WHEN CAN GOVERNMENT VENTURE CAPITAL FUNDS BRIDGE THE EQUITY GAP?

Yan Alperovych
EMLYON Business School, Research Centre for Entrepreneurial Finance
23 Avenue Guy de Collongue, Ecully, 69132, France
http://ssrn.com/author=1010455
alperovych@em-lyon.com

Alexander Peter Groh
EMLYON Business School, Research Centre for Entrepreneurial Finance
23 Avenue Guy de Collongue, Ecully, 69132, France
http://ssrn.com/author=330804
groh@em-lyon.com

Anita Quas
Corresponding author
EMLYON Business School, Research Centre for Entrepreneurial Finance
23 Avenue Guy de Collongue, Ecully, 69132, France
http://ssrn.com/author=1574364
quas@em-lyon.com, +33(0)4 78 33 77 89

Abstract

Several papers find that government venture capital (GVC) funds do not add (much) value to their investees, underperform their private peers, or crowd out private investment. However, "bridging the equity gap" is allegedly a major objective of public initiatives in the market for start-up financing. This paper addresses the conditions under which GVC funds may fulfill this mission. Our data reveal that the competitiveness of a region where a GVC fund is located strongly affects its success. Furthermore, potential collusion and regulatory capture hinder the likelihood of success of GVC-backed start-ups. Nevertheless, GVC funds can achieve their objectives if they gain specific investee-industry experience and learn from their private peers through syndicated transactions.

Keywords: Governmental Venture Capital, Experience, Regional Characteristics, Regulatory Capture

JEL Codes: G24, G38.

1 Introduction

Public interventions in the entrepreneurial finance market have recently spurred considerable academic debate. Public initiatives include the creation of government venture capital (GVC) funds, which are venture capital (VC) funds financed and managed by government-affiliated agencies that aim to support entrepreneurial start-ups by injecting financial resources. The so-called "equity gap" is one of the most important rationales for this policy intervention. As commercial banks shy away from the high risk and uncertainty associated with young entrepreneurial ventures, the latter often find it difficult to collect the required capital to develop their businesses. Private venture capital (PVC) funds are potentially well-suited to provide seed and growth funding for entrepreneurial ventures (Hellmann and Puri 2000; Kortum and Lerner 2000). However, PVC funds invest in a very limited number of the most promising companies. Moreover, some ventures are unappealing to PVC investors, such as those in the very early stages of development (Bertoni et al. 2015; Lockett et al. 2002; Mason and Harrison 1997; Murray and Lott 1995) or operating in economically lagging regions (Harrison and Mason 1992; Sunley et al. 2005). Such ventures may suffer from the equity gap, and a lack of risk capital may constrain their development and growth.

Addressing this market failure is a natural move by government authorities (Brander et al. 2015). GVC initiatives can tackle the issue by directly investing in entrepreneurial ventures that are affected by the equity gap, alone or by syndicating with PVC.

Mixed empirical evidence has been found regarding the impact of GVC on portfolio companies. Using a series of performance measures, some papers find that GVC funds do not "add value" – at least they do not if they invest alone. Stand-alone investments by GVC funds seem to exert no significant impact on portfolio companies in terms of sales and employee growth (Grilli and Murtinu 2014, 2015) or in terms of patenting activity (Bertoni and Tykvová

2015). A recent study documents that the effect of stand-alone GVC investments is even negative in terms of efficiency (Alperovych et al. 2015). Solo GVC investments also underperform PVC activities in terms of the probability of a successful exit via an initial public offering (IPO) or trade sale (Cumming et al. 2014; Kovner and Lerner 2015).

However, other papers suggest that GVC can be beneficial. First, syndication among GVC funds and PVC funds has a positive impact on the ventures' exit performances (Cumming et al. 2014; Kovner and Lerner 2015), sales growth (Grilli and Murtinu 2015) and patenting activity (Bertoni and Tykvová 2015). Second, GVC may add value by backing companies until the next round of (private) financing. Lerner (1999) predicts that the investment of a GVC may increase the investee's probability of receiving PVC due to a certification effect. Third, GVC is not a homogeneous phenomenon: GVC programs have different geographical scopes (Munari and Toschi 2014), objectives (Bertoni and Tykvová 2015) and structures (Buzzacchi et al. 2013). This heterogeneity is likely to have an impact on the effectiveness of GVC funds.

In this paper, we aim to contribute to this stream of research by determining the conditions under which the GVC funds can help their portfolio companies develop. In particular, while the literature has presented different possible explanations for the underperformance of GVC, it has offered virtually no empirical evidence to support the validity of these explanations. This paper fills this gap and provides evidence regarding three major arguments that have been raised to explain the underperformance of GVC.

The first argument is that GVC programs are often motivated by policy objectives of job creation and economic growth in specific regions (Bertoni and Tykvová 2015; Kovner and Lerner 2015). In fact, the funding gap left by private investors has a geographical characterization. VC investors, especially in Europe, exhibit a high level of spatial concentration in financial centers and high-tech regions (Chen et al. 2010), and they have a

strong tendency to invest nearby (Harrison et al. 2010). Consequently, VC investments are concentrated in core regions, but they are negligible in peripheral, economically lagging areas (Harrison and Mason 1992). This phenomenon is referred to as "regional funding gaps" (Martin et al. 2005). GVC funds often have the precise objective to focus on economically lagging regions that offer limited opportunities to portfolio companies and minimal attractiveness to PVC investors. However, recent evidence has shown that the effectiveness of GVC programs highly depends on the economic characteristics of the regions in which these programs are deployed (Munari and Toschi 2014). Therefore, the "underperformance" of GVC funds is likely merely due to the poor economic conditions of the regions in which they are located. This notion is strongly supported by our data.

The second argument is that government interventions may be subject to collusion and regulatory capture (Lerner 1999). These phenomena can create distortions in the allocation of public funds, as politicians may favor companies to which they are politically or personally connected to benefit themselves rather than to fulfill their stated goals (Becker 1983; Peltzman 1976). If GVC funds are more inclined to invest in companies to which they are connected, regardless of their growth and success prospects, then regulatory capture may explain part of the underperformance of GVC investments. Our paper also provides evidence for this notion.

The third argument is that skepticism surrounds GVC managers' skills and investment experience in supporting and monitoring entrepreneurial companies (Leleux and Surlemont 2003; Lerner 2002). Research has also found that by accumulating experience, PVC funds become better at selecting portfolio companies and adding value (Sørensen 2007). Clarysse et al. (2013) show that PVC funds learn from both their experience and that of their co-investors. GVC funds are presumably subject to the same learning processes, especially considering that many GVC initiatives date back to the 1980s and that they very often interact with PVC funds. We find evidence of such a learning process by GVC funds.

We evaluate the impact of local development, political influence and business experience on the success of GVC funds using a sample of 1230 investments made by 72 GVC funds operating in 16 European countries. The data are retrieved from ThomsonOne. We find that GVC investments in companies located in economically lagging regions are less successful in terms of receiving subsequent PVC funding or exiting. Furthermore, GVC funds that exclusively source their investments locally are also less successful. This effect is stronger if the GVC funds are located in countries with higher perceived corruption. We interpret this result as evidence of collusion and regulatory capture actually affecting GVC performance. Finally, compared to a syndicated investment with a PVC, a GVC fund is less likely to make a successful investment if it invests alone. However, GVC funds with built-up industry-specific experience and those that have co-invested with PVC funds are more likely to make a successful investment when subsequently investing alone. This result serves as evidence of a learning process of GVC funds.

The remainder of the paper is organized as follows. Section 2 presents the data and measures. Section 3 presents the methodology and the results of the main analysis, while Section 4 presents additional evidence and robustness checks. Finally, we summarize and conclude in Section 5.

2 Measures and data

2.1 *Measures*

We utilize several important measures and a set of control variables in our analyses as described subsequently.

GVC investment success measure: We assess GVC success as the occurrence of a later stage of PVC funding (see Cumming et al. 2014; Guerini and Quas 2015; Lerner 2002 for a similar approach). Therefore, the dependent variable is "Additional PVC", a dummy equal

to 1 if the focal GVC investment results in an additional PVC investment and 0 otherwise. We use this measure of success because by injecting financial resources, GVC funds can contribute to the venture's development by avoiding its premature bankruptcy and by preparing it for a subsequent financing round with PVC funds. Receiving PVC is a proof of the investee's viability. Receiving PVC after receiving a GVC investment signals that return-driven investors believe in the start-up's business plan and its entrepreneurs' management capacities. If the GVC-backed venture is able to procure PVC backing at some later stage of its development, then the GVC fund was capable to select a promising investee or to facilitate its development until it has become promising. Following this logic, the GVC fund successfully bridges a funding gap between its initial investment and the later financing round. Empirical evidence showing the alleged ability of GVC to bridge the equity gap and to support target companies until a private investor becomes involved remains scarce. At the same time, numerous papers have presented mixed findings about whether GVC investments have increased or crowded out the aggregate pool of PVC investments (Armour and Cumming 2006; Brander et al. 2015; Cumming and Macintosh 2006; del-Palacio et al. 2012; Jeng and Wells 2000; Leleux and Surlemont 2003). At the company level, Guerini and Quas (2015) find that GVC-backed companies are more likely than their peers to receive PVC, which is also consistent with Lerner's (1999, 2002) assumptions.

Local development measure: The literature suggests that GVC funds that invest in underdeveloped regions are less likely to be successful (Kovner and Lerner 2015). We test this notion by including the level of local development in the region in which the target company is located in our analyses. Our measure of local development is the "Regional Competitiveness", an index computed at regional (i.e., NUTS2) levels by the European Commission in 2013 (Annoni and Dijkstra 2013). The index is built on several measures that aim to consider the development, efficiency and innovation of the European regions. Although

these measures are not time varying, we believe that a substantial degree of serial correlation exists in regional development over the years. As robustness checks, we substitute "Regional Competitiveness" with other measures of local development, such as the GDP per capita, and local innovation, such as the percentage of human resources involved in science and technology. These measures, which are time varying, were collected at NUTS2 level from Eurostat.[1]

Room for political influences measure: Testing whether political influences affect GVC funds' behaviors is not a trivial endeavor. We use an indirect approach, for which we present robustness checks. Geographic proximity between the GVC investor and the entrepreneur can likely facilitate collusion between the parties. In fact, "as geographical proximity makes it easier for companies to collaborate in research and innovation, so it makes it easier for companies or other agencies to collude in their supply of a critical input" (Akehurst 1987, page 160). GVC investors are more likely to collude with entrepreneurs in their personal networks, such as friends, previous classmates or co-workers. Geographic proximity between GVC funds and these entrepreneurs would make the creation of these social relationships more likely (Liben-Nowell et al. 2005). Therefore, when GVC funds and entrepreneurs are located near each other, we expect that collusion is more likely to influence the selection process of GVC funds. We measure the proximity between the GVC investor and the entrepreneur with the dummy variable "Local deal", which is equal to 1 if the GVC investor is located in the same geographical region (NUTS2 code) as the target company. We do not expect that all local investments are equally subject to potential collusion. Rather, we assume that GVC funds located in countries with higher perceived regulatory capture are more likely to collude with entrepreneurs. Following a common approach in the literature, we proxy the likelihood for

[1] The results related to these variables are similar to those presented here, and they are available from the authors upon request.

regulatory capture with the nationwide measure of corruption (Dal Bó 2006; Dal Bó and Rossi 2007). We use the Corruption Perceptions Index measured by Transparency International since 1995. This index assigns higher values to lower levels of perceived corruption. To improve interpretability, we switch the sign of the Corruption Perceptions Index and generate the "Corruption" variable, which assigns higher values to higher levels of corruption. We expect that locally sourced GVC investments perform worse because of collusion in the selection process and that this result is even stronger in more corrupt countries. To test this assumption, we interact "Local deal" with "Corruption" and expect a negative sign. The political science literature also suggests that an influence in the form of campaign contributions is an alternative measure of regulatory capture (Dal Bó 2006; de Figueiredo and Edwards 2007). Therefore, we refer to the International Monetary Fund database and retrieve information on whether the amount that a donor can contribute to a candidate of a political party in a certain country is limited. This characteristic is coded via the dummy variable "No limit on contributions to candidates", which is equal to 1 if no limit exists. The variable is used as a robustness check for our main proxy for regulatory capture, i.e., "Corruption".

GVC funds' learning ability measure: We aim to test whether GVC funds are able to learn from their experience and whether such learning, in turn, has a positive effect on GVC investment success. To measure GVC funds' experience, we rely on the full investment history of the focal GVC investor up to the year before the focal investment. We develop different assessments for the general experience of GVC funds, referring to Hochberg et al. (2007) and Gompers et al. (2008), who measure the experience of PVC funds. "Years of experience" is the number of years since the first investment ever made by the focal GVC investor. "Total deal experience" is the number of investment rounds in which the focal GVC investor participates before the investment in question. "Industry experience" is the number of times the focal GVC investor has invested in the industry of the focal company in the past. To test

whether GVC can learn from syndicating with PVC investors, we compute GVC's "Syndication experience" as the number of investments in which the focal GVC investor has syndicated with a PVC investor in the past.

Control variables: We control for "Syndicates", a dummy equal to one if the investment is originated by a syndicate of GVC and PVC funds. We expect syndicated deals to perform better than GVC funds' solo investments, as revealed in the literature using a variety of performance measures (Bertoni and Tykvová 2015; Cumming et al. 2014; Grilli and Murtinu 2015; Kovner and Lerner 2015). In some specifications, we also control for the liquidity of the exit market via the "Exit opportunities" variable. This variable is the average number of IPOs per year over the three years following the focal investment. Lastly, our model includes a set of control variables, such as the logarithm of the age of the GVC-backed company ("Log of company age") and industry and period fixed effects[2].

2.2 *Dataset*

The empirical analysis is based on a sample of investments originated by GVC funds, i.e., investments in which a GVC fund is present in the first financing round of a particular target company.

To create our sample, we first identify a list of GVC investors operating in Europe in the Thomson One database. As we are aware of the limits of this database, particularly its tendency to mischaracterize captive investors (e.g., Bertoni et al. 2015; Da Gbadji et al. 2015; Ivanov and Xie 2010), we cross-check our list with the VICO database (www.vicoproject.org). We are able to detect 93 GVC investors whose parent companies are European governmental bodies. From Thomson One, we then download the full investment history of all GVC investors

[2] Results are similar if we also include country dummies.

and all companies that have ever received GVC financing.[3] After excluding companies operating in finance or real estate, we obtain a sample of 2,142 companies that have received 4,724 rounds of investment—2,912 from 92 GVC funds and the rest from PVC funds. These investments occur between 1979 and 2014. We use this information to measure the GVC experience.

To isolate investments originated by GVC funds, we focus on the first financing rounds of our sample companies in which a GVC fund is present. Guerini and Quas (2015) show that GVC funding increases the companies' chances of receiving PVC in the first three years after the investment, but this effect fades after three years. Therefore, we exclude the first rounds that occur after 2011 to allow for at least 3 years to observe whether the investment results in a subsequent round of PVC financing. After dropping observations with missing data and companies located outside Europe, we ultimately have 72 GVC funds investing in 1,230 investees in 1,208 companies between 1995 and 2011. This is our final sample of investments originating from GVC funds.

For this sample, we gather information on the investee company's characteristics with respect to its name, location, industry of operation, foundation year, exit status (listed, acquired or liquidated, if any of those events occur before 2015) and full investment history. We further know the GVC investors' details, including name, nature of the parent company, foundation year, full investment history and location. Data are cross-checked with Bureau Van Dijk Orbis and Zephyr, and missing data are found on the websites of the companies and the GVC investors.

[3] To check the completeness of our data, we also gather the full investment history of all GVC-backed companies from the Zephyr database. Aggregated statistics on the number and success of the investments are comparable between the two databases.

Table 1 shows the distribution of GVC investors according to country, first investment period and nature of the parent company,[4] while Table 2 presents the distribution of GVC investments according to industry, country, the target company's founding period and investment year. Our sample includes 635 investments (51.63%) originating from GVC funds alone and 595 investments (48.37%) originating from a syndicate of PVC and GVC funds. The distribution by the portfolio company's age at the time of the investment shows that the vast majority of companies are very young during the first financing round. In particular, 25% of the sample companies are younger than 1 year old at the time of the investment, and 75% are younger than 5 years old. Nevertheless, the sample also includes GVC investments in older companies. In those cases, the GVC's rationale is evidently not to bridge an equity gap at foundation but to possibly support companies that notably contribute to the employment in a particular region.[5]

[Insert Table 1: Distribution of GVC investors by country, first investment period and type of parent company]

[Insert Table 2: Distribution of GVC investments by investment period, age at the time of the investment, country and industry of the target company]

Our variables are summarized in Table 3 and their correlation matrix is presented in Table 4.

With respect to our dependent variable, of the 1,230 investments originating from GVC funds, 390 investments (31.71%) achieve subsequent PVC investments (the dummy variable *AdditionalPVC* is equal to 1). Of the 635 companies that are initially exclusively backed by a GVC investor, 122 (i.e., 19.21% of them) receive subsequent PVC financing. Of the 595

[4] The full list of GVC investors included in our sample can be found in Table A1 in the Appendix.

[5] Our results are robust if we exclude companies that are older than 5 years (see Table A3 in the Appendix).

companies that receive a GVC/PVC-syndicated first-round investment, 268 (i.e., 45.04%) subsequently obtain additional PVC financing.

[Insert Table 3: Summary statistics]

[Insert Table 4: Correlation matrix]

3 Determinants of GVC investments' success in bridging the equity gap

Table 5 provides the first results regarding the determinants of GVC investments' success factors in terms of bridging the equity gap. Columns I to VIII present Probit models of our complete sample of 1,230 investments. The dependent variable "Additional PVC" indicates that the equity gap has been successfully bridged. In Model I, we regress the dependent variable on the regional competitiveness index without additional controls. We find a statistically and economically strong effect of the local conditions of the investee firm on the likelihood of receiving subsequent PVC financing. The economic significance is such that a one-standard deviation increase in the level of the regional competitiveness enhances the likelihood of future PVC funding by 8.9 percentage points for the average start-up transaction. More intuitively, the likelihood of receiving additional funding in Greater London is 32.16 percentage points higher than in Andalucía (southern Spain), only due to the difference in the local development.

In column II, we add industry and time fixed affects and the "log of company age". We find that a company that is one year older than the average investee during the seed-funding round is 3.6% less likely to receive subsequent PVC financing.

In columns III to IV, we stepwise add the "Syndicates" and "Local deal" dummy variables (equal to 1 if the deal is syndicated and if the deal is locally sourced, respectively). Column III and column IV suggest that syndicated transactions are 21.5% more likely and

locally sourced deals are 5.2% less likely, respectively, than the average seed-investment to receive expansion PVC funding.

In column V, we add our proxy of corruption to the regressions but have to simultaneously drop "Regional competitiveness" because it is strongly negatively correlated with "Corruption", as revealed by the correlation matrix (Table 4). More competitive regions are located in countries with less perceived corruption. Corruption evidently hinders progress in the investment cycle. All other things being equal, a seed-financed venture in Poland is 18.7% less likely to receive private expansion capital than a venture located in Denmark due to different levels of perceived corruption.

Column VI presents a model in which we add an interaction term between the level of corruption and a deal's local sourcing by a GVC fund. This interaction term is highly statistically and economically significant,[6] showing that the level of corruption in a particular country is a stronger inhibitor of success if GVC funds source locally. Using the Norton et al. (2004) procedure to quantify the magnitude of the interaction effect, we find that if the deals are sourced locally, a standard deviation increase in perceived corruption decreases the probability of subsequent funding by 6.3%.

In columns VII and VIII, we repeat the previous analyses using an alternative measure of corruption, which allows the inclusion of the regional competitiveness index again. Our "No limit on contributions to candidates" variable serves as an alternative corruption measure but correlates only moderately (0.28) with the regional competiveness index. In column VIII, we can thus reveal in that the joint effect of the higher likelihood of collusion in locally sourced

[6] The inclusion of the corruption measure and its interaction with locally sourced transactions may lead to multicollinearity problems that could bias the coefficients. In fact, we notice a jump in the coefficient of the local dummy between models V and VI. To address this problem, we adopt the residual-centering procedure described in Lance (1988), more recently used, for example, by Tiwana (2008). This procedure and the results are described in Table A2 in the Appendix.

transactions remains even after controlling for the competitiveness of the investee firm's location.

[Insert Table 5: Determinants of GVC investments' success]

4 Additional evidence and robustness checks

4.1 *Are GVC funds good screeners?*

In the analyses above, we do not differentiate between the syndicated transactions and solo investments of GVC funds. GVC funds could free ride on the deal sourcing and screening abilities of PVC funds in syndicated deals. Doing so could improve the reported results of the government fund to its superior administrators, but it would not necessarily mean that the fund bridges an equity gap.

Alternatively, the PVC fund may free ride on the GVC fund. In fact, the commitment of a government-affiliated investor could signal a certain quality to a private sponsor (Lerner 1999) and convince him to participate in the deal. Additionally, the contribution of the GVC fund lowers the required exposure for the PVC fund, thereby perhaps facilitating its investment. Hence, syndicated transactions may bias the results on the success factors of government-affiliated VC funds. We address this potential bias with a reduced sample in which we discard all syndicated transactions and the government affiliated sponsor is, in turn, the only seed investor. Doing so rules out any effect of free riding on the government's role as a risk taker or on the private investor's role as a superior screener. Moreover, this analysis allows the presentation of evidence on the deal sourcing and screening abilities of government-affiliated investors.

As a result of excluding syndicated deals, we receive a reduced data set of transactions that exclusively originate from GVC funds. As shown in Table 6, the number of observations drops to 635. However, the results remain stable compared with those in the previous table.

"Regional Competitiveness" has significant positive coefficients throughout the analyses. Company age and local transactions have negative coefficients (specifications II and III). Corruption decreases the probability of deal success (specification IV), but this impact is driven by locally sourced deals (specification V and VII).

From column VIII onward, we include measures of the GVC funds' experience in the regressions. We can argue that the ability of successful deal sourcing can improve over time with learning effects and the experience that GVC funds gain. We first consider the number of years of experience since the first investment of a particular GVC, i.e., "Years of experience" (specification VIII). The second measure, "Total deal experience" (specification IX), is the number of transactions in which this GVC is involved prior to the focal investment. The third measure, "Industry experience" (specification X), addresses the experience of a GVC in the particular industry of the focal deal. The fourth measure, "Syndication experience" (specification XI), considers the experience that the GVC gains from syndications with PVC funds. From specifications VIII and IX, we find that overall experience, measured in both years and the number of previous transactions, does not affect the ability of GVC funds to successfully source deals. Only the experience gained in particular industries and from syndications with PVC funds helps improve the likelihood of success for GVC-originating deals.

[Insert Table 6: Determinants of solo GVC investments' success]

4.2 *Alternative model specification*

In addition to the cross-sectional Probit models, we also use a Cox (1972) model to analyze the joint effect of the likelihood of a successful transaction and the time until the event. This is a semi-parametric, event history-type model that has been extensively used in the VC context (Bertoni and Groh 2014; Chang 2004; Giot and Schwienbacher 2007; Guerini and Quas

2015). We use the Cox specification to model the receipt of second-round outside financing, based on the hazard rates, i.e., probabilities that an event occurs at a certain time contingent on it not having occurred before. In our setting, the elapsed time between the seed and subsequent financing rounds is the determinant of the hazard rate. If a particular investee never receives subsequent funding, we refer to the elapsed time between the seed transaction and 2014 (our cut-off year). The successful event "Additional PVC" occurs, on average, 1.84 years after the seed round. Table 7 presents the results of the Cox regressions and reveals that, in general, all our findings hold. However, some estimated coefficients have higher standard errors and thus lower significance levels than those in the Probit models. In Panel A of Table 7, we rely on the full sample, including syndicated transactions. In Panel B, we focus on transactions sourced by GVC funds only (i.e., excluding syndicated deals). Panel B also confirms our results regarding the experience that GVC funds should gain for successful deal making.

[Insert Table 7: Cox (1972) regressions]

4.3 *Determinants of GVC investments' successful exits*

So far, we have defined the receipt of additional outside funding from a private VC investor as criterion for a successful transaction originating from a GVC fund. Our argument follows the rationale that GVC fulfills its principle economic role to bridge the equity gap. However, receiving additional funding could arguably be a milestone for a start-up to reach maturity rather than a success criterion. Only the VC investor's exit is a proof that maturity has been reached. Therefore, we consider whether the target company is eventually listed or acquired as an alternative success factor. This indicator is a common measure of success for a VC transaction (Armour and Cumming 2006; Barry et al. 1990), which Cumming et al. (2014) and Guerini and Quas (2015) use in the GVC setting. These papers show that publicly affiliated investors do not affect the likelihood that an entrepreneurial venture becomes a listed company or acquired at a later stage. However, we do not differentiate between ventures that receive

GVC and those that receive PVC, as our sample exclusively includes GVC-backed start-ups. Hence, for this subset of VC-backed companies, we can analyze the conditions under which the likelihood of becoming listed or acquired increases. We generate the dummy "IPO or M&A", equal to 1 if the start-up eventually becomes listed or acquired in a trade sale or secondary transaction. In our sample, 232 ventures (18.86%) become listed or acquired in a trade sale or secondary transaction. We use this dummy variable as the success measure in the Probit models and expand the set of control variables by our proxy for the liquidity of the exit market, "Exit opportunities".

[Table 8: Determinants of the IPO and M&A of the target company of GVC investments]

Table 8 reveals the importance of regional competitiveness and syndication (consistent with Cumming et al., 2014) for successful exit. Corruption leads to the decreased probability of a successful exit, and this effect is driven by the locally sourced GVC investments. The coefficient of the venture's age changes its sign compared with the previous results. This finding is intuitive because successful ventures require additional funding (the success measure used before) early but still need time to reach maturity.

5 Summary and Conclusion

Governments' motivations for being actors in the entrepreneurial finance market and facilitating young ventures' access to finance are complex. Policymakers have an interest not only in spurring innovation, creating employment and wealth, receiving tax revenues and social contributions, supporting less developed regions and infrastructures but also in not crowding out private investment activity or taking inappropriate risks in start-up financing structures. A famous argument of supporters of government intervention in the entrepreneurial finance market is the concept of "bridging the equity gap" in terms of timing and risk taking until a

start-up company becomes “interesting” to a private investor. Private seed-financing investors might, on average, be insufficiently rewarded in terms of the unforeseeable project risk compared with the required exposure and the expected proceeds and time to exit. Indeed, if an equity gap exists for young ventures, then the government can step in and bridge this gap to preserve the competitiveness and innovation capacity of a country’s industry.

In this paper, we reveal the conditions under which public investors can pursue their mission to fill the equity gap. We analyze the impact of local development, political influence and business experience on the success of 1230 GVC investments in 16 European countries. We find that GVC-backed ventures are less likely to receive subsequent PVC funding or to be divested if the investees are located in economically lagging regions or if the venture is older. Furthermore, investments that are locally sourced perform worse, and this effect is stronger if the ventures are located in countries with higher perceived corruption. This finding suggests that collusion and regulatory capture affect GVC performance. If GVC funds invest alone, the likelihood of success is lower compared with that of a syndicated investment with a PVC.

Free-riding issues could arguably influence our results. On the one hand, public money can be used as a cushion to incentivize private investment in risky entrepreneurial ventures (Cressy 2002). Private investors may decide to provide seed financing based on the contribution of a government investor who faces greater exposure and risk. In this case, the government’s role is to decrease the risk of the PVC rather than to directly bridge an equity gap. On the other hand, free riding may exist in the opposite direction: the public investor eventually free rides on the selection capabilities of a PVC. In this setting, the GVC may play a passive role but benefit from the activity of the lead investor who supports the venture and solicits second-round financing or prepares the exit. We address this potential bias with a reduced sample in which we discard all syndicated transactions and the government-affiliated sponsor is thus the only seed investor. Doing so rules out any free-riding effect on the

government's role as a risk taker or on the private investor's role as a superior screener and supporter of the venture. We receive virtually the same result for the reduced sample, where all transactions must have been exclusively screened and performed by the government-affiliated investor.

In the reduced sample, we can further show that the screening and deal-making ability of public investors improves with their industry experience and with the experience gained in transactions syndicated with PVC funds. We conclude that GVC firms can learn from private investors via syndications.

This paper contributes to the debate on how policy initiatives, particularly GVC, effectively pursue their mission of bridging the equity gap. It also opens interesting new avenues for future research. First, we reveal the lower likelihood of GVC-backed firms in economically lagging regions to receive subsequent PVC funding. This result supports the idea that PVC funds are reluctantly invested in those regions and calls for further research on possible policies to strengthen those regions, thereby making them more attractive to VC investors. Second, we find evidence that political connectedness of GVC funds actually influences their behavior, as GVC funds which are more exposed to regulatory capture underperform their peers. A comprehensive analysis of the extent to which political distortions influence GVC funds should shed more light on this topic. Third, our paper strongly supports the rationale that GVC funds should syndicate with PVC investors. In fact, syndicated investments perform better and GVC funds which co-invested with PVC funds in their past are more likely to bring investments to success when they invest alone later. Therefore, it becomes fundamental to better understand the drivers of PVC-GVC syndication principles, including possible free-riding mechanisms that may influence the relationship between public and private actors.

Lastly, this paper leaves open another interesting research question related to possible reasons for underperformance of GVC funds compared to PVC funds. Literature suggests that a fundamental difference between managers of governmental and private VC funds is that the former have a fixed compensation, while the latter's compensation depends on investment performance. This creates a lack of incentives for GVC managers and may explain their poor performance (Armour and Cumming 2006; Leleux and Surlemont 2003). Future research using fine-grained data on VC managers' compensation and investment performance will be required to confirm this claim.

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Tables

Table 1: Distribution of GVC investors by country, first investment period and type of parent company

GVC country	N	%	**GVC first investment**	N	%
Austria	4	5.56	Before 1991	6	8.33
Belgium	6	8.33	1991-1993	3	4.17
Denmark	2	2.78	1994-1996	4	5.56
Estonia	1	1.39	1997-1999	8	11.11
Finland	1	1.39	2000-2002	18	25.00
France	5	6.94	2003-2005	19	26.39
Germany	5	6.94	2006-2008	8	11.11
Ireland	3	4.17	2009-2011	6	8.33
Italy	3	4.17	*Total*	*72*	*100.00*
Netherlands	2	2.78			
Norway	1	1.39			
Poland	1	1.39			
Portugal	1	1.39			
Spain	6	8.33	**GVC parent company**	N	%
Sweden	7	9.72	University	19	26.39
United Kingdom	24	33.33	Government	53	73.61
Total	*72*	*100.00*	*Total*	*72*	*100*

Table 2: Distribution of GVC investments by investment period, age at the time of the investment, country and industry of the target company

Investment year	N	%	**Age at the time of the investment**	N	%
1995	4	0.33	0 years	293	23.82
1996-1997	14	1.14	1 year	233	18.94
1998-1999	32	2.60	2-3 years	280	22.76
2000-2001	92	7.48	4-5 years	136	11.06
2002-2003	150	12.20	6-7 years	62	5.04
2004-2005	237	19.27	8-10 years	60	4.88
2006-2007	195	15.85	11-15 years	54	4.39
2008-2009	226	18.37	16-20 years	28	2.28
2010-2011	280	22.76	more than 20 years	84	6.83
Total	*1,230*	*100*	*Total*	*1,230*	*100*

Company industry	N	%	**Company country**	N	%
Construction and Mining	63	5.12	Austria	22	1.79
Chemical products	54	4.39	Belgium	74	6.02
Electric and Electronica	165	13.41	Denmark	94	7.64
Instruments	94	7.64	Estonia	11	0.89
Machineries	51	4.15	Finland	76	6.18
Pharmaceuticals	63	5.12	France	62	5.04
Other manufacturing	111	9.02	Germany	230	18.70
Computer related services	235	19.11	Ireland	70	5.69
Engineering and R&D services	135	10.98	Italy	36	2.93
Trade	48	3.90	Netherlands	62	5.04
Public Utilities	49	3.98	Poland	13	1.06
Other business services	92	7.48	Portugal	107	8.70
Other Services	70	5.69	Spain	66	5.37
			Sweden	127	10.33
			United Kingdom	180	14.63
Total	*1,230*	*100.00*	*Total*	*1,230*	*100.00*

Presence of a PVC	N	%
Yes (Syndicated investment)	595	48.37
No (GVC solo investment)	635	51.63
Total	*1,230*	*100.00*

Table 3: Summary statistics

Variable	N	Mean	Median	Std. Dev.	Min	Max
Additional PVC	1230	0.317	0.000	0.466	0.000	1.000
Regional competitiveness	1230	0.462	0.522	0.519	-0.858	1.192
Local deal	1230	0.456	0.000	0.498	0.000	1.000
Corruption	1230	-7.878	-7.900	1.246	-9.700	-3.400
No limit on contribution to candidates	1230	0.672	1.000	0.470	0.000	1.000
Years of experience	1230	7.483	6.000	6.723	0.000	33.000
Total deal experience	1230	47.901	22.000	61.194	0.000	264.000
Industry experience	1230	6.202	2.000	10.911	0.000	67.000
Syndication experience	1230	22.794	8.000	32.724	0.000	141.000
Log of company age	1230	1.242	1.099	1.043	0.000	4.779
Syndicates	1230	0.484	0.000	0.500	0.000	1.000
Exit opportunities	1230	26.213	15.000	35.077	0.000	242.000

Table 4: Correlation matrix

The correlation matrix is based on 1230 observations.

	Variable	1	2	3	4	5	6	7	8	9	10	11
1	Additional PVC	1.00										
2	Regional competitiveness	0.18	1.00									
3	Local deal	-0.06	0.11	1.00								
4	Corruption	-0.16	-0.61	-0.05	1.00							
5	No limit on contribution to candidates	0.08	0.28	-0.13	-0.28	1.00						
6	Years of experience	-0.07	0.01	-0.01	-0.17	-0.14	1.00					
7	Total deal experience	-0.03	0.00	-0.10	-0.06	-0.10	0.31	1.00				
8	Industry experience	0.03	-0.01	-0.07	-0.03	-0.06	0.15	0.65	1.00			
9	Syndication experience	0.07	0.18	-0.11	-0.21	0.09	0.14	0.81	0.64	1.00		
10	Log of company age	-0.15	-0.11	0.05	0.16	-0.11	0.11	-0.09	-0.06	-0.12	1.00	
11	Syndicates	0.28	0.14	-0.04	-0.13	0.03	-0.01	0.06	0.05	0.22	-0.05	1.00
12	Exit opportunities	0.07	0.05	-0.10	0.03	0.26	-0.25	-0.26	-0.16	-0.14	-0.11	0.08

Table 5: Determinants of GVC investments' success in bridging the equity gap

The table reports the coefficients and robust standard errors (in brackets) of Probit regressions of our dependent variable "Additional PVC" on different sets of independent variables and controls. Significance levels are denoted as * p<0.10; ** p<0.05; and *** p<0.01.

	I	II	III	IV	V	VI	VII	VIII
Regional competitiveness	0.499 ***	0.371 ***	0.343 ***	0.375 ***			0.381 ***	0.364 ***
	(0.070)	(0.080)	(0.082)	(0.085)			(0.088)	(0.089)
Log of company age		-0.170 ***	-0.177 ***	-0.168 ***	-0.171 ***	-0.174 ***	-0.168 ***	-0.169 ***
		(0.040)	(0.042)	(0.042)	(0.043)	(0.043)	(0.042)	(0.042)
Syndicates			0.717 ***	0.718 ***	0.716 ***	0.724 ***	0.717 ***	0.707 ***
			(0.087)	(0.087)	(0.087)	(0.088)	(0.088)	(0.088)
Local deal				-0.172 **	-0.137 *	-1.573 ***	-0.176 **	0.062
				(0.084)	(0.082)	(0.556)	(0.084)	(0.154)
Corruption					-0.110 ***	-0.028		
					(0.035)	(0.046)		
Local deal * Corruption						-0.178 ***		
						(0.068)		
No limit on contribution to candidates							-0.019	0.167
							(0.094)	(0.137)
Local deal * No limit on contributions to candidates								-0.347 *
								(0.184)
Industry fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N of observations	1230	1230	1230	1230	1230	1230	1230	1230
Pseudo R^2	0.028	0.107	0.153	0.156	0.150	0.154	0.156	0.158
Log pseudolikelihood	-746.91	-686.26	-650.69	-648.59	-653.06	-650.17	-648.57	-646.77
Chi^2	50.83 ***	130.41 ***	184.40 ***	187.18 ***	178.94 ***	176.21 ***	189.03 ***	197.54 ***

Table 6: Determinants of solo GVC investments' success in bridging the equity gap

The table reports the coefficients and robust standard errors (in brackets) of Probit regressions of our dependent variable "Additional PVC" on different sets of independent variables and controls. The sample exclusively includes transactions that are sourced by GVC funds (without syndicated investments from PVC funds). Significance levels are denoted as * p<0.10; ** p<0.05; and *** p<0.01.

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
Regional competitiveness	0.470 ***	0.327 ***	0.391 ***			0.429 ***	0.379 ***	0.384 ***	0.405 ***	0.421 ***	0.354 ***
	(0.096)	(0.111)	(0.119)			(0.122)	(0.122)	(0.119)	(0.118)	(0.119)	(0.122)
Log of company age		-0.143 ***	-0.134 **	-0.123 **	-0.124 **	-0.135 **	-0.137 **	-0.133 **	-0.130 **	-0.118 **	-0.116 **
		(0.055)	(0.055)	(0.056)	(0.056)	(0.055)	(0.055)	(0.055)	(0.055)	(0.055)	(0.056)
Local deal			-0.270 **	-0.227 *	-1.391 *	-0.280 **	0.173	-0.271 **	-0.267 **	-0.242 *	-0.233 *
			(0.129)	(0.124)	(0.720)	(0.129)	(0.238)	(0.130)	(0.129)	(0.131)	(0.132)
Corruption				-0.124 ***	-0.063						
				(0.043)	(0.057)						
Local deal * Corruption					-0.145 *						
					(0.087)						
No limit on contributions to candidates						-0.148	0.191				
						(0.139)	(0.206)				
Local deal * No limit on contributions to candidates							-0.667 **				
							(0.281)				
Years of experience								-0.011			
								(0.009)			
Total deal experience									0.001		
									(0.001)		
Industry experience										0.019 ***	
										(0.006)	
Syndication experience											0.006 **
											(0.002)
Industry fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N of observations	635	635	635	635	635	635	635	635	635	635	635
Pseudo R^2	0.030	0.128	0.135	0.131	0.135	0.137	0.146	0.137	0.135	0.149	0.143
Log pseudolikelihood	-301.285	-270.915	-268.783	-270.032	-268.904	-268.274	-265.376	-268.200	-268.656	-264.359	-266.357
Chi^2	24.002 ***	59.896 ***	63.676 ***	62.228 ***	59.345 ***	65.099 ***	80.585 ***	63.935 ***	64.756 ***	73.717 ***	68.679 ***

Table 7: Cox (1972) regressions

The table reports the estimated coefficients and the robust standard errors (in brackets) of Cox (1972) event history type models. The dependent variable is always "Additional PVC". The time until the event is defined by the number of days since the seed financing round. We use Efron's (1977) correction for ties. Significance levels are denoted as * p<0.10; ** p<0.05; and *** p<0.01.

Panel A	I	II	III	IV	V
Syndicated deals	Included	Included	Included	Included	Included
Regional competitiveness	0.498 ***			0.507 ***	0.490 ***
	(0.115)			(0.119)	(0.120)
Log of company age	-0.232 ***	-0.246 ***	-0.248 ***	-0.233 ***	-0.230 ***
	(0.056)	(0.057)	(0.057)	(0.056)	(0.056)
Syndicates	0.907 ***	0.913 ***	0.917 ***	0.906 ***	0.894 ***
	(0.120)	(0.120)	(0.120)	(0.120)	(0.121)
Local deal	-0.189 *	-0.148	-1.946 **	-0.194 *	0.007
	(0.106)	(0.104)	(0.783)	(0.107)	(0.209)
Corruption		-0.176 ***	-0.074		
		(0.047)	(0.064)		
Local deal * Corruption			-0.219 **		
			(0.095)		
No limit on contributions to candidates				-0.025	0.129
				(0.123)	(0.188)
Local deal * No limit on contributions to candidates					-0.282
					(0.247)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes
N of observations	1230	1230	1230	1230	1230
N of successes	390	390	390	390	390
Pseudo R^2	0.047	0.046	0.047	0.047	0.047
Log pseudolikelihood	-2555.56	-2558.32	-2556.01	-2555.54	-2554.85
Chi^2	207.095 ***	191.872 ***	192.331 ***	207.761 ***	212.812 ***

Table 7: Cox (1972) regressions (continued)

Panel B	VI	VII	VIII	IX	X	XI	XII
Syndicated deals	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded
Regional competitiveness	0.609 ***			0.694 ***	0.601 ***	0.622 ***	0.553 ***
	(0.185)			(0.195)	(0.198)	(0.190)	(0.193)
Log of company age	-0.240 ***	-0.232 ***	-0.228 **	-0.245 ***	-0.236 ***	-0.218 **	-0.221 **
	(0.088)	(0.090)	(0.090)	(0.088)	(0.086)	(0.089)	(0.089)
Local deal	-0.357 *	-0.272	-2.674 **	-0.381 *	0.219	-0.317	-0.315
	(0.196)	(0.188)	(1.268)	(0.196)	(0.372)	(0.200)	(0.201)
Corruption		-0.206 ***	-0.094				
		(0.070)	(0.086)				
Local deal * Corruption			-0.289 *				
			(0.149)				
No limit on contributions to candidates				-0.264	0.171		
				(0.209)	(0.319)		
Local deal * No limit on contributions to candidates					-0.870 **		
					(0.443)		
Industry experience						0.027 ***	
						(0.008)	
Syndication experience							0.008 **
							(0.004)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N of observations	635	635	635	635	635	635	635
N of successes	122	122	122	122	122	122	122
Pseudo R^2	0.058	0.057	0.059	0.059	0.062	0.063	0.061
Log pseudolikelihood	-724.18	-725.00	-723.27	-723.45	-721.24	-719.88	-721.66
Chi^2	66.572 ***	66.785 ***	62.633 ***	66.433 ***	79.109 ***	84.646 ***	73.034 ***

Table 8: Determinants of the IPO and M&A of the target company of GVC investments

The table reports the coefficients and robust standard errors (in brackets) of Probit regressions of the dependent variable "IPO or M&A" on different sets of independent variables and controls. Significance levels are denoted as * p<0.10; ** p<0.05; and *** p<0.01.

	I	II	III	IV	V	VI
Syndicated deals	Included	Included	Included	Excluded	Excluded	Excluded
Regional competitiveness	0.166 *			0.109		
	(0.088)			(0.118)		
Log of company	0.127 ***	0.133 ***	0.130 ***	0.133 ***	0.146 ***	0.142 ***
Age	(0.042)	(0.042)	(0.042)	(0.051)	(0.052)	(0.052)
Local deal	-0.073	-0.064	-1.104 *	-0.034	-0.036	-1.251 *
	(0.088)	(0.087)	(0.579)	(0.126)	(0.123)	(0.699)
Exit opportunities	0.001	0.002	0.002	0.002	0.002	0.002
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Syndicates	0.328 ***	0.318 ***	0.325 ***			
	(0.095)	(0.095)	(0.096)			
Corruption		-0.083 **	-0.024		-0.079	-0.011
		(0.039)	(0.054)		(0.050)	(0.067)
Local deal * Corruption			-0.130 *			-0.155 *
			(0.072)			(0.088)
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
N of observations	1230	1230	1230	635	635	635
Pseudo R^2	0.059	0.060	0.063	0.055	0.059	0.065
Log pseudolikelihood	-560.630	-559.77	-558.04	-261.201	-260.119	-258.51
Chi^2	67.890 ***	70.053 ***	76.271 ***	31.424 **	32.529 **	38.534 ***

Appendix

Table A1: List of GVC investors included in the sample

GVC Name		GVC Name	
Austria Wirtschaftsservice GmbH	AU	NV Industriebank Liof	NL
BABEG Kaerntner Betriebsansiedlungs und Beteiligungsg mbH	AU	Participatiemaatschappij Oost Nederland NV	NL
Steirische Wirtschaftsfoerderungs GmbH	AU	Investinor AS	NO
Tecnet Equity NOE Technologiebeteiligungs Invest GmbH	AU	Fundusz Gornoslaski SA	PL
Brussels I3 Fund NV	BE	Portugal Capital Ventures SGPS SA	PT
LRM NV	BE	Almi Innovationsbron AB	SE
NIVELINVEST SA	BE	Fouriertransform AB	SE
Sev Asset Management	BE	GU Holding AB	SE
Sopartec SA	BE	Industrifonden Stift	SE
Srib	BE	KTH Chalmers Capital KB	SE
Bm H Beteiligungs Managementgesellschaft Hessen mbH	DE	Lund University	SE
High Tech Grunderfonds Management GmbH	DE	Swedfund International AB	SE
Life Science Fonds Esslingen Verwaltungs GmbH	DE	Birmingham Venture Capital Ltd	UK
MBG Baden-Wuerttemberg GmbH	DE	Business Growth Fund PLC	UK
Mittelstaendische Beteiligungsgesellschaft Berlin	DE	Cardiff University	UK
DTU Symbion Innovation A/S	DK	CDC Group PLC	UK
VAEKSTFONDEN	DK	EBRD	UK
Estonian Development Fund	EE	Highland Venture Capital	UK
COFIDES SA	ES	Imperial Innovations Group PLC	UK
Empresa Nacional de Innovacion SA	ES	Invest Northern Ireland	UK
Extremadura Avante SL	ES	IP Group PLC	UK
Finaves I SA	ES	Isis Innovation Ltd	UK
Inversion y Gestion de Capital de Riesgo de Andalucia SAU	ES	Javelin Ventures Ltd	UK
Unirisco Galicia SCR SA	ES	Manchester Technology Fund Ltd	UK
Suomen Teollisuussijoitus Oy	FI	NESTA	UK
BPIfrance	FR	Partnerships Uk PLC	UK
Cea Investissement SA	FR	Plurion Ltd	UK
EPICEA(SIPAREX)	FR	Qinetiq Ventures Ltd	UK
ISIS Developpement	FR	Qubis Ltd	UK
SACDE	FR	Scottish Enterprise Board	UK
Enterprise Ireland	IE	Scottish Enterprise Glasgow	UK
Millennium Capital Ltd	IE	Sussex Place Ventures Ltd	UK
Western Development Commission	IE	University Of Cambridge Challenge Fund	UK
Friulia SpA	IT	Uutech Ltd	UK
Finlombarda SGR SpA	IT	Viking Fund	UK
Fondo Italiano d Investimento SGR SpA	IT	Welsh Development Agency	UK

Table A2: Determinants of a GVC success in bridging the equity gap – residual-centering procedure

The residual-centering procedure (Lance, 1988) includes two stages. First, the interaction term is regressed on its component parts. Second, the predicted residual is used instead of the interaction term in the regression equation. This approach reduces multicollinearity between the interaction term and main effects. The procedure is only available for OLS models; therefore, we use this model. The table reports the coefficients and the robust standard errors (in brackets) of the second step OLS regressions. As before, the dependent variable is "Additional PVC". Significance levels are denoted as * p<0.10; ** p<0.05; and *** p<0.01.

	I	II	III
Log of company age	-0.045 ***	-0.047 ***	-0.047 ***
	(0.011)	(0.011)	(0.011)
Syndicates	0.231 ***	0.232 ***	0.232 ***
	(0.027)	(0.027)	(0.027)
Local deal	-0.043 *	-0.370 ***	-0.047 *
	(0.025)	(0.126)	(0.025)
Corruption	-0.026 ***	-0.006	-0.031 ***
	(0.009)	(0.012)	(0.009)
Local deal* Corruption		-0.042 **	
		(0.016)	
Residuals of Local deal * Corruption			-0.042 **
			(0.016)
Industry fixed effects	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes
Constant	Yes	Yes	Yes
N of observations	1230	1230	1230
R^2	0.166	0.169	0.169
Log pseudolikelihood	-692.759	-690.524	-690.524
F	17.09 ***	16.30 ***	16.30 ***
Average VIF	10.45	20.98	10.20

Table A3: Determinants of a GVC success in bridging the equity gap – companies younger than 5 years old

The table reports the coefficients and robust standard errors (in brackets) of Probit regressions of our dependent variable "Additional PVC" on different sets of independent variables and controls. Only companies that are 5 years old or younger are included in the analysis. Significance levels are denoted as * p<0.10; ** p<0.05; and *** p<0.01.

	I	II	III	IV	V	VI
Regional competitiveness	0.483 ***	0.397 ***	0.370 ***	0.398 ***		
	(0.084)	(0.095)	(0.098)	(0.100)		
Log of company age		-0.051	-0.124	-0.109	-0.141 *	-0.141 *
		(0.073)	(0.077)	(0.077)	(0.078)	(0.078)
Syndicates			0.714 ***	0.712 ***	0.726 ***	0.738 ***
			(0.098)	(0.098)	(0.098)	(0.099)
Local deal				-0.160 *	-0.128	-1.843 ***
				(0.094)	(0.093)	(0.692)
Corruption					-0.121 ***	-0.020
					(0.042)	(0.056)
Local deal * corruption						-0.211 **
						(0.084)
Industry fixed effects	No	Yes	Yes	Yes	Yes	Yes
Time fixed effects	No	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes	Yes
N of observations	942	942	942	942	942	942
Pseudo R^2	0.023	0.102	0.147	0.150	0.144	0.148
Log pseudolikelihood	-601.047	-552.565	-524.702	-523.266	-527.082	-524.469
Chi^2	33.184 ***	101.495 ***	153.094 ***	154.423 ***	150.915 ***	148.207 ***