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Political Connections and Non-traditional Investment: Evidence from Public-Private Partnerships in Vocational Education

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Abstract

How do political connections shape the propensity of firms to make investments in weakly institutionalized settings? Traditionally, absent ways to hold the state accountable, firms should withhold investment for fear of predation. An emerging body of work on the political economy of investment has highlighted the competitive advantages that direct political connections with officials can bring to firms in institutionally weak environments with low accountability. These advantages, particularly privileged protection of property rights, can decrease uncertainty and promote investment even absent traditional accountability mechanisms. This paper applies these insights to a particularly risky form of investment for firms: public-private partnerships (PPP) with the state to develop skill. Skill development investments are riskier than average, since they require firms to reveal trade secrets about their production, engage in long-term interactions, and can be poached by free-riding rival firms. This paper argues that these risks can be overcome by a strong state partner (i.e. PPP), albeit this creates new risks in weakly institutionalized environments if the lower-level officials responsible for implementing agreements cannot be held accountable for agreements and can shirk. This paper argues that political connections provide the means for states to create credible commitment, as they give firms access to power that can enable them to monitor lower-level officials, call attention to misbehavior, and thus punish deviations from PPP agreements. It outlines the ways in which various types of political connections state ownership, direct officeholding, employing former officials, via formal consultative organs , and acquaintanceship can enable firms to hold lower-level officials accountable and engender credible commitment. These arguments are then tested using data from an original survey of 690 firms in 12 Russian regions.

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Introduction

How do political connections shape the propensity of firms to make investments in weakly institutionalized settings? Traditionally, work on the political economy of investment has argued that firms should not invest in settings where the state is weakly constrained and firms are unable to hold it accountable (North, Wallis, and Weingast, 2009; North, 1990; North and Weingast, 1989). Absent accountability mechanisms, investors cannot protect themselves from opportunistic policy uncertainty (Frye, 2010; Kydland and Prescott, 1977), shirking and inconsistent enforcement (Gehlbach, 2008; Beazer, 2012), or even direct expropriation (Olson, 2000, 1993). Consequently, investment becomes too risky. More recent work on the political economy of investment argues that ties between firms and government officials are a potential means of overcoming this problem. Such ties provide a mechanism for exchanges that can align the rent-seeking or office-seeking incentives of state officials with those of firms (Szakonyi, 2017; Gehlbach and Keefer, 2011; Faccio, Masulis, and McConnell, 2006; Haber, Maurer, and Razo, 2003). In exchange for rents or favors, the officials provide connected firms with selective access to ostensibly public goods, subsidized credit, enhanced property rights, favorable contracts, and other benefits that can enhance growth prospects and decrease risk (Gehlbach, 2008). While not ideal, these relationships can provide a second-best alternative to strong institutions that allow for limited investment by those with political connections (Gehlbach and Keefer, 2011; Rodrik, 2000).

Although this body of work has demonstrated the returns of political connections and the myriad of benefits they bring, relatively less empirical attention has been paid to the effect of political connections on micro-level investment decisions.[1] Moreover, it is theoretically unclear what effect political connections should have on investment. On the one hand, political connections may smooth out the uncertainty related to investment – by providing privileged access to property rights protections or decreasing policy uncertainty – or may provide access to subsidized goods –

[1] Although for an important exception, *c.f.* Szakonyi (2017). Levina et al. (2017) explore the mirror of this problem, attempting to understand how the probability the average firm invests varies with the degree to which politically connected firms and state security forces work together to expropriate the former's business rivals in Russia's regions.

credit, government aid, or contracts – that can make investment more attractive (Szakonyi, 2017; Gehlbach and Keefer, 2012; Frye and Iwasaki, 2011; Gehlbach, 2008; Haber, Maurer, and Razo, 2003). On the other hand, political connections may require trade-offs of costly services – campaign contributions, assistance with electoral mobilization, provision of social services, rents, etc. – in exchange for benefits from state officials, thus decreasing the resources available for investment (Mironov and Zhuravskaya, 2016; Boas, Hidalgo, and Richardson, 2014; Frye, Reuter, and Szakonyi, 2014). Firms may also be less willing to invest if they can use their connections to distort the economy to enhance their profitability without need for additional effort (Slinko, Yakovlev, and Zhuravskaya, 2005; Hellman, 1998).

Similarly puzzling is whether the nature of political connections matters for our theoretical expectations. Although extant work has looked at individual forms of connections – state ownership, legislative seats, board memberships, etc. – less work has been done to explore whether different types of connections are more (or less) important for investment or lead to fundamentally different incentives to invest. Is having a member of management directly in government office more beneficial than a tie built through mutual membership on consultative councils? Are formal ties more important than "who one knows"? These questions are important but have received relatively little attention.

This paper explores the relationship between different types of political connections and a specific form of investment that is particularly vulnerable to malfeasance by the state: public-private partnerships (PPP) in vocational education and training (VET). Work on skill development has long identified a series of commitment problems that make investments in human capital uniquely complex and that involve relationships between different firms, capital and labor, and between the business community and the state (Thelen, 2004; Iversen and Soskice, 2001; Acemoglu and Pischke, 1998; Stevens, 1996). These problems are amplified when firms are contemplating long-term, costly forms of partnership with the State, which can seek rents from such arrangements by leaking proprietary trade secrets to rivals (Culpepper, 2000) or accepting firms time and money but not exerting effort to provide the agreed upon skilled graduates (Remington and Marques, 2017).

Extant theory suggests such co-investments are only likely to emerge in settings with free, efficient markets and strong contract enforcement, on the one hand, or strong civil society capable of holding the state to its agreements, on the other (Martin and Swank, 2008; Crouch, Finegold, and Sako, 1999; Finegold and Soskice, 1988). Absent these conditions,co-investments in VET with the state should be rare.

Recent work using data on PPP in VET in Russias regions has problematized the notion that free, transparent markets or strong civil society are necessary for the development of co-investments in VET such as PPP. Despite the lack of the traditional prerequisites, PPP in VET has flourished in many of Russias regions (Marques, Remington, and Bazavluk, 2016). Remington and Marques (2017) argue that in Russia, regional governments were able to forge credible commitments through a combination of demonstrably strong state capacity, allowing top-level officials to credibly monitor the performance of lower-level officials responsible for implementing PPPs in VET, and political accountability, which provided top-level officials the incentives to actually monitor agreements. This paper carries this argument one step further. Drawing on existing theories of the value of political connections, it argues that in weakly institutionalized settings such as Russia, political connections may provide firms with a means of holding regional level officials accountable and insuring that lower-level officials live up to the terms of PPP agreements and provide necessary skills. It argues that the more direct connections firms have to regional and municipal governments, which are ultimately responsible for VET, the stronger the protections afforded by connections and the greater probability they co-invest in PPP agreements that require significant commitments (of time or treasure). This argument is then tested using an original survey of 690 firms across 12 Russian regions.

In the next section, I present the argument in more detail and develop hypotheses about how different types of connections can enable firms to forge credible commitments with the state that should enable PPP in VET. Section 3 presents the data and research design of the study, while section 4 presents the results. The final section concludes.

Theory

Most models of firms investment behavior start from the simple assumption that firms' decisions to invest are based on a simple cost-benefit calculation. Firms invest today so long as their future expected benefits outweigh the present costs, discounting potential risks due to changing circumstances over time. Although investments into human capital share many characteristics with other forms of investment, their very nature as long term investments into workers creates additional risk for firms. Vis--vis other employers and labor, training employees makes firms vulnerable to rivals, who can free ride by poaching trained workers rather than making their own investments (Acemoglu and Pischke, 1998; Stevens, 1996). The state also poses a great deal of risk to investments in human capital, particularly in co-investment arrangements such as PPP. Work on the developed countries of the OECD highlights the risk to firms of providing the state with sensitive product market information (Culpepper, 2000), which can be passed to rivals. It also highlights the uncertainty on future returns that arises organically in the normal course of politics, as actors challenge existing skill development institutions and the state's attempts to adjudicate lead to policy drift (Hall and Thelen, 2009).

Although significantly less work has been done on skill development outside the developed world, a number of less benign threats are suggested by broader work on the political economy of investment. Where politicians are weakly constrained, they have strong incentives to opportunistically alter policies as changing circumstances alter their preferences (Kydland and Prescott, 1977; Frye, 2010). Absent some means of constraining politicians, firms may find that their investments in skill are rendered moot or suddenly more expensive as changing policy priorities alter taxation policy, subsidies for education, curricula requirements, etc. More problematic for firms pursuing cooperative forms of skill development with the state, such as PPP, are dangers stemming from having to work hand-in-hand with school administrators and other lower level state officials. Such officials often possess information asymmetries which allow them to shirk on their responsibilities or to carve out discretion in enforcing policy (McNollGast, 1987; Weingast and Moran, 1983), which heightens uncertainty for firms' dealing and negatively influences expected investment returns (Beazer, 2012). Absent oversight and pressure from above to force such officials to exert effort, they are unlikely to faithfully implement complex policies (Gehlbach, 2008; Huber and Shipan, 2002; McCubbins and Schwartz, 1984).

PPPs in skill development are particularly vulnerable to bureaucratic shirking. Often they involve exchanges of material benefits or organizational aid for graduates with a specific set of high quality skills. Developing such skills and keeping them competitive often requires intensive effort by school officials. They must constantly update curricula, buy new equipment, and hire or retrain instructors, Meanwhile they must also work closely with firms to meld new educational plans and curricula with existing legal requirements (*c.f.* Culpepper and Thelen (2008); Anderson and Hassel (2013). Absent oversight, therefore, these are precisely the types of complicated, labor-intensive programs that lower level officials should shirk on, thus making them less attractive to firms looking to invest in skill development.

Traditional work on VET in Europe has argued that overcoming the commitment problems faced by firms and encouraging them to engage in long-term, co-investment with other actors requires a set of complimentary institutions. In Coordinated Market Economies (CME), a combination of centralized wage bargaining, parliamentary democracy, strong civil society in the form of peak organizations (both capital and labor) with mandatory membership, and other institutions encouraged firms to coordinate with each other, labor, and the state. They also encouraged firms to adopt product market strategies premised on competition over quality (Hall and Soskice, 2001; Estevez-Abe, Iversen, and Soskice, 2001). These institutions, in turn, also enabled business associations to serve as guarantors to their members that other actors' commitments were credible. On the one hand, associations in CMEs hold the state accountable for its commitments by serving as a vehicle for collective action and mobilization by firms (Culpepper, 2000; Swensen, 2002; Busemeyer and Trampusch, 2012; Busemeyer, 2015). Associations can monitor firms partner schools in PPP for violations of agreements and both bring these to the attention of top level officials and exert pressure to rectify issues (McNollGast, 1987). On the other hand, business associations also render agreements among their membership credible by collecting and providing information, monitoring compliance with agreements (by members, labor, and the state), and sanctioning non-compliant firms (Culpepper, 2000; Finegold and Soskice, 1988). Thus, a key prerequisite of cooperation and co-investment, particularly between firms and state actors, is a strong, independent civil society in the form of powerful employers associations.

In prior work, my co-author and I argue out that in much of the developing world, however, civil society is quite weak and employers associations are unable to function as guarantors of skill development agreements (Remington and Marques, 2017). Similarly, poorly functioning markets prevent firms from using contracting in order to forge arrangements for cooperative skill development. In such settings, we argue that the state can step in to perform many of the functions performed by business associations in CMEs, particularly with respect to gathering and disseminating information, monitoring, and sanctioning. The state is particularly well-suited for taking on this role when firms partner with state-run schools, since higher level officials have direct authority to inspect, sanction, and impose remedies on the lower level officials that run them. Consequently, states with a high degree of capacity both bureaucratic and enforcement can resolve credible commitment problems between firms and schools.

It is important to note, however, that solving credible commitment problems between firms and schools does not necessarily entirely assuage firms doubts and lead to co-investments with state partners in skill. This merely shifts the commitment problem up a level and causes firms to question whether the state itself is a credible partner. Turnover in the government's ranks or simple shifts in the policy priorities of officials over time may render prior agreements to enforce PPPs unattractive (Frye, 2010; Kydland and Prescott, 1977). Under what circumstances then can the state itself commit to firms that it will properly monitor and enforce co-investment agreements between firms and skills?

One means of doing so that has arisen in the literature on the political economy of development is to tightly align the incentives of firms and politicians. Perhaps the easiest means of doing so is to grant politicians an ownership stake in the firm itself, which generates rents for politicians if the firm succeeds. A large body of work has documented the benefits that can accrue to firms with such connections, which can include better stock prices (Fisman, 2001; Faccio, 2006; Faccio and Parsley, 2009), higher profitability and revenue (Szakonyi, 2017), access to government finance and subsidies (Frye and Iwasaki, 2011), and privileged protection of the firms property rights (Gehlbach, 2008; Haber, Maurer, and Razo, 2003). Although less explored, firms may also be able to use informal political connections garnered through acquaintanceship in order to secure benefits (Levina et al., 2017). Implicit in all of this work is that political connections provide firms with access to power, which steps in to provide the firm with stronger guarantees and greater certainty about policies that decrease the uncertainty of investment. In return, firms also do favors for politicians and provide them rents (Mironov and Zhuravskaya, 2016; Frye, Reuter, and Szakonyi, 2014; Frye and Iwasaki, 2011). Thus, political connections can facilitate credible commitment by certain politicians to the firms they are linked to.

An important question that has remained unanswered in the literature, however, is which types of political connections matter for receiving non-market benefits from the state. Frye and Iwasaki (2011), for example, highlight the ownership structure of firms and the presence of current or former state officials on their board of directors as an important factor for firms in reaping benefits from the state. Szakonyi (2017) also argues that firms that count sitting regional legislatures among their leadership perform better in Russias regions, likely due to privileged access to the local bureaucracy and favors from it. The implications of both arguments are that direct connections to the state should strengthen its ability to make credible commitments to firms. This in turn suggests the following hypotheses for co-investment in PPPs related to skill development:

Hypothesis 1 *Firms with dominant state ownership are more likely to co-invest in public-private partnerships with schools in vocational education.*

Hypothesis 2 *Firms whose leadership includes current or former state officials are more likely to co-invest in public-private partnerships with schools in vocational education.*

Work on the political economy of investment in non-democratic and hybrid regimes offers a potentially different lens through which to view the relationship between credible commitment, political connections, and investment. While this literature has also focused on access to power as a potential means of providing firms with credible commitment, the emphasis is less on the favors that firms are provided and more on the ability of firms to use institutions to constrain politicians (North, Wallis, and Weingast, 2009; North, 1990). In non-democratic or hybrid regimes, where electoral institutions are weak or non-existent, similar mechanisms hold, albeit for the much smaller subset of investors.[2] Boix (2003), for example, argues that regimes with legislatures can place limits on the autocrat, potentially providing credible commitment of a sort even absent true accountability. Gehlbach and Keefer (2011, 2012) are more specific, arguing that autocratic institutions (both legislatures and parties) reduce the costs of acquiring information, coordinating, and engaging in collective action for elite members. Should the autocrat violate the rights of one member, the rest can easily observe this defection and mobilize in rebellion.[3] Work on ruling parties similarly emphasizes the role of the party as a commitment between its members and the autocrat and facilitator of collective action (Reuter, 2017; Magaloni, 2008, 2006; Haber, Maurer, and Razo, 2003). Common to all of these accounts is the notion that institutions in non-democratic and hybrid regimes can provide member firms a forum in which to make issues known and the means to credibly threaten collective action if they are not solved. This should increase their confidence in the states commitments, particularly vis--vis co-investment in PPPs. Albeit by a different mechanism, one implication of this is H_2 above, which argues that firms whose leadership includes current legislatures should be more likely to co-invest in PPP in VET. Another is:

Hypothesis 3 *Firms in consultative bodies with state officials are more likely to co-invest in public-private partnerships with schools in vocational education.*

[2] This work builds on an older work, which focused on the ways in which democratic institutions enable citizens to hold leaders accountable via electoral mechanisms and collective action in response to violations of consensus limits on the state (Weingast, 1997; North and Weingast, 1989; Greif, Migrom, and Weingast, 1994; Barro, 1973; Ferejohn, 1986).

[3] *see also*, Boix and Milan (2013) for a similar argument with slightly different mechanisms.

A final type of political connection, which has received less attention, are diffuse and informal links such as those that arise from acquaintanceship. While knowing officials is unlikely to help firms resolve credible commitment threats that arise due to rent-seeking incentives of top-level officials themselves (Olson, 1993, 2000), they may be more useful in cases where threats come from lower level officials. Work on bureaucratic accountability has long noted the importance of oversight and threats from top-level officials in holding lower level bureaucrats accountable and preventing shirking and other abuses. In such cases, access to top-level officials is crucial to drawing their attention to potential problems at lower levels (McNollGast, 1987; Weingast and Moran, 1983). Although this literature traditionally focuses on more formal mechanisms, informal ties are another means by which firms can communicate problems with top-level officials and seek solutions and that might be particularly important in settings with weak institutions and low electoral accountability. With respect to PPP in VET, such links are likely to be particularly important because of the key role that lower level officials play in implementing them. To succeed, PPP in VET require schools to exert costly efforts such as reform of curricula, retraining and hiring of instructors, acquiring new equipment, etc. that are crucial to skill development but that they are unlikely to want to implement, *ceteris paribus* (Gehlbach, 2008). While not necessarily as powerful as the threat of collective action that stems from joint membership with other firms on consultative bodies, informal connections can nonetheless provide firms with a means of checking these lower level officials by drawing the attention of higher ranking officials to malfeasance. Thus, firms with informal links they can use to check their counterparts in schools are more likely to view the state's commitments as credible and be willing to engage in PPP in VET. This suggests:

Hypothesis 4 *Firms with informal ties to higher ranking state officials are more likely to co-invest in public-private partnerships with schools in vocational education.*

Before continuing, it is important to make two caveats about the hypotheses presented above. First, the discussion above simplifies investment greatly by treating all investments homogeneously. Empirically, however, investment agreements can differ greatly in their terms, which in turn have important potential implications for firms' willingness to accept commitments by the state to honor them. One dimension of variation is what the firm is contributing, which may make rent-seeking more or less tempting. Intuitively, investments of monetary resources should be much more tempting for officials to abuse than investments of time. A second, and more important, theoretical distinction between different types of investments is firms' ability to monitor them and the control they grant. While the firm may insert language allowing it to inspect schools or observe the quality of students after they graduate, providing equipment or renovating a school, *ceteris paribus*, does not automatically confer on firms the right to closely monitor day-to-day training within the school. Consequently, it may be more difficult for firms to withdraw their investments or punish schools in case of malfeasance. Conversely, other types of investments that require firms' employees to invest significant amounts of time into schools contain within themselves mechanisms allowing firms to monitor schools. Firms can directly observe the quality of students brought into the plants for training and can gain great control over schools' activities when they can rewrite curricula or send their own employees into them as instructors. In such cases, the firms' representatives can interact with students on a day-to-day basis and monitor compliance with PPP. Intuitively, therefore, firms making less costly investments and that make investments that confer a greater ability to monitor their partners should require weaker credible commitments. Thus, political connections should be less important for forging these types of relationships.

Second, the discussion above generally assumes that political connections provide credible commitments that make investment in general, and co-investment with the state in particular, more attractive to firms. This may be an optimistic view of the nature of political connections, however. While the mechanisms detailed above may give firms the confidence to invest, access to non-market benefits such as subsidized inputs, privileged access to public goods (particularly property rights protections), favorable legislation, and subsidies may also have a dark side. Knowing that such benefits increase their competitiveness vis--vis unconnected rivals, politically connected firms regardless of the specific nature of the connection may also be less willing to invest. After all, they can make use of their privileges to benefit themselves with minimal effort. If this is the case, then it actually implies that such thing may render investment of any kind, particularly long-term investments like PPP in skill development, superfluous and sub-optimal. This perspective would suggest the possibility of dark mirrors of the hypotheses noted above, in which political connections actually *decrease* the incentives of firms to invest. Whether political connections have a positive effect on investment is, therefore, an empirical question to be explored.

Data and Research Design

In order to test the hypotheses introduced in the previous section, I make use of an original survey of 690 Russian firms that was run from June to October 2017. The survey covers medium ($100-249$ employees) and large (> 250 employees) manufacturing, transport, and construction firms in 12 Russian regions.[4] Within these regions, firms were stratified by size and sub-sector. Within each stratum, firms were randomly selected to produce a sample that is roughly representative of their respective regional population, with a slight oversampling of larger firms (> 250 employees) due to concerns about non-response. Interviews were conducted in-person with the chief executive, financial, or legal officer of each firm, although respondents were encouraged to consult with their human resources directors to answer specific questions on vocational education and training practices if necessary.

The main dependent variable of interest in this paper is a relatively simple dummy variable that measures whether firms report engaging in PPP in VET, a particularly demanding form of co-investment with the state. The measure was constructed from a question asking:

[4]Six of the regions were selected due to selection in a series of competitions held by the Russian Agency for Strategic Initiatives between 2007 and 2013. The competition was designed to highlight leading regions in vocational education reforms, identify best practices, and disseminate them. We matched each of these regions to a similar region socio-economically that did not win an ASI competition. The overarching goal was to contrast regions in which vocational education was known to be well-developed with a similar set of regions that were not recognized for their reforms. For this paper, however, regional selection is unimportant for analysis. For a more in-depth description of the competitions, *see* Remington (2017). For a discussion of how ASI winners differed from other regions in terms of Public-Private Partnerships, *see* Remington and Marques (2017).

Does your firm (organization) maintain partnership relations with the purpose of organizing professional education with local secondary professional education institutions or schools?

1. Yes (Please list all of them)

2. No

98. Hard to say

This question is useful for establishing the conditions under which firms are willing to engage in PPP of any type, but does not provide leverage over the complexity of the relationship between firms and their partner schools. It also cannot answer questions about whether the effect of political connections varies over different types of investment. To explore these issues, I exploit a follow up question to the one on partnerships, in which firms were provided a list of 12 common forms of PPP formulated by the author on the basis of in-depth interviews in 6 Russian regions and a review of over 1600 school end-of-year reports on their PPP relationships. Firms were asked to mark all of the forms that they made use of in their PPP agreements.[5] I then divided this list into two groups of practices for use in analysis. These groups were constructed by exploiting variation in the PPP practices according to the type of investment made (time versus money) and the extent to which forms contained inherent monitoring mechanisms. The first group consisted of practices that represented a clear monetary investment on the part of firms. It included equipment donations to the school, direct payments of salaries for the school's teachers, and financial support (both tuitions and stipends) for students. As noted above, such investments do not carry within themselves a means for firms to monitor them, as none put the firms' employers directly in contact with students or inside the school. The second group consisted of practices that clearly required significant investments of time on the part of the firm but not necessarily direct monetary investments. These included setting training standards and curricula, supervising qualification exams, coordinating in-school training with in-plant lessons, providing mentors for students from current employees, having employees guest lecture, and apprenticeships. Inherent in all of these is direct cooperation between firms and schools and involvement of the firm in day-to-day school activities. As such,

[5]For a deeper discussion of this dataset, *see* Marques, Remington, and Bazavluk (2016).

these forms of partnership carry inherent monitoring capabilities.[6] For each of these two groups, I create a dummy variable equal to one if firms use any of the practices within the group.

Because the dependent variables of interest are all binary, my analysis consists of a standard logit model with the functional form:

$$Y_{irs} = \alpha + \beta_1 * PoliticalConnection + X_i + \eta_r + \eta_s + \varepsilon_i \tag{1}$$

Where Y is the main dependent variable of interest for firm i located in region r and in sector s, *Political Connection* is one of the main independent variables of interest (discussed below), X is a vector of firm-level controls for firm i in sector s and region r (also discussed below), η_r and η_s are a vector of region and sector fixed effects, and ε_i is the error term. Because the error term is likely to be heteroskedastic and correlated within regions, all specifications report cluster-corrected standard errors.

To measure direct political connections, I deploy a dummy variable equal to one if the firm reports that the state is a dominant shareholder (H_1) on a survey instrument asking them to indicate if a federal, regional, or municipal state organ is their controlling stakeholder (i.e. own $> 50\%$ of shares).[7] I also include two measures indicating whether firms have direct connections to current or former state officials (H_2) despite not being formally state-owed. The first is a dummy variable equal to one if a firm answers yes to a question asking if any members of its top-level management team have worked for a federal, regional, or municipal state organ in the last 10 years. The second

[6] It is worth noting that this categorization captures all but two of the answer categories for the question asking firms to mark all forms of PPP they participate in. Of the remaining two, the first, *practika* is a traditional Soviet practice in which students are sent to a firm for a short period to train. Although potentially helpful for skill development, *practika* vary enormously in practice. While some firms use *practika* for in-plant training, others view the practice as a source of cheap labor and assign students menial, low skill tasks. As such, they are difficult to classify. The second omitted category are firms which consult with regional resource centers in order to acquire skill. I do not include this as part of my second set of dependent variables, as it does not appear to involve particularly high efforts on the part of firms

[7] Firms were first asked to select which of a pre-determined list of actors were shareholders and then to mark which (if any) had a controlling stake. Note that this measure does not capture the extent to which the state controls “golden” shares that give it preferential voting rights and the ability to exercise control even absent a controlling stake in shares. Unfortunately, there is no way to distinguish firm with “golden” share arrangements from others, although in in robustness checks, I examine whether state ownership, more broadly, differs from cases where the state has a controlling stake.

is a dummy variable equal to one if the firm answers yes to a question asking if any member of its top-level management team is a sitting member of their region's legislature.

Moving to more indirect political connections that operate through formal institutions, I construct a set of measures indicating whether firms belong on governmental consultative councils working directly on professional education (H_3). To do so, I make use of a question that asks firms whether they are members of various consultative bodies with the goal of providing recommendations on regional professional education or overseeing it to create two measures. The first is a dummy variable equal to one if the firm reports being on consultative councils under the aegis of regional authorities. The second is also a dummy variable, but is equal to one if firms report being on consultative councils under the aegis of municipal authorities. I focus on these two types of consultative councils due to their formal responsibility for vocational education and for specific schools, which is central to the logic of my hypotheses about how these types of connections engender credible commitment.

My final set of measures are designed explore whether informal ties to various political leaders can provide credible commitments and increase the probability firms engage in PPP in VET (H_4). They are constructed from a question asking firms whether members of their top-level management are personally acquainted with a series of regional and municipal officials with nominal authority over education. Specifically firms were asked if members of their top-management personally knew the regional governor, vice-governors, the head of the municipal education department, or a member of the regional legislature. I create a dummy variable for each of these officials that is equal to one if firms' reported that members of their top management personally know that type of official.

In addition to the main independent variables of interest, I also included a series of firm-level controls to account for various important explanations for firms skill development strategies in all specifications. I control for firms size using the log of the number of workers it reports employing and for firms' perceptions of labor market tightness with a measure of the extent to which firms report that a deficit of qualified workers hamper their development. I also include a measure of the number of social benefits firms offer, to control for labor costs and wage generosity. I also control for firms financial resources by including a measure of the size of growth (or contraction) in firms sales over the previous year and a dummy variable equal to one if the firm reported investing in new production lines, equipment, renovations, or construction of new facilities. I also control for the nature of competition faced by each firm using a dummy variable equal to one if the firm reports intense competition from foreign firms in its usual markets.

Results

I begin by examining the relationship between various types of political connections and firms' self-reported participation of PPP. Results are reported in Table 1. Model 1.1 presents the baseline specification and examines whether a dominant share of state ownership is correlated with PPP in VET. Firms in which the state controls a dominant share are more likely to report participating in PPP in VET, but this result only holds at the 10% level. This is somewhat supportive of H_1, suggesting that state control is correlated with the decision to participate in PPP. The effect is not robust, however, and disappears once one controls for other forms of political connections. Model 1.2 and 1.3 introduce dummy variables indicating whether the firm's top-level management includes former government officials or sitting legislatures, respectively. Both measures are positive predictors of participation in PPP, but fail to reach significance at conventional levels. Further, the state control dummy ceases to be significant at conventional levels in both these specifications. Taken together, this evidence casts doubt on both H_1 and H_2, suggesting that firms with direct connections – whether due to formal state control or connections to current or former officials – are not more likely to engage in PPP.

Models 1.4 and 1.5 introduce the measures of firms' participation in government consultative councils at the regional and municipal levels, respectively (H_3). While both variables are positively correlated with participation in PPP, membership in governmental councils at the regional level is not statistically significant at conventional levels. Membership in governmental councils at the municipal level, however, are significant at the 1% level. This result is consistent with the notion that firms can indeed make use of consultative bodies as a means of insuring that PPP agreements will be followed by lower-level officials in settings with weak institutions. It suggests, however, that not all consultative bodies are created equal and that they may serve as a better means of protecting co-investments made via PPP when they involve lower levels of government. Unfortunately, there are many potential mechanisms behind this correlation. Since municipal governments in Russia are more likely to interact with school officials on a day-to-day basis, they may potentially more salient in resolving disputes than more distant regional officials. Alternatively, regional councils may meet too infrequently or include too few genuinely powerful officials to be of use. Future work is needed to understand the logic of this finding.

Finally, models 1.6 – 1.8 examine various measures of informal political connections by introducing dummies indicating firms' top-level management are acquainted with various government officials. Model 1.6 suggests that acquaintanceship with the regional governor is positively related to participating in PPP in VET at the 1% level. Similarly, being acquainted with the head of the municipal education ministry (model 1.8) is also positively correlated with participation in PPP, a results which holds at the 5% level. Knowing regional legislatures is also positively associated with participating in PPP in VET, albeit not at conventional levels of significance (model 1.7). Taken together, these results are consistent with H_4 and suggest that firms with informal ties to politicians may view them as a means of insuring that the state's commitment to PPP and policing lower level officials is credible. As with consultative councils, however, it also suggests that there is variation in *which* officials one should have ties with. Governors have inordinate powers in their regions, making them a valuable connection for resolving almost any problem. Local education officials are also likely to have a great deal of sway over school officials, the main counterparties for most forms of PPP examined in this paper, which makes them ideal interlocutors. Regional legislatures, while influential, are at a further remove than local municipal officials and lack the power of regional governors, which logically should make them less useful for firms looking to enforce PPP agreements against recalcitrant schools.

While the evidence presented in table 1 provides some insight into the relationship between PPP in VET and political connections, it does not necessarily reflect the types of co-investment firms are making with their state partners. As noted in section 2, the importance of political connections, broadly, and of certain types of political connections, specifically, may vary greatly depending on the types of co-investments firms are making and their accompanying risks. Table 2 examines the relationships between political connections and those types of PPP that require firms to invest large sums of money, whether directly into the school or into its students. Recall that in addition to concrete monetary losses, section 3 also noted that in Russia such forms are also problematic because they do not include inherent control mechanisms. Consequently, one would expect the importance of political connections generally, and of direct connections in particular, to increase. For the most part, the results from Table 2 conform to these expectations. In these specifications, all but two of the various measures of political connections have positive, statistically significant correlations with participation in a form of PPP involving monetary investment that hold at the 5% level of higher. Of the remaining two types of connections, prior experience in the government is still positive and significant at the 10% level, while state control does not reach conventional levels of significance. Taken together, therefore, table 2 suggests that while direct government control does not facilitate monetarily costly investments in PPP, direct connections to current and future government officials, indirect ties through formal institutions, and informal acquaintanceship all do.

Finally, table 3 repeats this analysis for a group of PPP that require significant investments in time by firms and that primarily revolve around coordinating joint training with schools and setting up apprenticeships. As noted in section 3, this group of practices both requires fewer monetary resources than the practices examined in table 2 and intimately involves firms in the day-to-day life of schools. As such, they should be more resistant to malfeasance and shirking on the part of school officials. If true, then political connections should be less salient for firms using these types of PPP, as they have more opportunities to monitor schools and more avenues to enforce PPP. Interestingly, however, this appears to not be the case. Table 3 largely mirrors Table 1. Firms' direct connections to politicians – state control and current or past government positions – are not significantly correlated with use of PPP at conventional levels, while coefficients on the variables proxying for connections via formal institutions (consultative councils) and informal acquaintanceships are positive and significant at conventional levels. The only major difference between tables 1 and 3 is that both membership in government consultative councils and knowing a regional deputy are both positive predictors of forming PPP's that involve significant time commitments. Taken together, this suggests that when firms are not investing money and their PPP come with in-built monitoring mechanisms, direct connections may be less important.

One caveat is in order with respect to the results above. While the theory presented in this paper argues that PPP in VET is stems in part from political connections, the reverse might also be true. Firms may choose to engage in PPP in VET and later acquire political connections, whether due to concerns about making agreements credible or to pure happenstance. Unfortunately, the survey used as this paper's primary data source does not include questions that would enable a deeper exploration of the sequence of events behind the forging of political connections and beginning PPP in VET. Future versions of this paper will attempt to disentangle this potential source of bias by making use of a unique dataset of PPP across nearly all of Russia's 1600 VET facilities, which includes historical data on PPP. Although respondents identities in the main survey are anonymous to the research team, the survey company that carried it out retained records that allow matching of responses to firm-level data and can match firms' responses to the historical data on their PPP. It will then be possible to conduct a series of robustness checks to determine whether firms with historical PPP, particularly those that no longer participate in PPP, are more likely to report political connections. If not, then it is unlikely PPP proceeds connections.

Before ending this discussion, it is worth noting that tables 1 – 3 provide strong evidence against the view that political connections serve as a drag on investment. In all specifications, the various measures of direct, indirect (via institutions), and informal political connections that were statistically significant were positively associated with PPP in VET. The consistency of this result suggests that political connections do not provide such a strong comparative advantage that, *ceteris paribus* they displace human capital investment. It is possible, however, that these results arise due to omitted variables – receipt of government orders, receipt of subsidies, responsibility for providing public goods on behalf of the government – that are correlated with political connections and represent non-market comparative that may sap willingness for firms to invest. In order to check for this possibility, I reran the analyses presented above with additional controls for some of the benefits firms may receive from their connections. Specifically, I included a measure of the volume of government orders and dummy variables indicating whether the firm had received financial aid from any level of the Russian government in the last year. I also accounted for the fact by including an index of the degree to which firms provide social programs to aid their local and regional governments (Frye, 2002; Frye and Iwasaki, 2011).[8] In all cases, the results reported above remained robust to the inclusion of these variables.[9]

Conclusions

This paper has explored the relationship between different types of political connections and the willingness of firms to formally co-invest with state institutions in public-private partnerships to develop skilled workers in settings with weak institutions. It has argued that PPP involving skill development carry a number of risks common to all forms of investment in weak institutional settings: rent-seeking, expropriation, policy uncertainty. Co-investments in human capital with the state also carry with them unique risks, however, since such investments require partners to engage in costly (in terms of time and treasure) changes to established educational practices and personnel policy to insure students graduate with the skills required by firms. These requirements mean that in settings with weak institutions and restricted accountability, firms are particularly vulnerable to malfeasance on the part of the lower-level officials that typically oversee day-to-day

[8]Firms were presented a list of social programs and asked which they provided to aid regional development in the last two years. Categories included aid to educational, health, sports, or cultural institutions; aid to the unemployed; aid to children's institutions such as orphanages or hospitals; aid to pensioners or other socially disadvantaged groups; public housing; ecological programs; or charity events. The index is the sum of such programs firms reported supporting.

[9]Results are available upon request.

implementation of PPP. This paper argues that political connections are a particularly invaluable way of resolving this dilemma for firms, as they grant access to power that makes it possible for the state to credibly commit to policing such lower level officials. While direct connections – whether via ownership or having current/former government officials in management – are particularly important for forging credible commitments when co-investment is significant and does not involve easily monitored forms, indirect ties such as membership in formal, consultative institutions and acquaintanceship are also valuable.

This paper then tested its argument on the importance of political connections using survey data on 690 Russian manufacturing, transport, and construction firms. The findings largely confirm the argument that political connections matter for all forms of PPP, and flatly reject the notion that political connections serve as a disincentive to invest. Of the types of political connections that were examined, connections forged via acquaintanceship and membership in consultative bodies had the most consistently robust relationships to PPP in VET. Perhaps unsurprisingly, though, the association between these forms of indirect ties and participation in PPP varied depending on the level of government the tie operated on. Ties to municipal level officials and consultative bodies, who are closest to the individual schools firms forge PPP agreements with, were strongly associated with participation in PPP agreements, as were ties to the most important official in any region: the governor. Conversely, ties to officials with more tenuous connections to education, such as regional legislatures or consultative bodies, proved uncorrelated with participation in PPPs. More surprisingly, however, direct ties were less important than expected. Firms with current or former officials in their top-management were no more likely than others to engage in PPP in VET, although such firms were more likely than others to use specific PPP forms that were monetarily costly and not easily monitored. This suggests the extra security such ties bring may not matter much for PPP in VET and may be substituted for in many types of agreements by forms of ties that are potentially less costly to firms than running candidates or hiring former officials.

Although this paper suggests that political connections are a valuable means by which firms can secure credible commitments from the state that their investments will be safe, many questions remain. First, this paper has focused on investments in human capital in Russia as a way of examining the importance of political connections for a difficult, risky form of investment in a setting with bad institutions. Because human capital investments with the state are particularly risky, a naive interpretation of the results of this paper may overstate the importance of political connections for investment. This is particularly pertinent for forms of political connections – such as membership in consultative bodies or informal acquaintanceship – that should be weaker and provide less leverage. Theoretically, there is no reason to expect that these sorts of links are not important for more general investments, however, particularly in settings where top-level officials are less likely to rent-seek themselves and the danger comes from poor oversight of lower-level officials. It is also worth noting that human capital investments are important in their own right, as much of the recent literature on economic development highlights the inability to develop skill as a key cause of stagnation in middle-income economies (Doner and Schneider, 2016; Kharas and Kohli, 2011). Nonetheless, further research is warranted to understand how these findings apply to more general forms of investment. Second, the focus of this paper on settings with weak institutions, where credible commitments are particularly hard to forge, calls into question whether more traditional forms of accountability – such as elections or strong civil society – serve to compliment or substitute political connections as a means of generating credible commitment by firms. Put another way, are political connections a strong predictor of investments, particularly in human capital, in democratic regimes? Further work is also needed to see how these findings apply outside of developing world settings with weak institutions.

References

Acemoglu, D. and J. Pischke (1998). Why Do Firms Train? Theory and Evidence. *The Quarterly Journal of Economics* 113 (1): 79 – 119.

Anderson K. and A. Hassel (2013). Pathways of change in CMEs: Training regimes in Germany and the Netherlands, in Wren, A. (ed.) *The political economy of the service transition*. Oxford: Oxford University Press. Pp. 171 – 194.

Agnor, P-R. and O. Canuto (2012) Middle-Income Growth Traps. *Policy Research Working Paper* 6210. Washington, D.C.: World Bank. Available at http://dx.doi.org/10.1596/1813-9450-6210.

Aiyar, S., R. Duval, D. Puy, Y. Wu, and L. Zhang. (2013). Growth Slowdowns and the Middle-Income Trap. *IMF Working Paper* 1371. Washington, D.C.: International Monetary Fund.

Barro, R. (1973). The Control of Politicians: An Economic Model." *Public Choice* 14: 19-42.

Beazer, Q. (2012). Bureaucratic Discretion, Business Investment, and Uncertainty. *The Journal of Politics* 74 (3): 637 – 652.

Boas, T., F. Hidalgo, and N. Richardson (2014). The Spoils of Victory: Campaign Donations and Government Contracts in Brazil. *Journal of Politics* 76 (2).

Boix, C. (2003). *Democracy and Redistribution*, Cambridge University Press.

Boix, C. and M. Svolik (2013). The Foundations of Limited Authoritarian Government: Institutions and Power-sharing in Dictatorships. *Journal of Politics* 75 (2): 300 – 316.

Busemeyer, M. (2015). *Skills and Inequality*. Cambridge: Cambridge University Press.

Busemeyer, M. and C. Trampusch (2012). *The Political Economy of Collective Skill Formation*. New York: Oxford UP.

Crouch, C., D. Finegold, and M. Sako (1999) *Are Skills the Answer? The Political Economy of Skill Creation in Advanced Industrial Countries*. New York: Oxford UP.

Culpepper, P. (2000). Can the State Create Cooperation?: Problems of Reforming the Labor Supply in France. *Journal of Public Policy* 20 (3): 223 – 245.

Culpepper, P. D. and K. Thelen (2008). Institutions and Collective Actors in the Provision of Training: Historical and Cross-National Comparisons. in Mayer, K. U. and Solga, H. (Eds.), *Skill Formation: Interdisciplinary and Cross-National Perspectives*. New York: Cambridge University Press.

Doner, R. F. and B. R. Schneider (2016). The Middle-Income Trap: More Politics than Economics. *World Politics* 68:4.

Estevez-Abe, M., Iversen, T. and Soskice, D. (2001). Social protection and the formation of skills: A reinterpretation of the welfare state, in Iverson, T., Soskice, D. and Hall. P. (Eds.), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. London: Oxford University Press.

Faccio, M. (2006). Politically Connected Firms. *The American Economic Review* 96 (1): 369 – 386.

Faccio, M. and D. C. Parsley (2009). Sudden deaths: Taking stock of geographic ties. *Journal of Financial and Quantitative Analysis* 33 (3): 683 – 718.

Faccio, M., Masulis, R. W., and McConnell, J. J. (2006). Political Connections and Corporate Bailouts. *The Journal of Finance* 61: 2597 – 2635.

Ferejohn, J. (1986). Incumbent Performance and Electoral Control. *Public Choice*: 5 – 25.

Finegold, D. and D. Soskice (1988). The Failure of Training in Britain: Analysis and Prescription. *Oxford Review of Economic Policy* 4 (3): 21 – 53.

Fisman, R. (2001). Estimating the Value of Political Connections. *the American Economic Review* 91 (4): 1095 – 1102.

Frye, T. (2010). *Building States and Markets After Communism: The Perils of Polarized Democracy*. New York: Cambridge University Press.

Frye, T. (2002) Capture or exchange? Business lobbying in Russia. *Europe-Asia Studies* 54 (7): 1017 – 1036.

Frye, T. and Iwasaki, I. (2011). Government Directors and Business-State Relations in Russia. *European Journal of Political Economy* 27: 642 – 658.

Frye, T., O.J. Reuter, and D. Szakonyi (2014). Political Machines at Work: Voter Mobilization and Electoral Subversion in the Workplace. *World Politics* 66 (2).

Gehlbach, S. (2008). *Representation Through Taxation: Revenue, Politics, and Development in Postcommunist States*. New York: Cambridge University Press.

Gehlbach, S. and Keefer, P. (2012). Private Investment and the Institutionalization of Collective Action in Autocracies: Ruling Parties and Legislatures. *The Journal of Politics* 74 (2): 621 – 635.

Gehlbach, S. and Keefer, P. (2011). Investment Without Democracy: Ruling-Party Institutionalization and Credible Commitment in Autocracies. *Journal of Comparative Economics* 39 (2): 123 – 139.

Greif, A., P. Milgrom, and B. R. Weingast (1994). Coordination, commitment, and enforcement: the case of the merchant guild. *Journal of Political Economy* 102: 745 – 776.

Haber, S., Maurer, N., and Razo, A. (2003). *The Politics of Property Rights: Political Instability, Credible Commitments, and Economic Growth in Mexico, 1876-1929*. Cambridge: Cambridge, University Press.

Hall, P.A. and Soskice, D., (Eds.) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.

Hall, P. and K. Thelen (2009). Institutional Change in Varieties of Capitalism. *Socio-Economic Review* 7 (1): 7 – 34.

Hellman, J.S. (1998). Winners take All: The Politics of Partial Reform in Postcommunist Transitions. *World Politics* 50(2): 203 – 234.

Huber, J. D., and Shipan, C. R. (2002). *Deliberate Discretion? The Institutional Foundations of Bureaucratic Autonomy*. Cambridge: Cambridge University Press.

Iversen, T., and Soskice, D. (2001). An Asset Theory of Social Policy Preferences. *American Political Science Review* 95 (4): 875 – 893.

Kharas, H. and H. Kohli (2011). What is the middle income trap, why do countries fall into it, and how can it be avoided? *Global Journal of Emerging Market Economies* 3 (3).

Kydland, F.E. and Prescott, E.C. (1977). Rules Rather than Discretion: The Inconsistency of Optimal Plans. *Journal of Political Economy*. 85 (3): 473-492.

Levina, I., A. Kazun, I. Marques II, A. Yakovlev (2017). Destructive Corporate Raiding: The Dark Side of Political Connections. *Mimeo*.

Magaloni, B.(2008) Credible Power-Sharing and the Longevity of Authoritarian Rule. *Comparative Political Studies* 41 (4–5): 715 – 741.

Magaloni, B. (2006). *Voting for Autocracy: Hegemonic Party Survival and its Demise in Mexico*. New York: Cambridge University Press.

Marques II, I., T. Remington, and V. Bazvluk (2016). The Adoption of Costly VET Practices in Russias Regions/ *Higher School of Economics Working Paper No.* WP1/2016/05.

Martin, C.J. and D. Swank (2008). The Political Origins of Coordinated Capitalism: Business Organizations, Party Systems, and State Structure in the Age of Innocence. *American Political Science Review* 102 (2): 181 – 198.

McCubbins, Matthew, and Thomas Schwartz (1984). Congressional Oversight Overlooked: Police Patrols Versus Fire Alarms. *American Journal of Political Science* 28 (1): 165 – 79.

McNollgast (McCubbins, Matthew, Roger Noll, and Barry Weingast). (1987). Administrative Procedures as Instruments of Political Control. *Journal of Law, Economics, and Organization* 3 (2): 243 – 77.

Mironov, M. and E. Zhuravskaya (2016). Corruption in Procurement and the Political Cycle in Tunneling: Evidence from Financial Transactions Data. *American Economic Journal: Economic policy* 8 (2): 287 – 321.

North, D. (1990). *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.

North,D., Wallis, J.J., Weingast, B.R. (2009). *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. New York: Cambridge UP.

North, D., and Weingast, B. (1989). Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth Century England. *Journal of Economic History* 49: 803 – 832.

Olson, M. (2000). *Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships*. New York: Basic Books.

Olson, M. (1993). Dictatorship, Democracy, and Development. *American Political Science Review* 87 (3): 567 – 576.

Remington, T. F. (2017). Business-government cooperation in VET: a Russian experiment with dual education. *Post-Soviet Affairs* 33 (4): 313 – 333.

Remington, T. F. and I. Marques II (2017). The Reform of Skill Formation in Russia: Regional Responses. *Mimeo*.

Reuter, O.J. (2017). *The Origins of Dominant Parties: Building Authoritarian Institutions in Post-Soviet Russia*. Cambridge: Cambridge University Press.

Rodrik, D. (2000). Institutions for High-Quality Growth: What they are and how to Acquire Them. *Studies in Comparative International Development* 35 (3): 3 – 31.

Slinko, I., E. Yakovlev, and E. Zhuravskaya (2005). Laws for sale: evidence from Russia. *American Law and Economics Review* 7(1): 284 – 318.

Stevens, M. (1996). Transferable Training and Poaching Externalities. in A.L. Booth and D.J. Snower (eds.) *Acquiring Skills*. New York: Cambridge University Press.

Swensen, P. A. (2002). *Capitalists Against markets: The Making of Labor Markets and the Welfare States in the United States and Sweden*. Oxford: Oxford University Press.

Szakonyi, D. (2017). Businesspeople in Elected Office: Identifying Private Benefits from Firm-Level Returns. *Mimeo*. Retrieved on 1 December, 2017. Available at SSRN: https://ssrn.com/abstract=2844901.

Thelen, K. (2004). *How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan*. New York: Cambridge University Press.

Weingast, B. (1997). Political Foundations of Democracy and the Rule of Law. *American Political Science Review*, 91, 245-63.

Weingast, B., and Moran, M. (1983). Bureaucratic Discretion or Congressional Control? Regulatory Policymaking by the Federal Trade Commission. *Journal of Political Economy* 91: 765 – 800.

Table 1: Political Connections and the Probability of Engaging in PPP in VET

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Number of Employees	0.449***	0.398***	0.451***	0.440***	0.380**	0.358**	0.402***	0.369***
	(0.141)	(0.151)	(0.136)	(0.140)	(0.152)	(0.142)	(0.141)	(0.132)
Deficit of Skilled Workers	-0.048	-0.004	-0.055	-0.042	-0.054	-0.050	-0.040	-0.063
	(0.091)	(0.099)	(0.096)	(0.089)	(0.087)	(0.094)	(0.092)	(0.095)
Sales Dynamic	0.215*	0.202*	0.205*	0.207*	0.204*	0.193*	0.223**	0.208*
	(0.116)	(0.107)	(0.121)	(0.117)	(0.113)	(0.108)	(0.104)	(0.109)
Investment Activity	0.590	0.625*	0.566	0.536	0.606	0.498	0.651	0.678*
	(0.390)	(0.370)	(0.374)	(0.379)	(0.391)	(0.369)	(0.404)	(0.377)
Foreign Ownership	1.067**	1.212**	1.044**	1.244**	1.294**	1.031**	0.997**	1.297**
	(0.489)	(0.511)	(0.521)	(0.489)	(0.522)	(0.458)	(0.470)	(0.514)
State Ownership	0.846*	0.645	0.849	0.628	0.792	0.678	0.722	0.620
	(0.453)	(0.457)	(0.555)	(0.482)	(0.525)	(0.483)	(0.478)	(0.454)
Social Benefits Offered	0.486***	0.482***	0.469***	0.457***	0.457***	0.481***	0.470***	0.464***
	(0.054)	(0.046)	(0.050)	(0.047)	(0.048)	(0.055)	(0.049)	(0.055)
Foreign Competition	-0.031	0.003	-0.017	-0.124	-0.137	-0.064	0.090	0.044
	(0.188)	(0.181)	(0.195)	(0.158)	(0.158)	(0.194)	(0.182)	(0.179)
Management: Former Gov. Official		0.625						
		(0.380)						
Management: Current Legislature			0.455					
			(0.309)					
Member of Regional Consultative Council				0.981				
				(0.610)				
Member of Municipal Consultative Council					1.150***			
					(0.423)			
Management: Know Governor						0.889***		
						(0.264)		
Management: Know Regional Deputy							0.438	
							(0.344)	
Management: Know Municipal Edu. Head								0.797**
								(0.360)
Constant	-3.975***	-4.769***	-3.703**	-3.772**	-3.403**	-3.395**	-3.839**	-3.703***
	(1.537)	(1.671)	(1.448)	(1.656)	(1.689)	(1.455)	(1.570)	(1.437)
Sectoral Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	656	638	640	656	656	642	637	641
Log Liklihood	-267.4	-256.3	-260.5	-265.1	-262.8	-256	-259.3	-258.4
Pseudo-R2	0.338	0.342	0.339	0.344	0.350	0.357	0.342	0.349

Robust standard errors in parentheses
*** p¡0.01, ** p¡0.05, * p¡0.1

Table 2: Political Connections and the Probability of Monetarily Intensive PPP in VET

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Number of Employees	0.491***	0.504***	0.466***	0.464***	0.374***	0.411***	0.494***	0.455***
	(0.141)	(0.147)	(0.134)	(0.137)	(0.133)	(0.136)	(0.133)	(0.151)
Deficit of Skilled Workers	-0.002	0.004	-0.016	0.013	0.000	0.027	0.043	0.004
	(0.174)	(0.171)	(0.166)	(0.175)	(0.169)	(0.188)	(0.184)	(0.172)
Sales Dynamic	0.415***	0.480***	0.418***	0.394***	0.397***	0.381***	0.403***	0.406***
	(0.128)	(0.107)	(0.125)	(0.150)	(0.144)	(0.132)	(0.120)	(0.125)
Investment Activity	0.649	0.940	0.579	0.478	0.599	0.230	0.428	0.585
	(0.439)	(0.615)	(0.468)	(0.401)	(0.456)	(0.388)	(0.433)	(0.435)
Foreign Ownership	-0.705	-0.583	-0.678	-0.540	-1.011*	-0.489	-0.647	-0.568
	(0.711)	(0.663)	(0.704)	(0.743)	(0.587)	(0.738)	(0.752)	(0.745)
State Ownership	0.207	-0.206	0.343	-0.163	-0.048	0.033	0.029	0.031
	(0.490)	(0.520)	(0.522)	(0.393)	(0.671)	(0.411)	(0.445)	(0.506)
Social Benefits Offered	0.767***	0.764***	0.741***	0.704***	0.716***	0.762***	0.721***	0.735***
	(0.105)	(0.117)	(0.104)	(0.114)	(0.121)	(0.112)	(0.107)	(0.108)
Foreign Competition	-0.340	-0.294	-0.414	-0.423	-0.386	-0.440	-0.318	-0.325
	(0.402)	(0.486)	(0.437)	(0.429)	(0.413)	(0.436)	(0.391)	(0.385)
Management: Former Gov. Official		0.690*						
		(0.380)						
Management: Current Legislature			0.794**					
			(0.361)					
Member of Regional Consultative Council				1.315**				
				(0.531)				
Member of Municipal Consultative Council					1.656***			
					(0.491)			
Management: Know Governor						1.413***		
						(0.470)		
Management: Know Regional Deputy							1.027**	
							(0.504)	
Management: Know Municipal Edu. Head								0.741**
								(0.354)
Constant	-8.202***	-8.456***	-7.619***	-7.805***	-7.348***	-7.563***	-8.350***	-8.067***
	(2.118)	(2.311)	(2.026)	(2.047)	(1.965)	(1.945)	(2.155)	(2.107)
Sectoral Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	672	653	655	672	672	655	650	654
Log Liklihood	-167.5	-155.6	-163.6	-164.1	-159.5	-157.8	-161.8	-164.2
Pseudo-R2	0.367	0.393	0.372	0.380	0.397	0.398	0.381	0.373

Robust standard errors in parentheses
*** p¡0.01, ** p¡0.05, * p¡0.1

Table 3: Political Connections and the Probability of Time Intensive PPP in VET

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Number of Employees	0.395**	0.344**	0.412***	0.378**	0.301	0.301*	0.314*	0.323**
	(0.172)	(0.171)	(0.153)	(0.178)	(0.188)	(0.169)	(0.177)	(0.162)
Deficit of Skilled Workers	-0.017	0.001	-0.028	-0.008	-0.022	-0.008	0.005	-0.024
	(0.085)	(0.088)	(0.088)	(0.084)	(0.081)	(0.087)	(0.084)	(0.089)
Sales Dynamic	0.337***	0.329***	0.330***	0.323***	0.324***	0.305***	0.329***	0.317***
	(0.115)	(0.109)	(0.114)	(0.114)	(0.109)	(0.101)	(0.099)	(0.114)
Investment Activity	0.779*	0.914**	0.757*	0.691*	0.795**	0.611	0.622	0.778**
	(0.424)	(0.450)	(0.439)	(0.382)	(0.397)	(0.404)	(0.420)	(0.377)
Foreign Ownership	0.507	0.641	0.508	0.663	0.726	0.577	0.613	0.796
	(0.919)	(0.951)	(0.920)	(0.922)	(0.958)	(0.847)	(0.964)	(0.971)
State Ownership	0.627	0.354	0.807	0.317	0.473	0.500	0.440	0.425
	(0.550)	(0.527)	(0.597)	(0.572)	(0.616)	(0.562)	(0.551)	(0.548)
Social Benefits Offered	0.559***	0.565***	0.555***	0.515***	0.521***	0.549***	0.530***	0.540***
	(0.070)	(0.060)	(0.065)	(0.052)	(0.062)	(0.067)	(0.063)	(0.070)
Foreign Competition	-0.008	-0.010	-0.012	-0.088	-0.097	-0.051	0.092	0.032
	(0.236)	(0.214)	(0.243)	(0.220)	(0.247)	(0.263)	(0.228)	(0.237)
Management: Former Gov. Official		0.453						
		(0.363)						
Management: Current Legislature			0.082					
			(0.298)					
Member of Regional Consultative Council				1.283**				
				(0.571)				
Member of Municipal Consultative Council					1.435***			
					(0.435)			
Management: Know Governor						0.933***		
						(0.300)		
Management: Know Regional Deputy							1.026***	
							(0.383)	
Management: Know Municipal Edu. Head								0.783**
								(0.349)
Constant	-6.434***	-5.849***	-6.391***	-6.224***	-5.784***	-5.819***	-6.114***	-6.093***
	(1.670)	(1.660)	(1.523)	(1.549)	(1.621)	(1.524)	(1.629)	(1.580)
Sectoral Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	672	653	655	672	672	655	650	654
Log Liklihood	-237.8	-227.9	-230.6	-233.8	-230.4	-228.4	-225.8	-230.4
Pseudo-R2	0.351	0.352	0.354	0.362	0.371	0.367	0.367	0.359

Robust standard errors in parentheses
*** p¡0.01, ** p¡0.05, * p¡0.1