Politics at the Gate:

Political Connections in Private Equity

Jun Chen and Matthew Denes*

ABSTRACT

This paper studies how political influence impacts capital allocation. We leverage an unanticipated weakening of political connections between financial intermediaries and capital providers. Using detailed data on capital commitments, we find that public pensions reallocate capital to first-time private equity funds. The effects are similar across asset classes in private markets and concentrated in these capital providers. The investment in first-time funds is driven by disruptions to existing relationships between financial intermediaries and capital providers, rather than a change in resources provided to private markets. The reallocated investments exhibit superior performance. Overall, our findings highlight how politics shapes capital decisions.

*Jun Chen is with College of Business Administration, University of Illinois Chicago (chenjun@uic.edu). Matthew Denes is with Tepper School of Business, Carnegie Mellon University (denesm@andrew.cmu.edu).

I. Introduction

Political influence can impact investment decisions and economic outcomes. There has been a striking increase in campaign finance over the past two decades, with spending in the most recent U.S. federal election eclipsing $16 billion. At the same time, there is a growing concern regarding the drift from free markets towards crony capitalism, where politics steer the allocation of capital. In this paper, we study the impact of the U.S. federal regulatory changes that altered the extent to which financial intermediaries can form political connections with potential investors.

The Securities and Exchange Commission (SEC) adopted the Advisers Act Rule 206(4)-5 in September of 2010, with a compliance date by early 2011. Termed the "pay-to-play" rule, it prohibits an investment adviser from receiving compensation for advisory services to any government client for two years following political contributions. The SEC can impose penalties for firms violating this rule. Since the rule passed, there have been high-profile violations, leading to millions of dollars in penalties.

We gather data from two key sources. First, the Database on Ideology, Money in Politics, and Elections (DIME) has extensive information on political contributions in local and state elections in the United States (Bonica, 2024) covering 850 million itemized contributions. Second, Preqin provides comprehensive coverage on the investments and returns of U.S. public pensions (Kaplan and Lerner, 2016). We link private equity (PE) firms in Preqin to political contributions in DIME. We supplement the DIME-Preqin data with information from PitchBook. The sample period for our analyses covers 2006 to 2016, providing a symmetric 5-year window around the rule implementation. The data include over 5,500 commitments by public pensions into just over 1,100 PE funds.

In the first set of analyses, we evaluate the role of political contributions in fundraising from public pensions. The SEC argued for the adoption of the "pay-to-play" rule by

highlighting that politics influenced the allocation of capital. We form a panel of political contributions by general partners (GPs) and link it with their state-level fundraising. There is an economically sizable and statistically significant relationship between political contributions and receiving a capital commitment. We find that a GP contributing to state's limited partners (LPs) increases the likelihood of raising a capital commitment by 11 percentage points. We also report similar effects using the number of commitments, in addition to the intensive margin of political influence.

We next analyze how the "pay-to-play" rule affected the political activity of GPs. We begin by tracking political contributions and examine the share of PE firms engaging in political activity. Prior to the rule, about 25% of GPs provide political contributions during a particular election cycle. This drops by a sizable 10 percentage points to 15% following the implementation of the rule. Because prohibited contributions can result in the loss of compensation—such as management fees—from existing public pension investments, or trigger SEC enforcement actions, the pay-to-play rule should most strongly curtail contributions by GPs with active advisory relationships with local public pension LPs. We therefore evaluate the rule's effectiveness by comparing the political contributions made by GPs with existing public pension relationships to those without such ties. Using multiple measures for political activity and estimating regressions with granular fixed effects for GPs, LP states, and political contribution years, we find that the rule substantially reduced political contributions along both the extensive and intensive margins. We additionally examine the effects separately for VC and buyout funds, and find similar estimates. Combined with the steep univariate drop, these estimates highlight that the rule disrupted the political influence of financial intermediaries on their capital providers.

The disruption of previously established political connections might induce capital providers to search for new investment opportunities. In the setting of private equity, this adjustment is likely to manifest in LPs directing a greater share of capital toward funds at

newly-formed private equity firms, which we refer to as first-time funds. To examine whether the weakening of political connections increased the likelihood that public pension LPs invest in first-time funds, we employ a difference-in-differences framework.

Our empirical strategy exploits variation in political connections prior to the rule change. Specifically, we construct a state-level treatment variable that measures political activity relative to private market investments, both before the rule implementation: the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs over 2003–2010. Importantly, there is substantial heterogeneity in political connections across states prior to the "pay-to-play" rule. There are also no pre-treatment differences in states along a variety of measures for economic activity and state characteristics.

We include LP fixed effects to capture time-invariant LP heterogeneity. We also use year fixed effects to absorb macroeconomic trends, along with fund-type fixed effects to control for differences across asset classes. Using this difference-in-differences design, we find that LPs are significantly more likely to invest in first-time funds after political influence declines. The effects are statistically significant and economically large. A one-standard deviation increase in exposure to the rule change leads to a 2 percentage point increase in the probability of investing in a first-time fund, which is a 28% increase relative to the sample mean. The results remain similar if we include time-varying state-level controls or restrict the sample to states that follow the standard four-year gubernatorial election cycle. By curbing political influence, the restriction helps level the playing field for new fund managers, consistent with the SEC's rationale:[1]

> By addressing pay to play practices, we will help level the playing field so that the advisers selected to manage retirement funds and other investments for the public are more likely to be selected based on the quality of their advisory services.

[1]See page 131 of the final rule release: https://www.sec.gov/files/rules/final/2010/ia-3043.pdf

Taken together, these results highlight that such influence distorts the allocation of capital.

We provide several extensions of the baseline results. First, we evaluate the effects separately for VC and buyout funds. For this analysis, we construct a treatment variable to capture the role of political connections for VC and a separate measure for buyout. We find that the disruption of political influence has sizable effects in both VC and buyout, though the estimates are comparatively larger in VC. Second, we examine the effects of weakened political influence within a pre-existing GP-LP relationship. We implement this approach by focusing on GP-LP pairs with capital invested prior to the rule change. Then, we track the likelihood of making a new commitment within these pairs after political connections were disrupted. We show that the weakening of political connections led to large declines in the likelihood of making new commitments by public pension LPs to their existing GPs. Third, we investigate the validity of the parallel trends assumption by estimating dynamic treatment effects. We find that there is no effect prior to the rule change in 2011 and the impact starts soon after the rule's implementation. In the last extension, we re-estimate the effect for other type of LPs, including private pensions and foundations, where the rule change should arguably not impact investment decisions. We find that there is no change for these other LP type after the rule change.

Weakening political connections might affect the investment decisions of capital providers through several channels. One potential mechanism is disrupting relationships between GPs and LPs. Prior to the rule change, GPs contributed to LPs in return for capital commitments. A second possible mechanism is that the resources, preferences, or investment opportunities of capital providers responded to the change in political influence.

In the next set of analyses, we explore each of these potential channels. First, we evaluate the importance of the mechanism based on the relationship between GPs and LPs. We construct a panel of political contributions and capital commitments before the rule change. We find that there is a strong and positive relationship between political contributions and

raising subsequent capital commitments. Paired with the previous results on the decline in fundraising after the rule change, these results are consistent with the importance of GP-LP networks and suggest that the pay-to-play arrangement previously strengthened these relationships. We extend the findings on the relationship channel by analyzing variation in political influence across states. In particular, we follow Ewens and Farre-Mensa (2020) by measuring political influence using the total assets of state and local pension funds and the share of state officials serving on the boards of trustees in the year before the rule change. We show that the effects are substantially larger in states with high political influence. This is again consistent with relationships serving as a key channel explaining the reallocation to first-time funds.

Next, we investigate the importance of the resources channel. Private markets have grown considerably over the past two decades. At the same time, public pension funds could increase their allocation to this asset class. To evaluate this channel, we gather data on the number and size of commitments to private equity by public pension funds. We find that there is no change in the capital committed by public pensions during the sample period. The estimates are economically small and statistically indistinguishable from zero. Combined, this evidence suggests that the resources channel does not play a sizable role in the effects of weakened political connections on investment decisions of capital providers.

In the last set of analyses, we study the performance of investments by public pensions. For this approach, we use data on the internal rate of return (IRR) and investment multiple, which are two common metrics of performance for PE funds. We include the latest observation for each fund in the sample. We find that the performance of investments significantly increases following weakened political connections. These effects hold when including LP, GP, year, and fund type fixed effects, in addition to time-varying state-level controls. We also show that the estimates are comparatively larger for investments in first-time funds relative to capital committed to other GPs. These findings indicate that the disruption to

political connections is related to superior investment performance.

Overall, we contribute to two streams of the literature. First, there is an increasingly established literature in private equity. A growing number of papers evaluate the performance of private equity funds (Korteweg and Westerfield (2022)). Several papers also examine the decisions of public pensions (Andonov et al. (2018)). Our findings connect to the investment decisions of these capital providers. Our paper is also related to the literature at the intersection of political economy and finance. A series of studies document that political connections positively impact firm value (e.g., Faccio (2006); Akey (2015)). Firms connected to politicians are more likely to be bailed out and received preferential access to government contracts (e.g., Khwaja and Mian (2005); Duchin and Sosyura (2012); Brogaard et al. (2021)). We contribute to this literature by showing that disruptions to political influence impact the investment decisions of capital providers. Further, the reduction in rent extraction by financial intermediaries appears to increase investment performance.

II. Institutional background and Data

II.A. Pay-to-Play Rule

In response to a series of pay-to-play violations,[2] the Securities and Exchange Commission (SEC) adopted Rule 206(4)-5—commonly known as the Pay-to-Play (or PTP for short) Rule—in late 2010.[3] The rule restricts investment advisers from making political contributions if they provide, or seek to provide, investment advisory services to a government entity,

[2]For example, one of the most well-known pay-to-play violations involved a multi-million dollar kickback scheme connected to New York's largest pension fund, see https://www.sec.gov/enforcement-litigation/litigation-releases/lr-21036

[3]https://www.ecfr.gov/current/title-17/chapter-II/part-275/section-275.206(4)-5

either directly or through a pooled investment vehicle.[4]

A central provision of the rule is the imposition of a two-year "time out" period during which an adviser is prohibited from receiving compensation for advisory services to a government client if certain political contributions above the de minimis exception (i.e., $350 per individual contributor per candidate per election cycle) are made. The rule applies specifically to investment advisers that manage assets of government entities through "covered investment pool," which include both private equity and venture capital funds.

The SEC rule covers not only the investment firms themselves but also their "covered associate." Covered associates include (i) any general partner, managing member, executive officer, or person with similar status or function; (ii) any employee who solicits government clients for the adviser, as well as anyone who directly or indirectly supervises such employee; and (iii) any political action committee controlled by the adviser or by any of its covered associates. In light of this provision, our main analyses draw on political contributions made by both PE firms and their employees to measure political connections between public pension funds and PE firms.

On the recipient side, the SEC rule encompasses contributions to officials at all levels of state and local government, their agencies and instrumentalities, as well as public pension plans and other collective government investment vehicles, including participant-directed plans such as 403(b), 457, and 529 plans.

Several features of Rule 206(4)-5 make it particularly broad in scope. First, although the original intent of the rule was to prevent political contributions from influencing the

[4]There are also state and local pay-to-play regulations, as well as other federal rules targeting specific segments of the financial service industry. However, the SEC's pay-to-play rule remains the most significant, as it applies to both registered and exempt reporting advisers and operates at the federal level, see https://www.reuters.com/legal/legalindustry/sec-pay-to-play-rule-investment-advisers-it-turns-12-2023-03-01/

selection of investment advisers, it also applies to existing advisory relationships. Because private equity funds are illiquid, closed-end vehicles, fund managers who raised capital from public pension funds years earlier remain subject to the contribution restrictions as long as the funds have not been liquidated. Consistent with this, we show that political contributions decline more sharply for existing LP-GP relationships following the rule's adoption.

Second, the rule includes a "look-back" provision that applies to contributions made before an individual becomes a covered associate. Specifically, if a contribution was made within two years (or six months for non-solicitors, as defined by the SEC) prior to an individual's hire or promotion into a covered associate role, the adviser that employs or promotes that individual is prohibited from receiving compensation for advisory services to a government entity until the look-back period has expired.

Third, the rule applies broadly to both incumbents and candidates for any office that has authority to appoint—or to influence the appointment of—persons responsible for selecting investment advisers. In practice, this encompasses governors as well as local elected officials.[5] Importantly, the rule also extends to candidates for such offices, even if their election campaigns are ultimately unsuccessful.[6]

Lastly, the rule does not require evidence of an actual quid pro quo, or even intent to seek one to establish a violation. Echoing this concern, one SEC Commissioner described the rule as an "exceedingly blunt instrument".[7]

---

[5]Due to the rule's broad reach, its impact can extend beyond the finance industry. For example, a contribution to the Harris-Walz ticket in the 2024 presidential election could affect an adviser's ability to receive compensation from public pension investors in Minnesota because Governor Tim Walz qualified as an "official" under the rule, see https://thefundlawyer.cooley.com/remember-pay-to-play-rule-before-making-us-election-campaign-contributions/

[6]https://www.sec.gov/enforce/ia-6126-s

[7]https://www.sec.gov/newsroom/speeches-statements/peirce-statement-pay-play-rule-settlements-091522

Importantly, the SEC has also been active in enforcing the pay-to-play rule. Since 2010, we identify more than 20 enforcement actions related to pay-to-play violations, with civil money penalties ranging from $35,000 to $500,000. Notably, such cases represent the largest category of enforcement actions brought against exempt reporting advisers (including PE and VC), accounting for roughly one-third of all enforcement actions involving this group.[8]

Although the pay-to-play rule does not impose an outright ban on political contributions by PE firms, its prohibition of receiving compensation for two years after a prohibited contribution can effectively halt the collection of management fees by investment advisers and disrupt fund operations, potentially resulting in substantial financial losses. Consequently, given the rule's broad reach, we expect it to significantly curb the political participation and contributions of PE firms.

Consistent with this expectation, our empirical analyses below show a sharp decline in political donations following the rule's adoption. Specifically, the fraction of PE firms making any political contribution fell from approximately 25% before the rule change to about 15% by the end of our sample period—a 40% decrease (Figure 1). Moreover, in panel regressions, we find that GPs with existing advisory relationships with public pension funds in a state reduced their political contribution by nearly 80% in dollar terms (Table 2).

II.B. Data

II.B.1. Political Contribution Data

To measure PE firms' political connections, we draw on political contribution data from Stanford's Database on Ideology, Money in Politics, and Elections (DIME) (Bonica, 2024). The database offers a comprehensive ideological mapping of political elites, interest groups,

[8] https://www.goodwinlaw.com/en/insights/publications/2023/01/01_25-exempt-reporting-advisers-sec-enforcements

and donors, covering more than 850 million itemized contributions made by individuals and organizations to local, state, and federal elections from 1979 through 2024. We match the Itemized Contribution Files in DIME to PE fund managers using contributor names for organizational donations and employer names for individual donations. The matching procedure employs fuzzy matching on standardized firm names.

To more precisely capture the impact of the Pay-to-Play Rule on public pension funds' allocation to private equity, we focus on political contributions to candidates that can influence "the outcome of, or the hiring of, an investment adviser." Specifically, we restrict the sample to contributions made to candidates for offices that commonly hold ex-officio seats on public pension boards—including governor, lieutenant governor, treasurer, state controller, comptroller, secretary of state, attorney general, auditor, chief finance officer, and superintendent of public instruction. For state and local elections over 2006–2016, we identify 12,029 contributions from individuals or organizations affiliated with 1,510 PE firms. Approximately 85% of these contributions were directed to gubernatorial or lieutenant gubernatorial elections, with the remainder supporting candidates for positions such as state treasurer or secretary of state. Roughly 98% of all contributions were made by individual employees, while 2% came directly by PE firms. Because PE firms are typically small organizations in which individual employees' contributions closely reflect firm-level preferences, we attribute a political contribution to the corresponding PE firm regardless of whether it was made by an individual employee or the firm itself.

II.B.2. Public Pension Commitments Data

We obtain public pension funds' investments in PE funds primarily from Preqin. Drawing on public filings by pension funds and FOIA requests, Preqin provides the most comprehensive coverage of public pension fund investments in private equity (Kaplan and Lerner, 2016; Hochberg and Rauh, 2013). Because Preqin identifies general partners by fund name, the

information can be verified and corrected, making it a transparent and reliable data source (Kaplan and Lerner, 2016). Lastly, we supplement the Preqin data with additional information from the Pitchbook database.

To obtain a clean sample of PE funds, we exclude firms whose primary strategies are natural resources or mezzanine and focus on funds classified within the following categories: venture, early stage, late stage, buyout, growth, balanced, turnaround (see, e.g., Fernández-Tamayo et al., 2023).

Between 2006 and 2016, we identify 5,528 commitments made by 190 public pension LPs into 1,123 PE funds managed by 594 distinct PE firms. About 63% of these commitments were directed to buyout funds, while 22% went to venture capital funds.

III. Estimation Strategies

III.A. The Relevance of PE's Political Contribution in Fundraising

We begin by establishing that PE firms' political contributions to a state have significant predictive power of their fundraising from public pension LPs within that state.

One of the key motivations for the SEC to adopt the pay-to-play rule was evidence that the selection of investment advisers had been influenced by political contributions. As the SEC noted in its final rule:[9]

> Numerous developments in recent years have led us to conclude that the selection of advisers, whom we regulate under the Investment Advisers Act, has been influenced by political contributions and that, as a result, the quality of management service provided to public funds may be negatively affected.

We test this premise empirically and use it to motivate the construction of our treatment variable.

[9]See Page 8 of of the final rule release: https://www.sec.gov/files/rules/final/2010/ia-3043.pdf

Political contributions can be made either to secure new public pension commitments or to maintain existing advisory relationships—both of which are restricted under the pay-to-play rule. Consequently, it is difficult to directly link the timing of individual political contributions to specific public pension investments. To remain agnostic about timing, we focus on a relatively broad pre-regulation window spanning 2003-2010, which covers the two most recent gubernatorial election cycles prior to the rule change. Within this period, we track each GP's political contributions to a given state alongside their fundraising activity in that same state, and then examine the relationship between a PE firm's political contribution and its fundraising from public pension LPs at the PE firm-LP state level.

The estimates reported in Table IA.1 indicate that a PE firm's political contributions to a state significantly predict its fundraising from public pension LPs in that state. For instance, column 1 shows that, conditional on a GP raising capital from a state, the likelihood of receiving funding from a public pension LP in that state increases by approximately 11.6% if the GP has made a political contribution there. This represents a 32% increase relative to the sample mean (36.0%). Column 3 reveals a similarly strong relationship between political contributions and the total number of commitments from public pension funds, while the coefficient on the total dollar amount of the commitments in column 4 is estimated with less precision but implies a large economic magnitude.

Overall, the results in Table IA.1 are consistent with the SEC's concern that fundraising from public pension funds may have been influenced by political contributions.

III.B. Construction of the Treatment Variable

Building on the findings in the previous section, we aim to construct a variable that approximates the relative exposure of each public pension fund to the pay-to-play rule change. The idea is that a public pension fund in state i is more exposed to the rule if that state has received relatively higher political contributions from PE firms in which its public pension

funds have invested.

Accordingly, we measure cross-state variation in political contributions received by each state from PE firms that obtained public pension investments from the same state prior to the pay-to-play rule. As discussed earlier, because it is difficult to precisely align the timing of political contributions with specific public pension investment, we aggregate total political contributions of GPs that have raised funding from public pensions in a state over the two election cycles immediately preceding the rule change (2003–2010).[10] This broader window also helps reduce noise arising from differences in electoral competitiveness and contribution intensity across states.

To account for variation in the scale of state pension funds' PE investments, we normalize the political contributions made by GPs that raised capital from public pensions in a given state over 2003–2010 by the total capital these GPs have raised during the same period. This resulting ratio of political contribution to PE capital commitments is our state-level measure of exposure to the pay-to-play rule–*Connections*.

There is no evidence that the PE industry anticipated the rule change or adjusted its political contribution in advance (see Figure 1). We therefore treat *Connections* as plausibly exogenous and use it as our treatment variable.

Our measure likely understates the true extent of political connections between PE firms and public pension LPs for several reasons. First, we observe only political contributions that can be directly linked to PE firms. Contributions made without employer identifiers or through third parties are not captured. As one of the main motivations behind the pay-to-play rule, the SEC expressed particular concern that "[some] contributions have been funneled through solicitors and placement agents that advisers engage in order to secure a

[10]For gubernatorial elections, all states follow a four-year cycle except New Hampshire and Vermont. Accordingly, our pre-regulation window captures exactly two political cycles for the other 48 states.

client relationship with a public pension plan or an investment from one."[11] Consequently, depending on the magnitude of such indirect or undisclosed contributions, our measure may substantially understate the political ties between PE firms and public pension funds.

The political connection variable captures the intended variation. First, when we correlate it with proxies for state political influence over public pension funds' PE allocations and with standard corruption measures, we find positive correlations (Figures 2 and IA.1). However, these correlations are also modest. For example, the correlation between our treatment variable and the corruption measure of Glaeser and Saks (2006) (the GS measure) is approximately 16%, indicating that our measure does not reflect the same variation as the corruption measures commonly used in the literature. Second, we examine correlations between the political connection variable with several state-level attributes, including state GDP growth, housing prices, the state capital gain tax rate, per capita R&D expenditure, and educational attainment (measured as the share of adults with at least some college or associate's degree). We find weak or statistically insignificant correlations with these variables. These results suggest that states with higher levels of PE-related political connections do not systematically differ in other economic conditions unrelated to private equity activity.

III.C. Estimation Strategy

Given the regional variation in PE firms' political connections to public pension funds, we expect the pay-to-play rule to have differentially affected public pension funds' PE allocations across U.S. states. We exploit this cross-sectional heterogeneity in PE firms' political connections to identify the impact of the rule on public pension funds' allocations to different types of PE funds, with particular emphasis on first-time funds. Our empirical strategy employs a difference-in-differences (diff-in-diff) framework. The pay-to-play rule was adopted in September 2010, with a compliance date of March 14, 2011, for investment advisers sub-

[11] See page 8 of the final rule release: https://www.sec.gov/files/rules/final/2010/ia-3043.pdf

ject to the rule. Accordingly, we define 2011 as the beginning of the treatment period and focus on a sample spanning 2006–2016, a symmetric five-year window around the rule's compliance date. We therefore compare outcomes of interest between the pre-rule period (2006-2010) and the post-rule period (2011-2016). Our main analyses are conducted at the LP commitment level, estimating the following regression:

$$Y_{it} = \beta_1 Connections_i * Post_t + \beta_2 X_i + \gamma_t + \epsilon_{it}, \tag{1}$$

where X_i are characteristics of the LP commitment at the time of investment, including LP firm, fund type, and GP state fixed effects; γ_t are investment year (fund vintage) fixed effects corresponding to the year of investment or commitment. The primary coefficient of interest (β_1) is the interaction between *Connections* and *Post* (equal to one for 2011 to 2016).

The *Connections* treatment variable is continuous and thus captures richer cross-state variation than a binary alternative. For example, Illinois exhibits a level of political connection nearly one hundred times higher than that of Kentucky, yet both would be classified within the same high political connection group if a binary treatment were defined at the sample median. Accordingly, throughout the paper, we use *Connections* as our main treatment variable in the diff-in-diff analyses. As a robustness check, we also employ a binary indicator – *Top Third* – which equals one if a state's political connection measure falls within the top third of the sample distribution, and we find qualitatively similar results (Table IA.2).

IV. Main Results

We begin by documenting that the pay-to-play rule had a negative impact on political contributions by PE firms. We then show that the resulting weakening of political connections between PE firms and public pension LPs altered the allocation of capital across different types of PE funds. In particular, public pension LPs in more politically connected

states increased their allocations to first-time funds following the rule's implementation.

IV.A. Decline in PE's Political Contribution

First, to examine the long-term trend in PE firms' political contributions, we calculate the likelihood of a firm making a political contribution over five election cycles surrounding the 2010 pay-to-play rule change, covering the period from 1998 to 2018. Figure 1 shows that, while the share of PE firms making political contributions remained relatively stable prior to the rule's adoption, it declined markedly thereafter. Specifically, the fraction of contributing firms fell from roughly 25% before the rule change to about 15% by the last election cycle ending in 2018. A similar pattern emerges when focusing only on contributions exceeding the de minimis threshold. These trends indicate that the pay-to-play rule significantly reduced political contributions by PE firms to state and local elections.

Next, we analyze PE firms' political contributions within a regression framework using GP-LP state-year observations over our main sample period (2006–2016). To focus on politically active GPs, we restrict the sample to GP-LP state pairs in which the GP has made at least one political donation to that state during the sample period and track these pairs beginning in the first year the GP donated. As discussed earlier, the primary objective of the pay-to-play rule is to deter political contributions that could influence the selection of investment advisers. While the rule does not constrain contributions by PE firms that do not seek capital from public pension funds in a given state, it can substantially limit contributions by those that have already established advisory relationships with local public pension LPs. Because prohibited contributions can result in the loss of compensation—such as management fees—from existing public pension investments, or trigger SEC enforcement actions, we test the rule's effectiveness by comparing the political contributions of GPs with active public pension relationships to those without.

Panel A of Table 2 presents the estimation results. We classify a GP-LP state pair as

having an active public pension relationship (i.e., *Has Pension LP*) if that GP raised capital from a public pension fund in the given LP state during the pre-pay-to-play rule period (2006-2010). Because PE funds typically have a lifespan of 10-12 years, this classification ensures that all identified public pension relationships persist throughout the post-pay-to-play rule period (2011-2016). To ensure a clean comparison, we exclude GPs with active advisory relationships for only a portion of the post-rule period (i.e., those that raised funds from public pension LPs in a state before 2006 but not thereafter). The estimate in column 1 shows that, after the rule change, the likelihood that a GP with an active public pension fund relationship makes a political contribution to that state declines by 8.4% relative to GPs without such relationships. This corresponds to a 45% decrease relative to the sample mean of 18.8%. Column 2 reports results from a Poisson regression using the number of itemized political contributions as the dependent variable. The coefficient estimate implies that the number of political contributions made by a GP declines by approximately 68% when the GP has an active advisory relationship with a public pension in the state. In column 3, we examine total contribution amounts and find an even larger decline of about 80%. Column 4 focuses on contributions exceeding the de minimis exceptions (i.e., $350 per individual per candidate per election cycle) and yields similar estimates. Collectively, the findings in Panel A indicate that the pay-to-play rule was particularly effective in reducing political contributions among GPs with existing advisory relationships with public pension fund LPs.[12]

We next investigate changes in political contributions separately for VC and Buyout firms, which we classify based on their primary investment strategies. Panel B of Table 2 reports the results. Column 1 shows that VC firms with existing advisory relationships reduced

[12]We also examine the trend of political contributions made by PE firms with existing advisory relationships, and find that the decline is consistent with the implementation of the pay-to-play rule (see Figure IA.2).

their likelihood of making political contributions by 12.3% relative to those without such relationships, corresponding to a 65% decline relative to the sample mean of 18.9%. Using the number of political contributions as the dependent variable, column 3 yields a similarly large decline. We then turn to buyout firms, with estimates reported in columns 2 and 4. The coefficients in both specifications are negative and statistically significant. Although the magnitude in column 3 is somewhat smaller, column 4 indicates nearly a 60% reduction in the number of political contributions made by GPs with existing advisory relationships. Overall, the results in Panel B demonstrate that the pay-to-play rule substantially reduced political contributions among both VC and buyout firms.

In summary, the pay-to-play rule significantly curtailed political contributions by the PE industry, especially among GPs with ongoing advisory relationships with public pension LPs.[13] We next examine how this reduction in political contributions affects public pension LPs' investment allocations.

IV.B. Impact on First-time Fund

The weakened political connections between public pension funds and private equity managers—particularly within existing LP-GP relationships—may have prompted public pension funds to look beyond their established networks for new investment opportunities.

[13] Assuming the pay-to-pay rule had been in place since 1998, we also compute the number of political contributions made by PE firms that would have been inconsistent with the rule over time. We focus on two types of potentially noncompliant contributions: those above the de minimis threshold made within ten years of the most recent fundraising from a public pension fund, and those above the threshold made within two years prior to the subsequent fundraising from a public pension fund. Both measures decline sharply following the 2010 rule change (see Figure IA.3), indicating that PE firms significantly curtailed their political contributions in response to the pay-to-play rule, and largely complied with the new restrictions.

GPs that have raised prior funds (i.e., seasoned GPs) typically have an established LP base,[14] and thus are less likely to raise funding from new investors. Therefore, any reallocation by public pension funds may disproportionally benefit newly formed funds. We test this hypothesis using a diff-in-diff framework, as specified in equation (1), based on public pension funds' commitments to PE funds.

Table 3 reports the estimation results at the LP commitment level. The dependent variable is a dummy variable indicating whether a commitment is made to a first-time fund. Because public pension LPs vary substantially in assets (e.g., Bernstein et al., 2017; González-Uribe, 2020) and overall PE allocations, we include LP fixed effects to account for time-invariant heterogeneity across LP investors. To capture time-varying differences in investment characteristics, we include (vintage) year fixed effects. Moreover, as public pension LPs may exhibit systematic differences in investing in particular fund types, we also include PE fund type fixed effects. The main coefficient in column 1 is positive and statistically significant at the 1% level. In terms of economic magnitude, a one-standard deviation increase (0.025) in exposure to the pay-to-play rule for a public pension LP leads to a 2 percentage point increase in the likelihood of investing in a first-time fund—equivalent to a 28% increase relative to the sample mean of 7.4%. In column 2, we additionally control for GP state fixed effects, given evidence that public pension LPs overweight investments in home-state funds (Hochberg and Rauh, 2013), and find only a slightly smaller effect. Following Gompers and Lerner (1998), column 3 further adds time-varying, state-year level controls—log population and GDP growth—and yields similar results.

Finally, in column 4, we restrict the sample to states that follow the standard four-year gubernatorial election cycle and held a gubernatorial election in the midterm year of 2010

[14]For example, we find that roughly 60% of commitments in our sample are made by LPs that have previously invested with the GP.

(i.e., *standard cycle*).[15] For this subset of states, the 2003–2010 pre-pay-to-play rule window used to construct our treatment variable aligns exactly with the two political cycles preceding the rule change (i.e., 2003–2006 and 2007–2010).[16] This alignment reduces potential measurement noise in our treatment variable by ensuring that all political contributions in the pre-period correspond to complete and comparable electoral cycles. The estimated coefficient in this restricted sample is only slightly smaller than in the baseline specification.

Taken together, these results in Table 3 indicate that the pay-to-play rule significantly shifted public pension funds' allocations toward first-time PE funds, consistent with the interpretation that the weakening of political ties led public pension LPs to explore new investment relationships.[17]

We next examine the impact of the pay-to-play rule on public pension LPs' commitments to first-time funds separately for VC and Buyout funds—defined as funds raised by VC and Buyout firms, respectively. To more accurately capture the political connections between each firm type and public pension LPs prior to the rule change, we construct two new treatment variables—*VC Connections* and *BO Connections*—analogous to our main *Connections* variable but based exclusively on VC and buyout firms, respectively.

Panel A of Table 4 replicates the analyses in Table 3 for VC funds. The estimate in column 1 indicates that a one-standard deviation increase (0.158) in exposure to the pay-to-play rule for a public pension LP leads to a 2.4-percentage point increase in the likelihood of investing in first-time funds, representing a 34% increase relative to the sample mean

[15] https://www.thegreenpapers.com/G25/GovernorsByElectionCycle.phtml

[16] The sample also includes Washington, D.C., which follows a four-year mayoral election cycle and held an election in 2010.

[17] We also estimate the effects of the pay-to-play rule on public pensions' commitments to GPs that have previously raised funds and find no impact (see Table IA.3), indicating that first-time funds are the primary beneficiaries of public pension funds' reallocation.

of 7.3%. The results remain robust when controlling for GP state fixed effects (column 2), adding time-varying state-level controls (column 3), and restricting the sample to states with standard political cycles (column 4).

Panel B of Table 4 presents the corresponding estimates for buyout funds. All coefficients are statistically significant and economically meaningful. For instance, column 1 shows that a one-standard deviation increase (0.019) in exposure to the rule for a public pension LP leads to a 1.4-percentage point increase in the likelihood of investing in first-time funds, equivalent to a 22% increase relative to the sample mean of 6.4%.

Taken together, the findings in Table 4 suggest that the pay-to-play rule increased public pension funds' commitments to first-time funds across both VC and buyout funds, with the effect appearing somewhat stronger among VC funds.[18]

Lastly, we estimate the within-relationship effect of the pay-to-play rule by examining the probability that a public pension LP makes a new commitment to its existing GPs in the post-rule period. We classify an LP's existing GPs as those that raised capital from the LP prior to the rule change, i.e., over 2006–2010. Table 5 reports the estimation results, where the dependent variable indicates whether an LP makes a new fund commitment to its existing GPs up to a certain year during the post-pay-to-play rule period. Across different event windows, the results consistently show that greater exposure to the rule leads to a lower likelihood of making follow-on commitments by pubic pension LPs to their existing GPs. This within-relationship evidence indicates that the pay-to-play rule reshaped public pension funds' capital allocation across different types of PE funds—reducing investments in existing GP relationships while increasing commitments to first-time funds.

[18]We also examine the heterogeneous effects of the pay-to-play rule on first-time fund commitments by state versus local pension funds and find no significant differences (Table IA.4).

IV.C. The Parallel Trend Assumption

As with any difference-in-differences estimation strategy, our key identifying assumption is that of parallel trends, that is, states with low exposure to the pay-to-play rule provide an appropriate counterfactual for what would have occurred in high-exposure states had they not been affected by the rule. While the parallel trends assumption cannot be tested, we aim to validate it in several ways.

We first examine pre-treatment trends of the outcome variables by estimating a dynamic version of equation (1). Specifically, we replace the single interaction variable in equation (1) with a series of interactions between the political connection variable and year dummies over 2006-2016 (2010 is omitted). Using the same specifications as those in Table 3, Table 6 shows that the pre-treatment coefficients for 2006-2009 are small and statistically insignificant, while the coefficients become positive and significant only after the pay-to-play rule change. Notably, the effect on public pension funds' investments in first-time funds emerges around 2013—approximately two years after the rule's implementation, which is consistent with the notion that the impact of weakened political connections takes time to materialize in public pension funds' investment selection. Using the same specification from column 1 of Table 6, Figure 3 plots the estimated coefficients and conveys the same pattern. Together, these results corroborate the validity of our diff-in-diff design.

To further validate our diff-in-diff model, we conduct placebo tests using commitments to first-time funds by other LP types—private pension funds, foundation, private endowment,[19] and insurance companies. Table 7 reports the results, estimated using the same specification as column 1 of Table 3. The estimates show that the pay-to-play rule did not lead to a significant increase in the likelihood of investing in first-time funds for any of these LP

[19]We exclude endowments affiliated with public universities because they are also subject to the pay-to-play rule.

types: private pension funds in column 1, foundations in column 2, private endowments in column 3, and insurance companies in column 4.

V. Mechanisms

Have documented the impact of the pay-to-play rule on public pension funds' allocations across different types of PE funds, we next turn to the underlying mechanisms. We focus on two potential channels. The first is the *Relationship* channel–through which political contributions may help sustain existing LP-GP relationships; a reduction in such contributions could weaken these relationships and, in turn, alter public pension funds' capital allocations. The second is the *Resources* channel, through which changes in public pension LPs' resources, preferences or access to PE investment opportunities over time could affect how they allocate capital across various types of PE funds.

V.A. LP-GP Relationship

Anecdotal evidence disclosed by the SEC suggests that political contributions were often solicited within existing LP-GP relationships and used to facilitate pay-to-play arrangements. For instance, in one comment letter to the SEC, a respondent noted that when the sole trustee of a major pension fund changed several years earlier, a firm managing some of the fund's assets "began to receive invitations to fundraising events for the new trustee with suggested donation amounts."[20] As discussed in Section IV.A, the pay-to-play rule applies not only to new fundraising relationships but also to existing LP-GP relationships. When political contributions are prohibited, these existing relationships may weaken, prompting public pension LPs to look outside their established networks for new investment opportunities—thereby increasing their allocations to first-time funds.

[20]See note 27 of the final rule: https://www.sec.gov/files/rules/final/2010/ia-3043.pdf

Evidence consistent with this relationship channel is presented in Table 5, which shows that the pay-to-play rule reduced the likelihood of public pension funds reinvesting in existing LP-GP relationships. To provide more direct evidence for the channel, we next use data from the pre-pay-to-play rule period and examine whether prior fundraising from public pension funds in a state predicts subsequent political contribution to that state.

Similar to the analysis in Table IA.1, we examine PE firms' fundraising from LPs—including all LP types—and their political contribution during the pre-pay-to-play rule period (2003–2010). Unlike the earlier analysis, however, we now track both variables over time. Specifically, we construct a panel of PE firm-LP state-year observations in which the PE firm raised capital from LPs in a given state and year. We then regress a PE firm's subsequent political contributions on its fundraising from public pension funds in that state.

Table 8 presents the estimation. In columns 1-3, the dependent variable is a dummy equal to one if a PE firm makes a political contribution to a state in the next year, two years, or three years, respectively. All regressions include GP firm, LP state, and year fixed effects. The estimate in column 1 shows that when a PE firm raises capital from a public pension LP in a state, its likelihood of making contributions to that state in the following year increases by 0.9 percentage points—equivalent to a 56% increase relative to the sample mean of 1.6%. Consistent patterns emerge over longer horizons: as shown in columns 2 and 3, fundraising from a public pension LP predicts roughly 50% higher contribution probabilities over the subsequent two- and three-year windows. Columns 4 and 5 report Poisson regressions using the number and total dollar amount of political contributions over the next three years as dependent variables and yield similarly significant results.

Overall, the estimates in Table 8 indicate that fundraising from public pension funds strongly predicts subsequent political contributions to the same state. This pattern is consistent with a relationship channel in which political contributions are facilitated within existing LP-GP networks and serve to reinforce or expand those relationships through ad-

ditional pay-to-play arrangements. Consequently, the restrictions introduced by the pay-to-play rule likely weakened this channel, prompting public pension LPs to seek new GPs outside their traditional networks. Finally, as noted earlier, a caveat of this analysis is that political contributions may also be made strategically—for example, promised prior to but executed following a fundraising event—a form of behavior that we are unable to identify empirically.

For the relationship channel to operate, politicians receiving political contributions from PE firms must be able to exert meaningful influence over the selection of fund managers. Following Ewens and Farre-Mensa (2020), we measure *political influence* in a state's public pension funds using the interaction between two variables: the total assets of state and local pension funds and the fraction of state officials (appointed or ex officio) serving on the funds' boards of trustees in 2010. The measure captures cross-state variation in both public pension fund assets and the degree of political oversight of public pension funds. In states with higher political influence, political connections should play a greater role in forming and maintaining LP-GP relationships, and the pay-to-play rule should therefore have a stronger effect on first-time fund commitments. Table 9 provides evidence consistent with this prediction. When focusing on public pension fund commitments in states with above-median political influence (columns 1 and 2), we find that the pay-to-play rule had a positive and significant impact on investments in first-time funds, with point estimates slightly larger than those in the full-sample results reported in Table 3. Specifically, column 1 shows that, within the subsample, a one-standard deviation increase in pay-to-play rule exposure (0.025) leads to a 37% increase in the likelihood that public pension LPs invest in first-time funds, relative to the sample mean of 10.0%.

By contrast, in states with below-median political influence, the pay-to-play rule had a small and statistically insignificant effect on first-time fund investments (columns 3 and 4). The triple-diff estimates reported in columns 5–6 further confirm that the rule's impact was

more pronounced in states with greater political influence. The interaction coefficients in the last two columns are both economically large and statistically significant.[21]

It is important to note that political contributions—and their use in establishing or maintaining LP-GP relationships—were not illegal prior to the implementation of the pay-to-play rule in 2010. Accordingly, such contributions need not reflect corruption. To examine this, we draw on two widely used state-level corruption measures from the existing literature and test whether the effect of the pay-to-play rule on first-time fund investments varies with corruption levels.

The first measure, from Glaeser and Saks (2006) (hereafter, the GS measure), is based on data from the U.S. Department of Justice's "Report to Congress on the Activities and Operations of the Public Integrity Section." The report documents the number of federal, state, and local public officials convicted of corruption-related crimes by state. These conviction counts are normalized by the average state population from the 1999 and 2000 Census to construct a per capita corruption rate. The second measure, from Boylan and Long (2003) (the BL measure), relies on survey responses from state house reporters, who rated the perceived level of corruption among state officials on a scale from 1 (clean) to 7 (crooked). Data are unavailable for three states with no survey responses.

Using both measures, our triple-diff estimates reported in Table IA.6 show no significant differences in the effect of the pay-to-play rule across states with varying levels of corruption. This finding suggests that the political connection channel we document operates largely independently of the corruption channel that has been the focus of prior research.

[21] We also follow Andonov et al. (2018) and measure political influence using the fraction of state officials serving on the funds' boards of trustees in 2010 and find no heterogeneous effects (Table IA.4). This suggests that the scale of pension assets in a state is a prerequisite for the pay-to-play rule to meaningfully affect public pension funds' reallocation.

V.B. LP Resources

Another possible channel through which public pension LPs may have shifted their allocations toward first-time funds is the broader expansion of public pension funds' overall allocations to the PE industry. Over the past two decades, the PE industry has grown substantially, and public pension funds have correspondingly increased their exposure to it. This industry expansion could have disproportionately benefited first-time funds. If this mechanism drives our findings, we would expect public pension LPs in states with stronger political connections to make more PE commitments overall and commit larger amount of capital. To test this hypothesis, we examine both the number and the size of public pension LPs' PE commitments.

We first examine public pension funds' PE commitments at the LP firm-year level. Panel A of Table 10 reports the estimation results. In columns 1 and 2, the dependent variable is a dummy equal to one if an LP makes a commitment to a PE fund in a given year. The coefficient in column 1 is negative and statistically insignificant, suggesting that public pension LPs in more PE-connected states did not differ from those in less-connected states in their likelihood of committing to PE funds around the pay-to-play rule change. Including additional time-varying, state-level controls in column 2 yields a similar result. Columns 3 and 4 present Poisson regressions in which the dependent variable is the number of PE commitments made by an LP in a given year. Again, the main coefficients are negative, indicating that public pension funds in more PE-connected states did not increase their overall number of PE commitments. Taken together, these results provide no evidence that public pension LPs altered their overall PE investment activities in response to the pay-to-play rule.

We next analyze the size of public pension funds' PE investments, conditional on making a commitment. Using the baseline specification from Table 3, we estimate regressions at the individual commitment level, where the dependent variable is the natural log of commitment

size. It is worth noting that commitment size data for public pension LPs are highly complete (Hochberg and Rauh, 2013). Column 1 reports a positive but statistically insignificant coefficient, and this result remains unchanged when we add GP state fixed effects in column 2, include time-varying state-level controls in column 3, or restrict the sample to states with standard political cycles in column 4. Overall, Panel B shows no evidence that public pension LPs in more PE-connected states adjusted their commitment size differently around the rule change.

In sum, the evidence presented in this section does not support the resource channel. Public pension LPs did not systematically alter their overall investment volume or commitment size in the PE industry, nor do they exhibit differential investment behavior around the pay-to-play rule change.

VI. Public Pension LP Performance

Thus far, we have shown that, following the restriction on political contributions by PE firms, public pension LPs increased their allocation to first-time funds. We next examine how this reallocation of investments affected public pension funds' performance.

Table 11 presents the estimation results at the LP commitment level. We first measure public pension LPs' investment performance using the multiple of invested capital—one of the key performance metrics available in Preqin. Panel A of Table 11 reports the results. Using the full sample, column 1 shows a positive and statistically significant coefficient: a one-standard deviation (0.02) increase in exposure to the pay-to-play rule leads to a 3-percentage point increase in the investment multiple, corresponding to a 1.5% improvement relative to the sample mean of 2.019. Adding time-varying state-level controls in column 2 yields a slightly larger estimate.

Columns 3 and 4 further examine the source of public pension LPs' improved perfor-

mance, and in particular whether their investments in first-time funds play a disproportionately important role. We introduce an interaction term that identifies whether a given investment is made in a first-time fund. The resulting triple-difference estimates are positive and statistically significant. They are also economically large. For example, the coefficient in column 3 implies that a one-standard deviation increase in exposure to the pay-to-play rule corresponds to nearly a 10-percentage point higher investment multiple on first-time fund investments, equivalent to an 5% increase relative to the sample mean. These findings suggest that public pension LPs in states more affected by the pay-to-play rule not only invested in a greater number of first-time funds but also selected higher-performing funds.

We also evaluate public pension LPs' performance using net IRR, another key measure reported by Preqin. Panel B of Table 11 presents these results, which are consistent with those based on investment multiple. For example, column 1 shows that a one-standard deviation (0.025) increase in exposure to the pay-to-play rule leads to a 0.5-percentage point increase in net IRR, corresponding to a 3% increase relative to the sample mean of 15.0%. When we examine the role of first-time funds in driving performance improvements (columns 3 and 4), the coefficients lose statistical significance but remain economically significant: a one-standard deviation increase in exposure corresponds to an additional 6% increase (relative to the sample mean) in net IRR for investments in first-time funds. Overall, the results demonstrate that our findings are robust across alternative measures of investment performance.

References

Akey, Pat, 2015, Valuing changes in political networks: Evidence from campaign contributions to close congressional elections, *Review of Financial Studies* 28, 3188–3223.

Andonov, Aleksandar, Yael V Hochberg, and Joshua D Rauh, 2018, Political representation and governance: Evidence from the investment decisions of public pension funds, *The Journal of Finance* 73, 2041–2086.

Bernstein, Shai, Josh Lerner, Morten Sorensen, and Per Strömberg, 2017, Private equity and industry performance, *Management Science* 63, 1198–1213.

Bonica, Adam, 2024, Database on ideology, money in politics, and elections: Public version 4.0 [computer file], https://data.stanford.edu/dime, Stanford, CA: Stanford University Libraries.

Boylan, Richard T, and Cheryl X Long, 2003, Measuring public corruption in the american states: A survey of state house reporters, *State Politics & Policy Quarterly* 3, 420–438.

Brogaard, Jonathan, Matthew Denes, and Ran Duchin, 2021, Political influence and the renegotiation of government contracts, *Review of Financial Studies* 34, 3095–3137.

Duchin, Ran, and Denis Sosyura, 2012, The politics of government investment, *Journal of Financial Economics* 106, 24–48.

Ewens, Michael, and Joan Farre-Mensa, 2020, The deregulation of the private equity markets and the decline in IPOs, *The Review of Financial Studies* 33, 5463–5509.

Faccio, Mara, 2006, Politically connected firms, *American Economic Review* 96, 369–386.

Fernández-Tamayo, Borja, Reiner Braun, Florencio Lopez-de Silanes, Ludovic Phalippou, and Natalia Sigrist, 2023, Limited partners versus unlimited machines: artificial intelligence and the performance of private equity funds, Working paper, Université Côte d'Azur.

Glaeser, Edward L, and Raven E Saks, 2006, Corruption in america, *Journal of public Economics* 90, 1053–1072.

Gompers, Paul, and Josh Lerner, 1998, What drives venture capital fundraising?, *Brookings Papers on Economic Activity and Microeconomics* 1998, 149–192.

González-Uribe, Juanita, 2020, Exchanges of innovation resources inside venture capital portfolios, *Journal of Financial Economics* 135, 144–168.

Hochberg, Yael, and Joshua Rauh, 2013, Local overweighting and underperformance: Evidence from limited partner private equity investments, *The Review of Financial Studies* 26, 403–451.

Kaplan, Steven N, and Josh Lerner, 2016, Venture capital data: Opportunities and challenges, *Measuring entrepreneurial businesses: Current knowledge and challenges* 413–431.

Khwaja, Asim Ijaz, and Atif Mian, 2005, Do lenders favor politically connected firms? rent provision in an emerging financial market, *Quarterly Journal of Economics* 120, 1371–1411.

Korteweg, Arthur, and Mark M. Westerfield, 2022, Asset allocation with private equity, *Foundations and Trends in Finance* 13, 95–204.

VII. Figures and Tables

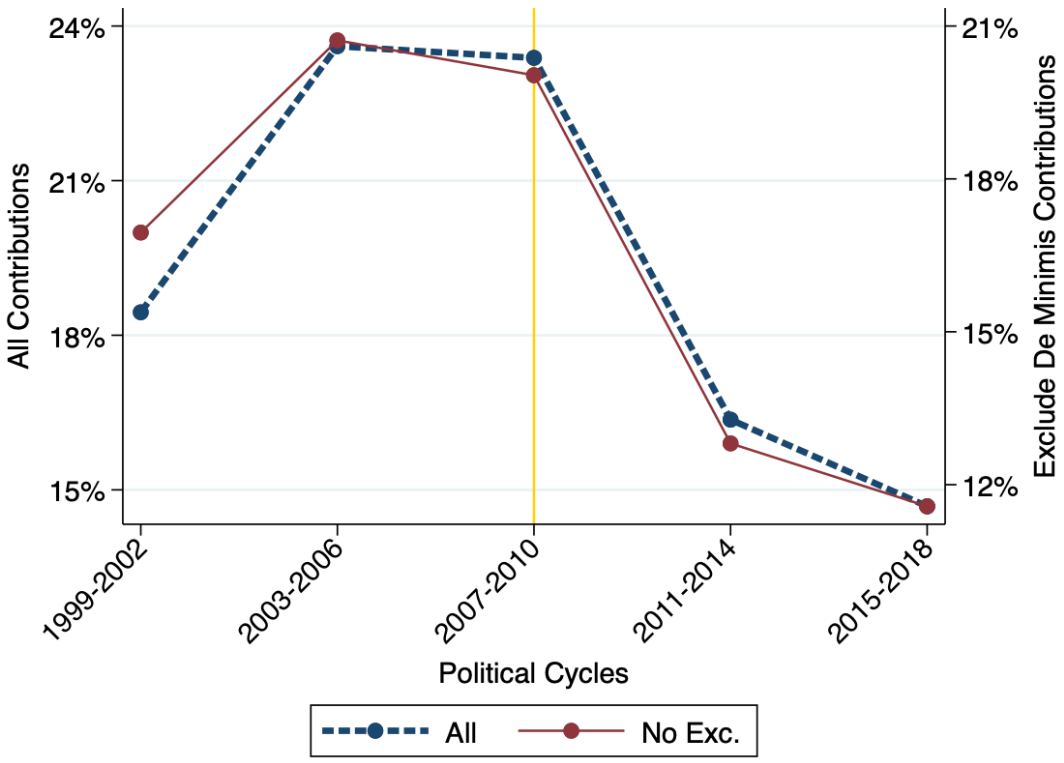


Figure 1. Fraction of PE Firms Making Political Contributions Over Time. This figure presents the share of PE firms that made at least one political donation in each election cycle. Election cycles are defined according to the four-year gubernatorial terms of states that hold their elections in midterm years. The dashed line reflects all political contributions, regardless of size, whereas the solid line includes only contributions above de minimis threshold.

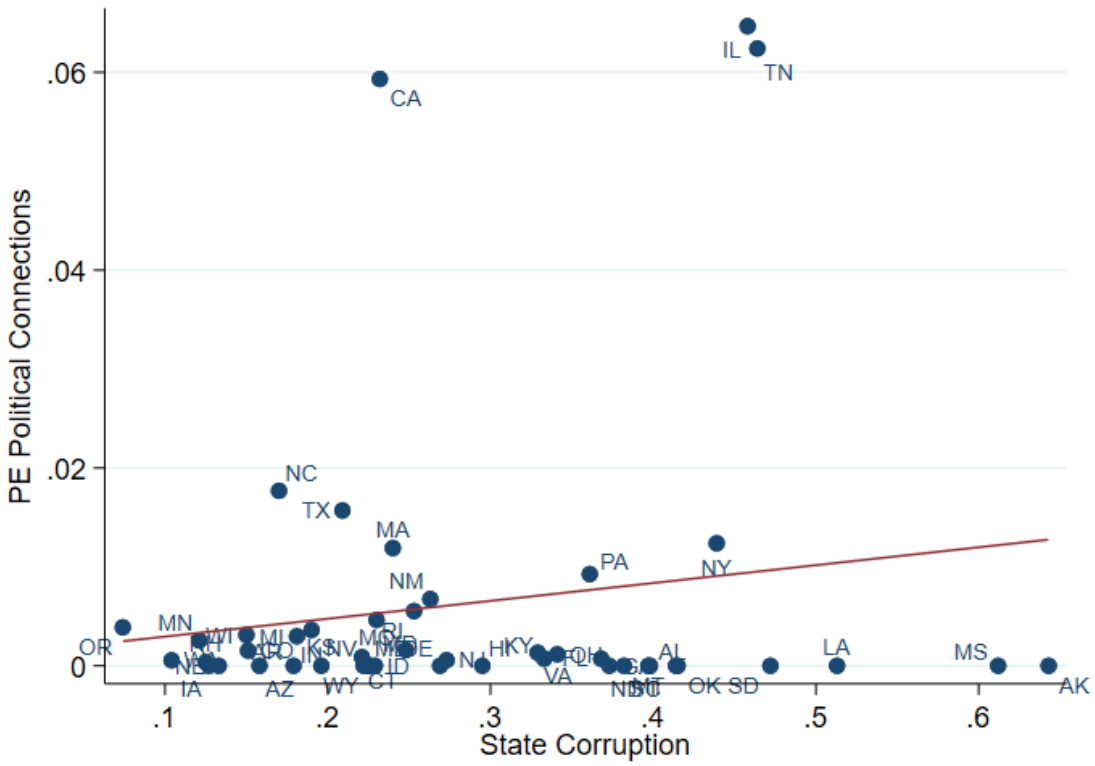


Figure 2. PE Political Contribution and State Corruption. This figure presents the correlation between state-level corruption, measured using the GS corruption index, and our main treatment variable, *Connections*, which is defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010.

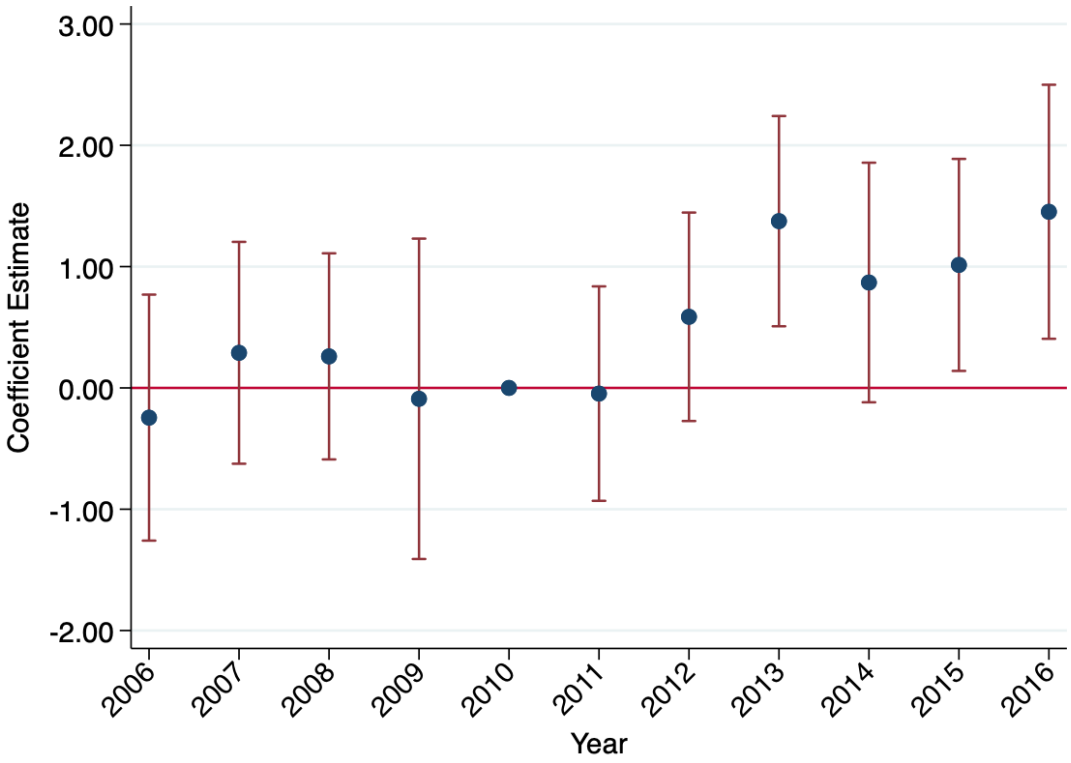


Figure 3. Dynamic Effect on First-Time Fund. This figure presents the dynamic effect of the pay-to-play rule on public pension funds' investments in first-time PE funds by investment year. The coefficients are estimated from a dynamic OLS model in which the treatment variable *Connections* is interacted with year indicators over the sample period 2006–2016. The omitted (base) year is 2010, the year immediately preceding the compliance year of the pay-to-play rule.

Table 1. Summary Statistics

This table presents summary statistics for the baseline sample of public pension LPs' commitments to PE funds over the 2006–2016 period. *First Time Fund* equals one if the commitment is made to the first fund raised by a PE firm; *Connections* is a state-level measure defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010; *Post* is a dummy equal to one for observations after 2010; *Commitment Size* is the size of a given commitment, measured in millions of US dollars; *Investment Multiples* is the ratio of total value generated to capital invested; *Net IRR* is the net IRR of the fund in which the LP invests; *VC fund* equals one if the commitment is made to a fund raised by a venture capital firm; *Buyout fund* equals one if the commitment is made to a fund raised by a buyout firm; *State Pension* equals one if the LP is a state pension fund; *Std. Cycle* equals one if the LP is located in a state with standard four-year gubernatorial elections held in midterm years.

	N	Mean	Std. Dev.	5-%ile	25-%ile	50-%ile	75-%ile	95-%ile
First Time Fund	5,528	0.07	0.26	0.00	0.00	0.00	0.00	1.00
Connections	5,528	0.02	0.02	0.00	0.00	0.01	0.06	0.06
Post	5,528	0.52	0.50	0.00	0.00	1.00	1.00	1.00
Commitment Size (M)	4,822	60.49	107.07	4.23	15.00	30.00	75.00	200.00
Investment Multiples	5,142	2.02	1.02	0.90	1.53	1.87	2.31	3.49
Net IRR	4,966	0.15	0.13	-0.02	0.09	0.15	0.21	0.33
VC Fund	5,528	0.22	0.41	0.00	0.00	0.00	0.00	1.00
Buyout Fund	5,528	0.62	0.48	0.00	0.00	1.00	1.00	1.00
State Pension	5,528	0.72	0.45	0.00	0.00	1.00	1.00	1.00
Std. Cycle	5,528	0.88	0.32	0.00	1.00	1.00	1.00	1.00

Table 2. Decline in PE Political Contributions

This table presents analyses of declines in political contributions by PE firms at the GP firm-LP state-year level over the 2006-2016 period. In Panel A, the sample includes all GP firm-LP state pairs for which the GP made at least one political contribution to the LP state during the sample period; Panel B further restricts the sample to VC and Buyout subsamples. The dependent variables are: *Made Contrib.*, a dummy equal to one if a GP firm makes a political contribution to an LP state in a year; *# Contrib.*, the number of political contributions a GP makes to an LP state in a year; *Amt Contrib.*, the total dollar amount of political contributions a GP makes to an LP state in a year; and *Amt Contrib. (No Exc.)*, the total dollar amount of above-de minimis-threshold political contributions a GP firm makes to an LP state in a year. OLS regressions are estimated for *Made Contrib.*, and Poisson models are estimated for all other dependent variables. *Has Pension LP* is a dummy indicating whether a GP raised capital from a public pension LP in a given state during the pre-pay-to-play rule period (2006-2010). *Post* is a dummy variable equal to one for observations after 2010. All regressions include GP firm, LP state and political contribution year fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: full sample

Dependent variable:	Made Contrib.	# Contrib.	Amt Contrib.	Amt Contrib. (No Exc.)
	(1)	(2)	(3)	(4)
Has Pension LP × Post	−0.084***	−1.135***	−1.618***	−1.629***
	(0.021)	(0.228)	(0.481)	(0.493)
Has Pension LP	0.056***	0.546***	0.681***	0.672***
	(0.014)	(0.166)	(0.211)	(0.215)
Observations	17,996	17,996	17,996	17,996
Adj./Pseudo R^2	0.142	0.438	0.512	0.508

Panel B: VC and Buyout subsamples

Dependent variable:	Made Contrib.		# Contrib.	
Sample:	VC	Buyout	VC	Buyout
	(1)	(2)	(3)	(4)
Has Pension LP × Post	−0.123***	−0.039*	−0.936**	−0.886***
	(0.045)	(0.020)	(0.422)	(0.264)
Has Pension LP	0.109***	0.043**	0.996***	0.554**
	(0.038)	(0.020)	(0.233)	(0.275)
Observations	7,834	5,829	7,834	5,829
Adj./Pseudo R^2	0.137	0.150	0.512	0.328

Table 3. Effects on First-time Funds

This table presents diff-in-diff analyses examining the impact of the pay-to-play rule on public pension funds' investments in first-time PE funds at the LP commitment level. The sample includes all commitments made by public pension funds between 2006 and 2016. The dependent variable, *First Time Fund*, equals one if the commitment is made to the first fund raised by a PE firm. *Connections* is the state-level treatment variable, defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund-type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	First Time Fund			
Sample:	Full	Full	Full	Std. Cycle
	(1)	(2)	(3)	(4)
Connections × Post	0.815***	0.699***	0.733***	0.735***
	(0.213)	(0.226)	(0.226)	(0.245)
Log Pop			0.041	
			(0.187)	
GDP Growth			−0.003	
			(0.002)	
Observations	5,528	5,528	5,528	4,867
Adj. R^2	0.067	0.086	0.086	0.087
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y
GP State FE	N	Y	Y	Y

Table 4. Effects on First-time Funds by VC and Buyout Firms

This table presents diff-in-diff analyses examining the impact of the pay-to-play rule on public pension funds' investments in first-time PE funds by GP firm type–VC (Panel A) and buyout (Panel B)–at the LP commitment level. The sample period is 2006–2016. *VC/BO Connections* are state-level treatment variables defined analogously as *Connections* in Table 3, but constructed separately using only VC firms or buyout firms. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: VC subsample

Dependent variable:	First Time Fund			
Sample:	Full	Full	Full	Std. Cycle
	(1)	(2)	(3)	(4)
VC Connections × Post	0.155**	0.149**	0.166**	0.153**
	(0.058)	(0.060)	(0.062)	(0.062)
Log Pop			−0.301	
			(0.369)	
GDP Growth			−0.002	
			(0.005)	
Observations	1,170	1,170	1,170	1,038
Adj. R^2	0.042	0.054	0.052	0.056
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y
GP State FE	N	Y	Y	Y

Panel B: Buyout subsample

Dependent variable:	First Time Fund			
Sample:	Full	Full	Full	Std. Cycle
	(1)	(2)	(3)	(4)
BO Connections × Post	0.741**	0.622**	0.750***	0.658**
	(0.360)	(0.299)	(0.254)	(0.294)
Log Pop			0.259	
			(0.276)	
GDP Growth			−0.001	
			(0.002)	
Observations	3,443	3,443	3,443	3,023
Adj. R^2	0.056	0.101	0.100	0.108
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y
GP State FE	N	Y	Y	Y

Table 5. Effects on Commitments into Existing GPs

This table reports OLS estimation results from a single-difference regression at the LP-GP firm level. The sample includes all public pension LP-GP pairs in which the LP made at least one commitment to the GP during the pre-pay-to-play rule period (2006-2010). The dependent variables are dummy indicators equal to one if a public pension fund LP made a new commitment to the same GP by a given year between 2012 and 2016 (the post-rule period). *Year of Pre-Commit FE* denotes fixed effects for the last year in which the LP made a commitment during the pre-pay-to-play rule period (2006-2010). *Connections* is a state-level measure defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	Commitment After Rule				
Post window:	2012	2013	2014	2015	2016
	(1)	(2)	(3)	(4)	(5)
Connections	−0.587	−0.864*	−1.245**	−1.690***	−1.881***
	(0.372)	(0.443)	(0.581)	(0.521)	(0.520)
Observations	2,625	2,625	2,625	2,625	2,625
Adj. R^2	0.017	0.008	0.010	0.015	0.019
Year of Pre-Commit FE	Y	Y	Y	Y	Y
Mean of Dep. Var.	0.201	0.260	0.326	0.365	0.392

Table 6. Dynamic Estimation

This table presents the dynamic effects of the pay-to-play rule on public pension funds' investments in first-time PE funds at the LP commitment level. The results are estimated from a dynamic version of equation (1) in which the single interaction term in equation (1) is replaced with a set of interactions between the main treatment variable, *Connections*, and year dummies; the interaction for 2010 is omitted to avoid multicollinearity. The sample period is 2006–2016. The dependent variable, *First Time Fund*, equals one if the commitment is made to the first fund raised by a PE firm. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	First Time Fund			
Sample:	Full	Full	Full	Std. Cycle
	(1)	(2)	(3)	(4)
Connections × 2006	−0.245	−0.185	−0.076	−0.018
	(0.504)	(0.513)	(0.553)	(0.580)
Connections × 2007	0.289	0.388	0.543	0.625
	(0.454)	(0.447)	(0.465)	(0.505)
Connections × 2008	0.260	0.404	0.461	0.498
	(0.422)	(0.411)	(0.391)	(0.454)
Connections × 2009	−0.090	0.084	0.186	−0.116
	(0.656)	(0.653)	(0.589)	(0.799)
Connections × 2011	−0.047	0.004	0.037	0.237
	(0.439)	(0.438)	(0.457)	(0.483)
Connections × 2012	0.586	0.479	0.583	0.557
	(0.427)	(0.494)	(0.526)	(0.542)
Connections × 2013	1.375***	1.406***	1.526***	1.617***
	(0.431)	(0.394)	(0.406)	(0.439)
Connections × 2014	0.869*	0.945*	1.156**	0.859
	(0.491)	(0.501)	(0.510)	(0.580)
Connections × 2015	1.014**	0.988**	1.159***	1.157**
	(0.434)	(0.410)	(0.382)	(0.460)
Connections × 2016	1.452***	1.309**	1.501**	1.580***
	(0.520)	(0.528)	(0.599)	(0.542)
Observations	5,528	5,528	5,528	4,867
Adj. R^2	0.067	0.085	0.086	0.087
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y
GP State FE	N	Y	Y	Y
Controls	N	N	Y	N

Table 7. Placebo: Commitments to First-time Funds by other LPs

This table reports the results of a placebo test of the baseline findings by examining other LP types' commitments to first-time PE funds. Specifically, the sample includes commitments made by private pension funds (column 1), foundations (column 2), endowments affiliated with private universities (column 3), and insurance companies (column 4). The sample period is 2006–2016. *Connections* is the state-level treatment variable, defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	First Time Fund			
Other LP type:	Private Pension	Foundation	Private Endowment	Insurance
	(1)	(2)	(3)	(4)
Connections × Post	−0.134	0.520	0.163	−0.436
	(0.248)	(0.721)	(0.469)	(0.541)
Observations	4,901	2,940	717	2,039
Adj. R^2	0.057	0.139	0.044	0.081
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y

Table 8. PE Political Contribution After Fundraising

This table presents analyses examining the relationship between a GP's fundraising from public pension LPs in a state and its subsequent political contribution to that state at the GP firm-LP state-year level. The sample includes all PE firms that raised capital from a state (across all LP types) between 2003 and 2010. The dependent variables are: indicators for whether a GP made a political contribution to that state in the next one year (column 1), two years (column 2), or three years (column 3), the number of political contributions made to that state over the next three years (column 4), and the total dollar amount of political contributions to that state over the next three years (column 5). *Raised from Pension LP* is a dummy variable equal to one if a GP raised capital from a public pension LP in a given state-year. Columns 1-3 estimate OLS regressions, while columns 4-5 estimate Poisson models. *GP Firm FE*, *LP State FE*, and *Year FE* denote GP firm, LP state and year fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	Made Contrib.			# Contrib.	Amt Contrib.
Future window:	1 yr	2 yrs	3 yrs	3 yrs	3 yrs
	(1)	(2)	(3)	(4)	(5)
Raised from Pension LP	0.009***	0.012***	0.018***	0.349**	0.239
	(0.003)	(0.003)	(0.004)	(0.155)	(0.164)
Observations	30,374	30,374	30,374	30,374	30,374
Adj./Pseudo R^2	0.056	0.095	0.123	0.370	0.588
GP Firm FE	Y	Y	Y	Y	Y
LP State FE	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y

Table 9. Heterogeneous Effects on First-time Funds by Political Influence

This table presents analyses examining the impact of the pay-to-play rule on public pension LPs' investments in first-time PE funds over 2006–2016, by the degree of political influence over public pension funds' PE allocations within a state. Political influence is measured following Ewens and Farre-Mensa (2020) as the interaction between two variables: the total assets of state and local pension funds and the fraction of state officials (appointed and ex officio) serving on the funds' boards of trustees in 2010. *High Political Influ.* equals one if the political influence measure in the LP state is above the sample median. *Connections* is the state-level treatment variable, defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	First Time Fund					
Sample:	High Political Influ.		Low Political Influ.		Full	
	(1)	(2)	(3)	(4)	(5)	(6)
Connections × Post × High Political Influ.					0.966*	1.041**
					(0.491)	(0.515)
Connections × Post	1.479***	1.177**	0.513	0.273	0.513	0.303
	(0.179)	(0.388)	(0.463)	(0.433)	(0.462)	(0.430)
Log Pop		0.248		−0.115		−0.053
		(0.519)		(0.293)		(0.244)
GDP Growth		−0.003		−0.002		−0.002
		(0.005)		(0.002)		(0.002)
Observations	2,365	2,365	3,163	3,163	5,528	5,528
Adj. R^2	0.065	0.093	0.068	0.085	0.071	0.094
LP Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y	Y	Y
GP State FE	N	Y	N	Y	N	Y

Table 10. Changes in Public Pension Commitments

This table presents analyses examining changes in public pension LPs' PE commitments at the LP firm-year level (Panel A) and at the commitment level (Panel B) over the 2006–2016 period. In Panel A, the dependent variables are: a dummy equal to one if a public pension LP makes at least one PE commitment in a given year (columns 1-2), and the total number of PE commitments made by a public pension LP in that year (columns 3-4). Poisson models are estimated in columns 3-4. In Panel B, the dependent variable is the natural log of commitment size. *Connections* is the state-level treatment variable, as defined in Table 3. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Number of Commitments

Dependent variable:	Has Commit		# Commits	
	(1)	(2)	(3)	(4)
Connections × Post	−0.644	−0.394	−2.579*	−2.179
	(0.524)	(0.512)	(1.447)	(1.558)
Log Pop		0.330		4.258**
		(0.307)		(1.854)
GDP Growth		−0.015**		−0.018
		(0.006)		(0.011)
Observations	1,454	1,454	1,454	1,454
Adj./Pseudo R^2	0.334	0.338	0.512	0.516
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y

Panel B: Commitment Size

Dependent variable:	Ln(Commitment Size)			
Sample:	Full	Full	Full	Std. Cycle
	(1)	(2)	(3)	(4)
Connections × Post	1.254	1.478	1.520	1.573
	(1.558)	(1.620)	(1.661)	(1.615)
Log Pop			0.683	
			(1.148)	
GDP Growth			−0.007	
			(0.007)	
Observations	4,820	4,820	4,820	4,259
Adj. R^2	0.611	0.627	0.627	0.599
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y
GP State FE	N	Y	Y	N

Table 11. Public Pension LP Investment Performance

This table presents analyses examining the impact of the pay-to-play rule on public pension LPs' investment performance, measured by the multiple of invested capital (Panel A) and net IRR (Panel B), at the LP commitment level. The sample includes all public pension fund commitments made between 2006 and 2016. In each panel, columns 1-2 estimate a diff-in-diff specification, and columns 3-4 estimate a triple differences specification. *Connections* is the state-level treatment variable, defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010. *First Time* equals one if the commitment is made to the first fund raised by a PE firm. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A: performance measured by investment multiples

Dependent variable:	Investment Multiples			
Specification:	Baseline		Triple-diff	
	(1)	(2)	(3)	(4)
Connections × Post × First-time			4.675*	4.833*
			(2.385)	(2.512)
Connections × Post	1.449**	1.759**	1.254*	1.470**
	(0.712)	(0.709)	(0.698)	(0.704)
First-time × Post			−0.192	−0.139
			(0.134)	(0.141)
Log Pop		−0.731		−0.739
		(0.469)		(0.475)
GDP Growth		−0.013*		−0.012*
		(0.006)		(0.006)
Observations	5,142	5,142	5,142	5,142
Adj. R^2	0.092	0.113	0.093	0.113
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y
GP State FE	N	Y	N	Y

Panel B: performance measured by IRR

Dependent variable:	IRR			
Specification:	Baseline		Triple-diff	
	(1)	(2)	(3)	(4)
Connections × Post × First-time			0.333	0.270
			(0.478)	(0.468)
Connections × Post	0.202*	0.260**	0.165	0.219*
	(0.108)	(0.120)	(0.114)	(0.129)
First-time × Post			0.003	0.012
			(0.029)	(0.029)
Log Pop		−0.007		−0.009
		(0.073)		(0.074)
GDP Growth		0.000		0.000
		(0.001)		(0.001)
Observations	4,966	4,966	4,966	4,966
Adj. R^2	0.233	0.266	0.233	0.266
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y
GP State FE	N	Y	N	Y

Internet Appendix

A. Additional Figures and Tables

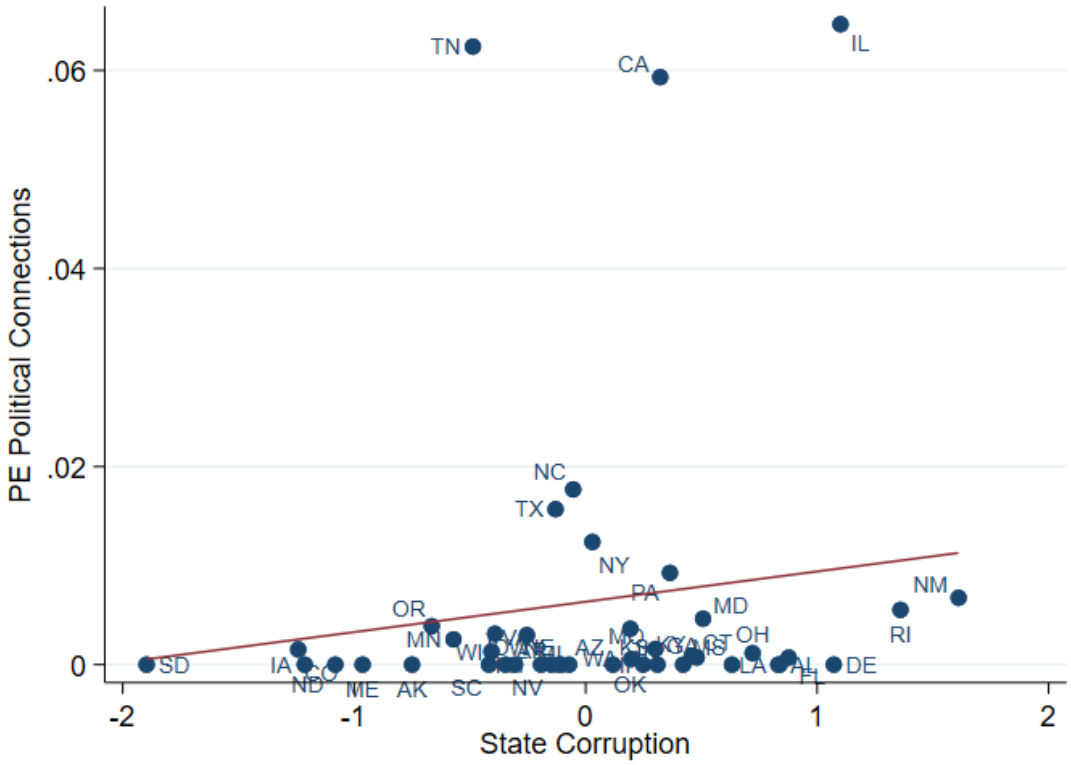


Figure IA.1. PE Political Contribution and State Corruption. This figure presents the correlation between state-level corruption, measured using the BL corruption index, and the state-level treatment variable, *Connections*, defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010.

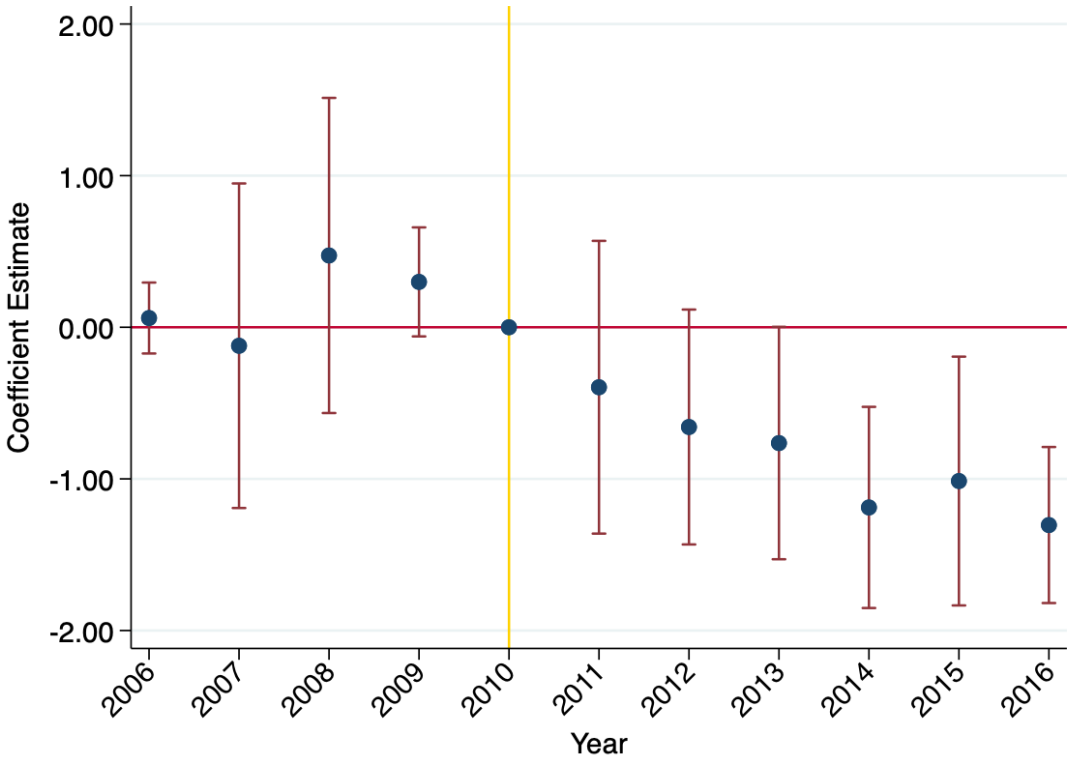


Figure IA.2. Dynamic Effect on PE Political Contribution. This figure presents the dynamic effect of the pay-to-play rule on PE firms' political contributions. The coefficients are estimated from a dynamic Poisson model in which the dummy variable *Has Pension LP* is interacted with year indicators over the 2006–2016 sample period. The dependent variable is the number of political contributions a GP makes to an LP state in a given year. The specification includes LP state and contribution year fixed effects.

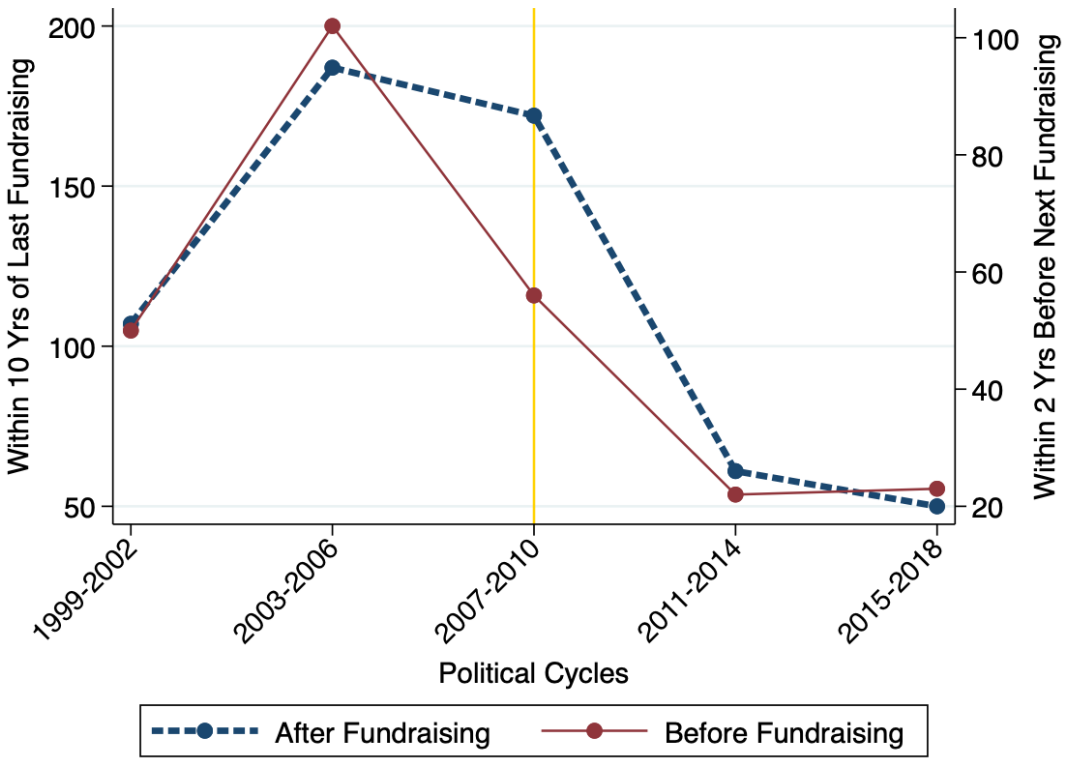


Figure IA.3. PE Non-compliance with the pay-to-play rule. Assuming the pay-to-play rule had been in place since 1998, i.e., the beginning of the sample period, this figure presents the number of political contributions made by PE firms that would be inconsistent with the rule by election cycle. Election cycles are defined according to the four-year gubernatorial terms of states that hold their elections in midterm years. The dashed line plots the number of above-de-minimis-threshold contributions made within ten years of the most recent fundraising from a public pension fund, while the solid line plots the number of above-de minimis-threshold contributions made within two years prior to subsequent fundraising from a public pension fund.

Table IA.1. PE Contribution and Public Pension Commitment

This table presents analyses examining the relationship between a GP's political contributions in a state and its fundraising from public pension LPs in that state prior to the pay-to-play rule at the GP firm-LP state level. The sample includes all PE firms that raised capital from a state (across all LP types) between 2003 and 2010. The dependent variables are: an indicator for whether a commitment has been made to the GP by public pension LPs in a given state over 2003-2010 (columns 1 and 2), the number of such commitments (column 3), and the total dollar amount of commitments (column 4). Column 1 estimates an OLS regression; columns 2-4 estimate Poisson models. *Made Contrib.* is a dummy equal to one if a GP made at least one political contribution to the state. *ln(Contrib. Amount)* is the natural log of one plus the total dollar amount of political contributions a GP made to that state. *GP Firm FE* and *LP State FE* denote GP firm and LP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	Has Commit		# Commits	Amt Commit
	(1)	(2)	(3)	(4)
Made Contrib.	0.116***		0.452***	0.396
	(0.025)		(0.118)	(0.254)
ln(Contrib. Amount)		0.015***		
		(0.003)		
Observations	6,199	6,199	6,199	6,199
Adj./Pseudo R^2	0.282	0.282	0.321	0.649
GP Firm FE	Y	Y	Y	Y
LP State FE	Y	Y	Y	Y

Table IA.2. Effects on First-time Funds: Top Third Treatment

This table provides a robustness test for the main results in Tables 3 and 4 using a dummy treatment variable, *Top Third*, defined as an indicator equal to one if the main treatment variables, *Connections* in Table 3 or *VC/BO Connections* in Table 4, fall within the top third of their respective sample distributions. The sample includes all commitments made by public pension funds between 2006 and 2016 in columns 1-3, and is restricted to commitments made to VC funds in column 4 and to buyout funds in column 5. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	First Time Fund				
Sample:	Full	Full	Full	VC	Buyout
	(1)	(2)	(3)	(4)	(5)
Top Third × Post	0.040**	0.034**	0.035**	0.062***	0.046**
	(0.015)	(0.015)	(0.016)	(0.017)	(0.019)
Log Pop			0.031		
			(0.207)		
GDP Growth			−0.003		
			(0.002)		
Observations	5,528	5,528	5,528	1,170	3,443
Adj. R^2	0.067	0.085	0.085	0.043	0.056
LP Firm FE	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y	Y
GP State FE	N	Y	Y	N	N

Table IA.3. Effects on Commitments to New Seasoned GPs

This table presents diff-in-diff analyses examining the impact of the pay-to-play rule on public pension funds' first-time commitments to GPs that have previously raised funds (i.e., new seasoned-GP relationships) at the LP commitment level. The sample includes all commitments made by public pension funds between 2006 and 2016. The dependent variable is a dummy equal to one if a commitment is made to a new LP-GP relationship in which the GP has previously raised at least one fund. *Connections* is the state-level treatment variable, defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	New Seasoned GP			
Sample:	Full	Full	Full	Std. Cycle
	(1)	(2)	(3)	(4)
Connections × Post	−0.568	−0.565	−0.552	−0.832
	(0.529)	(0.545)	(0.566)	(0.542)
Log Pop			−0.487	
			(0.580)	
GDP Growth			−0.003	
			(0.005)	
Observations	5,528	5,528	5,528	4,867
Adj. R^2	0.109	0.120	0.121	0.121
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y
GP State FE	N	Y	Y	Y

Table IA.4. Heterogeneous Effects on First-time Funds by State vs. Local Pension

This table presents analyses examining the impact of the pay-to-play rule on state versus local public pension LPs' investments in first-time PE funds at the LP commitment level. The sample period is 2006–2016. *State Pension* equals one if the LP is a state-level public pension fund. *Connections* is the state-level treatment variable, defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	First Time Fund					
Sample:	State Pension		Local Pension		Full	
	(1)	(2)	(3)	(4)	(5)	(6)
Connections × Post × State Pension					−0.607	−0.548
					(0.905)	(0.783)
Connections × Post	0.791***	0.632***	1.398	1.252**	1.398	1.216
	(0.158)	(0.212)	(0.916)	(0.532)	(0.899)	(0.781)
Log Pop		−0.225		0.831**		−0.013
		(0.212)		(0.347)		(0.213)
GDP Growth		−0.002		−0.008*		−0.003
		(0.002)		(0.004)		(0.002)
Observations	3,988	3,988	1,540	1,540	5,528	5,528
Adj. R^2	0.059	0.075	0.067	0.113	0.069	0.095
LP Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y	Y	Y
GP State FE	N	Y	N	Y	N	Y

Table IA.5. Heterogeneous Effects on First-time Funds by the Fraction of Officials

This table presents analyses examining the impact of the pay-to-play rule on public pension LPs' investments in first-time PE funds over 2006–2016, by the fraction of state officials serving on the public pensions' boards of trustees (Andonov et al., 2018). The fraction of state officials is measured in 2010, immediately preceding the implementation of the pay-to-play rule. *High % Officials* equals one if the fraction of state officials in the LP's state is above the sample median. *Connections* is the state-level treatment variable, defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	First Time Fund					
Sample:	High % Officials		Low % Officials		Full	
	(1)	(2)	(3)	(4)	(5)	(6)
Connections × Post × High % Officials					−0.071	0.102
					(0.455)	(0.494)
Connections × Post	0.927**	0.689*	0.998***	0.664*	0.998***	0.747**
	(0.394)	(0.347)	(0.246)	(0.383)	(0.244)	(0.319)
Log Pop		0.520		−0.162		0.046
		(0.314)		(0.310)		(0.209)
GDP Growth		−0.003		−0.001		−0.002
		(0.003)		(0.002)		(0.002)
Observations	2,763	2,763	2,765	2,765	5,528	5,528
Adj. R^2	0.064	0.086	0.071	0.080	0.069	0.086
LP Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y	Y	Y
GP State FE	N	Y	N	Y	N	Y

Table IA.6. Heterogeneous Effects by Corruption

This table presents analyses examining the impact of the pay-to-play rule on public pension LPs' investments in first-time PE funds by state-level corruption. The corruption indicator, *High Corr.*, equals one if the state's corruption index from Glaeser and Saks (2006) (the GS measure) is above the sample median in columns 1 and 2, and if the corruption index from Boylan and Long (2003) (the BL measure) is above the sample median in columns 3 and 4. *Connections* is the state-level treatment variable, defined as the total political contributions made to a given state by PE firms that have raised capital from public pension LPs in that state, scaled by the total capital these firms raised from those LPs prior to the passage of the pay-to-play rule in 2010. *Post* is a dummy variable equal to one for observations after 2010. *LP Firm FE*, *Year FE*, *Fund Type FE* and *GP State FE* denote LP, commitment year, fund type and GP state fixed effects. Standard errors in parentheses are clustered by LP state. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable:	First Time Fund			
Corruption measure:	GS		BL	
	(1)	(2)	(3)	(4)
Connections × Post × High Corr.	−0.412	−0.694	2.076	2.345
	(0.768)	(0.739)	(2.080)	(2.138)
Connections × Post	0.882***	0.860***	−1.336	−1.742
	(0.234)	(0.222)	(2.065)	(2.106)
Log Pop		−0.041		0.153
		(0.216)		(0.249)
GDP Growth		−0.004*		−0.001
		(0.002)		(0.002)
Observations	5,495	5,495	5,240	5,240
Adj. R^2	0.067	0.081	0.070	0.088
LP Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Fund Type FE	Y	Y	Y	Y
GP State FE	N	Y	N	Y