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Democracy and Consumer Strength: Direct Evidence from Regulatory Reform in Developing Countries

Stephen Weymouth*

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Abstract

The distributional implications of antitrust regulation imply a political cleavage between consumers and producers. I argue that the relative strength of these two groups depends on the level of democracy. In particular, an expansion of the franchise and competitive elections will increase the relative political weight of consumers, resulting in policies that favors their interests. An empirical implication of the argument is that the likelihood of effective competition policy reform increases with democracy. I test this proposition in two stages using an original dataset measuring competition agency design in 156 developing countries covering the period 1975-2007. First, I estimate hazard models on the timing of competition policy reform. Second, since “laws on the books” do not necessarily indicate a commitment to effective policy, I create an original index measuring governments’ commitments to antitrust policy. The index captures the independence of the agency, resource (budget and staffing) allocations, expert perceptions, and actual legal actions. The results of the empirical analysis support the proposition that democracy improves governments’ commitments to competition policy.

*School of International Relations and Pacific Studies (IRPS) and the Department of Political Science, University of California, San Diego, La Jolla, California, 92093-0521. Email: sweymouth@ucsd.edu. I thank Susan Heilig for superb research assistance. I gratefully acknowledge financial support from the University of California Pacific Rim Research Program, the Center on Pacific Economies at IRPS, and the National Science Foundation.

1 Introduction

The canonical models of regulation imply a political conflict between consumers and producers (Stigler, 1971; Peltzman, 1976). Consumers favor greater levels of economic competition, which lowers prices and increases aggregate welfare. Producers prefer lax regulatory policy, allowing them to maintain or expand their anticompetitive rents. This paper argues that democratic political institutions mediate the strength of these two groups. In particular, I suggest that an expansion of the franchise and competitive elections will increase the political weight of consumers, resulting in policies that favors their interests. I provide one of the first direct tests of the link between democracy and consumer strength using an original dataset measuring competition (antitrust) agency design in 156 developing countries covering the period 1975-2007. The results support the proposition that democracy increases governments' commitments to competition policy.

One of the main factors contributing to market competition is government regulation of anticompetitive behavior. Welfare enhancing competition is characterized by the entry of new firms—foreign and domestic—into product markets, which eliminates producer rents, leading to higher overall welfare, lower prices, and lower unemployment. The delegation of regulatory authority to an independent competition agency has been shown to increase the entry rates of new firms into the market (Kee and Hoekman, 2007) and economic competition (Voight, 2009). In spite of the benefits of economic competition to developing countries, many governments still have no formal institutional means of penalizing the anticompetitive practices of incumbent producers. In my sample of 156 developing countries covering the period 1975-2007, 74 passed laws delegating competition policy to a regulatory agency; 82 have no formal regulatory oversight. Since delegation of regulatory authority to competition agencies is ultimately a political decision, I highlight how the political rules of the game change policymakers' incentives to pursue competition policy reform.

I offer an explanation for variation in regulatory institutions that builds upon a well-known social cleavage: increases in economic competition from a non-competitive status quo

imply a redistribution of wealth from organized incumbent oligopolists (“producers”) to diffuse consumers (Stigler, 1971; Peltzman, 1976; Rogowski and Kayser, 2002). Competition policy enforcement weakens the ability of incumbents to capture and maintain rents; this benefits consumers through favorable price and employment effects. The redistribution implies political conflict: incumbent interests will lobby to maintain and expand their rents, and consumers will support greater competition policy enforcement.

I advance a straightforward proposition that to my knowledge has been overlooked. In particular, I argue that the level of democracy affects the strength of consumers relative to producers. Indeed, since the median voter is a consumer, an expansion of the franchise and electoral competition in a democracy will increase the political weight of consumers relative to producers. The empirical implication is that governments’ commitments to antitrust policy will increase with the level of democracy.

The empirical contribution of the paper provides one of the first direct tests of the political determinants of regulation. The use of policy as the dependent variable contrasts with much of the existing research, which generally relies upon distant economic outcomes as the dependent variable. For instance, the important contribution by Rogowski and Kayser (2002) makes inferences about the effect of institutions on consumer strength by measuring the correlation between electoral institutions and prices. These authors infer that electoral institutions shape policymakers’ incentives in the production of certain policies that affect prices, but the intermediate stage in the causal chain (institutions to policies) is not tested. Similarly, Rosenbluth and Schaap (2003) study the effects of political institutions on interest rate spreads; and Persson et al. (2003) and Kuniková and Rose-Ackerman (2005) use subjective corruption indices as the dependent variable. My work is closer in spirit to Djankov et al. (2002), Scartascini (2002), Pagano and Volpin (2005), and Quinn (1997, 2003), who also employ policy outputs as the dependent variable.

Using an original dataset on competition policy in 156 developing countries over the period 1975-2007, I test the theory in two stages. The first is to measure the effect of

democracy on the timing of laws delegating regulatory authority to competition agencies. Since laws alone do not necessarily reflect support for a particular policy, the second step develops an original index measuring governments' commitments to competition policy, and estimates its political determinants. The results of the empirical tests are consistent with the proposition that political competition leads to consumer-friendly policies.

My paper also contributes to broader debates in international political economy. First, I find no evidence of a robust relationship between external openness and an effective behind-the-border competition regime. To the extent that economic integration has not produced welfare improvements in many developing countries, the absence of correlation between these policies may suggest that welfare gains only accrue when trade liberalization is combined with effective competition enforcement. Second, the evidence that competition policies can reflect consumer interests despite the collective action hurdles that these actors face is in line with recent consumption-based theories of economic policy (Baker, 2005; Trumbull, 2006).

The paper proceeds as follows. Section 2 reviews the related literature. Section 3 presents my theoretical model. Section 4 describes the research design and the variables. Section 5 reports the results of the models of agency adoption, and the empirical analysis of agency commitment appears in Section 6. Section 7 concludes.

2 Related Literature

The academic study of regulation was revolutionized by the work of Stigler and Peltzman (S-P). The S-P model advanced research in positive political economy by highlighting the distributional implications of various regulatory arrangements. By explaining that regulation results in a transfer between social groups, their work brought politics into the mix. The important intuition is that politicians do not always pursue policies that maximize social welfare.

The S-P model explains the competing political interests that result from the transfer that regulation represents. An effective antitrust policy is a tax on incumbent monopolists, and a subsidy to consumers. They argued that regulatory institutions should be thought of as an equilibrium outcome of a market, the political market for policy. Rogowski and Kayser (2002) extend the model to argue that majoritarian electoral institutions in democracies are more conducive to the interests of consumers. Other important contributions highlight how special interests compete with the public for policies that favor them (Grossman and Helpman, 1994; Frieden, 1991).

Related research explains how political institutions filter the interests of the relevant social groups into policy, and several studies highlight the effects of democratic political institutions. Milner and Kubota (2005) and Dutt and Mitra (2002) argue that democracy increases the likelihood of trade liberalization in developing countries. The reason is that, under a two-factor Heckscher-Ohlin framework, the median voter in a capital scarce/labor abundant developing country gains from trade liberalization. Related work argues that the democracy contributes to economic reform by increasing the political weight of the electorate and reducing the clout of special interests (Stokes, 2001; Weyland, 2002).¹ Other contributions explain how various electoral rules within democracies influence economic policy outcomes (Cox and McCubbins, 2001; Shugart and Haggard, 2000; Persson and Tabellini, 2004a,b).

This paper also contributes to debates regarding the delegation of regulatory authority to independent institutions. The literature on central banking argues that anti-inflationary monetary policies are more likely under an independent body that is not subject to electoral pressure (Barro and Gordon, 1983; Rogoff, 1985; Lohmann, 1992). Other approaches explain the delegation of authority to independent regulatory agencies as a process of diffusion (Jordana and Levi-Faur, 2005, 2006; Henisz et al., 2005) or domestic politics (Murillo and Martinez-Gallardo, 2007).

¹See Milner and Mukherjee (2009) of a review of the literature linking democracy to economic liberalization.

3 The Effect of Democracy on Competition Policy

I argue that democracy makes policymakers more sensitive to consumer interests, thereby increasing the likelihood of competition policy reform. The policy preferences of consumers follow from the S-P theory of regulation, which posits a conflict between producers and consumers based on the distributional implications of regulation. Consider an incumbent firm with *market power*, or the ability to charge a price that exceeds marginal cost without inducing new firms to enter the market. Market power exists when barriers to potential competitors enable incumbent firms to restrict output and raise prices,² which implies a transfer of wealth from consumers to producers in the form of a monopoly rent. The distributional implications of market power result in a cleavage between incumbent firms and consumers. On one hand, incumbents benefit from market power in the form of economic rents, and they therefore have an incentive to oppose antitrust or competition policy oversight.³ On the other hand, a reduction of market power—greater product market competition—favors consumers through favorable prices effects. Consumers will support delegation of antitrust authority to competition agencies that promote well-functioning markets and penalize anti-competitive behavior.

Political institutions go unaddressed under the S-P setup, but the effects of democracy can be deduced as follows. Consider the process of democratization as an expansion of the electorate, or the portion of the population that participates in choosing the political leadership (Bueno de Mesquita et al., 2003). Following Bueno de Mesquita et al. (2003),

²An important point of emphasis is that producers need not be monopolists in the strict sense in order to have market power: barriers to competition may bestow market power on more than one firm, enabling each to set price above marginal cost.

³I assume that incumbent firms' opposition will exist in spite of the fact that antitrust agencies have not necessarily pursued policies that improve consumer welfare (Long et al., 1973; Siegfried, 1975; Asch, 1975); one reason is that regulatory agencies may be captured by incumbent firms, who use them perversely to deter competition (Shughart, 1990; McChesney and Shughart, 1995). Other empirical work suggests that the agencies regulate according to partisan political interests of the chief executive. There is reason to believe, therefore, that the formal *independence* of regulatory bodies is a crucial factor in the extent to which they are opposed by incumbent interests. If the government can make a credible commitment to delegate independent regulatory authority to the competition agency, then entrenched businesses are more likely to oppose its existence. This is why a portion of my contribution is to create an index measuring agency independence.

define the winning coalition as the subset of the selectorate whose support is required for the leadership to maintain political power. If we think of democratization as an expansion of the franchise, it follows that democratization increases the size of the selectorate and changes the makeup of the winning coalition. Democratization induces policymakers to pursue the electoral support of new groups of voters.

An important distinction between autocracy and democracy is the makeup of the winning coalition. In autocratic settings, leaders maintain power through the support of a coalition that could include any number of groups, but by definition, the minimum winning coalition in autocracies does not include a majority of citizens. Most often, the minimum winning coalition in autocracies includes economic elites, “the major producers/investors in the economy” (Acemoglu, 2008, p.1). In many developing countries, the autocratic selectorate consists of a coalition of industrialists and their labor allies who gained economic power through various development strategies that shielded them from domestic, or more commonly in the Latin American case, external competitors (Weyland, 2002). Other configurations of autocratic support include the military or religious groups (Geddes, 1999; Gandhi and Przeworski, 2007).

Democratization changes the makeup of the minimum winning coalition by expanding the selectorate. Quite simply, an expansion of the franchise results in an increase in the proportion of the minimum winning coalition represented by consumers, and a reduction in the proportion of the winning coalition represented by producers, or the economic elite.

Electoral competition in democracy translates the interests of the winning coalition into policies that favor the median voter. The reason is that, as democracy strengthens, political leaders have incentives to appeal to new coalitions of voters who have been previously ignored. Indeed, under standard assumptions, it is easy to show that the platforms of the two candidates in a competitive election will converge on the preferences of a median voter (Downs, 1957; Grossman and Helpman, 1994), or those of the dominant majority (McGuire

and Olson, 1996; Alesina and Rodrik, 1994).⁴ If we assume that consumers make up a larger group than do incumbent producers, an expansion of the franchise to some approximation of universal suffrage *ensures that the median voter is a consumer*. Thus, political competition will lead to policies that improve economic competition, and increase aggregate welfare. Furthermore, as political competition increases, opposing parties will draw attention to the influence of bribes on policy outcomes that are unfavorable to the median voter. As voters become aware of the influence of anticompetitive interest groups on competition policy, the incentives for regulatory laxity will decline.⁵

In sum, I have argued that the relative political weight of consumers increases with democracy. The empirical implication of this proposition is twofold. First, the likelihood of competition policy reform will increase with democracy. Second, the government's commitment to competition policy will improve with democracy.

4 Research Design and Variables

This section presents the identification strategy and the main variables used to test the hypothesis developed in the previous section. I constructed a new dataset on competition (antitrust) agency design and independence in 156 developing countries.⁶ My dataset is unique in its coverage of competition laws passed during the period 1975-2007. The primary sources are the World Bank Competition Policy database,⁷ and various issues of the annual

⁴The deadweight loss from uncompetitive markets accrues to consumers, who constitute the dominant majority in a democracy.

⁵Note that this argument provides less analytical traction for explaining variation in regulatory outcomes within democracies, where the characteristics of interest groups, such as their ability to organize, may affect the nature of the commitment to regulatory institutions such as competition policy. Stigler argued that regulation will favor producers because they are a smaller group, implying the per capita benefits will be greater than for the diffuse – and larger – group of consumers. Thus, producers are better able to organize and lobby for preferred policies. Peltzman's model allows for a more realistic set of outcomes to emerge; namely, producers do not always prevail. The effects of interest groups on competition within democracy is the subject of future research.

⁶Due to limitations in the data coverage of the explanatory variables, the models include up to 131 countries.

⁷The database can be found at <http://web.worldbank.org>.

Handbook of Competition Enforcement Agencies (Campbell, 2006, 2007, 2008). Supplementary sources include individual country’s competition agency websites.

The analysis proceeds in two stages. First, to measure the effects of democracy on the timing of competition reform, I record the year of passage of laws delegating authority to competition agencies. Since I am interested in identifying the affect of democracy on the speed with which governments delegate regulatory authority to a competition agency, I estimate a series of proportional hazards models:

$$h_j(t|\mathbf{x}_j) = h_0(t) \exp(\mathbf{x}_j\boldsymbol{\beta}_x) \tag{1}$$

Hazard models are used to estimate the hazard rate $h_j(t)$, or the probability that a government in a particular country j passes legislation delegating regulatory authority to a competition agency in year t , given that it had not done so in the previous year. The models are proportional since the hazard that faces country j is proportional to the baseline hazard $h_0(t)$. The exponential function is chosen to avoid negative hazard functions $h_j(t)$. A nice feature of hazard models is that they do not exclude countries that do not pass competition legislation by the end of the period. Countries are observed from the beginning of the sample period (the year 1975) up until when they pass legislation, or the end of the period of study (2007)—whichever comes first.

Second, since laws on the books do not necessarily reflect the government’s commitment to a robust competition policy, I also create an original index measuring the governments’ commitments to antitrust enforcement. The index has two independent components: one gauges *de jure* commitment to effective policy by coding several indicators of agency independence; the second measures *de facto* commitment by incorporating resource allocations, expert assessments, and actual regulatory decisions. I provide full details on the construction of the index in section 6. I model the correlates of competition policy effectiveness using a Tobit model.

4.1 Independent Variables

To test the effects of democracy and political competition, I incorporate the following variables. The level of democracy is measured using the familiar *Freedom House Political Rights* and *Polity* scores. I also include two measures of political competition. One, *Political Competition* (or *Polcomp*) is the sub-component of *Polity* that measures political competition. Two, the variable *Parties in the Legislature*, from Gandhi (2008), captures de facto political competition by looking at party representation in the legislature (0=no parties; 1=one political holds all the seats; 2=two or more parties hold seats within the legislature). I also include the *Polcon* index developed by Henisz (2000), which measures the empirically correlated yet theoretically distinct concept of veto points, or the number of institutional constraints on the policymaking discretion of the executive (North and Weingast, 1989; Tsebelis, 2002; Cox and McCubbins, 2001).

I control for several factors that may affect political competition as well as the state's institutional capacity. *GDP/capita* proxies for institutional development. *Population* measures the size of the domestic market.⁸ Imports and exports as a percentage GDP (*Trade/GDP*) captures the effects of external competitive pressures on competition policy reform. The effect of trade on competition policy is ambiguous: openness to competition from international sources may substitute for domestic competition; or governments' commitments to international competition may coincide with a commitment to behind the border competition.⁹ Finally, some of my models include regional dummy variables to capture the diffusion of political and policy reform that has been shown to occur systematically within regional clusters (Henisz et al., 2005; Levi-Faur, 2005).

Table 1 reports overall summary statistics. Table 2 reports correlation coefficients. Country averages appear in Table 10.

⁸The variables *GDP/capita* and *Population* are logged.

⁹The economic control variables are from the World Development Indicators.

5 Models of Competition Policy Reform

This section reports the results of an estimation of the effects of democracy on the timing of delegation to competition agencies. Assuming data availability, the sample period covers 1975-2007. Countries drop out of the model upon the year of delegation. The analysis includes up to 131 developing countries, of which up to 62 passed competition laws during the period of study. I begin by looking at the unconditional Kaplan-Meier estimates of the hazard rate, reported in Figure 1. The hazard rate is increasing over time, which suggests that I chose a parameterization of $h_0(t)$ that allows it to grow.

Thus, my preferred specification is the Weibull model, which parameterizes $h_0(t)$ as:

$$h_0(t) = \alpha t^{\alpha-1} \exp(\beta_0) \quad (2)$$

This implies that the proportional hazard model is specified as:

$$h_j(t|\mathbf{x}_j) = \alpha t^{\alpha-1} \exp(\beta_0 + \mathbf{x}_j \boldsymbol{\beta}_x) \quad (3)$$

This model allows for monotonic changes in the the underlying hazard over time; these changes are determined by the evolutionary parameter α . For example, when $\alpha = 1$, the hazard is constant; for values of $\alpha > 1$, the hazard is increasing; for $\alpha < 1$, the hazard is decreasing.

The Weibull model has the advantage of providing theoretically useful information about the effects of diffusion (or contagion) on a country's propensity to reform the competition regime through the evolutionary parameter α . Positive and significant values of α can be interpreted as evidence of external influence or policy diffusion. The evolutionary parameter thus provides an empirical substitute for time trends or variables that capture the percentage of countries in the region that have passed reforms in a given year.

I estimate a Cox proportional hazard model (CPH) as a robustness test.¹⁰ Unlike the Weibull specification, The CPH model makes no *a priori* assumptions about the distribution of the hazard function. The CPH model is specified as follows:

$$h_j(t|\mathbf{x}_j) = h_0(t) \exp(\mathbf{x}_j\boldsymbol{\beta}_x) \quad (4)$$

In this model, the baseline hazard is left unspecified, and as such the model makes no assumptions about the shape of the hazard over time. The only assumption is that the general shape of the hazard is invariant across countries.

The estimations produced using the Weibull and the CPH models are directly comparable. That is, both models produce estimations of $\boldsymbol{\beta}_x$, which have a standard interpretation: $\exp(\beta_i)$ is the hazard ratio for the *i*th coefficient, or the proportional increase in the hazard rate corresponding to a one-unit increase in the explanatory variable x_i . The Weibull specification produces an additional estimate of the evolutionary parameter α .

Table 3 reports the regression results of a set of Weibull proportional hazard models measuring the effect of democracy on the passage of law establishing a competition agency. I include several alternative proxies for democracy. I begin in column 1 by introducing the Freedom House Political Rights Index. The estimated coefficient, which is positive and statistically significant at the 99% level, can be interpreted as follows: a one standard deviation (1.98) increase in *FH Political Rights* increases the hazard rate for delegation by $\exp(.19 \times 1.98) = 1.46$ points (around 46%). This implies that more democratic countries are more likely to adopt competition policy reforms sooner.

Models 2-3 test the robustness of this result by introducing other well-known measures of democracy. Model 2 includes *Polity*, and the results suggest that more democratic countries pass competition law earlier: a one point increase in the Polity score increases the hazard by around $\exp(.06)$, or 6%; a one standard deviation increase in the Polity score (6.85)

¹⁰As with the Weibull specification, I estimate robust standard errors, adjusted for clustering at the country level. Under the CPH specification, the Efron method is used to handle ties, in which two or more countries adopt during the same year.

increases the hazard by nearly 51%. Column 3 includes the variable *Freedom House/Polity*, which represents the average of the Freedom House and Polity scores, taken from the Quality of Government dataset (Teorell et al., 2009).¹¹ The estimates reported in column 3 indicate that a one standard deviation increase in *Freedom House/Polity* increases the hazard by approximately 50%.

To illustrate the result, I divide the sample according the Freedom House/ Polity democracy index. I define democracies as country-years above the median score, and autocracies as scores below the median. Figure 2 illustrates the survival functions of these two groups. By the end of the period, the cumulative probability that a democracy passes competition policy reform is over twice the cumulative probability of reform in a non-democracy.

I introduce alternative indicators of democracy and political competition in models 4-6. Column 4 includes the political competition concept (Polcomp), a component of the more general Polity index. A one-standard deviation increase in this index results in a 52% increase in the hazard rate. Model 5 includes an indicator, developed by Gandhi (2008), measuring of the number of political parties represented in the legislature. Figure 3 graphs the survival functions corresponding to the results in column 5. The graph illustrates that the cumulative probability of reform is much lower where only one party controls the legislature; countries without parties are extremely unlikely to reform. Model 6 introduces an alternative conceptualization of democratic veto points (*Political Constraints*). Interestingly, veto players do not significantly increase the probability of competition policy reform. This suggests that the mechanism driving reform in democracies has more to do with political competition and the expansion of the franchise to include consumers, rather than constraints on executive policymaking discretion. Finally, model 7 demonstrates the effect of democracy remains robust to the inclusion of regional dummy variables.

¹¹This variable ranges from 0-10 where 0 is least democratic and 10 most democratic. It is generated by transforming the average values of the Freedom House measures of democracy and the Polity score along a scale 0-10. These transformed values are then averaged. Since the coverage of Freedom House is more extensive than that of Polity, the index relies on imputed values of Polity for the approximately 8 countries where Polity is missing. The imputation is the result of regressing Polity on the average Freedom House measure.

Other differences across countries appear to affect the probability of competition policy reform. In particular, wealthier countries are more likely to reform sooner. I find the probability of early reform increases with the size of the population. I also find some evidence suggesting that external donors push countries to adopt competition enforcement agencies: the amount of foreign aid that the country receives appears to contribute to regulatory reform, though the estimated coefficient is not significant in all specifications. Trade openness, on the other hand, does not appear to matter. The estimated coefficients are generally positive, but never statistically significant. This result conforms with the argument that the interests and incentives concerning external (e.g., trade) and behind-the-border (e.g., competition policy) reforms are fundamentally distinct.

Along with the effects of democracy, there is strong evidence of policy diffusion. Indeed, as reported in Table 3, the evolutionary parameter enters each model positive, with a value above 2, and in each case is statistically significant at the 99% level. This result suggests that the hazard function for passing competition policy reform increases during the sample period. To demonstrate this effect, consider the baseline hazard rates in the years 1985 ($t=10$) and 2005 ($t=30$) based on the estimate of α from model 1 ($\alpha = 2.23$):

$$h_0(2005)/h_0(1985) = (30/10)^{\alpha-1} = (30/10)^{2.23-1} = 3.86 \quad (5)$$

This means that a country is over 3 times more likely to pass competition policy reform in 2005 than in 1985, and provides evidence of policy contagion over time. The mechanisms driving this phenomenon deserves attention and is left for future research.

Table 4 probes the robustness of the main findings, and indeed the results are very similar when I estimate a Cox model of the hazard rate. In line with my theory, competition policy reforms occur sooner in democracies. The results also confirm that richer countries and those with larger populations are more likely to pass competition policy laws.

6 Determinants of Competition Agency Commitment

Since the passage of laws does not necessarily reflect a government’s commitment to effective competition policy, in this section I develop an original index of commitment, which I model as a function of the identical set of independent variables used to explain the decision to delegate. The motivation behind the construction of the index is to provide an easily replicable proxy for antitrust policy commitment that can be extended to a large sample of countries. The variable *Agency Commitment* measures features of the statute, as well as how the law is actually applied. Specifically, *Agency Commitment* represents the average of the standardized values of two sub-indexes: *De Jure Independence* captures institutional features relating to the legal independence of the regulatory body based on the law; *De Facto Commitment* measures resource allocations, expert assessments, and actual regulatory decisions. I detail the construction of each sub-index in turn. Table 5 provides a summary of the index components, and Table 10 reports the *Agency Commitment* scores for each country in the sample.

6.0.1 De Jure Independence

The construction of the sub-index of competition agency independence follows previous work on central bank independence (CBI) by Cukierman et al. (1992) and others. The sub-index *De Jure Independence* has four components. The first component concerns the relationship between the government and the head of the competition agency. In particular, I measure the rules governing the tenure of the agency head. Following the CBI literature, I assume that a fixed term in which the agency head cannot be removed to be indicative of greater political independence. I code a dummy variable equal to 1 if the term of the agency head is fixed. I also assume that independence increases with length of the term, and so I code an indicator variable equal to one if the term exceeds 5 years. I sum these dummy variables to create a measure of the independence of the agency head, ranging from 0 to 2 (0 = no fixed term; 1 = fixed term < 5 years; 2 = fixed term \geq 5 years).

The second component of *De Jure Independence* concerns the stated independence of the agency. I generate a dummy variable equal to 1 if the language of the law establishing the competition agency stipulates agency “independence.” The third indicator variable is coded equal to one if the competition agency represents a unique entity, meaning that it does not fall under the authority of another government agency (regardless of whether the overarching entity is itself independent). Finally, I code a dummy variable equal to one if the agency has been in existence for over ten years as of 2007. The four components are averaged to create *De Jure Independence*.¹² Countries without competition agencies receive scores of zero.

6.0.2 De Facto Commitment

The sub-index *De Facto Commitment* attempts to operationalize the government’s actual commitment to agency effectiveness. The variable incorporates four main components: budget commitments, staffing commitments, expert assessments, and actual regulatory actions.

To capture the government’s resource commitment to the competition agency, I gathered data on agency staffing and budgets over the period 2002-2007. Using these data, I ran a regression of the (logged) number of employees as a function of the (logged) population for each year for which data were available, and computed the average residuals for each country. The motivation for this approach is to capture the distinction between what a government actually allocates toward competition policy and the mean allocation based on the size of the country. Similarly, I ran regressions of the (logged) the agency budget as a function of (logged) GDP and computed the average residuals over the period.

The third component of the index captures expert opinions using data from the World Economic Forum’s (WEF) Global Competitiveness Report. The report provides the average response among practitioners, business persons, and academics to a variety of questions regarding the economic and institutional environment for 125 countries. My index incorpo-

¹²To ensure that data limitations are not skewing the results, I only include in my sample countries for which data on at least two of the subcomponents of *De Jure Independence* are not available. As a result, approximately 11 countries with competition agencies drop out of the sample.

rates the country average for the following question regarding the effectiveness of antitrust policy: “Anti-monopoly policy in your country is: (1 = lax and not effective at promoting competition, 7 = effective and promotes competition).”

The fourth component of *De Facto Commitment* measures actual antitrust actions by the competition agency. I code a dummy variable equal to one if the agency has ever intervened over a proposed merger, regardless of the outcome of the legal action.

The variable *De Facto Commitment* is the average of the standardized values of: the average residuals of the staffing and budget regressions, the WEF score, and the dummy variable for antitrust regulatory action.¹³ Countries without competition agencies are assigned the minimum value.

6.1 Political Competition and Agency Commitment

In this section, I estimate the correlates of my index of competition agency commitment. The index *Agency Commitment* represents the average of the standardized values of the *De Jure Independence* and *De Facto Commitment* subindexes. I am interested in estimating the following relationship:

$$Y_i = \beta_0 + \beta_1 \mathbf{X}_i + \beta_2 I_i + \epsilon_i \quad (6)$$

where Y_i represents *Agency Commitment* in country i ; I_i are the various democracy variables; and \mathbf{X}_i is a vector of economic controls. All of the independent variables are averaged over the period of study (1975-2007). A one-boundary Tobit model is used due to the censoring at the minimum value of the dependent variable (i.e., countries without competition agencies).

Table 6 reports the results of models testing the relationship between democracy and competition agency commitment. Model 1 includes the Freedom House Political Rights score, and the results are consistent with the proposition that more democratic governments are more strongly committed to competition policy. I successively introduce various alternative

¹³To ensure that data limitations are not skewing the results, I only include in my sample countries for which data on at least two of the four subcomponents of *De Facto Commitment* are not available. As a result, approximately 19 countries with competition agencies are coded as missing.

indicators of political competition in columns 2-6; the results are consistently supportive of the hypothesis that democratic political competition is positively associated with competition policy effectiveness, and the results are substantively significant. Table 7 reports the marginal effects based on model 3, with the control variables \mathbf{x} set at their mean values. Columns 7-12 replicate the estimations while including regional dummy variables. The correlation between democracy and competition policy commitment retains statistical significance to the inclusion of regional indicators.

Several of the control variables are also strongly significant. Consistent with the hazard models, the commitment to competition policy increases with country wealth and population. External factors also appear to correlate strongly with a commitment to competition policy effectiveness. In particular, *Aid per Capita* and *Trade* enter with positive and significant coefficients. These results are consistent with the view that international actors are salient constituents in favor of a robust competition policy; while they do not support the view that trade openness substitutes for competition policy.

7 Conclusion

This paper introduced democracy into the debate over the determinants of regulation. I provided an overlooked extension to the classical positive theory of regulation, arguing that democracy will lead to regulatory policies that favor consumers. An empirical implication of the argument is that competition policy will improve with the level of democracy.

The empirical contribution offers one of the first direct tests of the political economy determinants of regulatory reform in developing countries. Using an original dataset covering 156 developing countries over the period 1975-2007, I tested the determinants of regulatory policy in two stages. First, I estimated duration models on the timing of competition policy reform. Second, since laws on the books do not necessarily reflect effective policy, I created an original index of competition policy commitment. The results of both tests are strongly

supportive of the argument linking democratic political competition to policies that promote economic competition.

The results shed new light on the politics of globalization and suggest avenues for future research. In particular, the theory and statistical evidence presented here are consistent with a nascent body of research that focuses on the influence of consumers in shaping economic policy (Baker, 2005; Trumbull, 2006). This work suggests that political economists can gain analytical traction by extending the standard paradigm in international political economy, which focuses almost exclusively on conflicts between supply-side coalitions that compete for influence according to factor- or industry-based cleavages. We will gain new insights into the origins of economic and regulatory policies through the development of models that incorporate consumer interests and illustrate the ways in which political institutions determine the influence of these demand-side actors.

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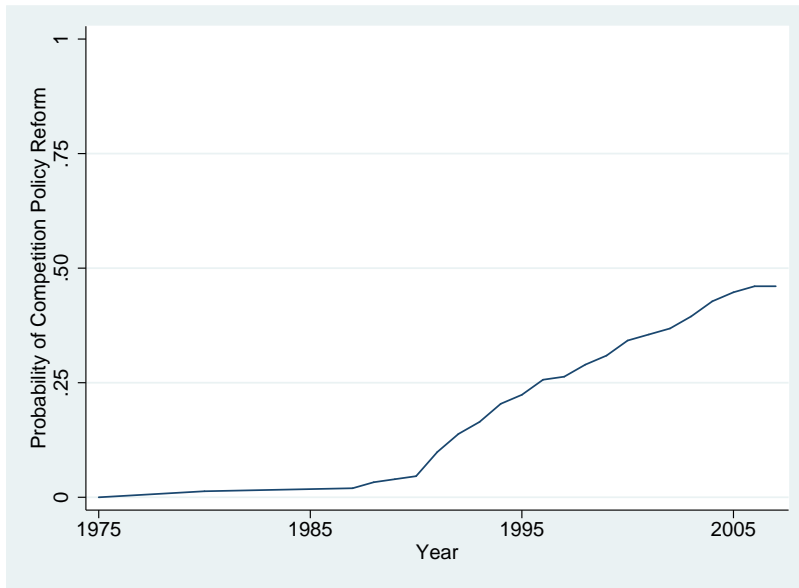


Figure 1: Kaplan Meier Estimates of Competition Policy Reform

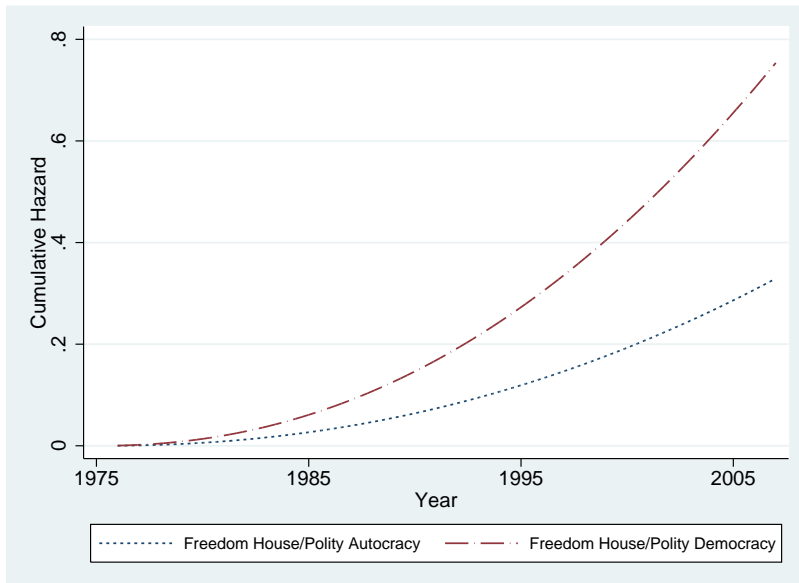


Figure 2: Effect of Democracy on Competition Policy Reform

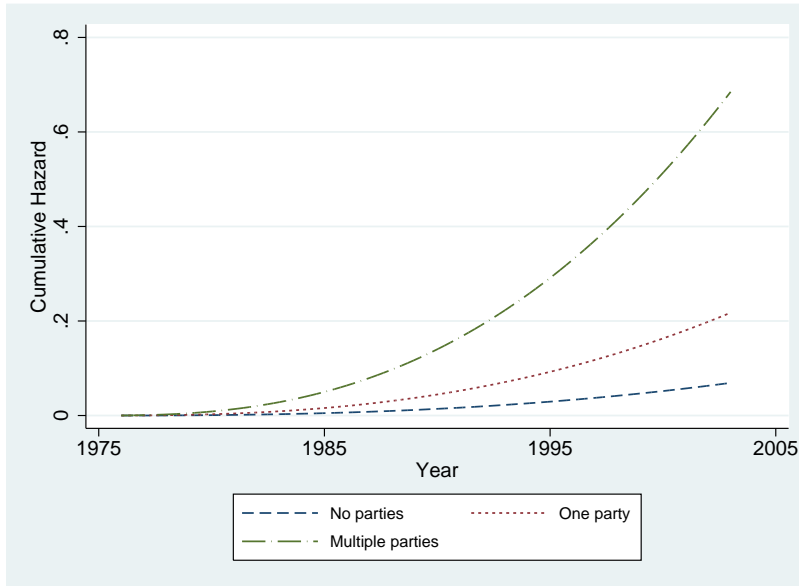


Figure 3: Effect of Party Competition on Competition Policy Reform

Table 1: Summary Statistics

variable	N	mean	sd	min	max
Agency Commitment	2535	-0.352	0.697	-0.712	2.150
De Jure Independence	2663	-0.315	0.813	-0.736	2.190
De Facto Commitment	2535	-0.341	0.722	-0.689	2.455
GDP per capita	2820	6.931	1.366	4.395	10.749
Population	2820	15.315	1.760	11.014	20.994
Aid per capita	2820	3.133	1.503	-6.103	7.645
Trade	2820	0.804	0.466	0.063	3.973
FH Political Rights	2622	3.540	1.978	1	7
Polity	2466	-1.398	6.849	-10	10
Political Competition	2370	4.373	3.388	1	10
Freedom House/Polity	2622	4.464	3.104	0	10
Parties in Legislature	2478	1.323	0.832	0	2
Political Constraints	2517	0.159	0.198	0	0.667

Table 2: Correlation Matrix

	Agency Commitment	De Jure Independence	De Facto Commitment	GDP per capita	Population	Aid per capita	Trade	FH Political Rights	Polity	Political Competition	Freedom House/Polity	Parties in Legislature	Political Constraints
Agency Commitment	1												
De Jure Independence	0.9293*	1											
De Facto Commitment	0.9294*	0.7275*	1										
GDP per capita	0.2481*	0.1797*	0.2622*	1									
Population	0.2998*	0.2139*	0.3450*	-0.3835*	1								
Aid per capita	-0.0986*	-0.0395	-0.1275*	-0.2011*	-0.4217*	1							
Trade	-0.0302	-0.0096	-0.0449	0.4370*	-0.5113*	0.1565*	1						
FH Political Rights	0.2816*	0.2545*	0.2570*	0.3719*	-0.2046*	0.1885*	0.1955*	1					
Polity	0.3408*	0.3268*	0.2978*	0.2281*	0.0054	0.1522*	0.1032*	0.8692*	1				
Political Competition	0.3318*	0.3320*	0.2831*	0.2390*	-0.0114	0.1759*	0.1213*	0.8488*	0.9428*	1			
Freedom House/Polity	0.2934*	0.2767*	0.2593*	0.3277*	-0.1836*	0.2038*	0.1979*	0.9576*	0.9723*	0.9315*	1		
Parties in Legislature	0.3491*	0.3220*	0.3177*	0.1068*	0.0838*	0.1515*	0.1019*	0.6147*	0.6234*	0.6568*	0.6395*	1	
Political Constraints	0.3460*	0.2984*	0.3267*	0.2522*	0.0595*	0.0810*	0.1020*	0.6891*	0.7506*	0.7455*	0.7286*	0.5544*	1

Note: The table presents pairwise correlation coefficients. * $p < 0.01$.

Table 3: Hazard Models of Competition Policy Reform (Weibull)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GDP per capita	0.487*** (0.134)	0.541*** (0.124)	0.493*** (0.133)	0.511*** (0.128)	0.523*** (0.154)	0.496*** (0.133)	0.769*** (0.158)
Population	0.520*** (0.103)	0.369*** (0.112)	0.511*** (0.101)	0.370*** (0.112)	0.294*** (0.112)	0.435*** (0.108)	0.743*** (0.130)
Aid per capita	0.252** (0.110)	0.172 (0.109)	0.242** (0.111)	0.155 (0.109)	0.061 (0.129)	0.236** (0.117)	0.378*** (0.118)
Trade	0.378 (0.311)	0.145 (0.331)	0.352 (0.316)	0.165 (0.356)	-0.096 (0.331)	0.277 (0.311)	0.419 (0.431)
FH Political Rights	0.198*** (0.071)						0.182** (0.084)
Polity		0.059*** (0.020)					
Freedom House/Polity			0.130*** (0.046)				
Political Competition				0.124*** (0.042)			
Parties in Legislature					1.147*** (0.315)		
Political Constraints						1.063 (0.668)	
Regional dummies	No	No	No	No	No	No	Yes
Observations	2622	2466	2622	2370	2478	2517	2622
Countries	129	121	129	120	131	128	129
Countries reforming	62	61	62	61	54	60	62
Chi-squared	35.455	37.308	38.296	33.708	32.843	30.278	206.474
Evolutionary parameter α	2.229	2.242	2.155	2.214	2.542	2.461	2.183

Note: The table presents the results of the hazard models of the timing of competition policy reform. Variable definitions and sources are provided in the text. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 4: Hazard Models of Competition Policy Reform (Cox Proportional Hazards)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GDP per capita	0.494*** (0.144)	0.551*** (0.135)	0.504*** (0.143)	0.509*** (0.139)	0.504*** (0.164)	0.487*** (0.142)	0.803*** (0.167)
Population	0.541*** (0.109)	0.383*** (0.113)	0.533*** (0.107)	0.378*** (0.113)	0.282*** (0.110)	0.424*** (0.109)	0.806*** (0.139)
Aid per capita	0.245* (0.125)	0.169 (0.117)	0.241* (0.124)	0.143 (0.114)	0.023 (0.128)	0.199 (0.124)	0.428*** (0.131)
Trade	0.440 (0.308)	0.196 (0.335)	0.406 (0.315)	0.211 (0.359)	-0.034 (0.345)	0.326 (0.331)	0.534 (0.409)
FH Political Rights	0.212*** (0.071)						0.193** (0.085)
Polity		0.061*** (0.020)					
Freedom House/Polity			0.139*** (0.046)				
Political Competition				0.126*** (0.040)			
Parties in Legislature					1.166*** (0.315)		
Political Constraints						1.090* (0.662)	
Regional dummies	No	No	No	No	No	No	Yes
Observations	2622	2466	2622	2370	2478	2517	2622
Countries	129	121	129	120	131	128	129
Countries reforming	62	61	62	61	54	60	62
Chi-squared	33.499	34.281	35.639	31.434	33.487	27.976	187.175

Note: The table presents the results of the hazard models of the timing of competition policy reform. Variable definitions and sources are provided in the text. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 5: Index of Competition Agency Commitment

De Jure Independence		Numerical Coding
Component	Levels of Independence	
Agency Head	1. Fixed term greater than or equal to 5 years 2. Fixed term less than 5 years 3. No fixed term	2 1 0
Stated Independence	1. Agency independence is formally stated in the law 2. No mention of agency independence	1 0
Agency Organization	1. Agency is a unique entity 2. Agency is part of another bureaucracy, department, or regulatory body	1 0
Agency Tenure	1. Agency is at least 10 years old as of 2007 2. Agency is less than 10 years old as of 2007	1 0
De Facto Commitment		
Agency Budget	The variable represents the average residuals from regression models in which the logged value of the competition agency budget is regressed on log of GDP for years 2002-2007.	
Agency Staff	The variable represents the average residuals from regression models in which the logged value of the competition agency staff is regressed on log of country population for years 2002-2007.	
Expert Assessment	The World Economic Forum country score regarding the effectiveness of antitrust policy. The variable is the average response to the following: "Anti-monopoly policy in your country is: (1 = lax and not effective at promoting competition, 7 = effective and promotes competition)."	
Antitrust Activity	A dummy variable equal to one if the agency has ever intervened over a proposed merger, regardless of the outcome of the legal action.	

Note: The Competition Agency Commitment Index represents the mean of the standardized values of the two sub-indices: De Jure Independence and De Facto Commitment. The sub-indices De Jure Independence and De Facto Commitment are calculated as the average value of their respective components. The four components of De Facto Commitment are standardized before averaging.

Table 6: Determinants of Competition Policy Commitment (One-Boundary Tobit Estimates)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
GDP per capita	0.602*** (0.151)	0.644*** (0.135)	0.589*** (0.142)	0.622*** (0.139)	0.640*** (0.142)	0.582*** (0.144)	0.729*** (0.167)	0.752*** (0.159)	0.711*** (0.160)	0.722*** (0.153)	0.721*** (0.146)	0.714*** (0.161)
Population	0.805*** (0.121)	0.745*** (0.126)	0.797*** (0.119)	0.768*** (0.129)	0.654*** (0.130)	0.672*** (0.127)	0.781*** (0.132)	0.766*** (0.150)	0.774*** (0.132)	0.782*** (0.150)	0.703*** (0.145)	0.710*** (0.127)
Aid per capita	0.483*** (0.163)	0.482*** (0.162)	0.463*** (0.161)	0.449*** (0.166)	0.395*** (0.170)	0.420*** (0.169)	0.467*** (0.162)	0.496*** (0.169)	0.448*** (0.164)	0.482*** (0.170)	0.400*** (0.172)	0.443*** (0.150)
Trade	0.523*** (0.219)	0.505*** (0.226)	0.549*** (0.217)	0.608*** (0.231)	0.282 (0.221)	0.515*** (0.224)	0.367 (0.258)	0.370 (0.263)	0.387 (0.257)	0.452* (0.270)	0.276 (0.273)	0.363 (0.266)
FH Political Rights	0.331*** (0.091)						0.145* (0.082)					
Polity		0.103*** (0.024)						0.041* (0.025)				
Freedom House/Polity			0.235*** (0.055)						0.108** (0.054)			
Political Competition				0.229*** (0.051)						0.112** (0.051)		
Parties in Legislature					1.398*** (0.235)						0.756*** (0.283)	
Political Constraints						3.759*** (0.800)						1.845*** (0.752)
Regional dummies	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Countries	120	111	120	110	121	119	120	111	120	110	121	119
<i>Pseudo R</i> ²	0.211	0.219	0.223	0.220	0.263	0.223	0.320	0.328	0.322	0.333	0.335	0.327

Note: The table presents the results of tobit models. The dependent variable is the competition policy commitment index. Variable definitions and sources are provided in the text. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 7: Marginal Effects of Independent Variables (based on results from Table 6, Model 3)

variable	dy/dx	Std. Err.	z	P>z	95% C.I.		mean
GDP per capita	0.212	0.057	3.700	0.000	0.100	0.324	7.174
Population	0.287	0.045	6.410	0.000	0.199	0.375	15.515
Aid per capita	0.167	0.059	2.850	0.004	0.052	0.281	3.006
Trade	0.198	0.118	1.680	0.094	-0.034	0.429	0.829
Freedom House/Polity	0.085	0.022	3.910	0.000	0.042	0.127	4.934

Table 8: Summary Statistics by Country

Country	Law	Agency Commitment	De Jure Independence	De Facto Commitment	GDP per capita	Population	Aid per capita	Trade	FH Political Rights	Polity	Political Competition	House/Polity	Freedom	Parties in Legislature	Political Constraints
Albania	1995	1.147	2.190	0.104	6.739	14.991	2.973	0.536	3.143	-0.143	4.571	4.190	4.190	1.714	0.094
Algeria	1995	0.621	1.020	0.222	7.515	16.882	2.032	0.547	2.053	-7.650	1.900	1.570	1.570	0.850	0.000
Angola	1995	-0.712	-0.736	-0.689	6.563	16.350	3.127	1.124	1.619	-3.524	4.750	2.274	2.274	1.588	0.195
Argentina	1980	0.621	0.435	0.808	8.861	17.106	0.133	0.142	2.800	-6.000	2.200	2.583	2.583	0.400	0.000
Armenia	2000	0.866	1.605	0.126	6.213	14.997	3.358	0.898	3.889	3.222	7.000	7.000	5.759	2.000	0.239
Azuba	-0.712	-0.736	-0.689	9.832	11.253	5.637	2.358	1.138	3.000	-1.000	6.000	3.917	3.917	1.500	0.000
Azerbaijan	1993	0.612	0.435	0.789	6.973	15.807	-0.788	1.138	6.654	9.126	9.126	9.126	9.126	2.000	0.000
Bahamas	-0.712	-0.736	-0.689	9.297	12.454	2.327	1.148	1.488	2.227	-9.174	1.304	1.409	1.409	0.000	0.000
Bahrain	-0.712	-0.736	-0.689	9.297	13.159	4.627	1.758	2.227	0.188	4.406	4.406	5.078	5.078	1.429	0.183
Bangladesh	2002	1.511	1.020	2.002	8.962	12.443	2.846	1.158	7.000	7.000	7.000	9.946	9.946	2.000	0.244
Barbados	1992	-0.712	-0.736	-0.689	7.239	16.137	2.909	0.703	4.000	7.000	7.000	6.750	6.750	2.000	0.000
Belarus	-0.712	-0.736	-0.689	7.871	12.239	4.483	1.173	6.960	4.483	-0.484	5.000	4.531	4.531	2.000	0.272
Benin	-0.712	-0.736	-0.689	5.746	15.398	3.474	0.469	3.467	3.467	8.000	7.000	7.417	7.417	2.000	0.274
Bhutan	-0.712	-0.736	-0.689	6.289	13.187	4.447	0.773	1.880	1.880	8.000	8.000	8.000	8.000	0.421	0.000
Bolivia	-0.712	-0.736	-0.689	6.888	15.723	3.959	0.508	0.508	5.355	5.469	6.938	7.224	7.224	1.571	0.351
Bosnia and Herzegovina	2000	0.512	1.020	0.004	6.765	15.046	5.445	1.022	2.667	0.000	9.000	8.524	8.524	2.000	0.000
Botswana	-0.712	-0.736	-0.689	7.676	14.104	4.078	1.021	1.021	7.938	9.000	9.000	8.524	8.524	2.000	0.197
Burundi	-0.712	-0.736	-0.689	9.953	12.436	0.912	1.074	1.565	1.565	8.000	7.000	2.226	2.226	0.000	0.000
Bulgaria	1991	1.465	2.190	0.741	7.450	15.981	0.446	0.698	5.000	8.000	7.000	7.417	7.417	2.000	0.274
Burkina Faso	1994	-0.712	-0.736	-0.689	5.143	15.842	3.346	0.367	2.389	-4.684	1.944	2.843	2.843	0.421	0.000
Burundi	-0.712	-0.736	-0.689	4.870	15.504	3.293	0.346	1.645	1.645	-3.531	2.292	2.317	2.317	0.679	0.000
Burundi	-0.712	-0.736	-0.689	5.676	16.344	3.489	0.995	2.214	1.071	6.929	3.929	3.929	3.929	2.000	0.325
Cambodia	1998	-0.712	-0.736	-0.689	6.568	16.197	3.247	0.464	1.818	-6.913	2.304	1.682	1.682	1.261	0.000
Cape Verde	-0.712	-0.736	-0.689	6.941	12.905	5.617	0.723	5.905	5.905	7.851	7.851	7.851	7.851	1.706	0.215
Central African Republic	-0.712	-0.736	-0.689	5.605	14.926	3.564	0.439	0.439	2.516	-2.438	3.625	3.298	3.298	0.929	0.165
Chad	-0.712	-0.736	-0.689	6.247	15.660	3.234	0.339	1.645	1.645	-3.531	3.625	2.395	2.395	0.000	0.000
China	-0.712	-0.736	-0.689	7.558	20.865	0.048	0.388	1.333	1.333	-7.000	1.000	1.167	1.167	2.000	0.000
Colombia	1992	1.330	0.435	2.224	7.558	17.179	0.967	0.296	5.875	8.059	9.000	8.135	8.135	2.000	0.424
Comoros	-0.712	-0.736	-0.689	5.991	13.040	4.384	0.566	0.566	3.192	-0.185	4.846	4.529	4.529	1.304	0.096
Congo	-0.712	-0.736	-0.689	6.983	14.695	3.856	1.146	1.146	2.997	-4.656	2.323	2.586	2.586	0.964	0.101
Costa Rica	1994	0.259	0.435	0.083	8.012	14.777	3.687	0.669	7.000	10.000	10.000	9.977	9.977	2.000	0.397
Cote d'Ivoire	1991	1.634	2.190	1.078	8.241	16.047	2.942	0.716	2.133	-8.875	1.063	1.589	1.589	1.063	0.000
Croatia	1995	1.560	2.190	0.929	8.629	13.349	4.100	1.077	6.000	-3.000	10.000	4.250	4.250	2.000	0.349
Cyprus	1989	1.878	2.190	1.566	8.382	16.154	0.278	0.878	8.000	10.000	10.000	8.846	8.846	2.000	0.239
Czech Republic	-0.712	-0.736	-0.689	5.078	17.466	2.344	0.442	0.442	8.000	8.000	7.000	7.000	7.000	2.000	0.000
Democratic Republic of the Congo	-0.712	-0.736	-0.689	6.759	13.435	4.915	0.977	2.941	-4.313	-2.706	1.500	3.270	3.270	0.893	0.000
Djibouti	-0.712	-0.736	-0.689	7.646	15.799	2.494	0.658	5.833	5.774	7.613	7.613	7.789	7.789	2.000	0.364
Dominican Republic	-0.712	-0.736	-0.689	7.200	16.125	2.577	0.556	5.226	6.469	7.813	7.813	7.565	7.565	1.714	0.240
Ecuador	2005	0.031	-0.151	0.213	6.981	17.837	3.511	0.338	2.621	-6.033	1.967	2.500	2.500	1.857	0.235
Egypt	-0.712	-0.736	-0.689	7.549	15.482	3.609	0.601	0.601	5.097	4.375	7.741	6.745	6.745	1.607	0.312
El Salvador	-0.712	-0.736	-0.689	5.190	13.020	4.254	1.412	1.048	-5.762	1.619	1.218	1.218	1.218	0.000	0.004
Equatorial Guinea	-0.712	-0.736	-0.689	7.160	15.127	3.869	0.901	1.429	6.429	-3.045	2.000	1.845	1.845	0.000	0.000
Eritrea	-0.712	-0.736	-0.689	4.833	17.738	2.617	0.230	2.238	3.222	-3.045	3.222	2.817	2.817	1.136	0.083
Ethiopia	2003	-0.419	0.435	-0.103	7.990	13.444	3.993	1.019	4.591	6.043	7.174	7.235	7.235	1.565	0.303
Fiji	1998	0.100	0.435	-0.235	9.544	12.290	7.430	0.291	2.567	-6.484	2.000	2.442	2.442	1.464	0.000
French Polynesia	-0.712	-0.736	-0.689	8.485	13.721	4.149	0.947	2.567	6.406	5.761	6.406	5.761	5.761	1.786	0.140
Gabon	-0.712	-0.736	-0.689	5.808	13.721	4.023	1.063	4.194	3.200	-1.094	6.406	5.300	5.300	1.600	0.300
Gambia	1996	-0.712	-0.736	-0.689	6.392	15.469	3.244	0.108	3.548	-1.094	4.733	4.519	4.519	0.929	0.114
Georgia	-0.712	-0.736	-0.689	5.460	16.526	3.244	0.338	3.244	5.862	2.125	6.548	8.026	8.026	1.538	0.222
Ghana	-0.712	-0.736	-0.689	7.924	11.488	4.757	1.137	5.862	4.258	2.125	6.548	5.605	5.605	1.786	0.327
Grenada	-0.712	-0.736	-0.689	7.363	16.013	2.820	0.461	0.461	4.258	-4.333	3.370	2.423	2.423	0.870	0.130
Guatemala	-0.712	-0.736	-0.689	5.851	15.726	3.492	0.545	1.654	1.654	-4.333	3.370	2.423	2.423	0.870	0.130
Guinea	-0.712	-0.736	-0.689	5.851	15.726	3.492	0.545	1.654	1.654	-4.333	3.370	2.423	2.423	0.870	0.130

Table 9: Summary Statistics by Country (continued)

Country	Law	Agency Commitment	De Jure Independence	De Facto Commitment	GDP per capita	Population	Aid per capita	Trends	FH Political Rights	Polity	Political Competition	Freedom House/Polity	Parties in Legislature	Political Constraints
Guinea-Bissau		-0.712	-0.736	-0.689	5.069	13,859	4.280	0.557	3,935	-2.781	3.500	3.358	1,179	0.100
Guyana		-0.712	-0.736	-0.689	6.668	13,541	4.322	1.744	4.567	0.097	5.290	5.625	2,000	0.203
Haiti	2005	-0.712	-0.736	-0.689	6.333	15,774	3.243	0.435	1.935	-3.667	3.778	1.250	1,250	0.103
Honduras		-0.712	-0.736	-0.689	6.994	15,368	3.933	0.818	4.828	4.667	7.964	6.917	1,571	0.263
Hong Kong		-0.712	-0.736	-0.689	9.799	15,564	2.382	2.382	2.458	-6.400	2.280	2.260	2,000	0.027
Indonesia	2000	1.290	1.020	-0.689	6.275	18,937	1.838	0.514	2.458	-3.900	3.037	2.979	3,385	0.079
Indonesia		-0.712	-0.736	-0.689	7.344	17,781	0.181	0.404	2.267	9.000	9.000	8.847	2,000	0.490
Iran	1988	1.027	-0.151	2.205	9.465	15,182	5.557	1.030	6.000	10,000	10,000	8,971	2,000	0.295
Israel	1993	1.120	1.605	0.634	7.979	14,619	4.009	0.942	6.118	10,000	10,000	2,846	0.593	0.185
Jamaica	2004	0.220	-0.736	1.176	7.478	14,981	5.187	1.196	3.074	-5.750	4.964	2,926	2,000	0.000
Kazakhstan	2001		0.044		7.084	16,563	1.595	0.886	2.111	-3.667	6.000	2,926	2,000	0.000
Kenya	1988	0.458	-0.151	1.068	6.024	16,644	2.942	0.600	2.667	-6.769	1.231	2.410	1,000	0.000
Kuwait		-0.712	-0.736	-0.689	9.776	14,355	3.998	0.978	2.667	-6.769	1.231	2.410	1,000	0.000
Kyrgyz Republic					5.799	15,329	2.431	0.789	3.500	-3.000	3.000	4.667	1,000	0.000
Laos	2004				5.553	15,337	3.541	0.500	1.200	-7.000	1.000	1.104	1,000	0.004
Latvia	1997	1.211	1.020	1.403	7.829	14,760	2.641	1.039	5.500	8.000	9.000	8,250	2,000	0.387
Lebanon		-0.712	-0.736	-0.689	8.341	15,083	4.124	0.711	2.167	4.667	6.000	3.329	0.000	0.152
Lesotho		-0.712	-0.736	-0.689	5.834	14,274	3.910	1.423	3.645	-1.063	3.536	4.513	1,071	0.026
Lesotho		-0.712	-0.736	-0.689	5.834	14,274	3.910	1.423	3.645	-1.063	3.536	4.513	1,071	0.026
Libya		-0.712	-0.736	-0.689	8.581	14,661	3.548	0.960	2.810	-2.773	3.368	3.484	0.944	0.000
Libya		-0.712	-0.736	-0.689	8.789	15,502	0.319	0.561	1.000	-7.000	1.000	0.750	0.000	0.000
Lithuania	1992	1.586	1.605	1.567	8.316	15,125	0.067	0.507	6.000	10.000	10.000	8.750	2,000	0.315
Macao		-0.712	-0.736	-0.689	9.467	12,845	0.027	1.843	4.333	6.000	9.000	7.056	2,000	0.474
Macedonia	1999	0.754	1.605	-0.097	7.384	14,493	3.341	0.860	4.333	6.000	9.000	7.056	2,000	0.474
Madagascar		-0.712	-0.736	-0.689	5.638	16,263	3.218	0.458	4.129	0.688	5.387	5.065	1,286	0.291
Malawi	1998				15.856	16.263	3.338	0.600	2.455	-6.348	2.435	2.004	1,174	0.055
Malaysia		-0.712	-0.736	-0.689	7.897	16,703	1.967	1.480	4.069	3.667	6.000	5.756	0.000	0.358
Mali	1994		-0.736	-0.689	5.459	15,879	3.755	0.539	3.452	-0.531	4.226	4.516	1,214	0.118
Mali		0.038	0.435	-0.358	8.486	12,777	4.069	1.749	6.400	0.338	8.437	2.000	0.338	0.000
Mauritania		-0.712	-0.736	-0.689	6.075	14,502	4.647	1.030	1.677	-6.375	1.563	1.745	0.893	0.071
Mauritius	2003	0.315	0.435	0.195	7.844	13,891	3.540	1.102	6.455	9.913	9.913	9.314	2,000	0.387
Mexico	1992	1.741	1.605	1.878	8.476	18,089	0.302	0.276	4.375	-2.647	5.765	4.578	2,000	0.183
Moldova	2000		-0.736	-0.689	5.878	15,274	2.284	1.027	4.500	7.000	7.000	6.792	1,750	0.268
Mongolia		-0.712	-0.736	-0.689	6.159	14,594	2.983	1.116	4.280	3.346	6.192	6.023	1.591	0.117
Morocco	2001		-0.151		7.027	16,935	3.189	0.541	3.560	-7.615	2.115	2.650	1.846	0.174
Mozambique		-0.712	-0.736	-0.689	5.315	16,554	3.839	0.485	3.385	-0.852	4.963	4.135	1.391	0.138
Nambhia	2003				7.596	14,234	3.539	1.100	5.857	6.000	9.000	7.660	2,000	0.337
Nepal		-0.712	-0.736	-0.689	5.198	16,781	2.626	0.399	4.226	-0.844	3.906	4.825	0.857	0.142
Nicaragua	2006	0.421	1.020	-0.177	6.747	15,223	4.171	0.645	3.900	2.097	5.586	5.514	1,929	0.271
Niger		-0.712	-0.736	-0.689	5.283	15,890	3.478	0.454	2.300	-1.935	3.533	3.378	0.857	0.117
Niger		-0.712	-0.736	-0.689	5.937	18,373	0.424	0.614	2.968	-1.313	3.367	3.987	0.643	0.108
Nigeria		-0.712	-0.736	-0.689	8.817	14,363	3.265	0.912	1.966	-9.367	1.133	1.083	0.000	0.000
Oman					8.086	14,643	3.109	1.621	3.533	0.125	5.500	5.117	1,500	0.305
Papua New Guinea	1996	1.668	2.190	1.146	6.497	15,187	4.374	0.966	5.962	10.000	10.000	8.862	2,000	0.522
Paraguay	2002	1.141	1.605	0.677	7.205	15,240	2.725	0.717	3.774	0.063	4.813	4.987	2,000	0.231
Peru	1991	1.462	2.190	0.733	6.639	16,724	2.425	0.354	4.733	3.625	5.714	6.378	1,679	0.269
Philippines		-0.712	-0.736	-0.689	6.839	17,944	2.194	0.713	4.806	6.065	6.065	6.164	1,679	0.236
Philippines		-0.712	-0.736	-0.689	10.271	13,448	0.671	1.000	2.000	-10.000	7.000	0.917	0.000	0.000
Qatar	1996	2.150	2.190	2.110	7.416	16,946	2.301	0.516	3.500	5.000	7.000	6.042	2,000	0.501
Romania		-0.712	-0.736	-0.689	18.815	15.883	0.538	0.361	3.000	0.000	2.000	4.583	1,000	0.000
Russia	1991	1.363	0.435	2.291	5.864	15,668	3.683	0.329	1.613	-6.031	1.438	1.793	1,036	0.013
Rwanda		-0.712	-0.736	-0.689	8.066	16,668	0.368	0.329	1.613	-6.031	1.438	1.793	1,036	0.013
Saint Lucia		-0.712	-0.736	-0.689	8.066	16,668	0.368	0.329	1.613	-6.031	1.438	1.793	1,036	0.013
Saudi Arabia	2004		-0.151		9.273	11,844	4.700	1.383	6.880	-10.000	1.000	0.327	2,000	0.253
Senegal	1994	0.751	2.190	-0.689	6.180	16,468	0.036	0.744	1.464	-1.947	6.789	4.616	1,842	0.123
Seychelles		-0.712	-0.736	-0.689	8.612	11,185	5.436	1.185	4.000	-1.947	6.789	4.616	1,842	0.123
Sierra Leone		-0.712	-0.736	-0.689	5.449	15,168	3.297	0.471	2.935	-3.500	2.444	3.347	1,071	0.054

Table 10: Summary Statistics by Country (continued)

Country	Law	Agency Commitment	De Jure Independence	De Facto Commitment	GDP per capita	Population	Aid per capita	Trade	FH Political Rights	Polity	Political Competition	Freedom House/Polity	Parties in Legislature	Political Constraints
Singapore	2004	0.846	0.435	1.258	10,050	15,237	-0.166	3,779	3,000	-2,000	2,000	3,944	2,000	0.032
Slovak Republic	1991	1.686	1.605	1.767	8,213	15,480	0.258	0.621	7,000	10,000	10,000	9,583	2,000	0.564
Slovenia	1999	0.470	0.435	0.505	9,018	14,501	3.004	1.072	6,000	8,800	9,000	8,617	2,000	0.399
South Africa	1998	1.960	1.605	2.316	7,996	17,483	2.200	0.446	3,400	-8,000	2,000	2,250	2,000	0.365
South Korea	1980	1.445	0.435	2.455	8,016	17,410	1.679	0.613	3,400	-8,000	2,000	2,250	2,000	0.365
Sri Lanka	1987	0.825	0.825	0.690	6,090	16,523	3.077	0.694	5,545	6,083	6,583	7,417	2,000	0.231
Sudan	..	-0.712	-0.736	-0.689	5,727	17,117	2.926	0.254	1,774	-5,188	1,710	1,836	0.679	0.012
Suriname	..	-0.712	-0.736	-0.689	7,683	12,928	4.553	0.820	4,700	-5,188	1,710	1,836	0.679	0.012
Swaziland	..	-0.712	-0.736	-0.689	6,972	13,621	3.699	1.575	2,161	-9,563	1,188	6,459	1,571	0.000
Syria	..	-0.712	-0.736	-0.689	6,972	13,621	3.699	1.575	2,161	-9,563	1,188	6,459	1,571	0.000
Tajikistan	2000	..	..	..	5,060	16,344	3.294	0.381	1,548	-8,563	1,000	0.659	2,000	0.040
Tanzania	2003	1.197	1.020	1.374	15,575	2.375	1.132	1.132	1,500	-4,625	3,125	1,760	2,000	0.188
Thailand	1999	0.658	-0.736	0.852	5,561	17,235	3.532	0.494	2,923	-2,615	3,154	3,641	1,615	0.273
Togo	..	-0.712	-0.736	-0.689	7,019	17,780	2.135	0.641	4,652	3,542	7,304	6,246	1,667	0.444
Trinidad and Tobago	1996	..	..	..	5,606	15,178	3.242	0.894	1,806	-4,750	3,333	2,285	1,179	0.000
Tunisia	1991	..	1.605	..	8,616	13,957	1.845	0.787	6,667	8,579	8,158	9,236	1,947	0.396
Turkmenistan	..	-0.712	-0.736	-0.689	7,204	15,732	3.545	0.775	2,400	-7,625	1,875	2,128	1,000	0.000
Uganda	..	-0.712	-0.736	-0.689	6,614	15,312	1.860	1.377	1,000	-9,000	1,000	0.250	1,000	0.000
Ukraine	1993	1.819	1.605	2.033	5,363	16,816	3.281	0.314	2,875	-3,600	2,542	3,354	0.286	0.184
United Arab Emirates	..	-0.712	-0.736	-0.689	7,140	17,767	2.015	0.508	5,000	6,000	7,000	7,333	2,000	0.184
Uruguay	..	-0.712	-0.736	-0.689	10,264	14,329	0.993	1.179	2,478	-8,000	1,000	1,913	0.000	0.000
Venezuela	1992	0.884	1.020	0.748	8,675	14,948	1.808	0.419	5,484	4,469	7,188	7,379	1,286	0.351
Vietnam	2004	0.254	0.435	0.074	8,565	16,647	0.061	0.479	6,923	9,000	10,000	9,205	2,000	0.422
Yemen	..	-0.712	-0.736	-0.689	6,180	18,082	2.036	0.788	1,111	-7,000	1,000	0.889	1,000	0.054
Yugoslavia	2005	1.106	1.605	0.607	7,168	16,591	2.941	0.785	2,714	-2,429	6,000	3,232	1,538	0.000
Zambia	1994	0.545	0.435	0.655	6,080	15,834	4.456	0.558	3,875	1,875	6,125	5,521	2,000	0.165
Zimbabwe	1996	0.722	0.435	1.009	6,412	15,979	3.833	0.747	3,278	-6,632	1,947	2,704	1,158	0.020
							2.664	0.489	3,100	-0.857	2,800	3,996	2,000	0.246