Relative Governance

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Abstract

Using data on antitakeover provisions and headquarters location for a large sample of U.S. public corporations, this paper documents robust evidence of complementarity between firm-level and local corporate governance. In particular, we find that: 1) good governance begets good governance - i.e., firms are less likely to adopt antitakeover provisions in areas with good governance; 2) good firm-level governance increases firm value only if local governance is good. This result holds across a variety of measures of firm value, which include the returns to a buy-and-hold portfolio that longs good and shorts bad governance firms; the short term own and peer announcement returns of the passage of state business combination laws, poison pill adoption, and board declassification; Tobin's Q, operating performance, the value of cash holdings, and acquirer returns. A contribution of the paper is to develop a novel triple-difference estimator that addresses causality by exploiting exogenous variation in local governance generated by the passage of state business combination laws. Our results suggest that in order to understand the governance-performance relationship the literature needs to go beyond the standard single-firm assumption.

External governance mechanisms play an important role in public corporations. Theory and empirics (Manne (1965), Scharfstein (1988), and Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen, and Ferrell (2004)) suggest that antitakeover provisions (ATPs) weaken firm governance by shielding management from the external discipline of the takeover market. This "agency" view, which is firmly established among academics, has been traditionally developed within a single-firm, partial equilibrium setting that ignores interactions among firms. However, firms do interact at several levels: local (see Marshall (1890), and, more recently, Brown, Ivković, Smith, and Weisbenner (2004), and Hong, Kubik and Stein (2004)), industry (through product markets and relationships with customers and suppliers), and in the takeover market (see Eckbo (1983), Song and Walking (2006)). This paper fills the gap in the literature and explores the intriguing possibility that interactions among firms may give rise to governance spillovers, or externalities.

Interactions among firms can arguably give rise to either positive or negative spillovers. For example, negative spillovers may arise from interactions in the takeover market. Since takeover targets are to some extent fungible within industries (Eckbo (1983), Song and Walking (2006)) and geographic areas (Kedia, Panchapagesan, and Uysal (2006)), antitakeover provisions may divert takeover pressure toward other targets, thus effectively strengthening the deterrence effect of own ATPs. This reasoning implies that firms facing stronger peer governance, i.e., fewer peers with ATPs, may have higher agency costs of ATPs. On the other hand, positive spillovers may arise if, for example, firms can free-ride on the strong governance of their peers. This free-riding may occur whenever firms benefit from having business relations, such as customer or supplier links, with better governed and, thus, more efficient peers.

This paper examines empirically the importance of governance spillovers, using direct tests based on the interaction between a firm's own governance and the governance of its peers.

¹This intuition is analogous to the classical diversion of crime idea (Shavell (1991)): a thief is less likely to steal a car protected by an antitheft device if there are other unprotected cars nearby.

In fact, if spillovers exist, then we would expect the relation between firm-level governance and firm value to vary with peer governance. Further, negative governance spillovers imply a complementary relation between firm-level and peer governance. This is the case, because, with negative spillovers, strong peer governance increases the agency cost of own entrenchment, which implies that the marginal value of own governance is increasing in peer governance. On the other hand, positive spillovers imply that firm-level and peer governance are substitutes. This is the case, because with positive spillovers strong peer governance decreases the agency cost of own entrenchment, which implies that the marginal value of own governance is decreasing in peer governance.

In order to implement our tests, we define peers based on headquarters location, where interactions among firms are likely to be significant. Local interactions may arise from a wide variety of sources, such as local product and labor markets (Marshall (1890)), local takeover market (Kedia, Panchapagesan, and Uysal (2006)), and local top executive and director networks (Fahlenbrach, Low, and Stulz (2008)). As is standard in the literature (see, for example, Pirinsky and Wang (2005)), we define a firm's location as the Metropolitan Statistical Area (MSA) of its headquarters. Using a large sample of U.S. public firms with information on antitakeover provisions from IRRC between 1990 and 2006, we find strong evidence of a complementary relation between firm-level and local governance.

We start by documenting a new fact in corporate governance: ATPs cluster by geographic areas. This geographic clustering is pronounced. For example, there are about forty times as many firms with particularly weak governance in Dayton, OH as in Denver, CO (39% vs. 1%). The wide geographic variation in governance is not just an artifact of a few areas with very bad governance versus a few areas with very good governance: using a battery of formal tests we reject the null hypothesis of no clustering and find evidence of a social multiplier effect. Our

estimates imply that, all else equal, if we were to move a typical firm from an area with a low incidence of ATPs, say Baltimore, to an area with a high incidence of ATPs, say Portland, this would increase its likelihood of adopting ATPs by about 60 percent of the sample mean. Thus, our evidence suggests that a feedback mechanism is in place: areas with better governance tend to beget still better governance.

Our evidence that good governance begets good governance is consistent with a complementary relation between firm-level and local governance. Using a variety of measures of firm value, we perform a wide-array of valuation tests to document direct evidence of this complementary relation. We consider three main measures of firm value: first, the returns to a buy-and-hold portfolio that is long in strong governance firms and short in weak governance firms; second, the short term announcement returns to announcing firms and their peers for three governance events (the passage of business combination (BC) laws by 19 states between 1983 and 1991, 342 announcements of poison pill adoption between 1990 and 2006 by firms in the IRRC sample, and 144 announcements of board declassification between 1990 and 2006 by firms in the same sample); third, the cross-sectional correllation between firm-level governance and Tobin's Q. Consistently across all these measures and using a variety of governance indices, we document evidence of complementarity: strengthening local governance exacerbates entrenchment costs. Therefore, strong firm-level governance increases firm value only if local governance is strong.

In order to reinforce confidence in our complementarity results, we examine several specific channels through which stronger governance can lead to value creation for shareholders. In particular, we examine investment and operating performance (Gompers, Ishii, and Metrick (2003), Bertrand and Mullainathan (2003)), financial policy and the value of cash (Dittmar and Mahrt-Smith (2005), Masulis, Wang, and Xie (2008)), organizational policy and acquirer returns (Masulis, Wang, and Xie (2006)). In all of these additional tests, we continue to find

that strong firm-level governance increases value only if local governance is strong.

Finally, we address potential endogeneity concerns by exploiting state antitakeover laws as a source of exogenous variation in corporate governance to develop difference-in-differences estimators. Our identification strategy builds on previous studies (see, for example, Bertrand and Mullainathan (2003)) and develops a novel triple-difference estimator that uses average exogenous characteristics of the peer group (see Case and Katz (1991) and Duflo and Saez (2002) for other applications). Our key insight is that one can generate exogenous variation in peer governance by averaging across adoption of antitakeover laws by peers' states of incorporation. To the best of our knowledge, our approach to identifying peer effects is novel to the literature. The difference-in-difference estimates confirm our earlier findings and support a causal interpretation of local governance effects. Thus, our finding of complementarity between own and local governance is not spurious.

Our study makes three main contributions. First, we contribute to the corporate governance literature by introducing local effects and interactions among firms. Previous studies typically abstract from peers and focus on the effects of ATPs on executive compensation ((Bertrand and Mullainathan (1999), and Fahlenbrach (2004)), firm leverage (Garvey and Hanka (1999), John and Litov (2006)), firm cash holdings and dividend policies (John and Knyazeva (2006), Dittmar and Mahrt-Smith (2005)), acquirer returns (Masulis, Wang, and Xie (2006), and firm performance (Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen, and Ferrell (2004), Core, Wayne, Rusticus (2004), Bebchuk and Cohen (2005), and Cremers and Nair (2003)). Our evidence strongly suggests the need for researchers to control for local governance.

Second, we contribute to the growing literature on the role of peer effects in finance. Previous studies have documented peer effects for stock market participation and, more broadly, asset pricing (Bikhchandani, Hirshleifer, and Welch (1992) Brown, Ivković, Smith, and Weisbenner

(2004), Coval and Moskowitz (1999, 2001), Hong, Kubik and Stein (2003, 2004)). There is also a vast empirical literature in labor and urban economics on peer group effects (see, for example, Case and Katz (1991), Glaeser, Sacerdote, and Scheinkman (1996, 2003), and Bertrand, Luttmer, and Mullainathan (2000); Glaeser and Scheinkman (2002) provide a survey with more references).² We broaden the reach of this literature by studying peer effects in corporate governance.

Finally, we contribute to the literature that uses state adoption of antitakeover laws to identify the effect of corporate governance (see, for example, Bertrand and Mullainathan (2003)). The literature has developed a difference-in-differences approach to estimate the effect of own governance on performance. Our contribution is to show that the insights of this literature can be used to identify peer effects in corporate governance.

Outline The next section describes our data and details our main variables. In Section 2, we present the results on the complementarity of firm-level and local governance mechanisms. In section 3, we discuss possible explanations and implications. Section 4 concludes.

1 Data

Our main data is on firm location, firm-level and local governance, and firm valuation. We collect these data, combine them into our dataset, and complement them with a variety of additional firm characteristics, which we use as controls. This section provides details on the dataset and on the construction of our variables. Additional details on definition and sources for all variables are in Appendix A.

Our main dataset consists of all firms with governance information from the Investor Re-

²Relatedly, Dumais, Ellison, and Glaeser (2002) and Rosenthal and Strange (2001) provide evidence that geographic proximity facilitates intellectual spillovers across a variety of industries.

sponsibility Research Center (IRRC) database between 1990 and 2006. We exclude firms in financial (SIC 6000-6999) and regulated (SIC 4900-4999) industries and firms with dual-class status. We combine governance data from IRRC with firm characteristics, such as Tobin's Q, size and age, and location from Compustat. This leaves us with a total of 16,141 firm-year observations. In some of our tests, we employ anti-takeover laws of the state of incorporation rather than firm-level anti-takeover provisions as our measures of governance and, thus, we use the entire Compustat instead of the IRRC sample.

1.1 Firm Governance

We experiment with a variety of firm governance indices which have been employed in the empirical literature on takeover threats as a source of external governance. Thus, our proxies of external governance aim at measuring the extent to which a firm is protected against a takeover. We use three firm-specific proxies, which are all based on information from IRRC for the years 1990 to 2006. These IRRC data are assembled and reported about every two years (1990, 1993, 1995, 1998, 2000, 2002, 2004, 2006). As is standard in the literature, we assume that the index remains unchanged for the years in which IRRC does not report scores.³

Our first governance proxy is the GIM-index constructed by Gompers, Ishii, and Metrick (2003). The GIM-index is the sum of all antitakeover provisions in a firm's charter⁴ that varies between 0 and 24, with higher values of the index corresponding to more ATPs and, thus, weaker governance. Our second proxy is the E-index constructed by Bebchuk, Cohen, and Ferrell (2004), who argue that not all of the 24 provisions in the GIM index are effective antitakeover measures and construct their index using only six provisions: staggered boards, limits

³Although both measures show little within firm change from point to point, our results do not depend on the assumption that the value of the antitakeover provision index in-between survey years is unchanged. In unreported results based solely on data from the survey years, we replicate the reported results.

⁴A detailed description of takeover defenses included in the GIM-index can be found in GIM, Appendix A.

to shareholder by-law amendments, limits to shareholder charter amendments, supermajority requirements for mergers, poison pills, and golden parachutes.

Our third proxy is the SB&P-index, which is based on the sum of staggered board and poison pill provisions and, thus, ranges from 0 to 2. This index is motivated by the argument in Bebchuk, Coates and Subramanian (2002) and some M&A practitioners (Lipton (2002), Gordon (2002)) that staggered (classified) boards constitute the most significant barrier to hostile acquisitions, especially when combined with a poison pill. Panel A of Table 1, which reports summary statistics for our sample, shows that, consistent with previous studies, our median firm scores values of 9 for the GIM-index, 2 for the E-index, and 1 for the SB&P index.

To mitigate endogeneity concerns, in our main tests we also use exogenous variation in corporate governance in the form of 30 business combination (BC) laws passed between 1985 and 1991 on a state-by-state basis (for examples of papers that have used BC laws, see Karpoff and Malatesta (1989), Comment and Schwert (1995), Garvey and Hanka (1999), Bertrand and Mullainathan (2003), Cheng, Nagar, and Rajan (2004), and Giroud and Mueller (2007)). Typically, BC laws impose restrictions that hinder potential acquirers from gaining access to the target firm's assets for the purpose of paying down acquisition debt, thus making hostile takeovers more difficult. Thus, by reducing the fear of a hostile takeover, these laws weaken firm governance.

Finally, in some of our tests and to construct our local governance variables, we use dummy variables based on the governance indices. In particular, following Gompers, Ishii, and Metrick (2003), we use the Dictatorship (Democracy) dummy, which take the value of one for firms in the top (bottom) decile of each index and, thus, measures very weak (strong) governance.

1.2 Local Governance

As is standard in the finance literature on geography, we define a firm's location as the location of its headquarters (see, for example, Coval and Moskowitz (1999), Ivković and Weisbenner (2004), and Pirinsky and Wang (2005)). Corporate headquarters are close to corporate core business activities. More importantly, corporate headquarters are the center of information exchange between the firm and its suppliers, service providers, and investors (see Davis and Henderson (2004) for detailed discussion on the role of corporate headquarters).

In particular, we define a firm's location as the Metropolitan Statistical Area (MSA) of its headquarters. To classify locations, we first obtain data on State and County of companies' headquarters from Compustat. The State/County combination defines the State/County code according to the Federal Information Processing Standards (FIPS). Using the State/County FIPS code, we then merge the sample of firms with the Metropolitan Areas and Components data defined by the Office of Management and Budget (OMB) as of 2005.⁵ As defined by the OMB, an MSA includes a core area containing a substantial population nucleus, together with adjacent communities having a high degree of social and economic integration with that core. Metropolitan statistical areas are comprised of one or more entire counties. Some MSAs contain counties from several states. For example, the New York MSA includes counties from four states, New York, New Jersey, Connecticut, and Pennsylvania. We include in our sample only firms from areas with at least three publicly traded firms in at least two different industry groups.⁶ Throughout the paper, we refer to these MSAs as areas.

One potential issue with the Compustat location data is that Compustat only reports the

⁵OMB defines metropolitan statistical areas for purposes of collecting, tabulating, and publishing Federal data. Metropolitan statistical area definitions result from applying published standards to Census Bureau data. Metropolitan statistical areas are redefined every 10 years after each census, but changes in recent revisions have been small.

⁶We verify robustness to a higher five-firm threshold.

current state and county of firms' headquarters. Thus, to make reliable inference about firm location it is important to correct for this deficiency. To this end, we use physical Compustat tapes to collect manually the historic information on firms' headquarters on an annual basis over our sample period. This allows us to identify all firms whose corporate headquarters have moved from one location to another. We also cross-checked this information for consistency using data on city and state of incorporation from Compact Disclosure.

Our measures of local governance are based on the incidence of strong governance (democracy) versus weak governance (dictatorship) firms in each MSA. We classify an MSA as a Democracy area if the ratio of the number of democracy firms to overall number of firms is high (top quartile). By analogy, we define an MSA as a Dictatorship area if the ratio of the number of dictatorship firms to overall number of firms is high (top quartile). We also verify robustness to using value-weighted (with weights given by market value of equity) averages to measure area incidence of democracy (dictatorship). As shown in Table 1 (Panel B), the typical (median) MSA in our sample has 41 firms in a given year, 24 different (3SIC) industries, and covers 4 different states of incorporation.

1.3 Firm Valuation and Other Firm Characteristics

In order to examine the relation between governance and firm value, we supplement the IRRC data set with various items from the COMPUSTAT and CRSP. We use several firm characteristics. As a proxy for firm valuation, we use Tobin's Q, which is the ratio of market value of assets to book value of assets. Market value of assets is defined as book value of assets plus market equity minus the sum of book equity and balance sheet deferred taxes (Kaplan and Zingales (1997)). To measure operating performance, we use return on assets (ROA), which is the ratio of EBITDA to total assets. We consider three additional outcomes: firm investment, measured

as the ratio of capital expenditures to net PPE, the value of cash holdings, measured as dollar change in shareholder wealth for one dollar change in corporate cash holdings, and returns to acquiring shareholders in M&As. Our list of controls includes standard firm characteristics, such as size, cash flow, R&D and advertising expenditures, and leverage. Finally, following Bertrand and Mullainathan (2003), in all specifications we control for local shocks by including the mean of the dependent variable in each MSA.

Other Governance Mechanisms. We also control for other governance mechanisms, including managerial incentives and internal governance mechanisms. Our proxy for managerial incentives is insider ownership, which is defined as the percentage of common equity held by the CEO through stocks and options. Our executive compensation data are from the ExecuComp database compiled by Standard and Poor's.

To control for the evidence in Daines and Klausner (1999) and Bebchuk and Cohen (2003) that incorporation in Delaware matters for firm value, we include as a control variable a dummy that takes value of one for firms incorporated in Delaware. Consistent with the literature, about 55 percent of the firms in our sample are incorporated in Delaware.

Finally, we control for internal governance by obtaining data on institutional blockholding and public pension fund ownership. Our institutional blockholding and public pension fund data come from Cremers and Nair (2005), who argue that external and internal governance interact in their effect on firm value. Following Cremers and Nair (2005), we define blockholders as shareholders, external to the firm, with an ownership greater than 5% of the firm's outstanding shares. Data on the percentage of shares held by the firm's largest institutional blockholder and by the 18 largest public pension funds are collected from CDA Spectrum.

⁷For all variables, we remove outliers by winsorizing the extreme observations in the 1% left or right tail of the distribution.

Acquisition sample. There is a sizable literature that studies corporate acquisition decisions and links acquirer returns to firm characteristics (see, for example, Moeller, Schlingemann, and Stulz (2004) and Masulis, Wang, and Xie (2006)). We include controls for firm characteristics whose relationship with acquirer returns has been documented in previous studies. In particular, we control for firm size, leverage, cash holdings, cash flows, and Tobin's Q, all of which are measured at the fiscal year end prior to acquisition announcement, and pre-announcement stock price runup, which is measured over the 200-day window from event day -210 to event day -11.

Previous studies also found that deal characteristics are associated with acquirer returns. Thus, we include controls for deal characteristics whose relationship with acquirer returns has been previously documented. In particular, we control for target ownership status (public or private), method of payment (cash or stock), and relative deal size measured as the size of the deal relatively to the acquirer stock-market capitalization. Our data on acquisitions is from Securities Data Corporation's (SDC) U.S. Mergers and Acquisitions database and consists of 4,337 acquisitions.

2 Firm-Level and Local Governance Mechanisms are Complements

While the literature has traditionally focused on the firm-level determinants of ATPs and on the relationships between ATPs and corporate performance, in this section we document that external governance mechanisms display pronounced variation across space. Moreover, firm-level and local governance mechanisms are complements in that the value of firm-level governance is increasing in local governance. In particular, stronger firm-level governance increases value only if local governance is strong. Before presenting the results of our formal tests and our novel identification approach of peer effects, we offer some univariate evidence. Table 2 shows examples of MSAs where local governance is particularly strong or weak. Panel A describes the worst-governance MSAs, while Panel B describes the best-governance MSAs. For each area, we look at the percentage of firms that have weak governance or dictatorship firms. The striking feature that emerges from the table is that there is substantial geographic variation in the incidence of dictatorship firms. Moreover, this pattern holds across all our governance indices. Taking, for example, the E-index, there are about forty times as many dictatorship firms in Dayton, Ohio as in Denver, Colorado (39% vs. 1%).

The wide geographic variation in governance is not just an artifact of a few areas with very bad governance versus a few areas with very good governance. To see this point, we present the frequency distribution of dictatorship areas graphically in Figure 1. Consistent with the message from Table 2 and robustly across years, this frequency distribution is clearly non-degenerate. In other words, we never see a mass of one around the sample mean. Rather, we see a widely spread geographic distribution of dictatorship firms, which has rather "fat" tails. Thus, the underlying patterns in the data indicate that governance clusters by geographic area.

2.1 Spatial Clustering Analysis

This sub-section documents that antitakeover provisions cluster by geographic area, a new fact in corporate governance. Moreover, a feedback mechanism appears to be in place: areas with better governance tend to beget still better governance.

2.1.1 Excess Variance Test

Our first test uses the empirical variance of governance indices to test whether governance is geographically clustered. The intuition of this test is that peer effects naturally increase the correlation of governance mechanisms across firms. We exploit this insight to develop a formal test of our peer hypothesis based on observed and predicted variance of governance indices across geographic areas. Our test is analogous to the study of crime in cities by Glaeser, Sacerdote, and Scheinkman (1996), to which we refer for further details.

The idea is to test whether the actual empirical variance of governance indices differs from the variance implied by the null hypothesis of no geographic clustering. More precisely, we compute the variance of each of our governance indices under the null hypothesis that individual firm governance decisions are independent and given by the empirical average probability of observing weak governance over all areas. More formally, under the null hypothesis, the variance of the average probability of observing entrenchment, p, in an area x with N_x firms is $\frac{p(1-p)}{N_x}$. Therefore, the variance of $\sqrt{N_x}P_x$ is p(1-p) for all x.

Panel A of Table 3 reports the results. For each governance index (Columns (1) to (3)), the first line reports the variance of cross-area dictatorship rates that would be expected if governance decisions were independent and if the expected proportion of dictatorships were constant across MSAs. To gain confidence intervals around the predicted variance, we follow Glaeser, Sacerdote, and Scheinkman (1996) and consider an observed variance threshold of 1.5 times the predicted variance sufficient to reject the null hypothesis of no geographic clustering.

The second line reports the actual variance of the incidence of dictatorship across areas, divided by the first line. Under the null hypothesis that governance decisions are independent across firms, this number should be equal to one. As shown in the table, this is not the case for any of the governance indices. In fact, actual variance exceeds implied variance up to almost

5 times. Thus, based on this first test, we robustly reject the null hypothesis of no geographic clustering of corporate governance.

2.1.2 Social Multiplier Test

Our next test takes a different angle on the issue of correlation of external governance mechanism across firms. We build on the ideas in Glaeser, Sacerdote, and Scheinkman (2003) and estimate a "social multiplier" in corporate governance by regressing aggregate outcomes on aggregate predicted outcomes, where the predictions are based on firm-level regressions.

In particular, we first run probit regressions of firm-level governance indices on standard firm-level determinants of corporate governance, which include firm size, age, state of incorporation, and internal governance mechanisms (see Gompers, Ishii, and Metrick (2003) and the description of Table 3, Panel B for a detailed list of these variables). We then aggregate up to the MSA level, using the estimated coefficients from these regressions to compute a predicted likelihood of dictatorship for any given MSA. Our last step is to regress actual incidence of dictatorships in the MSA on predicted incidence.

The intuition for this test is that if peer effects are important, then our firm-level regressions by construction are going to miss them. Thus, by comparing actual to predicted incidence at the MSA level we are able to get a quantitative estimate of how much is lost in predicting governance if social interactions are ignored.

The results reported in Panel B of Table 3 imply that much is lost if one tries to predict governance ignoring social interactions. In particular, our estimated social multiplier in governance is large and of an order of magnitude of up to 2.

2.1.3 Excess Sensitivity Test

In our final test of whether corporate governance tends to cluster geographically, we ask whether firms are less likely to have antitakeover provisions if fewer of their peers have them. To this end, we specify the following probit model of governance that relates the probability that a firm headquartered in a given MSA has a high number of antitakeover provisions ("Dictatorship") to the incidence of Dictatorship firms in that area:

$$prob(ATP_i) = \alpha + \beta * \hat{E}_{-i}(ATP|x) + \gamma * X_i + u_i$$
(1)

where i is a firm-level observation, ATP_i indicates a dictatorship firm,⁸ and

$$Peers = \hat{E}_{-i} \left(ATP | x \right) = \frac{\sum_{j \in x \setminus \{i\}} ATP_j}{N_x - 1}$$
 (2)

is the incidence of dictatorship firms in area x (excluding firm i), and N_x denotes the number of firms in area x. In computing our peer variable we exclude own governance, to avoid mechanical correlation between own and local governance. X is a set of standard controls, which include firm and other governance characteristics. Finally, we include year and industry fixed effects. Our coefficient of interest is β , which captures the peer effects or endogenous social effects in the terminology of Manski (1993): each firm's governance is influenced by local governance. The null hypothesis is that β is equal to zero.

Panel C of Table 3 reports our results from estimating Equation (1) using our three corporate governance indices. For all indices we find a positive and highly significant coefficient on peer ATPs. The estimated marginal effect is large. Take for example the E-index (Column (3)): each

⁸We have explored robustness of our results to alternative cutoffs. The results are qualitatively similar to those reported in the text and available upon request.

additional percentage point of weaker governance in the area is associated with a 0.23 percentage point increase in the likelihood of having weak governance, which is roughly equal to 1.5 percent of the sample mean.

In summary, so far we have found reliable evidence that governance clusters geographically. Moreover, our evidence that good governance tends to beget good governance is consistent with a complementary relation between firm-level and local governance. Next, we perform a wide-array of valuation tests to document direct evidence of this complementary relation.

2.2 Valuation Analysis

The remainder of this section documents a complementary relation between firm-level and local governance. Using a variety of measures of firm value, we find that stronger firm governance increases value only if local governance is strong.

2.2.1 Portfolios and Short-Term Event Study

Our first valuation test examines the performance of trading strategies that are jointly based on firm-level and local governance. As is standard in the literature (see, for example, Gompers, Ishii, and Metrick (2003)), to compute abnormal returns, we use Carhart's (1997) four-factor model. The abnormal return is the intercept α of the following regression: $R_t = \alpha + \beta_1 \times RMRF_t + \beta_2 \times SMB_t + \beta_3 \times HML_t + \beta_4 \times UMD_t + \varepsilon_t$, where R_t is the excess return on a given portfolio in month t, $RMRF_t$ is the return on the market portfolio minus the risk-free rate, SMB_t is the size factor (small minus big), HML is the book-to-market factor (high minus low), and UMD_t is the momentum factor (up minus down). To construct portfolio returns, we use monthly returns from CRSP. The RMRF, SMB, and HML factors are from Kenneth French's website, while UMD is computed using the procedure described in Carhart (1997).

Gompers, Ishii, and Metrick (2003) construct a hedge portfolio that is long in Democracy firms and short in Dictatorship firms. To analyze the joint effect of firm-level and local governance, we divide both the Democracy and Dictatorship portfolio each into two equal-sized portfolios based on whether firms are located in Democracy vs. Dictatorship areas. This leaves us with 4 portfolios: one Democracy portfolio and one Dictatorship portfolio for each area. For each area, we then construct a value-weighted hedge portfolio analogous to GIM that is long in Democracy firms and short in Dictatorship firms.

If the importance of firm-level governance is independent of local governance, we would expect to find significant abnormal returns for all four portfolios that mimic the importance of firm-level governance. By contrast, if firm-level and local governance are complements, then the abnormal return would be significant only for the portfolio where local governance is strong as well. The results are reported in Panel A of Table 4. We find that a portfolio that buys firms with highest takeover vulnerability and shorts firms with lowest takeover vulnerability generates monthly abnormal returns of 0.79% only when local governance is strong. Furthermore, when local governance is weak a similar portfolio does not generate any significant abnormal returns, implying strong complementarity between firm-level and local governance.

Short-Term Event Study. Next we consider the announcement effect of three governance events: [1] business combination (BC) laws passed in 19 states between 1983 and 1991 (based on Karpoff and Malatesta (1989), the event date is the date of the first newspaper report about the BC law; for the list of states and dates, see Bertrand and Mullainathan (2003) and Giroud and Mueller (2007)); [2] 342 announcements of poison pill adoption made between 1990 and 2006 by firms in the IRRC sample (as for BC laws, the event date is the date of the first newspaper

⁹ Analogous to GIM, we rebalance all portfolios in September 1990, July 1993, July 1995, and February 1998, which are the months after which new IRRC data became available. Also, to facilitate comparison, we limit our sample period to 1/1/1990 to 12/31/1999 and use a $GIM \geq 13$ as our dictatorship treshold.

report about the poison pill adoption, which we hand-collected using Factiva and Lexis-Nexis searches); [3] 144 announcements of board declassification made between 1990 and 2006 by firms in the IRRC sample (also in this case, the event date is the date of the first newspaper report about board declassification, which we hand-collected using Factiva and Lexis-Nexis searches).

We employ a standard event-study methodology. For each event, we estimate abnormal returns to firm i at date t as $AR_{it} = R_{it} - \alpha_i + \beta_i R_{mt}$, where R_{mt} is the return on the CRSP value-weighted index on day t, R_{it} is the realized return to firm i on day t, and the parameters α_i and β_i are estimated using the market model. To estimate the market model, we use CRSP daily return data from 241 to 41 trading days prior to the event date. To obtain cumulative abnormal returns (CAR), we sum the abnormal returns over a three-day event window (-1,+1). We use this methodology to estimate CARs for pill adoption and board declassification. However, to estimate CARs for the passage of BC laws and CARs to local peers, we amend this methodology and follow the literature by forming equally weighted portfolios to account for any contemporaneous cross-correlation of returns (see, for example, Eckbo (1983) and Song and Walkling (2000) and, for BC laws, Karpoff and Malatesta (1989)).

The methodology described above yields an estimate of the average impact of our three governance events on stock market value. To examine if the valuation effect is different for firms in areas with strong and weak local governance, we subdivide firms based on whether they are located in weak vs. strong governance areas and repeat the same steps as above.

Results for own CARs are reported in Table 4 (Panel B). Line 1 reports results for BC laws, and lines 2-3 report results for poison pill adoption and board declassification, respectively. Average CAR for the three-day event window around BC law announcements is -0.26%. Columns (2) and (3) show the average CARs for the strong and weak local governance portfolios. The average CAR for the weak local governance portfolio is insignificant. By contrast, the average

CAR for the strong local governance portfolio is -0.47% and is highly statistically significant. Hence, while the passage of BC laws has no significant stock price impact for firms in weak governance areas, firms in strong governance areas experience a significant abnormal stock price decline.

Line (2) and (3) of the panel provide further support for complementarity between own and local governance. Line 3 shows that board declassification has no significant stock price impact for firms in weak governance areas. By contrast, firms in strong governance areas experience significant abnormal stock price gains from board declassification. Line 2 shows CARs for poison pill adoption. It is well-known in the literature as least since Comment and Schwert (1995) that, unlike board declassification, the announcement of poison pill adoption represents not only an information event for governance, but it also reflects news about higher likelihood of the firm becoming a takeover target. Thus, consistent with prior literature, Column 1 shows that the average CAR for poison pill announcement is positive and statistically significant. However, positive CARs are concentrated in areas with weak local governance. This is consistent with complementarity, as the higher agency cost of entrenchment in strong governance areas likely offsets other positive effects of poison pill adoption on value.

Results for CARs to local peers are reported in Table 5. Panel A reports results for CARs to local peers around poison pill adoption announcements, and Panel B reports results for CARs to local peers around board declassification announcements. To examine if the valuation effect on local peers is different in areas with strong and weak local governance, we subdivide firms based on whether they are located in weak vs. strong governance areas and report results for these two sub-samples. Both panels show that consistently across governance indices, valuation effects on peers are only significant in strong governance areas. Moreover, in strong governance areas, entrenched peers are more likely to benefit from poison pill adoption by local firms (Panel A)

and more likely to lose from board declassification by local firms (Panel B). Overall, consistent with complementarity, strengthening of local governance exacerbates the entrenchment costs for peers with weak governance.

2.2.2 Tobin's Q Regressions

The relation between firm-level governance and value is well-established in the literature. In particular, previous studies find a negative relation between ATP-indices and firm value as measured by Tobin's Q (Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen, and Ferrell (2004), Bebchuk and Cohen (2005), and Cremers and Nair (2003)). To test for complementarity between firm-level and local governance in a Tobin's Q-regression framework, we use the following specification:

$$y_{ijt} = b_t^j + b_1^j * ATP_{ijt} + b_2^j * X_{ijt} + e_{ijt}$$
(3)

where i denotes firm, j denotes MSA area, t denotes year, y_{ijt} is (industry-adjusted) Tobin's Q, ATP_{ijt} is the governance index, and X_{ijt} is a list of standard controls, including area shocks. Note that our specification includes year fixed effects and we cluster standard errors at the MSA level based on Petersen (2007).

We split MSAs into two sub-samples, Democracy Area and Dictatorship Area, based on whether the incidence of, respectively, democracy and dictatorship firms is high (top quartile). Thus, letting j = 1 denote Democracy Areas and j = 2 denote Dictatorship areas, we effectively run the standard Tobin's Q regressions separately in each of the two area sub-samples. The innovation of our specification with respect to previous literature is that equation (3) allows for both intercept and slope coefficients to be area-specific. Our null hypothesis is that the

¹⁰There is also a broader empirical literature on the association between corporate arrangements and firm value (see, for example, Bebchuk and Cohen (2005), Demsetz and Lehn (1985), Morck, Shleifer, and Vishny (1988), McConnell and Servaes (1990), Lang and Stulz (1994), Yermack (1996)).

difference between the (slope) coefficients on ATPs between the two sub-samples equals zero - i.e., $b_1^1 = b_1^2$.

The results are displayed in Panel A of Table 6. As shown in Columns (2) and (3), across all ATPs indices the effect of own ATPs on firm value is negative and statistically significant only in Democracy Areas. Moreover, the coefficient is always statistically significantly higher in strong vs. weak governance areas. Thus, consistent with complementarity, stronger firm-level governance increases firm value only if local governance is strong.

2.2.3 Identification

There are two important potential endogeneity concerns with our OLS estimates in Panel A of Table 6. First, our firm-level measures of governance may change in response to changes in performance. Second, exogenous effects such as, for example, local shocks, may induce spurious correlation between local governance and performance. To address these endogeneity concerns and to rule out the possibility that our results are driven by unobserved correlated characteristics, we develop a novel identification strategy that builds on the original insight of Case and Katz (1991) (see, also, Duflo and Saez (2002) for another application).

A number of studies (see, for example, the influential paper by Bertrand and Mullainathan (2003)) have exploited the passage of state BC laws as a source of exogenous variation in corporate governance to develop a difference-in-differences estimator. These studies exploit the staggering in the time of adoption across states to generate exogenous variation in governance. Our identification strategy relies on this insight and generates exogenous variation in local governance by averaging across peers' BC laws. This average can be identified independently of own BC laws.

To see this, consider that not all firms are incorporated in the state of their physical location

— in our sample, only about 30 percent of the firms are incorporated in their state of location. Moreover, and importantly, we classify firms' location based on the Metropolitan Statistical Area (MSA) of their headquarters, i.e. firms located in the same MSA are considered to be peers. As MSAs often cross state lines,¹¹ there will be meaningful variation in average peer (state of incorporation) BC laws within multi-state MSAs. In our sample, most MSAs include at least two states of incorporation (see Panel B of Table 1). To the best of our knowledge, our approach to identifying peer effects is novel to the literature.

Based on Bertrand and Mullainathan (2003), we use a difference-in-differences approach¹² and adopt the following specification:

$$y_{ikjt} = b_t^j + b_i^j + b_k^j + b_1^j * BC_{kt} + b_4^j * X_{ikjt} + e_{ikjt}$$
(4)

where i indexes firms, k indexes states of incorporation, j indexes MSA area (of headquarters location), and t indexes time; y_{ikjt} is (industry-adjusted) Tobin's Q, BC_{kt} is a dummy variable that equals one if a state BC law was passed in state k by time t, and X_{ikjt} is a vector of standard controls. Note that our specification includes year, firm, and state of incorporation fixed effects and we cluster standard errors at the MSA level based on Petersen (2007).¹³

We split MSAs into two sub-samples, Democracy Area and Dictatorship Area, based on whether the incidence of, respectively, peers incorporated in states that have passed BC laws is, respectively, low and high (bottom and top quartile). Thus, letting j = 1 denote Democracy Areas and j = 2 denote Dictatorship areas, we effectively run the difference-in-difference regressions separately in each of the two area sub-samples.

¹¹For example, New York MSA includes 31 counties from four states: NY, NJ, CT, PA.

¹²Notice that we consider the same sample period and the same state laws as in Bertrand and Mullainathan (2003).

¹³We verify that our results are robust to clustering at the state of location and at the (Fama-French) industry level.

The innovation of our specification with respect to previous literature is that equation (4) allows for both intercept and slope coefficients to be area-specific. By doing so, we effectively implement a triple difference estimator of the effect of BC laws on firm value since we allow the valuation effect of BC laws to be heterogeneous across areas. Our null hypothesis is that the difference between the (slope) coefficients on BC law dummies between the two sub-samples equals zero - i.e., $b_1^1 = b_1^2$.

Our difference-in-differences estimates, which are reported in Panel B of Table 6, show that the effect of BC laws on firm value is negative and statistically significant only in Democracy Areas. Moreover, the coefficient is always statistically significantly higher in strong vs. weak governance areas. These results confirm our earlier findings and support a causal interpretation of local governance effects. Thus, our finding of complementarity between own and local governance is not spurious.

2.2.4 Analysis of Specific Sources of Value

In order to reinforce confidence in our complementarity results, the remainder of this section examines specific channels through which stronger governance can lead to value creation for shareholders. In particular, we examine investment and operating performance (Gompers, Ishii, and Metrick (2003), Bertrand and Mullainathan (2003), John and Litov (2006)), financial policy and the value of cash (Dittmar and Mahrt-Smith (2005), Masulis, Wang, and Xie (2008)), organizational policy and acquirer returns (Masulis, Wang, and Xie (2006)).

Investment Policy and Operating Performance. A first important way in which strong governance can lead to value creation by reducing managerial slack is through improved operating decisions, such as investment. Previous literature (Bertrand and Mullainathan (2003), John and Litov (2006), Core, Wayne, Rusticus (2004)) finds a negative relationship between

ATP-indices and corporate investment and operating performance. This finding is consistent with the interpretation that entrenched managers "enjoy the quiet life" and choose inefficiently conservative investment policies.

We run essentially the same regression as (3) with, first, capital expenditures and, second, a measure of operating performance, as the dependent variable. Moreover, we follow Core, Wayne, Rusticus (2004) and use median regressions instead of OLS when studying operating performance. Finally, we include controls that are standard in the literature.

The results are displayed in Table 7. Columns (2) and (3) of Panel A show that the estimated coefficient for the regression with capital expenditures is negative and statistically significant across all indices, but only in areas with strong governance. Panel B shows that this is also the case for the regression with return on assets (ROA) as a measure of operating performance. Overall, the results of these tests are consistent with complementarity, because stronger firm-level governance reduces inefficient managerial conservatism only if local governance is strong.

Financial Policy and the Value of Cash. A second way in which strong governance can lead to value creation is through improved financial decisions, such as corporate liquidity. Previous literature finds a negative association between ATP-indices and the value of corporate cash holdings (Dittmar and Mahrt-Smith (2005)). This finding is consistent with the interpretation that entrenched managers hoard cash inefficiently.

We run regression (3) with a firm's annual excess stock return as the dependent variable and a set of standard controls as in Dittmar and Mahrt-Smith (2005) and Faulkender and Wang (2006). We calculate annual excess returns as in Faulkender and Wang (2006) by subtracting the Fama-French size and book-to-market portfolio returns from the raw stock returns.

Panel A of Table 8 reports the results of this test. As argued in Dittmar and Mahrt-Smith (2005) and Faulkender and Wang (2006), the reported estimated coefficient measures the dollar

change in shareholder wealth for one dollar change in corporate cash holdings. Columns (2) and (3) show that the coefficients for all the governance indices are negative and statistically significant, but only in areas with strong governance. Moreover, the coefficients are always statistically significantly higher in strong vs. weak governance areas. Thus, consistent with complementarity, stronger firm-level governance increases the value of corporate cash holdings only if local governance is strong.

Organizational Policy and Acquirer Returns. Corporate acquisition decisions are another potentially important source of value. We employ a standard event study methodology (see MacKinlay (1997) for a detailed review) to capture the link between governance and acquirer announcement returns. We report results for an event window of seven days surrounding the announcement of the bid (-5, +1), where day 0 is the day of the acquisition announcement as reported in SDC.¹⁴ We calculate the cumulative abnormal stock return (CAR) for the acquirer over this event window using the market model. Thus, we use CRSP equally-weighted return as the market return and estimate the market model parameters from event day -210 to event day -11. In the whole sample average CARs are consistent with what has been documented in prior studies such as Moeller, Schlingemann, and Stulz (2004) and Masulis, Wang, and Xie (2006). In particular, the average seven-day CAR is 0.24%, significantly different from zero at the 1% level.

Previous literature (Masulis, Wang, and Xie (2006)) finds a negative relationship between ATP indices and acquirer returns, which is consistent with the interpretation that entrenched managers pursue value-destroying acquisitions. To bring our peer effect story to bear on these results, we run essentially the same regression as (3) with acquirer returns as the dependent

 $^{^{14}}$ We find qualitatively the same results using a shorter three-day window around the announcement of the bid (-1, +1).

variable and controls as in Masulis, Wang, and Xie (2006).

Panel B of Table 8 reports the results of this test. As show in Columns (2) and (3), the coefficient of each of our governance indices is negative and statistically significant only if local governance is strong. Moreover, the coefficient is always statistically significantly higher in strong vs. weak governance areas. Thus, consistent with complementarity, stronger firm-level governance increases acquirer returns only if local governance is strong.

3 Conclusion

This paper argues that corporate governance is influenced by peer effects. We test this idea using data on antitakeover provisions and headquarters location for a large sample of U.S. public corporations, and find strong support for it. In particular, we show that, consistent with our peer-story, firms are more likely to adopt antitakeover provisions if other firms headquartered in the same geographic area adopt them. We then bring our peer effects to bear with the relationship between ATPs and corporate value and policies. We document that own and peer ATPs have a positive interaction effect on firm value, measured by Tobin's Q. Moreover, own and peer ATPs have a positive interaction effect on a wide variety of firm policies, which include investment, cash holdings, and acquisitions. We adopt a novel identification strategy and verify that these findings are robust to endogeneity concerns, which strongly supports a causal interpretation of our results.

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Appendix A. Variable Definitions

The variables used in this paper are extracted from four major data sources: IRRC, COMPUS-TAT, CRSP, and SDC Platinum. For each data item, we indicate the relevant source in square brackets. The specific variables used in the analysis are defined as follows:

• Governance Measures

- GIM-index is the sum of all antitakeover provisions in a firm's charter that varies between 0 and 24. SB&P-index is the sum of the staggered board and poison pill indicators that ranges from 0 to 2. E-index is the sum of six provisions: staggered boards, limits to shareholder bylaw amendments, limits to shareholder charter amendments, supermajority requirements for mergers, poison pills, and golden parachutes. Higher values of these indices correspond to more entrenchment. [IRRC]
- Dictatorship is a dummy which takes the value of one for observations in the top decile of each index (GIM≥13, E≥4, and SB&P=2). [IRRC]
- Democracy is a dummy which takes the value of one for observations in the bottom decile of each index (GIM≤ 5, E=0, and SB&P=0). [IRRC]
- BC_t is a dummy which takes the value of one if the firm's state of incorporation has passed an antitakeover law by time t. List of states and year and date of passage of the laws are from Bertrand and Mullainathan (2003) and Giroud and Mueller (2007).

• Local Governance:

- MSA indicates the Metropolitan Statistical Area (MSA) of a firm's headquarters.
 MSA definitions are based on Metropolitan Areas and Components data from the Office of Management and Budget (OMB). Historical data on location of headquarters is from physical Compustat tapes. [Compustat]
- Area incidence of democracy is defined for each firm i as the ratio of the number of democracy firms to overall number of firms in the MSA, excluding the firm itself. Area incidence of dictatorship is defined for each firm i as the ratio of the number of dictatorship firms to overall number of firms in the MSA, excluding the firm itself.
- Democracy areas are MSAs in the top quartile of all MSAs by area incidence of democracy. Dictatorship areas are MSAs in the top quartile of all MSAs by area incidence of dictatorship.

• Outcome measures:

- Tobin's Q is defined as the market value of assets divided by the book value of assets (item 6), where the market value of assets equals the book value of assets plus the market value of common equity less the sum of the book value of common equity (item 60) and balance sheet deferred taxes (item 74). [Compustat]
- Return on assets is the ratio of operating income after depreciation (item 178) over lagged total assets (item 6). [Compustat]
- Investment is capital expenditures (item 128) over net property, plant and equipment at the beginning of the fiscal year (item 8). [Compustat]

- Annual excess stock return for year t is obtained by subtracting the Fama-French size and book-to-market portfolio returns from the firm's raw stock return from t-1 to t (see Faulkender and Wang (2006)). [CRSP]
- (Dollar) change in cash holdings is measured as change in cash (item 1) from year t-1 to t, scaled by the market value of equity at the end of year t-1 (item25*item199). [Compustat]
- Acquirer return: the cumulative abnormal return to the acquiring firm's stock for trading days (-5, +1) relative to the date of the first bid for acquisitions made by firms for which governance index data is available from the IRRC database. [SDC Platinum]

• Controls:

- Size is log of the book value of assets (item 6), deflated by CPI in 1990. [Compustat]
- Leverage is defined as long term debt (item 9) plus debt in current liabilities (item 34) over the sum of long term debt (item 9) plus debt in current liabilities (item 34) plus market value of equity (item 25*item199). [Compustat]
- R&D is the ratio of R&D expenditures (item 46, or 0 is missing) over lagged sales (item 12). [Compustat]
- Advertising is the ratio of advertising expenditures (item 45, or 0 if missing) over lagged total sales (item 12). [Compustat]
- Cashflow is defined as the sum of earnings before extraordinary items (item 18) and depreciation (item 14) over net property, plant and equipment at the beginning of the fiscal year (item 8). [Compustat]
- Age is firm age measured as the number of years since firm was first listed. We estimate firm age based on the first date for which pricing information about a firm is available from the CRSP database, and supplement remaining information using pre-CRSP data from Jovanovic and Rousseau (2001). [CRSP]
- Delaware incorporation is a dummy that takes the value of 1 for firms incorporated in Delaware. [IRRC]

Appendix B. Figures and Tables

Figure 1: Incidence of ATPs Across MSAs by Year

The figure plots the frequency distribution of MSAs by incidence of ATPs. Incidence of ATPs is defined as percentage of firms with high level of ATPs (SB&P-index=2, "dictatorship") in the MSA. SB&P is a governance index based on the sum of the staggered board and poison pill indicators that ranges from 0 to 2, and is from the IRRC dataset. Data is annual for the 1990-2005 period.

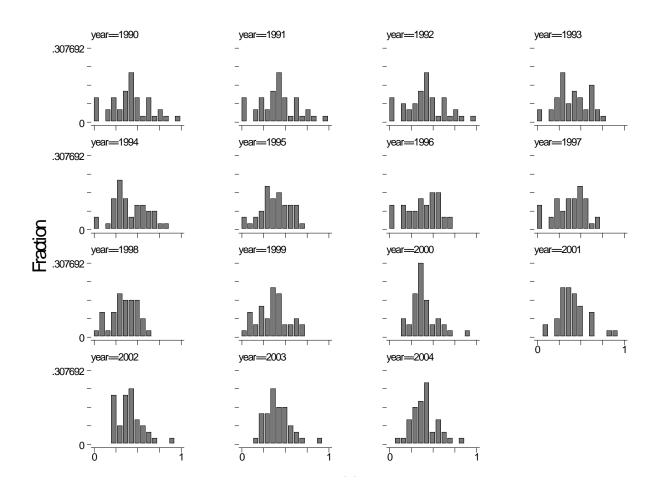


Table 1: Summary Statistics

The sample consists of 2584 firms from IRRC in the 1990 to 2006 period. Definitions for all variables are in Appendix A.

Panel A: Summary Statistics

Variable	Observations	Mean	Median	Standard Deviation
GIM	17613	9.13	9	2.70
SB&P	17613	1.19	1	0.76
\mathbf{E}	17613	2.19	2	1.28
I LODA	1.01.41	0.00	0.00	1 40
Local GIM	16141	8.30	8.60	1.46
Local SB&P	16141	1.04	1.04	0.26
Local E	16141	1.91	2.00	0.48
T	4.404.0	0.00	0	1.00
Tobin's Q (industry-adjusted)	14810	0.22	0	1.00
Investment	15639	0.27	0.20	0.28
ROA (industry-adjusted)	16130	0.05	0.03	0.11
Excess Return	15761	-0.01	-0.05	0.78
Delaware	18404	0.60	1	0.49
Size	16141	15.82	15.66	1.51
R&D	17914	0.09	0.03	0.16
Advertising	17914	0.03	0.02	0.03
Leverage	17613	0.25	0.22	0.24
Cashflow	15625	0.21	0.18	0.39
Sales Growth	16783	0.08	0.07	0.22
Cash holdings	17613	0.13	0.09	0.07
$\Delta ext{Cash}$	17613	0.02	0	0.09

Panel B: Characteristics of MSAs

	Mean	Standard Deviation	Q1	Median	Q4
N 1 CD:	45.00	9.0.71	1 -	41	CT
Number of Firms	45.90	36.71	15	41	67
Number of SIC3 Industries	26.31	18.51	12	24	37
Number of States of Incorporation	4.54	2.53	3	4	6
Number of States of Location	1.39	0.63	1	1	2
Number of Democracy Firms					
GIM	5.13	5.59	1	3	9
SB&P	12.31	12.66	3	8	16
E	6.25	6.46	1	4	9
Number of Dictatorship Firms					
GIM	4.22	3.91	1	3	7
SB&P	16.16	11.68	5	14	27
E	5.05	4.61	1	3	8

Table 2: Examples of Democracy and Dictatorship Areas

This table reports the top ten (Panel A) and the bottom ten (Panel B) areas (MSAs) by incidence of dictatorship firms in the sample of 2584 firms from IRRC in the 1990 to 2006 period. Governance is measured by GIM, SB&P, and E indices (details on each index are in Appendix A). For all indices, higher index value corresponds to more antitakeover provisions. Dictatorship is a dummy which takes the value of one for observations in the top decile of each index: $GIM \ge 13$, $E \ge 4$, and SB&P = 2.

Panel A: Areas with Highest Incidence of Entrenchment

MSA	Number	Γ	oictato	rship
	of Firms ⁻			SB&P=2
Divide a DA	4.4	0.00	0.00	0.40
Pittsburgh, PA	14	0.39	0.29	0.42
Providence-New Bedford-Fall River, RI-MA	6	0.31	0.18	0.46
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	37	0.28	0.16	0.34
Dayton, OH	7	0.27	0.39	0.59
Columbus, OH	9	0.25	0.33	0.29
Cleveland-Elyria-Mentor, OH	21	0.23	0.13	0.52
Greensboro-High Point, NC	6	0.23	0.24	0.34
St. Louis, MO-IL	15	0.19	0.19	0.62
Portland-Vancouver-Beaverton, OR-WA	11	0.19	0.14	0.55
Kansas City, MO-KS	9	0.19	0.25	0.73
Sample Average	41	0.13	0.16	0.40
Dampie Average	41	0.13	0.10	0.40

Panel B: Areas with Lowest Incidence of Entrenchment

MSA	Number	Г	ictato	rship
	of Firms ⁻	G≥13	E≥4	SB&P=2
	_	_		
Baltimore-Towson, MD	6	0	0.05	0.13
Miami-Fort Lauderdale-Miami Beach, FL	11	0	0.02	0.20
San Jose-Sunnyvale-Santa Clara, CA	55	0.03	0.02	0.21
San Antonio, TX	7	0.03	0.10	0.46
Jacksonville, FL	5	0.04	0.13	0.15
Charlotte-Gastonia-Concord, NC-SC	7	0.04	0.04	0.23
Cincinnati-Middletown, OH-KY-IN	11	0.04	0.06	0.38
Washington-Arlington-Alexandria, DC-VA-MD-WV	21	0.05	0.05	0.25
Denver-Aurora, CO	12	0.06	0.01	0.24
Nashville-Davidson-Murfreesboro, TN	7	0.07	0.07	0.21
Sample Average	41	0.13	0.16	0.40

Table 3: Spatial Distribution of Governance

The sample consists of 2584 firms from IRRC in the 1990 to 2006 period. Definitions for all variables, including area governance, are in Appendix A. Governance is measured by GIM, SB&P, and E indices. For all indices, higher index value corresponds to more antitakeover provisions. Dictatorship is a dummy which takes the value of one for observations in the top decile of each index: $GIM \ge 13$, $E \ge 4$, and SB&P = 2. Panel A reports cross-MSA variance in incidence of dictatorship and compares it to the variance predicted by differences across MSAs. PP is a hypothetical variance of dictatorship across areas, calculated under the null hypothesis that the governance is distributed i.i.d. across areas and given by the empirical average probability of observing dictatorship across all areas. Sample Variance/PP is the ratio of the empirical variance of the incidence of dictatorship across MSAs to PP. Panel B regresses mean MSA incidence of dictatorship on mean predicted MSA incidence of dictatorship. Predicted incidence of dictatorship is constructed using an OLS regression of firm-level dictatorship on standard firm-level determinants (lagged log of total assets, age, state of incorporation antitakeover statutes, delaware incorporation dummy, managerial ownership, block and pension fund ownership, and year and Fama-French (1997) industry fixed effects). Panel C reports probit estimates of the likelihood of dictatorship firm (coefficients are reported as marginal effects). For each firm i, Peers is the incidence of dictatorship in the area (MSA) where the firm is headquartered, excluding firm i. Additional controls include lagged log of total assets, age, state of incorporation antitakeover statutes, delaware incorporation dummy, managerial ownership, block and pension fund ownership, and year and Fama-French (1997) industry fixed effects. These coefficients are omitted from the table for brevity, and are available upon request. Standard errors are robust to heteroskedasticity and arbitrary serial correlation within industry-year cells. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Panel A: Excess Variance Test

	GIM (1)	SB&P (2)	E (3)
PP Sample Variance/PP	$0.114 \\ 2.122$	$0.240 \\ 4.538$	$0.134 \\ 2.295$

Panel B: Social Multiplier Test

	GIM	SB&P	E
	(1)	(2)	(3)
Predicted Dictatorship	1.184***	1.999***	1.840***
	(0.011)	(0.037)	(0.030)
Observations \mathbb{R}^2	8571 0.66	$8571 \\ 0.5$	8571 0.41

Panel C: Probit Analysis

	GIM	SB&P	E
	(1)	(2)	(3)
Peers	0.106***	0.295***	0.231***
	(0.030)	(0.032)	(0.034)
Observations \mathbb{R}^2	$12352 \\ 0.10$	$12352 \\ 0.11$	$12352 \\ 0.11$

Table 4: Relative Governance and Firm Value – Event Study Results

This table reports valuation effect of corporate governance in Democracy vs Dictatorship areas. Definitions for all variables, including area governance, are in Appendix A. Panel A reports the monthly abnormal return (alpha) and its t-statistic for value-weighted portfolios that buy democracy firms and short dictatorship firms as measured by the GIM index. Column (1) reports results for all areas, columns (2) and (3) report results when the sample is split between Democracy and Dictatorship areas. Democracy areas are defined as areas with high incidence of democracy firms (top quartile). Dictatorship areas are defined as areas with high incidence of dictatorship firms (top quartile). We also consider value-weighted and equally-weighted portfolios that buy democracy firms in Democracy areas and short dictatorship firms in Dictatorship areas. The sample consists of 2584 firms from IRRC from 1/1/1990 to 12/31/1999, and the alphas are relative to the four-factor Carhart (1997) model. Panel B reports mean cumulative abnormal returns (CARs) for three governance events, where CARs are calculated for the (-1, +1) period relative to the date of the first newspaper report of the respective announcement. Line 1 reports CARs of exchange-listed firms incorporated in 19 states that passed a business combination (BC) law between 1983 and 1991 (for the list of states and dates, see Bertrand and Mullainathan (2003) and Giroud and Mueller (2007)); line 2 reports CARs of 342 announcements of poison pill adoption made between 1990 and 2006 by firms in the IRRC sample; line 3 reports CARs of 144 announcements of board declassification made between 1990 and 2006 by firms in the IRRC sample. For each event, Column (1) reports results for all areas, columns (2) and (3) report results when the sample is split between Democracy and Dictatorship areas. Democracy areas are defined as areas with high incidence of democracy firms (top quartile). Dictatorship areas are defined as areas with high incidence of dictatorship firms (top quartile). t-statistics are in parentheses. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Panel A: Long-Term Event Study

	All Areas	Democracy Areas	Dictatorship Areas
	(1)	(2)	(3)
Value-Weighted	0.35	0.79*	0.29
	(1.24)	(1.80)	(0.60)
Democracy Firm	in Democracy	Area-Dictatorship	Firm in Dictatorship Area Portfolio
	Alpha	t-stat	
	(1)	(2)	_

Panel B: Short-Term Event Study

Event	All Areas (1)	Democracy Areas (2)	Dictatorship Areas (3)
[1] BC	-0.26** (1.75)	-0.47** (1.94)	$0.15 \\ (0.61)$
[2] Pill Adoption	0.007* (1.690)	$0.007 \\ (1.093)$	0.016** (2.082)
[3] Board Declassification	-0.006 (1.490)	0.006** (2.309)	-0.027 (1.341)

Table 5: Relative Governance and Firm Value – Announcement Effect of Governance on Peers

The sample is based on 342 announcements of poison pill adoption (Panel A) and 144 announcements of board declassification (Panel B) made between 1990 and 2006 by firms in the IRRC sample. The table reports results of OLS regressions of peer CARs on governance and controls in Democracy vs Dictatorship areas. Peer CARs are cumulative abnormal returns of area peers (i.e., firms located in the same MSA as the announcing firms) calculated for the (-1, +1) period relative to the date of the first newspaper report of the respective announcement. Governance is measured by GIM, SB&P, and E indices (details on each index are in Appendix A). Democracy areas are defined as areas with high incidence of democracy firms (top quartile). Dictatorship areas are defined as areas with high incidence of dictatorship firms (top quartile). Controls include lagged Tobin's Q, size, mean Tobin's Q in the firm's MSA in that year (excluding the firm itself), and year fixed effects. These coefficients are omitted from the table for brevity, and are available upon request. All variable definitions are in Appendix A. Standard errors are robust to heteroskedasticity and arbitrary serial correlation within MSAs. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Panel A: Poison Pill Adoption on Peers

	All Areas (1)	Democracy Areas (2)	Dictatorship Areas (3)	(Dem-Dict) Areas (p-value)
GIM	$0.041 \\ (0.027)$	0.152** (0.057)	-0.009 (0.034)	0.161** (0.044)
	$R^2 = 0.01$	$R^2 = 0.02$	$R^2 = 0.02$	
SB&P	0.103 (0.084)	0.208*** (0.075)	0.031 (0.143)	0.177*** (0.004)
	$R^2 = 0.01$	$R^2 = 0.02$	$R^2 = 0.03$	
Е	0.090 (0.058)	0.220** (0.101)	0.028 (0.086)	0.192** (0.040)
	$R^2 = 0.01$	$R^2 = 0.03$	$R^2 = 0.02$	

Panel B: Board Declassification on Peers

	All Areas (1)	Democracy Areas (2)	Dictatorship Areas (3)	(Dem-Dict) Areas (p-value)
GIM	-0.014 (0.020)	-0.124** (0.056)	-0.070 (0.053)	-0.054** (0.024)
	$R^2 = 0.01$	$R^2 = 0.03$	$R^2 = 0.02$	
SB&P	-0.089 (0.071)	-0.162** (0.062)	-0.016 (0.144)	-0.146* (0.069)
	$R^2 = 0.01$	$R^2 = 0.02$	$R^2 = 0.03$	
Е	-0.028 (0.059)	-0.099* (0.052)	-0.051 (0.063)	-0.048** (0.050)
	$R^2 = 0.01$	$R^2 = 0.03$	$R^2 = 0.02$	

Table 6: Relative Governance and Firm Value: Tobin's Q

This table reports panel regressions of industry-adjusted Tobin's Q on governance and controls in Democracy vs Dictatorship areas. Definitions for all variables, including area governance, are in Appendix A. Panel A reports results for governance measured by GIM, SB&P, and E indices in the sample of 2584 firms from IRRC in the 1990 to 2006 period. For each index, Democracy areas are defined as areas with high incidence of democracy firms (top quartile). Dictatorship areas are defined as areas with high incidence of dictatorship firms (top quartile). Controls include lagged size, the ratio of R&D expenditures to sales, the ratio of advertising and sales expense to sales, the ratio of long-term debt to assets, the mean of the dependent variable in the firm's area (MSA) in that year (excluding the firm itself), and year fixed effects. These coefficients are omitted from the table for brevity, and are available upon request. Panel B implements a difference-in-differences estimator using state antitakeover laws. Governance is measured by BC, a dummy variable that equals one if a state has passed an antitakeover law by time t, in the sample of 11769 firms from Compustat from 1977 to 1996. The definition of Democracy and Dictatorship areas now uses the BC laws and is otherwise analogous to Panel A (see Appendix A for details). Controls are as in Panel A. Firm fixed effects are also included. In both panels, standard errors are robust to heteroskedasticity and arbitrary serial correlation within MSAs. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Panel A: Governance Index

	All Areas (1)	Democracy Areas (2)	Dictatorship Areas (3)	(Dem-Dict) Areas (p-value)
GIM	-0.035*** (0.009)	-0.046*** (0.013)	-0.025 (0.016)	-0.021** (0.049)
	$R^2 = 0.05$	$R^2 = 0.07$	$R^2 = 0.03$	
SB&P	-0.101*** (0.037)	-0.206** (0.099)	-0.058 (0.051)	-0.148** (0.043)
	$R^2 = 0.05$	$R^2 = 0.06$	$R^2 = 0.09$	
E	-0.087*** (0.021)	-0.131*** (0.045)	-0.085*** (0.026)	-0.046*** (0.008)
	$R^2 = 0.05$	$R^2 = 0.08$	$R^2 = 0.07$	
Observations	14616	3282	3285	

Panel B: Identification

	All Areas (1)	Democracy Areas (2)	Dictatorship Areas (3)	(Dem-Dict) Areas (p-value)
BC	-0.127** (0.048)	-0.199*** (0.050)	-0.004 (0.104)	-0.195** (0.046)
	$R^2 = 0.05$	$R^2 = 0.04$	$R^2 = 0.05$	
Observations	69481	17809	17634	

Table 7: Relative Governance and Sources of Value: Operating Decisions

This table reports panel regressions of investment (Panel A) and industry-adjusted (percent) ROA (Panel B) on governance and controls in Democracy vs Dictatorship areas. Definitions for all variables, including area governance, are in Appendix A. The sample consists of 2584 firms from IRRC in the 1990 to 2006 period. Governance is measured by GIM, SB&P, and E indices. For each index, Democracy areas are defined as areas with high incidence of democracy firms (top quartile). Dictatorship areas are defined as areas with high incidence of dictatorship firms (top quartile). Controls include lagged cashflow and firm size in Panel A, and lagged log of market and book equity, the ratio of long-term debt to assets, cashflow, and capital expenditures in Panel B. In addition, all regressions control for the mean of the dependent variable in the firm's area (MSA) in that year, excluding the firm itself, and year fixed effects. These coefficients are omitted from the table for brevity, and are available upon request. Standard errors are robust to heteroskedasticity and arbitrary serial correlation within MSAs. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Panel A: Investment

	All Areas (1)	Democracy Areas (2)	Dictatorship Areas (3)	(Dem-Dict) Areas (p-value)
GIM	-0.006*** (0.001)	-0.008*** (0.002)	-0.004 (0.003)	-0.004** (0.033)
	$R^2 = 0.15$	$R^2 = 0.19$	$R^2 = 0.12$	
SB&P	-0.012*** (0.004)	-0.026*** (0.007)	-0.001 (0.006)	-0.025*** (0.005)
	$R^2 = 0.15$	$R^2 = 0.22$	$R^2 = 0.19$	
E	-0.010*** (0.003)	-0.020*** (0.005)	-0.009 (0.006)	-0.011* (0.056)
	$R^2 = 0.15$	$R^2 = 0.17$	$R^2 = 0.12$	
Observations	12146	2803	2952	

Panel B: ROA

	All Areas (1)	Democracy Areas (2)	Dictatorship Areas (3)	(Dem-Dict) Areas (p-value)
GIM	-0.073*** (0.023)	-0.107** (0.054)	-0.034 (0.044)	-0.073*** (0.001)
	$R^2 = 0.07$	$R^2 = 0.09$	$R^2 = 0.06$	
SB&P	-0.160* (0.094)	-0.542** (0.238)	0.144 (0.167)	-0.398** (0.026)
	$R^2 = 0.06$	$R^2 = 0.07$	$R^2 = 0.08$	
E	-0.279*** (0.060)	-0.432*** (0.109)	-0.227** (0.114)	-0.205** (0.012)
	$R^2 = 0.07$	$R^2 = 0.10$	$R^2 = 0.07$	
Observations	N=16105	N=3797	N=3748	

Table 8: Relative Governance and Sources of Value: Financial Policies and Acquisitions

This table reports OLS regressions of the value of cash holdings (Panel A) and acquirer returns (Panel B) on governance and controls in Democracy vs Dictatorship areas. Definitions for all variables, including area governance, are in Appendix A. Governance is measured by GIM, SB&P, and E indices. For each index, Democracy areas are defined as areas with high incidence of democracy firms (top quartile). Dictatorship areas are defined as areas with high incidence of dictatorship firms (top quartile). Panel A reports results for the value of cash holdings regressions, where the value of cash holdings is measured by regressing size and market-to-book adjusted excess returns during fiscal year t on changes in cash holdings from year t-1 to t (Δ Cash). The sample consists of 2584 firms from IRRC in the 1990 to 2006 period. Controls are as in Faulkender and Wang (2007) and Masulis, Wang, and Xie (forthcoming). In addition, all regressions control for the mean of the dependent variable in the firm's area (MSA) in that year (excluding the firm itself). Panel B reports results for acquirer returns for a sample of 3846 acquisition announcement by firms from IRRC in the 1990 to 2006 period. Controls are as in Masulis, Wang, and Xie (2007). Coefficients for controls are omitted from the table for brevity, and are available upon request. In both panels, standard errors are robust to heteroskedasticity and arbitrary serial correlation within MSAs. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Panel A: Value of Financial Policies

	All Areas (1)	Democracy Areas (2)	Dictatorship Areas (3)	(Dem-Dict) Areas (p-value)
$\mathrm{GIM}^*\Delta\mathrm{Cash}$	-0.022** (0.010)	-0.045** (0.021)	$0.019 \\ (0.019)$	-0.064*** (0.000)
	$R^2 = 0.16$	$R^2 = 0.15$	$R^2 = 0.17$	
SB&P* Δ Cash	-0.102*** (0.031)	-0.184*** (0.064)	-0.106 (0.098)	-0.078** (0.016)
	$R^2 = 0.16$	$R^2 = 0.16$	$R^2 = 0.16$	
$E^*\Delta Cash$	-0.038* (0.019)	-0.074* (0.039)	0.001 (0.037)	-0.075** (0.042)
	$R^2 = 0.16$	$R^2 = 0.16$	$R^2 = 0.15$	
Observations	12877	3093	3080	

Panel B: Value of Acquisition Decisions

	All Areas (1)	Democracy Areas (2)	Dictatorship Areas (3)	(Dem-Dict) Areas (p-value)
GIM	-0.153** (0.065)	-0.267** (0.131)	$0.029 \\ (0.095)$	-0.296** (0.028)
	$R^2 = 0.02$	$R^2 = 0.06$	$R^2 = 0.03$	
SB&P	-0.596* (0.308)	-1.102** (0.512)	-0.260 (0.357)	-0.842** (0.016)
	$R^2 = 0.02$	$R^2 = 0.03$	$R^2 = 0.02$	
E	-0.196 (0.144)	-0.391** (0.195)	-0.185 (0.176)	-0.206 (0.253)
	$R^2 = 0.02$	$R^2 = 0.03$	$R^2 = 0.03$	
Observations	4337	1075	1050	