GOVERNMENT PARTISANSHIP AND PROPERTY RIGHTS: CROSS-COUNTRY FIRM-LEVEL EVIDENCE

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Property rights are essential to economic development but vary with the political environment. We develop and test the claim that government partisanship influences the security of business firms' property rights: the perceived security of property rights increases when right-wing parties take power and declines with the election of left-leaning parties. Unlike research that uses country-level aggregates to draw inferences about the determinants of secure property rights, we analyze survey responses of over 7,400 firm owners from 73 countries using a novel difference-in-differences approach. We find that the political partisanship of the government in power strongly affects individual perceptions of property rights: firm owners are more likely to perceive that their property rights are secure under right-leaning governments. Our results are robust to firm- and country-level economic performance as well as controls for political institutions that might induce more stability to property rights, such as the number of checks and balances (veto players) in a system. Overall, our results indicate that business owners' beliefs about the security of property rights are highly responsive to changes in government partisanship.

1. INTRODUCTION

There is a near consensus that the clarity and security of property rights are an important determinant of economic development (Alchian and Demsetz, 1973; Barzel, 1989; North, 1990; North and Thomas, 1973). However, property rights institutions are driven by economic and political forces and therefore vary over time and place (Besley and Ghatak, 2010; Marcus, 2012). Although recent advances in political economy have emphasized the role of political institutions in establishing and protecting such rights (Acemoglu et al., 2001; Easterly and Levine, 2003; Rodrik et al., 2004), we argue that changes in government partisanship can also influence the security of property rights among business firms.

Our partisan theory of property rights builds on the argument that political parties represent different constituencies and pursue distinctive policies when in office (Hibbs, 1977; McCarty et al., 2006). By the nature of their coalitions, right-wing parties tend to formulate and implement policies that augment the private property rights of business while left-leaning parties are more apt to infringe on these rights, by way of policies that include redistributive taxation, inflation, and labor and environmental protections. We expect firms' assessments of property rights to improve when right-leaning parties take power and decline with the election of left-leaning parties.

Our research design offers two innovations over previous work. First, we evaluate the impact of changes in government partisanship on individual business owners' perceptions of property rights. This distinguishes our study from work that measures property rights from indices generated by legal experts, academics, or business people

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[e.g., the International Country Risk Guide (ICRG)], or from the institutions that supposedly generate secure property rights (e.g., checks and balances, judicial independence, democracy). The advantage of studying business entrepreneurs and managers is that they are key economic agents in the theory of property rights: when firms perceive property rights to be stronger, they are more likely to engage in productive exchange, innovation, and investment (Besley and Ghatak, 2010; Johnson et al., 2002).

For data, we draw upon the responses of business managers and owners to survey questions about property rights protections reported in the World Bank's "World Business Environment Survey" (WBES), conducted in late 1999 and early 2000. The WBES assesses the state of the policy and institutional environment for private enterprise in 80 nations, with a stated purpose of identifying the factors that matter most for investment, productivity, and growth, from the perspective of private sector actors. The WBES employs a common survey instrument, administered to a representative sample of at least 100 firms in each country, to measure investment climate conditions. The standardized approach allows us to draw consistent cross-national inferences from the data.

Our second innovation is to exploit a firm-level recollection assessment of property rights to construct a quasi-panel dataset, which allows us address some sources of endogeneity bias that would normally present a significant obstacle to identifying the effect of partisanship. In addition to providing an assessment of the property rights environment "now," managers were also asked to give a recollection score corresponding to "3 years ago." Our identification strategy estimates how changes in the partisan orientation of the government in which firms operate affect changes in firms' assessments of their property rights.[1]

Our difference-in-differences approach allows us to get closer to causal inference than do designs that lack a baseline assessment of the dependent variable (Meyer, 1995). Specifically, the design reduces omitted variable bias by implicitly controlling for the many time-invariant factors that may affect property rights assessments: the legal traditions of a country, the level of economic development, the sector in which a firm operates, the size of the firm, respondent idiosyncrasies, and so on (Ayyagari et al., 2008). We further address additional sources of heterogeneity by controlling for confounding variables that change over time, such as firm- and country-level economic performance, which may affect both managerial perceptions of property rights as well as changes in the partisan orientation of the government. The related concern involving simultaneity bias (i.e., countries with stronger property rights may choose right-wing governments) falls away since the use of a recollection assessment of the dependent variable, rather than an actual prior assessment of managers' opinions, ensures that perceptions did not directly cause the partisanship change. Our micro-level research design thus provides a direct test of our partisan theory and reduces some of the identification and inferential difficulties associated with recent work on property rights (Glaeser et al., 2004; Przeworski, 2004a, 2004b).

Our results strongly support a partisan, interests-based theory of property rights. In particular, we show that transitions to more right-wing governments are associated with improved perceptions of property rights among firm owners and business manag-

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[1]This retrospective sample design imparts potential "recall biases" to our data (Iarossi, 2006). We address such biases in our empirical analysis.

ers. Substantively, respondents are over 1.6 times as likely to report improved confidence in property rights following a partisan shift from left to right compared with respondents in countries experiencing a transition from right to left. This result holds up to a battery of robustness tests. Indeed, our results remain robust when we control for institutional changes, and when we control for firm- and country-level performance factors that might correlate with partisan changes.

Several caveats apply. First, our results suggest that only property rights *perceptions* improve when there is a shift to the right in government partisanship; whether property rights *enforcement* is actually better when the right is in office is a question beyond the scope of our analysis. Second, and relatedly, while we recognize that firms' decisions to invest and to engage in other behavior that contributes to economic growth depend in part on the strength of property rights, these protections are only one component of the broader business environment. We do not argue that right-leaning parties will be associated with a better overall investment climate or with improved macroeconomic performance. In fact, the literature gives us reason to doubt the conjecture in certain contexts: recent work shows that the left-leaning parties improve the stability of financial markets (Broz, 2011) and increase the depth and breadth of stock markets (Pinto et al., 2010). Third, our study examines property rights among business managers and owners only, and so our results should not lead to inferences about how partisanship affects property rights beyond this group of actors. Our results are consistent with the view that property rights may be selectively specified and enforced (Haber et al., 2003), and so hypotheses regarding the relationship between partisanship and the strength of property rights among other economic factors, including workers, would require a theoretical treatment beyond the scope of this article.

Our focus on firm owners also sets our research apart from the vast literature on partisanship and voter assessments of general economic conditions (e.g., Bartels, 2002, 2006; Conover et al., 1987; Evans and Andersen, 2006; Gerber and Huber, 2010; Lewis-Beck et al., 2008; Wilcox and Wlezien, 1996). While these studies use political surveys to evaluate the link between voters' self-reported party identification and their economic assessments or forecasts, we draw on a cross-country survey of business owners to implement a difference-in-differences model to examine whether changes in party control are associated economic assessments. While the WBES does not have political party identifiers for its business respondents, we do know if respondents operate in countries that experienced a change in party control, and we seek to identify partisan effects off those changes. A key benefit of this approach is that it reduces concerns about "priming" effects caused by embedding political questions, such as party identifiers, with questions about economic conditions. In the extant literature on partisanship, the problem is pervasive, and research has shown that asking political questions prior to economic ones increases the correlation between partisanship and subjective economic assessments (Lau et al., 1990; Palmer and Duch, 2001; Wilcox and Wlezien, 1996). We avoid this priming problem because the WBES is an economic survey, devoid of questions about political preferences.

The plan of the article is as follows. In section 2, we survey work on partisan public policies and develop our theory of partisan property rights. Section 3 describes our data and empirical models. Section 4 contains results and section 5 concludes.

2. PARTISANSHIP AND PROPERTY RIGHTS

Political economists have documented consistent partisan differences in economic policy, with left parties striving to reduce unemployment and right parties focusing primarily on controlling inflation (Alesina and Sachs, 1988; Beck, 1982; Hibbs, 1977, 1987; Keech, 1980). For example, analyses of postwar U.S. data show that unemployment and the income share of the wealthy relative to the poor are both significantly lower under Democratic presidents than under Republicans, while the growth rate of real output is significantly higher (Bartels and Brady, 2003; Hibbs, 1987). Sharp alterations in policies and performance imply that partisan changes in government have profound economic effects, not only in the United States (McCarty et al., 2006), but elsewhere (Alesina et al., 2001; Kenworthy and Pontusson, 2005).

Partisan models focus upon differences in economic policies and outcomes that result from the constituency and ideological orientation of different governments (Persson and Tabellini, 2000; Pinto and Pinto, 2008; Vaaler, 2008). The differing policies and outcomes of left and right governments are based on strategies to forge winning electoral coalitions. Party elites choose these alternative policies because they have different distributional consequences that favor a left coalition of low-skilled workers, the poor, plus middle-class elements or a right coalition of capitalists, business owners, and high-skilled workers. These divergent partisan strategies are more or less constrained by international and domestic institutions and by increasing exposure to international finance and goods markets (Alesina et al., 1997; Boix, 1998; Garrett, 1998; Iversen, 1998).

However, partisanship still influences economic outcomes in predictable ways. Milner and Judkins (2004) and Dutt and Mitra (2005) draw upon Heckscher–Ohlin framework to test a partisan model of trade policy and find that right parties consistently taking more free trade stances than left parties in capital-rich countries, but adopt more pro-trade policies in labor-rich countries than do right-wing ones. Further evidence of partisan effects comes from analyses using financial market data. Herron (2000) finds that in the days leading up to the 1992 British election, changes in the odds of a Labour victory were correlated with changes in British stock indices, leading him to infer that the election of Labour would have caused stock prices to decline by 5–11%. Analyzing U.S. and British equity markets from 1930 to 2000, Leblang and Mukherjee (2005) and Mukherjee and Leblang (2007) show that higher expected inflation and interest rates under left-wing governments depress trading volumes and mean stock prices. Similar analyses of U.S. presidential elections suggest that electing a Republican president raises equity valuations by 2–3% (Snowberg et al., 2007a). Examining bond spreads among 12 developing countries, Vaaler et al. (2005) find that bondholders' perceptions of investment risk increase with the probability that a left-wing government will replace a right-wing incumbent. This evidence establishes that markets respond strongly to whether the government is of the left or right, suggesting that political parties do indeed have different preferences over economic outcomes. Market actors perceive these differences and bid up the value of financial assets in anticipation of partisan shifts to the right.

We extend this line of reasoning to argue that partisanship also influences perceptions of the security of property rights. When economic agents believe that politicians of a certain party are committed to markets, the security of property rights is likely to increase (Przeworski, 1991). By the nature of their coalitions and pro-market ideology,

right parties are likely to pursue policies that preserve private property rights, while left parties formulate and implement policies that are more apt to infringe on these rights, especially those of firms and capital owners, which do not represent their traditional constituency. Indeed, scholars have found that party positions, gleaned from party manifestos, fall primarily along a single, left–right dimension that reflects positions on government intervention in the economy and respect for private property (Gabel and Huber, 2000; Laver et al., 2003).

In party manifestos, right parties generally champion free enterprise capitalism, the superiority of the market over state control, and the security of firms' private property rights (Budge et al., 2001). Since business owners are a core constituency, right parties tend to support private enterprise and markets free of all but essential government involvement. Right parties are also generally opposed to increases in government expenditures for social services such as unemployment insurance, health, housing, and social security and, on the macroeconomic front, favor low inflation and low taxes. Overall, this collection of orthodox policy preferences reflects an overriding respect for the property rights of firms and capital owners and for individual economic liberty, with government limited to ensuring the security of those rights.

Left parties, in contrast, are more likely to formulate and implement legislation and regulations that infringe on the private property rights of business firms. By the nature of their coalition, left parties typically favor redistribution toward the working class, the unemployed, trade unions, and the poor. Left parties also see a general need for state intervention into the economic system and may advocate control over prices, wages, and profits. They may be amenable to government ownership, partial or complete, of productive assets. Left parties are also more likely to introduce, maintain or expand social services (unemployment insurance, health, housing, and social security) and seek special protection for underprivileged (Allan and Scruggs 2004). From taxation for redistributive purposes to business regulation to environmental takings, left parties are more likely than right parties to adopt policies that impinge on the security of firms' private property rights. We thus expect business elites to perceive that their property rights are more protected when right parties are in power than under left parties.

This partisan property rights hypothesis has received little attention in the empirical literature. While Frye (2004) finds support for the argument that partisanship affects the property rights perceptions of Russian business elites in 1998 and 2000, more extensive tests have not been undertaken.

In contrast, there is a voluminous literature linking political institutions, broadly defined, to property rights (Acemoglu et al., 2001, 2002; Dollar and Kraay, 2003; Easterly and Levine, 2003; Hall and Jones, 1999; Jensen, 2008; Knack and Keefer, 1995; Rodrik et al., 2004; Weymouth, 2011).[2] Precisely which political institutions provide and protect property rights is difficult to discern from the literature (Glaeser et al., 2004; Woodruff, 2006). While North and Weingast (1989) emphasize institutions that constrain political authority (an independent legislature to check and balance the power of the crown), Acemoglu et al. (2002) cast a wider net, attributing effective property rights to a "cluster" of formal and informal institutions. The basic logic is that democracy and other checks on government impose constraints on government

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[2] For dissenting views, see Stasavage (2002), Przeworski (2004a, 2004b), Glaeser et al. (2004), and Gourevitch (2006).

opportunism and secure property rights. Since institutional constraints may also limit the ability of partisan governments to pursue policies and regulations that affect property rights, we control for various "institutions" in our analyses.

3. RESEARCH DESIGN AND DATA

A fundamental obstacle to measuring the determinants of property rights is that property rights – unlike investment or GDP growth – are not directly measurable. Researchers generally employ economic outcomes that serve as proxies for property rights (Ahlquist and Prakash, 2008; Weymouth, 2011), or they rely on subjective assessments of property rights. Existing country-level subjective indicators, such as those created by the Heritage Foundation and ICRG, raise important methodological concerns. First, these operationalizations of property rights are likely tainted by the subjectivity and biases of the analyst who devises them. Indeed, it is often the case that we do not know the specific criteria used to generate these ratings. Second, the experts who rate the countries often have no direct involvement in the local economy. The use of these indicators as the dependent variable results in a troubling empirical design in which the independent variable of interest – usually some political institution or government policy – never directly affects the subjects of interest.

Disaggregated individual assessments generated by actual participants in the local economy make superior indicators of property rights because they alleviate many of the sources of bias inherent in county-level measures. Surveys of individuals who conduct business in the local economy are more likely to reflect the reality of economic life, improving the reliability of the measures and ensuring that a treatment effect may be estimated.

Following Frye (2004), Marcus (2012), and Pyle (2011), we study individual perceptions of property rights using firm-level survey data. Our approach is also close in spirit to McMillan and Woodruff (2002), Johnson et al. (2002), and Besley (1995), who present micro-level results that show a link between property rights institutions and the behavior of entrepreneurs, as measured by profit reinvestment rates, and the number and distance of trading relationships between firms. In this approach, firm behavior indirectly reveals the impact of institutions on firm perceptions. Our research, in contrast, ascertains the effect of partisanship directly on the perceptions of individual firm owners. We hypothesize that if partisanship influences policies, then individual perceptions of the security of property rights should follow changes in the partisan orientation of the government.

Our identification strategy exploits changes in the political environment in which the subjects of study operate. We compare the property rights of firms operating in countries that experience a change in government partisanship with those operating in countries that do not experience such a change.

To address potentially sources of endogeneity bias, we rely upon the two-part feature of the WBES property rights question to control for initial heterogeneity among firms. In addition to their assessment of the property rights environment "now," managers provided a score corresponding to "3 years ago." We use the multi-period feature of the WBES question to generate a quasi-panel dataset consisting of two time periods for each of over 7,000 respondents. We model the difference between the "recollection" and the "now" responses to implicitly control for time invariant determinants of individual perceptions.

The WBES survey question that we analyze measures managers' confidence in the contract and property rights in the country in which they are located. The survey asked managers to respond to the following:

"I am confident that the legal system will uphold my contract and property rights in business disputes. To what degree do you agree with this statement?"

The question solicits separate responses in reference to two distinct points in time: "now" (the year 2000) and "3 years ago" (1997). Responses varied along the following ordered scale: 1 = fully disagree, 2 = disagree in most cases, 3 = tend to disagree, 4 = tend to agree, 5 = agree in most cases, 6 = fully agree.[3] Our research design exploits the time distinction to create a quasi-panel dataset consisting of two periods. Figure 1 displays the distribution of responses to the question for both points in time.[4]

Although the "3 years ago" response provides a subjective recollection assessment of property rights, it is precisely this individual subjectivity among business owners that we are interested in capturing. Our intent is to ascertain how partisan alignments affect individual perceptions of the business environment. These recollection assessments are extremely useful because they provide a baseline of perceptions "prior to" changes in the partisan orientation of the government. However, retrospective data also introduce various data quality issues linked to recall errors ("recall bias"). We address these potential problems empirically in section 4.

To motivate the analysis, we conduct a simple comparison of the mean responses among managers operating in four groups of countries, divided according to partisan changes between 2000 and 1997: countries experiencing shifts to the left, countries with left governments and no partisanship changes, countries with right governments and no partisanship change, and countries undergoing shifts to the right. Figure 2 displays the average response among managers in the four sets of countries in 1997 and 2000. The average response to the "now" (2000) component of the question among managers in countries that experience a shift to the left is 3.620, an average improvement of just .068 over the recollection response. In contrast, the average response in 2000 among managers in countries experiencing a shift to the right is 4.005, an increase of .234 over the recollection. The crude "difference in differences" estimate indicates that shifts to the right improve perceptions by .234−.068 = .166 compared with shifts to the left.

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[3]To simplify the interpretation of the results, we reversed the order of the original responses.

[4]We thank an anonymous reviewer for raising the concern that responses to this query may be "middle-inflated" due to "social desirability bias." This bias occurs when uninformed or uncertain individuals give a "neither agree nor disagree" response to a Likert-type survey to appear informed and responsive to the interviewer (Bagozzi and Mukherjee 2012; Alvarez and Franklin, 1994). Where it occurs, the bias inflates the indifferent (middle) category of ordered attitude variables with nonordered responses, making estimates from ordered probit models unreliable and inefficient. It is unlikely that this bias affects our data. Research has shown that the bias is minimized in even-numbered ordered scales that omit the midpoint "neither-nor" category (Garland, 1991; Weems and Onwuegbuzie, 2001). Our six-point WBES scale has no neutral category that uninformed or disinterested firm owners could choose to save face with the interviewer, leaving them able to express the direction and the strength of their opinion. To confirm this intuition, we dropped the two middle categories from the analysis (3 = tend to agree; 4 = tend to disagree) and ran the models in Table 5 (see below) on the set of responses that capture only strong and directional attitudes. Our main results (not reported) are robust to this recoding of the dependent variable even though sample size is reduced by 51%.
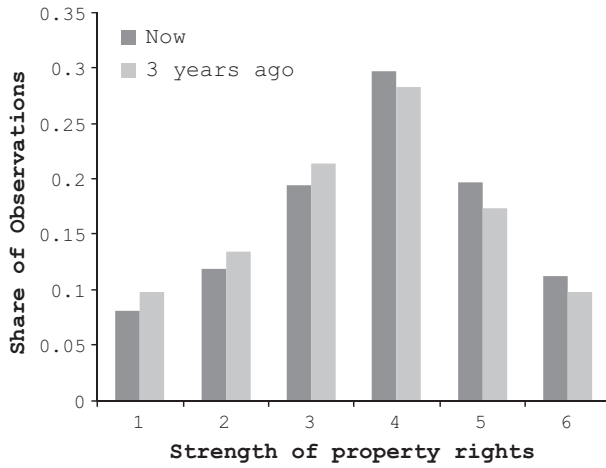
Figure 1. Distributions of property rights perceptions. Notes: The figure displays the distributions of responses to the following WBES question: "I am confident that the legal system will uphold my contract and property rights in business disputes. To what degree do you agree with this statement?" (1 = fully disagree, 2 = disagree in most cases, 3 = tend to disagree, 4 = tend to agree, 5 = agree in most cases, 6 = fully agree). The distributions correspond to perceptions "now" and "3 years ago."
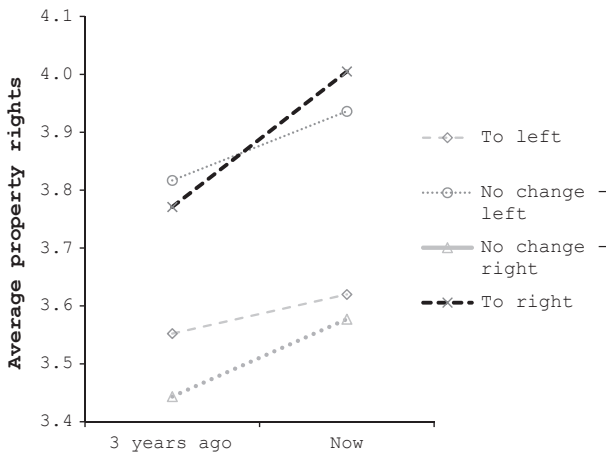
Figure 2. Average responses by partisanship changes. Notes: The figure displays the average "3 years ago" (1997) and "now" (2000) responses to the following WBES question: "I am confident that the legal system will uphold my contract and property rights in business disputes. To what degree do you agree with this statement?" (1 = fully disagree, 2 = disagree in most cases, 3 = tend to disagree, 4 = tend to agree, 5 = agree in most cases, 6 = fully agree). The values correspond to average manager responses among four subsamples: countries experiencing a shift to the right (ΔPartisanship equal to 1); countries with Left governments and no change in partisanship; countries with Right governments and no change in partisanship; and countries experiencing a shift to the Left (ΔPartisanship equal to −1).

Figure 2 also indicates that average property rights assessments "now" and "3 years ago" are lower in countries where the right remains in power for the period (No Change – Right) compared to countries without partisanship changes where the left remains in power (No Change – Left). We are cautious in interpreting differences in the average *levels* since there are many sources of unobserved heterogeneity at the firm-, industry-, and country-level that may account for the average values being higher in countries controlled by the left. For example, imagine if the sample consisted of poor countries with right-leaning parties in power, and rich countries with left-leaning parties in power. We would not be surprised to see that the average assessment of the level of property rights was higher in the subset of rich countries; but partisanship may not account for the difference. To control for time-invariant unobserved heterogeneity, we model changes in property rights perceptions. The figure shows that the average *change* in property rights assessments in "No Change – Right" countries is larger than the average improvement in "No Change – Left" countries (.134 vs. .119). In addition to our main tests of the relationship between partisanship changes and property rights changes, the empirical section confirms the robustness of this difference in differences among countries without partisanship changes.

Figure 2 also reveals a general tendency for property rights assessments to be higher "now" than "3 years ago." Both economic and psychological factors may account for the positive slopes of all groups. The survey was conducted in 1999, which was the peak of the global economic expansion that was fueled by the "dot.com boom." The combination of rapidly increasing stock prices and market confidence may have lead firm owners to associate high growth and profits in the recent past with better property rights protections in the present. However, "optimism bias" may also have affected firm owners' assessments of property rights. Optimism bias is the psychological tendency to believe that favorable future events are more likely than they actually are (Sharot, 2011). Researchers find that individuals are unrealistically optimistic about future events; furthermore, entrepreneurs are significantly more optimistic than non-entrepreneurs and also more likely to be optimistic about the general state of the economy (Coelho et al., 2004; de Meza and Southey, 1996; Puri and Robinson, 2006, 2007; Weinstein, 1980). In the context of the actual economic boom during which the WBES was administered, this "things are getting better all the time" bias may help explain why firm owners' had lower recollection assessments of property rights conditions than they had at the time of the survey.

We wish to identify the effect of political partisanship on individual property rights perceptions by controlling for confounding variables. Consider the property rights assessment PR of firm i in country j in the year 2000:

$$PR_{ij}(2000) = \beta P_j + E_j' \gamma + \delta F_{ij^-} + \zeta_{ij} + \eta_j, \tag{1}$$

where P_j is the partisan orientation of the government in 2000, E_j are country-level macroeconomic indicators in 2000, F_{ij} is firm-level performance, and ζ_{ij} and η_j are unobservable firm (respondent) and country factors, respectively.

The main obstacle to identifying the effect of P_j is the lack of data to account for ζ_{ij} and η_j. We exploit the "3 years ago" response to control for this unobservable heterogeneity in the following manner. Consider the "3 years ago" response as a function of similar factors, each corresponding to 1997:

$$PR_{ij}(1997) = \beta P_j + E_j' \gamma + \delta F_{ij^-} + \zeta_{ij} + \eta_j. \tag{2}$$

Subtracting equation (2) from equation (1), we derive the following empirical model:

$$\Delta PR_{ij} = \alpha + \beta \Delta P_j + \Delta E_j' \gamma + \delta \Delta F_{ij} + \varepsilon_{ij}, \tag{3}$$

where ΔPR_{ij} indicates the change in property rights perceptions between 2000 and 1997; ΔP_j is the change in the partisan orientation of the government, ΔE_j are changes in the macroeconomic environment, and ΔF_{ij} captures the recent performance of the firm. An advantage of our approach is that ζ_{ij} and η_j difference out of the model; that is, we implicitly control for firm- and country-level fixed effects, the exclusion of which would otherwise introduce omitted variable bias into our estimates. We follow existing literature that uses the WBES survey (Beck et al., 2006; Broz et al., 2008) and estimate equation (3) with an ordered probit model using standard maximum likelihood. Consistent with these studies, we allow that the standard errors cluster within countries to account for the possible correlation of error terms among firms in the same country, while maintaining the assumption of independence among the error terms across countries.

Our data sources are as follows. For an indicator of partisanship, we turn to data from the World Bank Database of Political Institutions, or DPI (Beck et al., 2001). Beck et al. (2001) use two types of classification criteria to code the partisan orientation of executives as it relates to economic policy: the content of party names and judgments by academic and professional commentators. In terms of content, they defined parties as "right-wing" based on whether terms such as "Conservative" or "Christian Democratic" was included in party names. A "left-wing" definition followed from party names with terms such as "Communist," "Marxist," "Socialist," or "Social Democratic." Failing a clear indication based on content, academic, and professional commentator judgments were used. The "centrist" classification followed from no clear criteria based on party name: academic and professional judgment was the primary source. For example, a party was classified as Centrist if it advocated the strengthening of private enterprise but also supported some substantial redistributive role for government. If both name-based and commentator-based criteria could not clearly classify a party into left-wing, right-wing, or centrist category, it was placed in a fourth classification as "Other."

Using the DPI partisan orientation data, create the variable ΔPartisanship.[5] This measure is derived using the following country-level coding of the political orientation of the executive branch: Right = 3, Center = 2, Left = 1.[6] To capture change in the political orientation of the executive between 2000 and 1997, we define ΔPartisanship as follows: -1 = shift to the Left; 0 = no change; 1 = shift to Right. Our regressions measure the relationship between changes in property rights and changes in the partisan orientation of the government (ΔPartisanship).

A plausible alternative hypothesis is that changes in firm owners' property rights perceptions follow changes in objective national economic conditions, such that an

[5]We supplement approximately 20 missing observations from the DPI partisanship data using data from Plouffe (2008). Our primary results hold when we analyze the truncated sample that includes solely the DPI data.
[6]Following Dutt and Mitra (2005), we employ the DPI coding of the partisan orientation of the chief executive in presidential systems, that of the largest party in government among parliamentary systems, and the average of the two for countries coded as "mixed" (assembly elected presidentialism).

improvement in the overall economy leads firm owners to perceive an improvement in property rights. This hypothesis is derived from the economic voting literature in which decades of research overwhelmingly suggests a robust connection between economic variables and individual vote choice in elections (e.g., Kramer, 1971; Lewis-Beck, 1988; Lewis-Beck and Paldam, 2000; Lewis-Beck and Stegmaier, 2000). Economic voting studies vary in terms of the specific economic factors included in models of vote choice, but the consensus is that retrospective assessments of the national economy are the best predictor of voting behavior (Lewis-Beck and Paldam, 2000). Economic voting of this type is called "sociotropic voting" and suggests that voters gauge the performance of incumbents on the economic well-being of the nation as a whole and not simply their personal financial situation (Kinder and Kiewiet, 1981). If objective national economic conditions influence partisanship, and if firm owners form property rights perceptions on the basis of economic conditions, then we need to control for changes in aggregate economic conditions in our analyses.[7]

We test the robustness of our findings to changes in political institutions. We do not view the inclusion of institutional controls as a test of an alternative institutional hypothesis, since the persistence of institutions biases against finding an effect on property rights perceptions over a relatively short period of time. Rather, these controls are intended to isolate the effect of partisanship changes from potentially confounding changes in political conditions. To inform our selection of variables, we draw on insights from institutional models, which highlight how democratic institutions, particularly those that constrain the executive, improve property rights. Following Glaeser et al. (2004) and Woodruff (2006), we differentiate between two sets of empirical measures of democracy. One set of "soft" or "informal" indicators gauge the overall level of democracy by way of subjective expert opinion, while a more "formal" set of indicators measure the number of checks and balances in government. The most commonly applied indices in empirical work are informal indicators such as Polity and Freedom House, which are derived through expert assessments of the overall democratic climate. ΔPolity and ΔFH Political Rights represent the differences in the values of the Polity 2 score and the Freedom House Political Rights indicator between 2000 and 1997, respectively.

Formal indicators of democracy, in contrast, attempt to avoid expert subjectivity and to achieve a degree of replicable quantification by considering the number of checks and balances (veto players) in government institutions. Checks and balances are expected to constrain expropriation and therefore to improve property rights. We draw upon the DPI variable Checks, which "counts the number of veto players in a political system, adjusting for whether these veto players are independent of each other, as determined by the level of electoral competitiveness in a system, their respective party affiliations, and the electoral rules." The index yields a minimum score (1) in the absence of an effective legislature, and the score then increases linearly – reaching a maximum of 18 – with the addition of veto points with political preferences closer to those of the opposition.[8] Our model introduces the variable ΔChecks, which represents the difference in DPI Checks between 2000 and 1997.

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[7]We also control for firm-level economic performance since economic success may induce a halo effect that positively influences evaluations of property rights.

[8]In Presidential regimes, the opposition is defined as the largest opposition party; under Parliamentary systems, the opposition equates to the three largest opposition parties.

TABLE 1 SUMMARY STATISTICS

Variable	N	Mean	SD	Min.	Max.
ΔProperty Rights	7414	0.153	0.771	−5	5
Sales (1 year)	7414	9.808	7.909	−2.120	25.328
ΔHelpful Government	7040	0.058	0.869	−4	4
ΔPartisanship	73	−0.082	0.464	−1	1
ΔPolity	71	0.859	3.186	−9	13
ΔFH Political Rights	73	0.027	0.912	−2	4
ΔChecks	69	−0.261	1.844	−13	3
ΔPolcon	73	−0.006	0.110	−0.348	0.423
ΔGrowth	73	−0.086	5.648	−29.134	17.025
ΔTrade	72	7.321	12.224	−19.639	38.688
ΔInflation	66	−0.436	1.183	−6.497	1.175

Notes: Table 1 reports overall summary statistics. Variable definitions and sources are provided in the text.

Henisz (2002) develops an alternative index of institutional checks and balances derived from a simple spatial model of the extent to which any one political actor is constrained in future policies. The variable Polcon 3 directly measures the feasibility of a change in policy as a function of a change in the structure of a country's political institutions (veto points). Polcon 3 considers as veto points the executive, and lower and upper legislative chambers. Higher values along a continuous range from 0 to 1 indicate more political constraints. We take the difference in Polcon 3 between 2000 and 1997 to generate ΔPolcon.

We report summary statistics in Table 1. Tables 2 and 3 present correlation coefficients among country- and firm-level variables, respectively. For country-level values of the main variables employed in our study, see Table 4.

4. EMPIRICAL RESULTS

Our models seek to estimate the effect of changes in partisanship on managers' perceptions of property rights. Table 5 presents the estimates of an ordered probit model in which the dependent variable is ΔProperty Rights. In Model 1, ΔPartisanship enters positive and strongly significant, indicating that a shift in the political orientation of the executive to the right increases the probability that a manager reports improved confidence in the property and contracting environment. A shift from left to right is associated with a 4% increase in the predicted probability that a manager reports a one-point improvement in ΔProperty Rights.

Our estimates indicate that the one-year sales performance of the firm is also strongly associated with property rights improvements.[9] To compare the substantive effect of the two independent variables, we estimate the model using OLS (see Table A1 of the online appendix). The estimated coefficient indicates that a one-standard-deviation increase in ΔPartisanship Change is associated with an increase in ΔProperty Rights of .05 SD. The substantive effect of partisanship rivals the firm-level performance effect, where a one-standard-deviation increase in sales is associated with a .07 SD improvement in ΔProperty Rights.

[9]We conducted robustness tests that included the reported change in firm sales as an alternative proxy for firms' performance. While our results remain robust and indeed increase in significance when we use sales change as an alternative indicator of performance, the response rate to the question was low, reducing the sample size by over 1,500 firms.

TABLE 2   CORRELATIONS AMONG COUNTRY-LEVEL VARIABLES

	ΔPartisanship	ΔPolity	ΔFH Political Rights	ΔChecks	ΔPolcon	ΔGrowth	ΔTrade	ΔInflation
ΔPartisanship	1							
ΔPolity	−0.075	1						
ΔFH Political Rights	−0.060	0.622*	1					
ΔChecks	−0.091	0.1473	0.144	1				
ΔPolcon	0.047	0.384*	0.239	0.015	1			
ΔGrowth	−0.092	0.025	−0.044	−0.012	0.086	1		
ΔTrade	0.001	0.033	0.020	−0.024	0.196	0.290	1	
ΔInflation	0.234	0.013	−0.036	−0.034	0.113	−0.505*	0.089	1

Notes: Table 2 displays pairwise correlation coefficients among country average values.
*Indicates significance at 1%.

TABLE 3   CORRELATIONS AMONG FIRM-LEVEL VARIABLES

	ΔProperty rights	Sales (1 year)	ΔSales (3 year)	ΔHelpful government
ΔProperty rights	1			
Sales (1 year)	0.072*	1		
ΔSales (3 year)	0.028	−0.053*	1	
ΔHelpful government	0.239*	0.118*	0.063*	1

Notes: Table 3 displays pairwise correlation coefficients among firm-level variables.
*Indicates significance at 1%.

The results are robust to the inclusion of changes in political institutions (columns 2–6). We note in column 3 that ΔFH Political Rights enters positive and statistically significant at the 95% level of confidence, indicating that property rights perceptions improve in countries where political rights improve. The measures of veto players do not appear to contribute to property rights perceptions, however. Indeed, in column 5, ΔPolcon enters with a negative albeit with a significant insignificant coefficient. We are reluctant to draw inferences from the coefficients corresponding to these institutional changes given that institutions are generally viewed as relatively persistent, and we are observing institutional changes over a short period of time. Furthermore, the estimated coefficient corresponding to our alternative indicator of veto players, ΔChecks, is positive but not significant. Finally, while just 11% of countries in our sample did not hold elections during the sampling period, the existence of an election could affect our results.[10] In column 6, we include a dummy variable indicating that an election occurred between 1997 and 2000. We note that ΔPartisanship remains positive and significant to the inclusion of each of these controls.[11]

[10]We thank an anonymous reviewer for raising this point.

[11]In a series of models reported in Table A2 of the online appendix, we further examine whether the institutional environment influences property rights. The only evidence of meaningful institutional effects relate to the OECD, and we find that firms in OECD countries are less likely to report improvements in property rights over the 3-year period (column 5 of Table A2), and partisanship changes are not related to property rights improvements in the subset of eight OECD nations that appear in our sample (column 6). Though we are reluctant to draw inferences due to the small sample size, these results suggest that partisan governments are less likely to influence managers' perceptions of property rights in wealthy, established democracies, where property and contract protections are strong and relatively stable.

TABLE 4 COUNTRY-LEVEL STATISTICS

Country	Response rate	ΔProperty Rights	ΔHelpful Government	Sales (1 year)	ΔSales (3 year)	ΔPartisanship	ΔPolity	ΔFH Political Rights	ΔChecks	ΔPolcon	ΔGrowth	ΔTrade	ΔInflation
Albania	0.755	0.093	−0.086	0.622	22.463	−1	0	0	0	0.033	17.025	9.414	−6.497
Argentina	0.980	0.031	−0.032	16.854	7.888	−1	1	1	2	−0.098	−8.624	−0.897	.
Armenia	1.000	0.136	−0.081	0.390	−20.448	0	11	1	0	0.196	1.850	−4.630	.
Belarus	0.856	−0.065	−0.252	0.478	10.814	0	0	0	−2	0.000	−5.756	16.093	0.970
Belize	0.960	0.188	0.596	16.835	12.346	0	.	0	0	−0.213	10.063	18.140	−0.534
Bolivia	0.950	0.284	−0.065	14.734	2.948	1	0	0	1	0.073	−2.310	−4.872	−0.022
Bosnia and Herzegovina	0.962	0.337	0.165	1.278	71.364	0	.	0	.	0.000	−29.134	6.849	.
Botswana	0.891	0.250	0.444	15.147	27.617	0	0	0	−1	−0.120	−1.299	−11.382	−0.014
Brazil	0.980	0.081	0.000	16.629	2.449	0	0	0	−2	−0.020	0.983	5.879	0.017
Bulgaria	0.832	0.000	−0.155	0.962	9.000	0	0	0	0	−0.020	12.436	4.825	−4.631
Cambodia	0.844	0.051	0.068	10.449	7.305	−1	9	1	.	0.394	3.593	32.675	.
Cameroon	0.947	0.278	0.633	15.013	13.294	0	0	0	−1	0.000	−0.777	3.126	−1.361
Canada	0.980	−0.010	0.021	17.036	16.753	0	0	0	0	0.039	1.178	8.385	0.517
Chile	0.960	0.010	0.022	16.871	7.654	0	1	0	0	0.002	−1.885	5.042	−0.468
China	0.911	0.326	0.321	14.034	4.877	0	0	0	0	0.000	−0.638	5.231	−2.397
Colombia	0.980	0.364	0.192	15.853	6.827	1	0	0	3	−0.102	−0.403	0.657	−0.695
Costa Rica	0.970	0.021	0.021	15.921	23.722	1	0	0	0	0.030	−3.452	9.054	−0.185
Croatia	0.969	0.089	−0.033	1.596	9.915	0	13	2	2	0.000	1.051	3.274	0.104
Czech Republic	0.898	−0.016	−0.026	0.882	9.027	−1	0	0	−2	−0.209	4.372	20.401	−0.784
Dominican Republic	1.000	1.009	0.482	16.002	20.958	0	0	1	0	−0.050	−2.201	6.498	−0.071
Ecuador	0.950	0.379	0.064	16.996	−5.257	1	−2	0	0	0.423	−0.965	16.717	1.143
Egypt	0.951	0.419	0.484	13.302	14.893	0	0	0	0	0.000	−0.128	−4.720	−0.544
El Salvador	0.952	0.545	0.177	15.540	−0.857	0	0	0	0	0.053	−1.740	6.388	−0.682
Estonia	1.000	0.409	0.173	1.213	63.358	0	3	0	0	0.000	−2.550	18.473	−0.966
Ethiopia	0.886	0.315	0.560	13.974	24.226	0	0	−1	0	0.000	3.041	6.772	−1.285
France	0.930	0.130	0.019	16.872	20.818	−1	0	0	0	0.067	1.511	7.724	0.325
Georgia	0.783	0.584	0.030	0.448	12.956	0	0	−1	.	−0.143	−8.945	4.909	−0.556

(continued)

TABLE 4 (continued)

Country	Response rate	ΔProperty Rights	ΔHelpful Government	Sales (1 year)	ΔSales (3 year)	ΔPartis-anship	ΔPolity	ΔFH Political Rights	ΔChecks	ΔPolcon	ΔGrowth	ΔTrade	ΔInflation
Germany	0.970	0.010	-0.729	17.448	9.864	-1	0	0	-1	0.000	1.448	12.705	-0.245
Ghana	0.899	0.474	0.528	15.141	26.533	0	0	1	0	0.000	-0.348	30.647	-0.102
Guatemala	0.915	0.495	0.469	16.679	18.544	0	0	0	0	-0.147	-0.833	7.594	-0.435
Haiti	0.757	0.256	0.280	14.249	2.060	0	-9	-2	0	-0.348	-1.678	9.215	-0.405
Honduras	0.880	0.068	0.054	18.848	11.161	0	1	-1	0	-0.041	0.894	22.388	-0.603
Hungary	0.977	-0.071	-0.158	1.156	27.938	0	0	0	1	0.037	0.529	38.688	-0.624
India	0.948	0.182	0.514	5.921	13.228	1	0	0	-13	-0.036	0.041	4.494	-0.580
Indonesia	0.970	0.447	0.181	18.095	-6.591	0	13	4	1	0.167	0.267	15.443	-0.516
Italy	0.900	0.022	0.012	20.694	16.224	0	0	0	0	0.000	1.827	6.587	0.217
Kazakhstan	0.724	-0.054	-0.273	0.637	7.286	0	0	0	0	0.000	6.811	33.340	-0.278
Kenya	0.947	-0.082	0.095	15.348	0.337	0	0	0	0	0.026	0.241	-0.748	-0.130
Kyrgyz Republic	0.808	-0.168	-0.278	0.291	0.930	0	0	-2	.	0.000	-3.978	4.953	-0.226
Lithuania	0.848	0.053	-0.043	0.836	9.094	-1	0	0	-2	0.000	-2.903	-18.852	-2.193
Madagascar	0.905	0.030	0.190	12.860	16.205	0	-1	0	-1	-0.030	1.130	16.858	0.972
Malawi	0.909	-0.414	-0.240	15.295	70.704	0	0	-1	0	-0.013	-2.352	5.997	1.175
Malaysia	0.870	0.103	0.244	17.977	0.771	0	0	-1	0	0.040	1.799	34.742	-0.551
Mexico	0.960	0.229	0.229	15.748	23.353	0	2	1	3	-0.026	-0.136	3.232	-0.776
Moldova	0.608	-0.224	-0.500	0.361	-21.283	0	0	1	-1	0.009	-8.688	-3.864	0.978
Namibia	0.958	0.050	0.132	15.215	30.330	0	0	0	0	-0.071	-0.434	-19.639	.
Nicaragua	0.890	0.056	0.114	17.264	18.943	0	0	2	0	0.000	0.492	4.049	.
Peru	0.972	0.581	0.505	16.215	-2.913	0	4	0	0	0.000	-3.669	1.216	-0.824
Poland	0.884	0.161	0.000	1.282	31.975	0	0	0	1	-0.309	-2.191	9.928	-0.405
Portugal	0.830	0.169	0.354	19.831	13.348	0	0	0	-1	0.021	-0.437	5.222	0.275
Romania	0.832	0.144	-0.149	0.672	4.920	0	0	0	0	0.000	8.046	5.174	-1.221
Russia	0.819	0.030	-0.108	0.593	27.444	0	3	-2	-1	-0.012	8.305	20.837	0.341
Senegal	0.669	0.759	0.364	12.750	18.374	0	9	1	0	-0.070	0.129	4.275	-0.766
Singapore	0.990	0.192	0.268	17.778	11.753	0	0	0	0	-0.032	3.405	.	-0.386

(continued)

TABLE 4 (continued)

Country	Response rate	ΔProperty Rights	ΔHelpful Government	Sales (1 year)	ΔSales (3 year)	ΔPartisanship	ΔPolity	ΔFH Political Rights	ΔChecks	ΔPolcon	ΔGrowth	ΔTrade	ΔInflation
Slovak Republic	0.922	0.101	0.302	0.988	16.119	−1	2	1	−2	0.000	−4.059	21.151	0.678
Slovenia	0.960	0.175	0.017	1.617	27.653	0	0	0	−1	−0.021	−0.968	7.156	0.060
South Africa	0.983	0.000	0.150	18.240	24.459	0	0	0	0	0.018	1.282	4.753	−0.476
Spain	0.981	0.152	0.011	15.584	25.587	0	0	0	0	0.000	0.576	9.452	0.555
Sweden	0.961	−0.052	0.000	16.202	23.732	0	0	0	1	0.037	1.877	10.153	0.695
Tanzania	0.904	0.882	0.760	14.470	28.626	0	0	1	0	0.000	1.625	−0.861	−0.999
Thailand	0.398	0.315	0.149	19.481	−7.641	0	0	1	0	0.000	5.893	30.318	−1.262
Trinidad and Tobago	1.000	0.079	0.190	14.762	18.113	0	0	−1	−1	0.000	3.535	−6.569	−0.020
Tunisia	0.942	0.275	0.135	17.419	14.045	0	0	0	0	−0.144	−0.485	2.740	−0.209
Turkey	0.913	0.007	0.007	1.579	9.962	−1	0	0	2	0.015	−0.626	−11.778	−0.445
Uganda	0.927	0.738	0.736	13.627	19.561	0	0	−2	0	0.000	0.477	−1.035	−0.879
Ukraine	0.809	−0.066	−0.422	0.564	4.393	0	−1	−1	−1	0.183	9.084	35.617	0.571
United Kingdom	0.971	0.010	0.022	16.230	27.955	−1	0	0	−1	−0.021	0.503	0.421	−0.068
United States	0.980	0.082	0.021	17.020	16.328	0	0	0	0	−0.001	−0.756	1.953	0.368
Uruguay	0.960	0.021	0.011	15.950	0.083	0	0	0	0	−0.010	−6.182	−0.993	−1.426
Uzbekistan	0.976	0.107	−0.134	0.697	63.880	0	0	0	0	0.000	−0.488	−10.932	.
Venezuela	0.970	0.330	−0.161	17.222	−2.461	−1	−1	−1	−1	0.000	−2.460	−3.388	−1.127
Zambia	0.905	0.211	0.133	14.395	10.450	0	0	0	0	0.000	0.576	4.469	0.064
Zimbabwe	0.938	−0.235	−0.254	14.696	44.190	0	3	−1	0	0.000	−9.678	−10.042	1.093

Notes: The table reports country-level summary statistics. Response rate is the share of total surveyed firms in each country responding to ΔProperty Rights. The values corresponding to ΔProperty Rights, ΔHelpful Government, Sales (1 year), and ΔSales (3 year) represent average values (by country) for firms in our sample.

TABLE 5 DETERMINANTS OF PROPERTY RIGHTS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Log sales (1 year)	0.011** (0.004)	0.012*** (0.005)	0.009** (0.004)	0.012*** (0.004)	0.011*** (0.004)	0.011** (0.005)	0.013*** (0.004)	0.011*** (0.004)	0.010** (0.004)	0.014*** (0.006)
ΔPartisanship	0.136*** (0.042)	0.141*** (0.045)	0.159*** (0.049)	0.130** (0.051)	0.130*** (0.046)	0.136*** (0.043)	0.146*** (0.053)	0.116** (0.057)	0.120** (0.060)	0.181** (0.083)
ΔPolity		0.009 (0.008)								
ΔFH Political Rights			0.087** (0.038)						0.047 (0.038)	
ΔChecks				0.008 (0.007)						
ΔPolcon 3					−0.312 (0.193)					
Election						0.010 (0.111)				
ΔGDPPC							−0.022** (0.011)	−0.022** (0.010)	−0.019 (0.012)	−0.031** (0.014)
Growth							0.003 (0.011)	0.004 (0.010)	0.003 (0.012)	0.006 (0.014)
ΔTrade							0.003 (0.003)	0.004 (0.003)	0.003 (0.003)	0.006 (0.005)
ΔInflation							−0.112*** (0.035)	−0.093*** (0.031)	−0.082** (0.034)	−0.129*** (0.046)
ΔHelpful Government								0.309*** (0.027)	0.307*** (0.027)	0.334*** (0.031)
Observations	7414	7271	7414	6862	7414	7414	6491	6149	6149	6149
Countries	73	71	73	69	73	73	65	65	65	65
Log likelihood	−6559.692	−6419.427	−6542.025	−6117.117	−6555.892	−6559.663	−5727.617	−5181.429	−5177.241	−2652.072
Pseudo R²	0.005	0.006	0.008	0.006	0.006	0.005	0.011	0.042	0.042	0.066

Notes: In models 1–9, the dependent variable is ΔProperty Rights, the firm-level difference between the "now" and the "3 years ago" responses to the following WBES inquiry: "I am confident that the legal system will uphold my contract and property rights in business disputes. To what degree do you agree with this statement?" (1 = fully disagree, 2 = disagree in most cases, 3 = tend to disagree, 4 = tend to agree, 5 = agree in most cases, 6 = fully agree). Models 1–9 are estimated using ordered probit. The dependent variable in model 10 is a dichotomous variable that takes a value of 1 if ΔProperty Rights is positive, zero otherwise. Model 10 is estimated using probit. All change variables represent the difference between 2000 and 1997. ΔPartisanship is the change in the country-level coding of the political orientation of the executive branch between 2000 and 1997 (−1 = shift to Left, 0 = no change, 1 = shift to Right). ΔHelpful Government represents the firm-level difference between the "now" and the "3 years ago" responses to the following WBES inquiry: "Please rate your overall perception of the relation between government and/or bureaucracy and private firms on the following scale. All in all, for doing business I perceive the state as:" 1 = Very Unhelpful to 5 = Very Helpful. The economic variables are the difference between the 2000 and 1997 values. GDP per capita and inflation are logged. Robust standard errors adjusted for country-level clustering in parentheses.
***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

To test the effect of partisanship against the alternative hypothesis that national economic variables influence property rights assessments, model 7 includes GDP/capita growth, trade, and the log of inflation, all entered as changes between 2000 and 1997. If changes in partisanship are endogenous to national economic performance, and if firm owners draw inferences about the status of property rights on the basis of general economic conditions, then the introduction of these variables should diminish the significance of ΔPartisanship. This does not appear to be the case, as our primary result holds, and indeed strengthens, to the inclusion of the economic control variables. We find evidence that inflation strongly influences property rights perceptions: managers in countries experiencing increased inflation are less likely to report improvements in property rights. The OLS coefficient estimate from model 7 of Table A1 indicates that a one-standard-deviation increase in ΔInflation (equivalent to approximately 1.2%) reduces ΔProperty Rights by .11 SD. This result is consistent with the view that inflation impacts managers' perceptions of the quality of the business environment generally; it highlights the detrimental impact of inflation on their view of property rights in particular.

In column 8, we introduce managers' responses to a separate question about the business environment. ΔHelpful Government is the change between the recollection ("3 years ago") and the "now" responses to the following question:

> "Please rate your overall perception of the relation between government and/or bureaucracy and private firms on the following scale. All in all, for doing business I perceive the state as:" (1 = Very Unhelpful to 5 = Very Helpful).

Beck et al. (2006) argue that the inclusion of more general questions about the business environment reduces the likelihood that idiosyncratic differences in interpretation or reporting across firms bias the results in favor of country-level treatment effects. ΔHelpful Government correlates highly with ΔProperty Rights (the correlation coefficient of .24 is significant at 99%), and it is likely co-determined. The inclusion of this variable in the model likely introduces simultaneity bias, but as Beck et al. (2006) note, the bias should make finding a relationship between partisanship and property rights more difficult. It also increases our confidence that we are isolating the effects of partisanship on property rights per se, rather than on more general perceptions of the business environment. Our results hold to this rigorous test. The model reported in column 9 includes all the economic controls and the statistically significant institutional variable (ΔFH Political Rights), and we find that partisan changes remain strongly associated with improved property rights perceptions.

Finally, model 10 reports the estimates using a simple dichotomous dependent variable coded to measure improvements in property rights. Specifically, the dependent variable in model 10 takes a value of 1 if ΔProperty Rights is positive; and 0 otherwise. Although this alternative dependent variable is less informative than the ordinal change variable ΔProperty Rights, it provides a further robustness test and it eases in the substantive interpretation of the results. ΔPartisanship enters positive and significant at the 95% level of confidence. We use the estimated coefficient corresponding to ΔPartisanship to calculate the impact of changes in partisanship on the probability that property rights assessments improve over the period. Holding the values of the other independent variables at their means, the predicted probability that a manager reports an improvement in property rights is .12 in countries experiencing shifts to the

left, .16 in countries with no partisan change, and .20 in countries experiencing a shift to the right.

We acknowledge that the data confine our examination of the impact of partisan changes to a brief window. As a result, the number of countries for which our main independent variable, ΔPartisanship, differs from zero is relatively small (about 22%), leading to questions about the external validity of our results. However, it may be possible to draw inferences from managers' responses in countries in which no partisanship shift occurred by examining the relationship between property rights assessment and the partisan orientation of the government that remained in power during the period of study.[12]

We analyze managerial perceptions in countries without partisanship changes in two ways. First, in Table 6 we report the results of a series of models of ΔProperty Rights, which we estimated using the truncated sample of respondents in countries *without* changes in the partisan orientation of the government. We model ΔProperty Rights and the dichotomous indicator of property rights improvements in turn. Each model includes the full set of controls. Our results indicate that the predicted probability that a manager reports an improvement in property rights is higher countries with right-leaning governments, as indicated by the results of the ordered probit estimates of ΔProperty Rights. Right governments are associated with a 2.8% increase in the predicted probability that a manager reports a one-point improvement in property rights. The results are consistent when we substitute partisanship dummy variables.[13] The results from probit estimates of the property rights improvement dummy variable in column 4 indicate that the probability that a manager reports an improvement in property rights is approximately 6% higher in countries with a right-leaning executive. Second, in Table A3 of the online appendix, we replicate the baseline models reported in Table 5 using a more fine-grained coding of ΔPartisanship, which captures the partisan orientation of the government in countries where no partisan shift occurs.[14] Our results are consistent with the view that managers' perceptions of property rights strengthen under right-leaning executives.

4.1 Robustness

We test the robustness of our full-sample results by addressing several potential sources of bias in the survey responses. A key feature of the data is that firm owners and managers are being asked about events that occurred 3 years prior to the survey date. It is well known that retrospective questions are answered with more error than contemporaneous ones and that there are systematic "recall biases" imparted by the retrospective sample design (Bradburn et al., 2004; Iarossi, 2006; Sudman and Bradburn, 1974). Although there are several potential sources of recall bias, the partisan orientation of the respondent may be particularly acute in our context. Given the possibility of "recall decay" (respondents forgetting the details of prior events or conditions), one could imagine a right-leaning business owner reporting that property rights have greatly improved following the election of a right-wing president, regardless of

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[12]We thank an anonymous reviewer for suggesting this approach.
[13]Partisanship – Left is the omitted category.
[14]Specifically, the models in Table A3 employ the following coding of ΔPartisanship: 1 = shift to left; 2 = no change, left executive; 3 = no change, center executive; 4 = no change, right executive; 5 = shift to right.

TABLE 6 DETERMINANTS OF PROPERTY RIGHTS – COUNTRIES WITHOUT PARTISANSHIP CHANGES

Dependent variable	(1) ΔProperty Rights	(2) ΔProperty Rights	(3) ΔProperty Rights	(4) Property rights improvement	(5) Property rights improvement	(6) Property rights improvement
ΔHelpful Government	0.318***	0.316***	0.318***	0.325***	0.324***	0.325***
	(0.033)	(0.033)	(0.033)	(0.043)	(0.043)	(0.042)
Log sales (1 year)	0.010*	0.010*	0.011**	0.010	0.011*	0.012*
	(0.005)	(0.005)	(0.005)	(0.006)	(0.007)	(0.007)
ΔGDPPC Growth	−0.026**	−0.026**	−0.024**	−0.034**	−0.033**	−0.029**
	(0.012)	(0.012)	(0.011)	(0.015)	(0.015)	(0.014)
ΔTrade	0.004	0.005	0.004	0.003	0.004	0.003
	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)
ΔInflation	−0.103**	−0.123**	−0.133**	−0.114*	−0.133*	−0.151**
	(0.052)	(0.050)	(0.052)	(0.064)	(0.071)	(0.075)
Partisanship	0.095**	0.088*		0.137**	0.130**	
	(0.047)	(0.047)		(0.066)	(0.065)	
Election		0.153*	0.150		0.136	0.144
		(0.089)	(0.094)		(0.165)	(0.178)
Partisanship – Center			0.268			0.403
			(0.225)			(0.263)
Partisanship – right			0.174*			0.256*
			(0.095)			(0.131)
Observations	4240	4240	4240	4240	4240	4240
Countries	43	43	43	43	43	43
Log likelihood	−3503.926	−3499.939	−3494.594	−1774.204	−1772.358	−1764.389
Pseudo R²	0.044	0.045	0.047	0.064	0.065	0.070

Notes: The dependent variable in columns 1–3 is ΔProperty Rights, the firm-level difference between the "now" and the "3 years ago" responses to the following WBES inquiry: "I am confident that the legal system will uphold my contract and property rights in business disputes. To what degree do you agree with this statement?" (1 = fully disagree, 2 = disagree in most cases, 3 = tend to disagree, 4 = tend to agree, 5 = agree in most cases, 6 = fully agree). The dependent variable in columns 4–6 is a dichotomous variable that takes a value of 1 if ΔProperty Rights is positive, zero otherwise. ΔPartisanship is the change in the country-level coding of the political orientation of the executive branch between 2000 and 1997 (−1 = shift to Left, 0 = no change, 1 = shift to Right. The economic variables are the difference between the 2000 and 1997 values. GDP per capita and inflation are logged. Robust standard errors adjusted for country-level clustering in parentheses. ***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

any actual improvements in his firms' property rights. Our dataset would note the improvement in the manager's assessment of property rights, but that improvement may be driven by the fact that the respondent supports the party in power, or that he strongly opposed the previous administration.

If the recollection assessment is indeed driven by this source of partisan recall bias, one would expect that the manager would report a similar improvement in the overall helpfulness of government (ΔHelpful Government) following a shift to the right. We test the proposition that shifts to the right are associated with improvements in firms' assessments of the overall helpfulness of government and report the results in columns 1 and 2 of Table 7. We find no evidence that partisanship changes correlate with assessments of government helpfulness in either the parsimonious specification (column 1) or in the model with economic controls (column 2). We take this as *prima facie* evidence that partisan orientation is not introducing recall bias into recollection assessments of property rights.

Recall bias may persist for a number of reasons other than the partisan leanings of respondents. In columns 3 and 4 of Table 7, we attempt to capture some of these additional sources of bias by controlling for the manager's assessment of overall helpfulness of government 3 years ago. This control variable enters negative and strongly

TABLE 7   ROBUSTNESS: RECOLLECTION BIAS

Dependent variable	(1) ΔHelpful Government	(2) ΔHelpful Government	(3) ΔProperty Rights	(4) ΔProperty Rights
Log sales (1 year)	0.017***	0.016***	0.013***	0.016***
	(0.004)	(0.005)	(0.005)	(0.005)
ΔPartisanship	0.131	0.179	0.136***	0.151***
	(0.097)	(0.123)	(0.040)	(0.052)
ΔGDPPC Growth		−0.009		−0.024**
		(0.009)		(0.011)
ΔTrade		−0.003		0.004
		(0.003)		(0.003)
ΔInflation		−0.072**		−0.113***
		(0.029)		(0.035)
Helpful government (3 years ago)			−0.061***	−0.058***
			(0.017)	(0.018)
Observations	7446	6532	7076	6184
Countries	73	65	73	65
Log likelihood	−7791.100	−6929.294	−6181.825	−5394.903
Pseudo R^2	0.009	0.012	0.008	0.014

Notes: The dependent variable in columns 1 and 2 is ΔHelpful Government, the firm-level difference between the "now" and the "3 years ago" responses to the following WBES inquiry: "Please rate your overall perception of the relation between government and/or bureaucracy and private firms on the following scale. All in all, for doing business I perceive the state as:" (1 = Very Unhelpful to 5 = Very Helpful). The dependent variable in columns 3 and 4 is ΔProperty Rights, the firm-level difference between the "now" and the "3 years ago" responses to the following WBES inquiry: "I am confident that the legal system will uphold my contract and property rights in business disputes. To what degree do you agree with this statement?" (1 = fully disagree, 2 = disagree in most cases, 3 = tend to disagree, 4 = tend to agree, 5 = agree in most cases, 6 = fully agree). ΔPartisanship is the change in the country-level coding of the political orientation of the executive branch between 2000 and 1997 (−1 = shift to Left, 0 = no change, 1 = shift to Right). The economic variables are the difference between the 2000 and 1997 values. GDP per capita and inflation are logged. Robust standard errors adjusted for country-level clustering in parentheses.
***, **, and * indicate statistical significance levels of 1%, 5%, and 10%, respectively.

significant, but the magnitude of the coefficient corresponding to ΔPartisanship does not diminish, and it retains significance at the 99% level of confidence. We take this as further evidence that we are isolating partisan effects on property rights.

As a final test of the robustness of our results, we address a further potential source of bias in the survey responses. As other studies note, surveys are subject to representativeness bias to the extent that respondents either lie or chose not to respond to certain questions; this bias is most likely when the questions are politically sensitive (Desai and Olosgard, 2011; Jensen et al., 2010). Although we view the question about property rights as less politically sensitive than questions about corruption or lobbying, non-response is a problem to the extent that it correlates with the independent variables. The country-level summary statistics reported in Table 4 include the response rates by country to ΔPartisanship. With the exception of Thailand, where 40% of firms responded to the property rights question, we find note that response rates exceed 60% in all countries.

Nonetheless, to account for possible representativeness bias, we replicate the models reported in Table 5, weighting for non-response. Specifically, using logit regression, we estimate the probability of response to ΔProperty Rights as a function of the full set of covariates included in model 9 of Table 5. Following the literature, we use the reciprocals of these predicted probabilities as non-response weights (Desai and Olosgard, 2011). The results of these robustness tests appear in Table A4 of the online appendix. While the estimated coefficients corresponding to ΔPartisanship are slightly reduced, our results remain robust.

5. CONCLUSION

We have approached the relationship between property rights, partisanship, and political institutions in a novel way, using micro-level survey responses from thousands of firm mangers in 73 nations. As our research design reduces or eliminates many of the econometric concerns that plague the existing literature, including some of the sources of endogeneity, our results shed new light on the relationship between these variables. We find government partisanship strongly and consistently influences firm owners' views on property rights. Following transitions to the right in the partisan orientation of government, firm owners express significantly more confidence in the security of private property as compared to firm owners in countries experiencing a shift to the left.

This finding resisted all our efforts to weaken it. We controlled for firm- and country-level economic performance as well as formal and informal measures of political institutions. We controlled for how "helpful" firms owners perceived their governments to be and we probed whether the partisan effect depended on political institutions. We also accounted for recall and representativeness biases in our data. In each instance, we found that partisan changes in government were the most significant political determinant of property rights assessments.

Our results, however, should not be interpreted as a general endorsement of right-wing parties. First, and foremost, we do not argue or demonstrate that right-wing parties are actually more serious about property rights *enforcement* than left parties. While our results suggest that property rights *perceptions* improve when there is a shift to the right, this may reflect the fact the right is better at advertizing its pro-business, pro-property rights orientation than the left. Our analysis does not allow us to

distinguish this perceptual interpretation from one in which there are actual property rights benefits to right-wing government. Second, the property rights perceptions of business people are but one of many factors that influence aggregate economic performance and we do not argue or test the claim that right-wing parties preside over better overall business conditions or produce superior macroeconomic outcomes than left-wing parties.

In fact, some studies suggest the opposite may be true. For example, Bartels (2008) shows that Democratic presidents have consistently produced higher economic growth and lower unemployment than Republican presidents, Pinto et al. (2010) find that left-wing governments promote the development of stock markets, and Garrett and Lange (1991) find that industrial countries with left governments and strong labor parties tend to run smaller budget deficits than right parties. Broz (2011) establishes that Democrats runs smaller fiscal and current account deficits than Republicans. In short, our results do not imply that the right is "good for growth" since growth is influenced by multiple channels and we focus only on property rights perceptions among incumbent business owners.

Within the narrower confines of our study, a related caveat applies. While we have shown that partisan control of the state apparatus influences how secure businesses perceive their property rights to be, we have not shown that these perceptions translate into economically productive behavior on the part of firms. Data limitations do not permit us to test whether the subjective partisan effects we measure extend beyond the survey context to translate to changes in firm investment and innovation. However, we see promise in Gerber and Huber's (2009) innovative research design for estimating partisan effects with behavioral data. Rather than relying on costless survey responses, Gerber and Huber (2009) focus on costly consumption decisions to measure citizen's true economic attitudes and examine how county-level consumption changes with partisan changes in presidential elections. In future research, we hope to extend this approach to the cross-country level, replacing measures of citizens' consumption with measures of firms' investment, and examining how investment changes with swings in partisan control of government. Until then, we must simply assume that business firms' sensitivity to partisanship in our survey gives rise to economically important behaviors.

Fortunately, there are reasons to be confident in this assumption. First, and as mentioned above, new research is corroborating the finding that partisanship influences both economic perceptions and economic behavior (Enns and Anderson, 2009; Gerber and Huber, 2009, 2010). Second, research on foreign direct investment (FDI) has shown that partisanship affects economic behavior through the mechanism of property rights perceptions. For example, Vaaler (2008) shows that multinational companies perceive higher (lower) risk and announce fewer (more) investment projects as right-wing (left-wing) incumbents appear more likely to be replaced by left-wing (right-wing) challengers. Similarly, Pinto and Pinto (2008) demonstrate that foreign investors allocate more investment into sectors that complement domestic labor and boost worker wages when left (pro-worker) parties are in power, and investment shifts to sectors that substitute for domestic labor and thereby increase returns to local capitalists when right (pro-business) parties are in office. In both instances, the inference is that partisan business cycles in FDI operate via investors' property rights perceptions.

By demonstrating the effect of partisanship on economic behavior outside of the mass public opinion survey, these studies help validate surveys as a method for

studying political and economic behavior. Second, unlike surveys that mix partisan questions with economic questions, the WBES contains no political questions and therefore does not run afoul of the priming problem present in other survey-based studies of partisanship and economic perceptions (Lau et al., 1990; Palmer and Duch, 2001; Wilcox and Wlezien, 1996). Thus, it is unlikely that the perceptual effect of partisanship that we have identified among business firms is a mere artefact of the survey context; moving from perceptions to behaviors is all the more plausible.

Our inference that firm managers understand that political parties have different preferences and pursue different policies when in office is also plausible and finds support in existing research. It is established with regard to financial market participants (investors) in work by Snowberg et al. (2007a, 2007b), who find that financial markets respond strongly to partisan shocks, with unanticipated shifts to the right producing improvements in equity prices while shifts to the left have the opposite effect. Our findings complement this work by demonstrating that partisanship also affects the property rights perceptions of business elites. Although we assume that business leaders prefer greater protection of property rights and that right-leaning governments pursue policies that enhance this protection, we do not investigate these complex processes here. In this article, we have shown that political phenomena influence individual perceptions of property rights. The next step is to analyze the effects of perceptions and policy expectations on firms' investment behavior.

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SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article:

Table A1. Determinants of Property Rights – OLS replications of Table 4.

Table A2. Determinants of Property Rights – Interaction Models.

Table A3. Determinants of Property Rights – Alternative Partisanship Coding.

Table A4. Replication of Table 4 Models, Weighted for Non-Response Bias.