012), *World Development Indicators*. Available online: <http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2>

US Department of State (2012), *World Law*. Available online: <http://jurist.law.pitt.edu/world/>

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