Policy Uncertainty in Hybrid Regimes - Evidence from Firm Level Surveys

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Abstract: Surveys by international organizations and political economists show that regulatory and policy uncertainty is the single most important constraint on investment in developing countries. Yet there has been little direct empirical investigation of the sources of this uncertainty. Using the World Bank-EBRD's Business Environment and Enterprise Performance (BEEPS) data from east Europe and the former Soviet Union, this paper demonstrates a robust inverted U-shaped relationship between firms' perceptions of policy uncertainty and political regime type. Firms in hybrid regimes report higher levels of concerns over policy uncertainty than those in strict authoritarian regimes and liberal established democracies. We argue that the nature of elite contestation accounts for the variation in reported policy uncertainty among hybrid regimes and propose a novel way of controlling for various forms of reporting bias in these regimes, including suppression and anchoring issues.

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Introduction

Of all the constraints to doing business in developing countries, firms consistently cite economic policy uncertainty as the most serious. According to the World Bank's Enterprise Surveys, 40 percent of firms in developing regions identify it as a severe constraint—ahead of macroeconomic instability, taxation, and access to finance and well in front of corruption, skills shortages, and crime. The problem is most acute in Latin America. More than 75 percent of Brazilian firms, 70 percent of Peruvian firms, and 60 percent of firms in Ecuador rate economic policy uncertainty as a major or very severe obstacle to doing business. It is also important in Europe and Central Asia, where 39 percent of firms consider it a serious problem, and in South Asia, where 35 percent do.

This is a puzzle. What are the sources of this uncertainty? What do firms mean when they say that 'policy uncertainty' is a constraint on investment? Much of the political science literature on investment behavior has used firms' perceptions of policy uncertainty as a *proxy* for actual uncertainty and then examined the effect of this uncertainty on macro-economic outcomes such as investment and growth. But to our knowledge, there has been no attempt to understand the causes of this uncertainty itself. How far is it a reflection of the political process? Do we see any variation in reported uncertainty across different regime types? How much is it a consequence of irregularities in the implementation of economic policy? Perhaps more fundamentally, how much confidence can we have that firm's perceptions have some basis in economic or political reality?

The World Bank Enterprise Survey data offers a unique opportunity to explore these questions. This paper analyzes firm-level data from the BEEPS dataset in conjunction with other data on elite contestation and political openness to explore how the interaction of firm attributes such as size, sector and ownership structure with country-specific variables shapes firms' assessment of the policy environment. We limit ourselves to those countries for which there is comparable data over time, which restricts us to 26 East European and former Soviet countries for 1999, 2002 and 2005 and 5 European Union countries for 2005. This gives us a sample of just over 20,000 firms from a range of manufacturing and service industries.

Why Does Policy Uncertainty Matter?

The notion that uncertainty over rules and regulations is detrimental to investment and growth is hardly controversial. Common sense suggests that a business environment characterized by constant policy surprises and reversals, unclear property rights and uncertain contract enforcement is likely to result in poor economic performance.[1] Numerous studies have demonstrated this at the cross-national level. Brunetti et al. find that 'low credibility' of rules is associated with lower rates of investment and growth. A well-established literature in political science has documented a strong connection between investors' perceptions of expropriation risk and countries' ability to attract foreign direct and portfolio investment. What is more in dispute is how to best to measure

[1] This section draws substantially on Brunetti et al. 1998.

uncertainty. Most political scientists have used proxies such as the number of violent political events, such as riots or political assassinations, or the number of orderly or disorderly changes in government.[2] Conceptually this approach is problematic because these are not so much proxies for policy uncertainty as potential causes. Also in as much as scholars have used direct measures they have been based on the perceptions of foreign investors. This too is problematic because the policies that affect foreign businesses are often different from those of concern to local entrepreneurs. There may also be systematic differences in the way regulators treat multinational and local investors.

The aim of this paper is not to improve our measures of policy uncertainty or to analyze its consequences but rather to elucidate its causes. This is an open question. To our knowledge, there has been no empirical investigation of the sources of private entrepreneurs' perceptions of uncertainty. The political science literature has alluded to possible causal factors, such as regime type, electoral cycles and political polarization, while sociologists have emphasized cultural and individual level differences in attitudes towards ambiguity and risk. In what follows, we disentangle some of these potential explanations.

The Sources of Policy Uncertainty

This section describes some of the possible sources of policy uncertainty. It distinguishes between uncertainty arising from the nature of electoral politics, that which is due to excessive discretion on the part of the civil servants and those responsible for implementing policies and that which is a residual and probably unavoidable facet of any human activity. It also discusses some of the biases and errors involved in measuring policy uncertainty, and in particular in inferring judgments about firms' perceptions of the investment climate from survey data.

Political Uncertainty: The political science literature is ambiguous on the relationship between regime type and policy uncertainty. One strand of research suggests that democracy is associated with higher uncertainty due to electoral change and a lack of insulation from special interest politics.[3] As Hirschman has put it, 'the one basic difference between democracy and authoritarianism is that, in the former, uncertainty about the course of policy-making is a conspicuous characteristic of the regime, since that course depends on the uncertain outcomes of popular elections. In an authoritarian regime, certainty about future policy-making is of course not complete either, but there is much greater assurance about the kinds of policies and directions that will never be adopted' (Hirschman, 1992, 179). According to this view democracy is a process of subjecting all interests to competition, such that nobody can be entirely certain that the interests will prevail. Furthermore, the greater the differences between political parties, or degree of polarization, proponents of this view suggest, the greater we should expect the potential for uncertainty over future policies and future economic conditions to be. Another strand of the literature argues that democracy is associated with lower policy uncertainty because of the greater respect democratic governments generally show for

[2] Brunetti et al., 1998, 355.
[3] Hibbs (1991), Olson (1965).

property rights and the rule of law.[4] Drawing on the historical experience of England after the 'Glorious Revolution' of 1688, North and Weingast argue that the emergence of political and civil liberties was inextricably linked with economic freedom. The triumph of parliamentary interests over the monarchy led to checks on sovereign power that allowed much greater predictability in government decision-making and in turn furthered the development of private and public capital markets.[5] More generally, as another group of scholars has pointed out, 'All lasting representative governments that have been observed, however wise or unwise their laws may be, always have extensive property and contract rights' (Clague et al., 1996, 3).

Another group of scholars has argued that what matters is not so much regime type as the time horizons of those in charge, whether autocrats or democrats. Olson has famously argued that 'mobile bandits' are more prone to prey on their subjects than more 'stationary' rulers. Short time horizons encourage rulers to expropriate any assets whose present capital value is less than their tax yield over the period in question. 'By contrast, a similarly rational and self-interested autocrat expecting to rule for a long time (and especially one with dynastic expectations) would gain from respecting – and even protecting – the property of his subjects. This would increase investment and future productivity and thus also his long-run tax collection' (Clague et al., 1996, 244). Empirically, Clague et al. find that the strength of property rights is positively related to the length of time autocratic governments have spent in power. They also find a similar relationship among democracies: property and contracts rights are generally poor in democracies that have lasted only a short time (Clague et al., 1996, 276). A related literature has discussed what we might call 'dynamic uncertainty' – that arising from political cycles, such as elections in democracies or other forms of leadership transition in autocracies. Common sense suggests that uncertainty should be higher the closer a country is to such a transition and the greater the policy differences among contenders for political power. The literature provides some empirical support for these conjectures. Frye finds that in politically polarized post-communist democracies or partial democracies, growth has tended to fall in the year preceding an election but that the effect is absent in countries where there is a political consensus (Frye, 2002, 37). He argues that the explanation lies in the discouraging effect of uncertainty on firm investment and expectations, though he provides no micro-level evidence of the mechanism. Henisz finds that political systems with fewer veto points, and hence fewer checks on reversals in economic policy-making, are associated with lower investment risk (Henisz, 2001). But neither of these studies, nor any other empirical study of which we are aware, has addressed the relationship between political cycles or regime type and uncertainty directly.

Uncertainty over implementation: Uncertainty over implementation can arise out of three distinct sources: bureaucratic capacity, problems with enforcement arising from and

[4] North and Thomas (1989).

[5] Thus 'the principal lesson of our article is that the fundamental institutions of representative government – an explicit set of multiple veto points along with the primacy of the common law courts over economic affairs – are intimately related to the struggle for control over governmental power' (North and Weingast, 1996, 162).

ambiguity in the contents of the rules themselves. This is because, in many situations, the lower level organizations responsible for enforcing business regulations have considerable discretion in doing so. Furthermore the officials tasked with implementing new policies often have different interests and objectives from the policy-makers who designed them. In the Ukraine, for example, bureaucrats responsible for carrying land reforms deliberately subverted them out of fear of their social consequences (Allina-Pisano, 2004). Sometimes the motive is less high-minded. In some cases officials deliberately create uncertainty over the implementation of rules in order to extract bribes from enterprises. An experiment involving driving licenses in New Delhi, for example, found that bureaucrats made it hard for individuals to pass the required test by failing them arbitrarily, irrespective of their skill. In response, applicants pay informal 'agents' to bribe the bureaucrat and avoid taking the exam altogether, thus undermining the very purpose of the regulation (Bertrand et. al, 2006, 25).

Risk aversion and 'fear of the future': Firms' perceptions of uncertainty are not conditioned solely by their external political and economic environment. They are also determined by individual or group-specific attributes that make them more or less risk-averse. In general businesses, like individuals, prefer low-risk to high-risk outcomes. Also like individuals, they tend to overweight the importance of 'catastrophes' like expropriation or re-nationalization. But this is not to say that individuals are alike. Management theorists distinguish a number of characteristics that comprise 'entrepreneurial orientation,' which vary both across cultures and across individuals within a given culture. Among them is a tolerance for ambiguity and uncertainty – measured as the extent to which 'members of a culture feel threatened by uncertain or unknown situations.' Other things being equal, it is argued, people in societies with a norm of high uncertainty avoidance feel 'relatively powerless towards external forces.'[6] Together these factors may explain why firms overall rate uncertainty as such a prominent concern. Even if there are no 'objective' grounds to expect policy to change, fear of the future and the magnifying effects of uncertainty avoidance may still lead them to rank it as a severe constraint. In other words, part of the difficulty may be emotional – which is why some psychologists analyze risk as 'feelings.'[7]

Measurement error: Finally, we must take account of the possibility that the responses on which our analysis is based might be biased. The survey instrument may be subject to measurement error for any of several reasons.[8] One source of bias is the positioning of the question in the survey instrument. Experiments have shown a tendency for respondents to offer identical answers to consecutive questions.[9] These considerations are particularly relevant for items presented in lists, as are the various investment climate constraints in the BEEPS questionnaire. A second source of bias is the identity of the interviewer. For sensitive questions, such as those concerning bribery among public officials, it can make a difference whether the interviewer is from a government agency

[6] Hofstede, 2001, 161.
[7] Loewenstein et al., 2001.
[8] For a cogent discussion of the impact of measurement error on the reliability of regression estimates derived from using subjective measures as the dependent variable, see Bertrand and Mullainathan, 2001.
[9] Iarossi, 2006, 45.

or a private firm: respondents are less likely to acknowledge corruption as a problem to the former than to the latter.[10] Third, it might also be that firms in authoritarian regimes are unwilling to admit to any deficiencies in government policy-making or even in the investment climate more broadly for fear that the government will discover their responses. This consideration is particularly relevant for the firms in our sample, as we discuss below.

Table 1: Theorized influences on firms' perception of policy uncertainty

	Country level	Firm-level
Actual level of policy uncertainty	Political regime type (democracy etc.) Degree of political competition/elite contestation Electoral cycle Degree of political polarization	Sector Ownership (public/private)
Perceived/reported level of policy uncertainty	Freedom of expression 'Culture' of risk aversion/tolerance	Respondent's level of education Respondent's experience Length of time firm has operated

The table above summarizes the preceding discussion. In the rest of this paper we concentrate on the first set of explanations – those relating to macro-politics and ask: How far is policy uncertainty a reflection of the political process? Do we see any variation in reported uncertainty across different types of political regime?

Democracy, Authoritarianism and Policy Uncertainty:

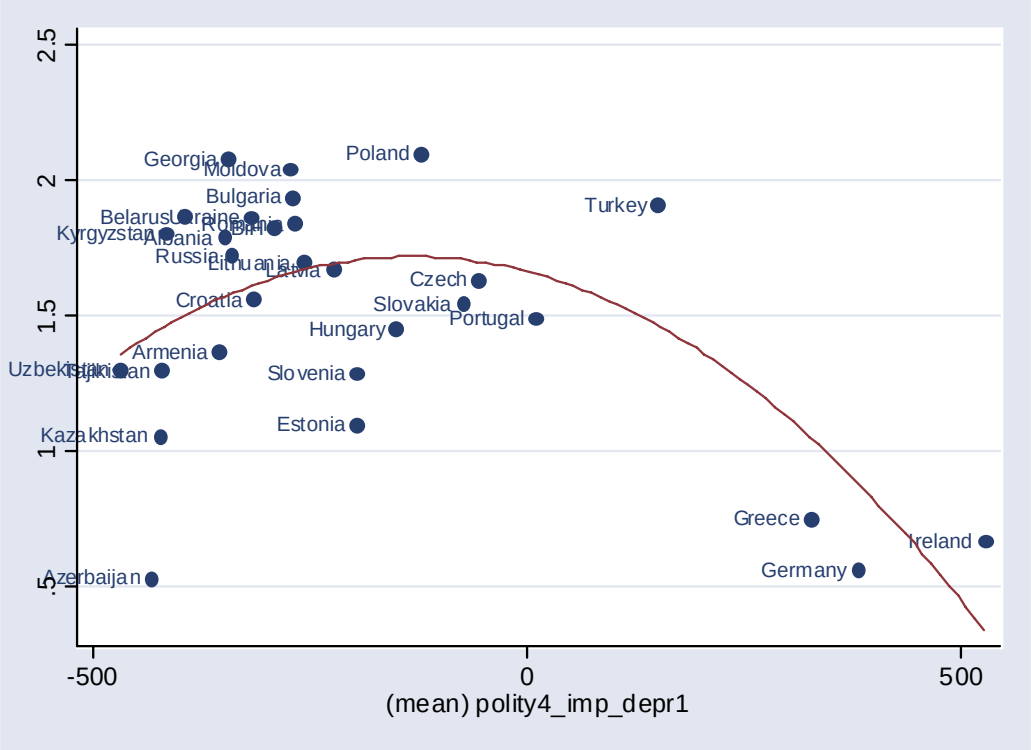
We begin from what appears to be a robust empirical finding – an inverted U-shaped relationship between the level of democracy and firms' perceptions of policy uncertainty. For our democracy indicator we use a stock measure devised by Gerring, Bond, Barndt and Moreno (2005). This is constructed as the weighted sum of each country's Polity2 score from the PolityIV dataset between 1900 and the present year, with greater weight given to more recent years. The Polity2 variable on which it is based measures the extent to which democratic or autocratic 'authority patterns' are institutionalized in a country. It takes into account the degree of competition for office among political elites and the extent to which non elites participate in political processes. The dependent variable is the firm's response to the following question from the BEEPS Survey: 'How problematic is policy uncertainty for the operation and growth of your business?' Respondents were asked to reply on a scale from 0 to 3 with 0 representing 'no obstacle' and 3 representing 'major obstacle.'

Figure 1 shows that firms in countries with either relatively low or relatively high levels of democracy, as measured by that country's score on our stock indicator, report low levels of concern over policy uncertainty. Examples include Azerbaijan and Kazakhstan

[10] Iarossi, 2006, 52.

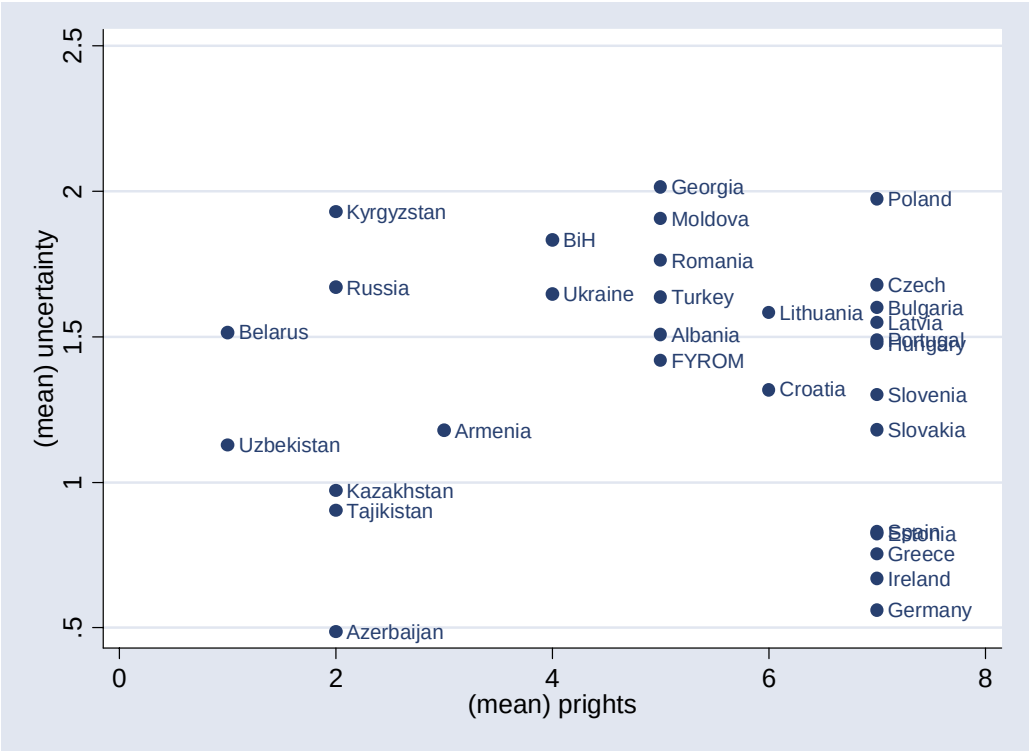
and at the other end of the democracy scale Germany Greece and Ireland. Meanwhile firms from countries in the middle, such as Poland and Turkey, tend to report it as a much more serious constraint. Figures in the appendix show comparable data for 1999 and 2002. The reader will see that countries change position from year to year but that the overall relationship remains strong. The correlation coefficient between the uncertainty variable and the square of the polity variable is negative (-0.10) as expected, and significant at the 1 percent level. Unfortunately the BEEPS survey was extended to the five European countries only in 2005, so we lack information for previous years. The data on which the graphs are based are provided in the appendix.

Figure 1: Democracy Stock and Policy Uncertainty in 2005.



This finding is also robust to other non-stock measures of democracy. Figure 2 shows the same measure of policy uncertainty plotted against Freedom House's index of political rights for 2005. The same relationship appears in the two other years for which we have comparable data. Note that the right hand side of the graph is compressed because these indicators of current political structure do not distinguish between mature, established democracies and the relatively new democracies in central and east Europe. This means that all European Union members, including the transition economies, tend to cluster at the right hand side of the chart. Nevertheless, there is still a clear difference in the reported levels of policy uncertainty between strict authoritarian regimes, such as those in Azerbaijan and Uzbekistan, and hybrid or semi-democratic regimes such those as in Georgia, Moldova and the Ukraine.

Figure 2: Political Rights and Policy Uncertainty in 2005



This finding is consistent with the literature on transition costs. Like other systems transitions, democratization involves the substitution of one set of rules for another. Until the new rules are broadly accepted, however, there is likely to be uncertainty both over their content and how they are implemented. Instead we see what McDermott has described as two 'simultaneous, interdependent experiments – micro level experiments by firms… to reorganize common assets and macro-level experiments by policy-makers to build new institutions.'[11] The finding is also consistent with an emerging set of findings on the characteristics of hybrid regimes more generally. Snyder and Mansfield (1995) found that partial democracies were much more likely to become involved in international wars than authoritarian regimes or liberal democracies, while Zakaria (2003) warned of the bellicose tendencies of populist, illiberal electoral democracies. A more recent survey of episodes of political 'instability' has found that more than one third of all such episodes between 1955 and 2001 occurred in partial democratic regimes, even though these accounted for less than 15 percent of all country-years in the sample (Goldstone et al., 2005, 17).

In the rest of this paper we focus on the authoritarian part of our country sample: that is, on explaining the upward sloping relationship between reported perceptions of policy uncertainty and the level of democracy on the left hand side of Figures 1 and 2.

[11] McDermott, 2002, 25.

Policy Uncertainty and Elite Contestation:

We now turn to those aspects of political reality that might explain the purported relationship between regime type and firms' perceptions of policy uncertainty. We focus on elite turnover and patterns of elite contestation. More specifically, we attempt to test the following two hypotheses:

H1: Policy uncertainty should be higher in polities where there was a change in incumbency during the year of the survey

H2: Policy uncertainty should be higher in polities where contestation is programmatic as opposed to personalized

Principal Variables and Data Sources:

Our dependent variable 'Uncertainty' is the firm's response to the BEEPS question on policy uncertainty as an obstacle to the operation and growth of its business, as reported above. We also employ a modified version of this variable, 'Uncertainty difference', which is calculated as the difference between the firm's assessment of policy and the mean of its responses to all the other questions on investment constraints in the BEEPS questionnaire.[12] This allows us to control for any tendency to over-complain or 'kvetch' on the part of individual managers. Our main explanatory variables are intended to capture the nature and outcome of elite contestation in hybrid regimes. 'Incumbent' is a dummy variable coded one if the incumbent president or party retained power as a result of presidential or parliamentary elections between 2002 and 2005 and zero otherwise. 'Corruption' is a dummy variable coded one if there was a change in incumbency during the period in question and if this change was due to public disapproval of corruption. 'Programmatic' is a dummy variable coded one if there was a change in incumbency that reflected a difference over policy issues or a coalitional realignment of parties involving policy debates. All three variables are measured at the country level. Data on incumbency and the nature of political contestation are from Hale (2005), supplemented by information gathered from official and expert election reports (such as Freedom House's *Nation in Transit*) and media coverage of the presidential and parliamentary elections held between 2002 and 2005. We recognize that there are several difficulties associated with this operationalization. One is that we treat personalized competition as a residual category, assuming that if there was a change in incumbency for reasons other than corruption or policy debate it must have taken this form. It would be preferable to code party platforms more systematically as do Grymala-Busse (2004) and Tucker (2005) for a smaller sample of east European countries, though this is beyond the scope of this paper. A second difficulty is that the distinction between personalized and programmatic competition itself may be problematic, in that policy platforms are often constructed to further the ambitions of individual politicians.

[12] These questions are phrased identically to the question on policy uncertainty and ask to what extent each of the following issues is an obstacle to the operation and growth of the firm's business: electricity, tax rates and administration, corruption, legal system, telecommunication, transport, labor union activities, worker's skills, access to land, finance and the cost of finance.

Control Variables:

We include a number of control variables. The first is the country's history of democracy, as captured by the Gerring et al. Polity IV stock measure described above. Because policy uncertainty is a function of economic, as much as political, conditions, we also attempt to control for observable volatility in economic policy. To do so we include a variable intended to capture the sharpness of fluctuations in macroeconomic policy. 'Volatility' captures variability in fiscal policy and is calculated as the median of the year-to-year changes in budget allocation across functional categories for the previous four years, as calculated by the OECD.[13] We also include a number of firm-level variables. 'Foreign' is the proportion of the firm's equity that is foreign-owned. We might expect foreign firms to have a different frame of reference from domestic firms, perhaps comparing their experience internationally rather than over time. We might also expect them to be less circumspect in expressing discontent with the government's performance than their domestic counterparts. 'Specificity' is coded one if the firm offered training to its skilled workers in the previous year and zero otherwise. This is intended to control for the possibility that policy uncertainty is a more serious problem for industries characterized by high asset specificity (Alt et al. 2003, Iversen and Soskice 2004; Mares 2005). We also include two variables intended to capture firms' closeness to political leaders. The first is firm size, as measured by the number of employees. The second, 'Lobby', denotes whether or not the firm reports having lobbied government in the previous year. We expect firms that lobby to be more susceptible to policy changes – and report greater concern over policy uncertainty – than those that do not.

Results

The table below shows our results. We employ ordered probit since the dependent variable is ordered. Table 2 shows the results for the unaltered version of the dependent variable. Table 3 employs our modified version.

[13] Changes in budget allocation are defined as the absolute values of the difference in expenditure shares for each functional classification from year t to year *t+1*, calculated as a proportion of the year *t* figure.

Table 2: Polity and Firm-level Sources of Policy Uncertainty

	(1)	(2)	(3)	(4)
Incumbent Stays	-0.142 (5.07)**	-0.129 (4.59)**	-0.185 (5.02)**	-0.170 (3.38)**
Democracy Stock	0.221 (9.84)**	0.238 (10.57)**	0.181 (5.60)**	0.147 (3.21)**
Incumbent Changed Due to:				
Programmatic	0.408 (14.77)**	0.429 (15.44)**	0.581 (10.70)**	0.473 (7.24)**
Corruption	0.036 (1.43)	0.036 (1.43)	-0.080 (1.67)	0.006 (0.11)
Control Variables:				
Volatility	2.473 (12.73)**	2.506 (12.88)**	2.276 (8.16)**	2.262 (5.92)**
Export	-0.119 (4.18)**	-0.112 (3.95)**	-0.145 (3.96)**	-0.125 (2.74)**
Foreign	-0.014 (0.42)	-0.002 (0.06)	0.062 (1.42)	0.105 (1.95)
Prev. Govt-owned			-0.110 (2.67)**	-0.132 (2.64)**
Firm Size	-0.036 (2.36)*	-0.061 (3.92)**	-0.012 (0.57)	-0.017 (0.62)
Firm Age	0.002 (3.23)**	0.001 (2.24)*	0.002 (2.51)*	0.002 (1.37)
Lobby			-0.293 (9.74)**	
Asset Specificity				-0.088 (1.83)
Observations	10224	10213	6131	3142

Absolute value of z statistics in parentheses; * significant at 5%; ** significant at 1%.

Table 3: Polity and Firm-level Sources of Policy Uncertainty (Dependent variable is distance from mean of responses for other constraints on investment)

	(1)	(2)	(3)	(4)
Incumbent Stays	-0.190	-0.199	-0.221	-0.238
	(7.58)**	(7.93)**	(8.28)**	(6.73)**
Democracy Stock	0.000	0.000	0.000	-0.000
	(2.94)**	(2.55)*	(1.92)	(0.42)
Incumbent Changed Due to:				
Programmatic	-0.040	-0.049	-0.097	-0.025
	(1.43)	(1.78)	(2.31)*	(0.48)
Corruption	0.076	0.076	0.135	0.106
	(3.03)**	(3.01)**	(3.53)**	(2.23)*
Firm-level controls:				
Foreign	-0.018	-0.021	-0.027	-0.011
	(0.63)	(0.73)	(0.81)	(0.27)
Firm Size	-0.001	0.010	0.032	0.005
	(0.07)	(0.78)	(1.98)*	(0.23)
Exporter	0.007	0.000	-0.033	0.005
	(0.28)	(0.02)	(1.13)	(0.13)
No Lobbying	-0.139	-0.175		
	(5.37)**	(4.55)**		
Asset Specificity	0.013	-0.003	-0.027	
	(0.56)	(0.13)	(0.76)	
Former Govt. Owned			-0.130	-0.137
			(4.63)**	(3.94)**
% Govt. Ownership				0.000
				(0.02)
Constant	1.018	0.785	0.906	1.203
	(11.03)**	(9.67)**	(8.31)**	(7.90)**
Observations	7421	7437	7015	3655
R-squared	0.03	0.02	0.03	0.03

Absolute value of t statistics in parentheses; * significant at 5%, ** significant at 1%. Positive coefficients imply firm reports greater concern over policy uncertainty than other constraints on investment.

The first finding is that, as expected, the incumbency variable is highly significant and has the correct sign in all our specifications. In other words, firms reported greater concern over policy uncertainty in those countries in which there was a change of government during the period of the survey, even controlling for the level of democracy as measured by those countries' accumulated Polity IV scores. Thus, reported policy uncertainty was higher in Croatia in 2002 (1.872) than in 2005 (1.318) and was higher in Macedonia in 2002 (1.791) than in 2005 (1.418). This result also holds when we control for the un-modeled predispositions of firm managers; that is, with our modified version of the dependent variable. Our second principal finding is that the nature of the transition between governments also shapes firms' perception of policy uncertainty. As we hypothesized, programmatic elite contestation is systematically associated with higher reported levels of policy uncertainty. Again, this holds even with the level of democracy controlled for. But this second result is not robust to our re-specification of the dependent variable. Indeed this version of the model gives us the opposite outcome. Firms in polities where executive turnover was due to corruption or scandal tend to report greater concern over policy uncertainty than over other types of business constraint.

Sources of Reporting Bias: Suppression and Anchoring

Next we ask whether this perceived relationship is to due to reporting bias on the part of firms in authoritarian countries. Our most serious concern is that firms in authoritarian countries may refuse to answer or may provide misleading answers to politically sensitive questions. These include those relating not only those to policy uncertainty but also to government efficiency and the incidence of bribe-taking by officials. This would explain the left hand side of the U-shaped pattern above. It might be, for instance, that firms in Uzbekistan and Azerbaijan, for instance, are less willing to report negative perceptions than firms in, say, Russia and Turkey, for fear that the government will discover their answers and take reprisals. How can we test for this bias?

Testing for suppression bias:

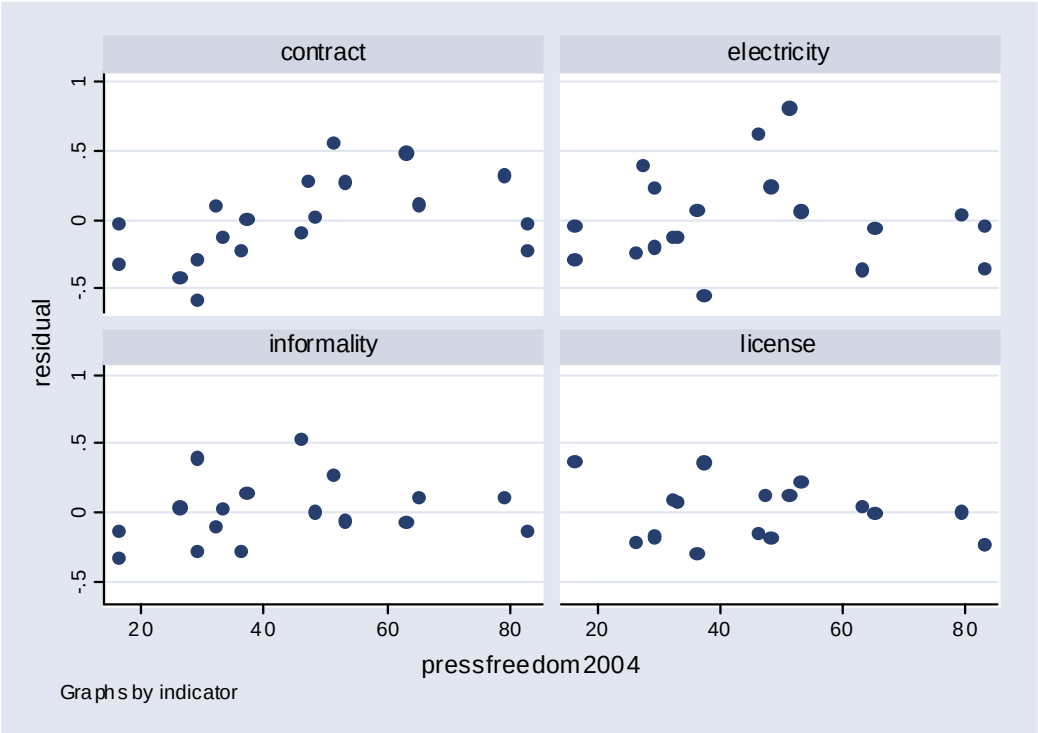
We proceed by comparing the firms' assessments of various constraints on investment with reliable country-level estimates of the same underlying variable. Ideally, we would like these country-level estimates to be both independent and objective – derived from another source and based directly on experience rather than perception. We then relate the difference between these subjective and objective variables to some measure of political openness. If suppression bias is present we would expect firms in authoritarian countries to under-report the severity of the constraint relative to those in more democratic countries. Matching 'subjective' and 'objective' indicators in this way is an inexact task. We choose four questions that might be considered 'sensitive' and therefore subject to bias – those relating to tax evasion, the functioning of the courts and judiciary, the ease of obtaining business licenses and the reliability of electricity supply. We pair each with an independently estimated country-level variable that we would expect to be correlated with firm's responses across countries but not subject to suppression bias. Both sets of indicators are shown in the table below.

Table 5: 'Subjective' and 'Objective' Indicators – Identifying Suppression Bias

Subjective firm-level variable	Objective country-level variable
Percent sales declared for tax purposes	Size of informal economy (Schneider)
'Business licenses' as obstacle to investment	Difficulty of obtaining licenses (Doing Business)
'Judiciary' as obstacle to investment	Difficulty of enforcing contracts (Doing Business)
'Electricity' as obstacle to investment	Percent electricity losses during transmission (WDI)

We then regress each of our firm-level indicators on the relevant objective variable and plot the residuals against a measure of political openness, in this case a press freedom indicator from Freedom House. Were suppression bias to be present, we should expect to see the residuals distributed along an upward sloping line – the intuition being that firms in authoritarian countries should under-report relative to those in more democratic countries. Figure 3 shows the results for contract enforcement, electricity, and tax evasion and licensing. Table 8 in the appendix shows the correlation coefficient between two measures of openness – press freedom and civil liberties – and the residuals from each regression. Only for one indicator, contract enforcement and the judiciary, is the coefficient positive and significant. We interpret this as evidence that firms in authoritarian countries are equally capable of expressing discontent with government polices and performance as those in more democratic ones.

Figure 3: Residuals from regressions of 'subjective' on objective' indicators plotted against press freedom



Note: If residuals are randomly distributed along the zero line there is no systematic suppression bias. Positive relationship would indicate expected bias.

Anchoring Issues:

But there is a second source of complication. Even if respondents answer honestly, we can not be sure that they have understood the question in the way it was intended or that respondents in different firms have understood it in a similar manner to each other. This problem, which is commonly referred to as 'differential item functioning', is often encountered in survey-based research, particularly in the context of health outcomes (King, Murray, Salomon and Tandon, 2004, 192). It is also relevant in this case because the categories according to which our dependent variable is measured are entirely subjective, making them potentially incomparable across firms. More problematically, it points to the possibility of bias. Even if the likelihood of policy change is low, firms in countries with freer media might express greater concern over it, reflecting what sociologists have referred to as the 'echo chamber effect'. This is worrisome because it could account for the positive relationship we observe between liberalization and reported uncertainty.

Table 6: 'Subjective' and 'Objective' Indicators – Identifying Anchoring Problems

Subjective firm-level variable	Objective firm-level variable
'Customs and trade regulations' as obstacle to investment	Av. days to claim goods from customs from arrival at point of entry
'Crime' as obstacle to investment	Percent sales lost to theft, robbery, vandalism or arson
'Corruption' as obstacle to investment	Percent of sales made as 'gifts or informal payments to public officials'
'Electricity' as obstacle to investment	Days of production lost to electricity outages

Fortunately there is also a means of the problem which is quite similar to that we used for suppression bias. As before, we proceed by matching perception-based firm level survey responses to objective measures. This time, however, we employ anchor the perception-based variables to objective variables as reported by the same respondent. Unfortunately, we face the same difficulty as before in that there is no direct anchor for firms' perceptions of policy uncertainty. Instead we consider customs and trade regulations, crime, corruption and access to electricity. The two sets of indicators are listed below. The aim is to assess the degree to which firms are consistent in relating their perceptions of investment climate constraints to their experience. We should like to show that the 'wedge' between experience and perception is uncorrelated with our country level explanatory variable. As before, we regress the subjective on the objective indicators, controlling for the respondent manager's level of education and the number of years the firm has been in business. Other things being equal we should expect the size of the 'wedge' to be negatively correlated with these control variables.

Table 7: Regression Results: Firm-level Regressions of 'Subjective' on 'Objective' Variables

	DV – Crime	DV – Customs	DV – Corruption	DV – Electricity
Objective variable	0.10** (0.00)	0.14** (0.00)	0.16** (0.00)	0.33** (0.00)
Manager's education	-0.06** (0.00)	0.05 (0.14)	-0.01 (0.55)	-0.04** (0.00)

Years of operation	-0.00 (0.46)	-0.00 (0.08)	-0.01 (0.53)	0.00 (0.94)
Constant	0.15** (0.00)	0.57** (0.00)	0.01** (0.00)	0.06** (0.00)

Note: OLS regression with robust standard errors; * significant at the 5 percent level; ** significant at the 1 percent level; p-values in parentheses. Variables standardized to zero mean and unit variance.

We begin with a simple linear specification, which assumes that firms relate perception to experience uniformly across the various outcome categories – in other words the difference in the underlying experiential variable required for a respondent to classify an obstacle as 'moderate' as opposed to 'minor' should be equal to that required to shift it from 'moderate' to 'major' and so on. The regression results are shown in table 7. Note that the variables are standardized to zero mean and unit variance. The coefficients on the objective explanatory variables are positive and statistically significant, as expected. However the substantive effects are relatively small, ranging from 0.1 to 0.33. Neither do the control variables perform as anticipated. Managerial education is significant in only two of the four equations and substantively very small; while the age of the firm appears irrelevant. We interpret this as absence of evidence of systematic anchoring bias arising from differences in the way firms relate perception to experience and as further support for our hypothesis that reported uncertainty is a function of macro-political factors, in particular elite contestation.

Conclusions:

This paper presents two principal findings. The first is that firms' concerns over policy uncertainty, as evidenced by the World Bank-EBRD BEEPS, tend to be greater in hybrid political regimes than in strict authoritarian regimes or liberal democracies. This is consistent with an emerging literature on the effects of regime type on propensity to conflict, economic performance and social outcomes. The second finding is that, within hybrid regimes, policy uncertainty is more of a concern in polities in which there was a change of government during the period of the survey – implying that political contestation is an important determinant of uncertainty. Both results hold after controlling for observable volatility in economic conditions and various other firm-level characteristics, including ownership structure and asset specificity. We also find some evidence that policy uncertainty is higher when change in government was associated with programmatic differences in policy – as opposed to public disenchantment with corruption or scandal – though this finding is not robust after controlling for firms' general perceptions of the investment climate. A further contribution of the paper is to identify and propose a means of testing for potential bias among survey responses in authoritarian and hybrid regimes. The objective-subjective matching method developed here should be useful for assessing other types of perception based data commonly used in political economy, such as property rights protection and corruption. The paper also suggests a couple of avenues for future research. One is to examine further how access to information influences firm's perceptions of the business environment. This might be linked to developments in the commercialization of media at the polity-level. A second is to think more about how firms' perceptions of policy uncertainty interact with social

protection policies – a topic that has received considerable attention in advanced industrial democracies but much less in transition countries (Scheve and Slaughter 2004; Rickard 2005).

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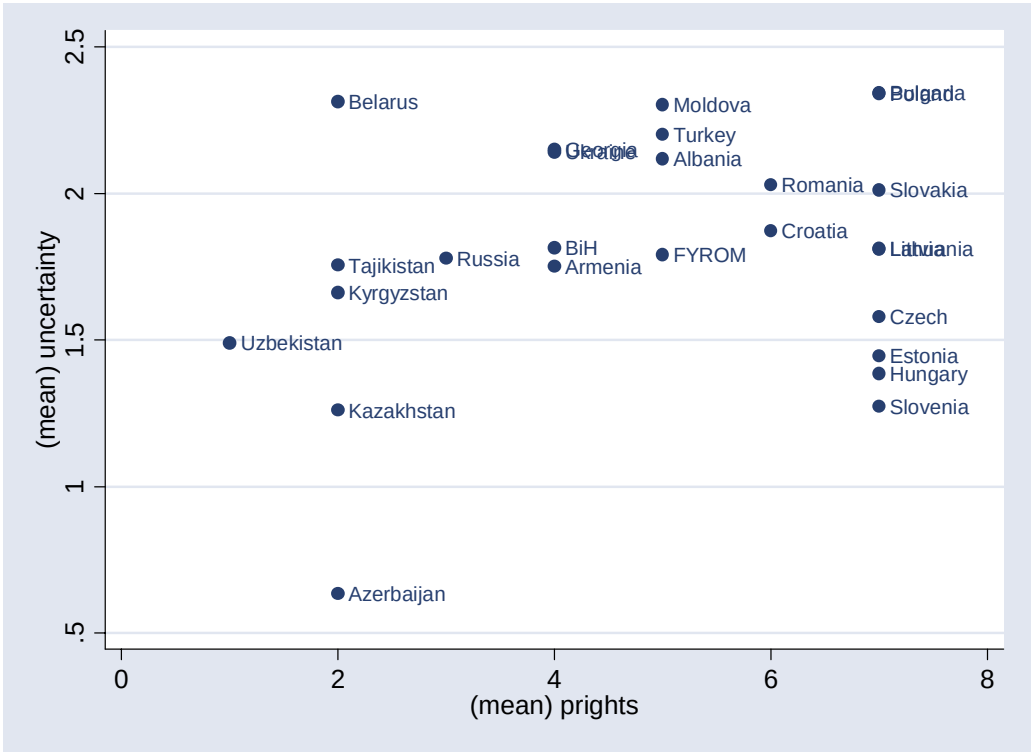
Appendix: Charts and Tables

Table 8: BEEPS Survey Questions:

Policy Uncertainty and Predictability
Can you tell me how problematic are these different factors for the operation and growth of your business? Policy instability/uncertainty [1=no obstacle, 4=major obstacle]
To what extent do you agree with the statement 'Interpretations of the laws and regulations affecting my firm are consistent and predictable'? [1=fully agree, 6=fully disagree]

Source: http://www.ifc.org/ifcext/economics.nsf/AttachmentsByTitle/IC-PICS-ReducedCore_2004-04-23.pdf/$FILE/IC-PICS-ReducedCore_2004-04-23.pdf

Figure 3: Political Rights (Freedom House) and Policy Uncertainty (2002)


(mean) uncertainty
.5
1
1.5
2
2.5
0
2
4
6
8
(mean) prights
Belarus
Moldova
Turkey
Albania
Romania
Slovakia
Croatia
Tajikistan
Russia
BiH
Armenia
FYROM
Kyrgyzstan
Czech
Uzbekistan
Estonia
Hungary
Kazakhstan
Slovenia
Azerbaijan

Residuals and Political Environment: Correlation Coefficients

	Civil Liberties	*Press Freedom*
Informality	0.16 (0.52)	0.19 (0.44)
Contract	0.63** (0.00)	0.46** (0.05)
License	-0.05 (0.81)	-0.24 (0.33)
Electricity	-0.01 (0.97)	-0.01 (0.95)

P-values in parentheses; ** denotes significant at 1 percent level.

Figure 5: Policy Uncertainty in 1999, 2002 and 2005