The value added by government venture capital funds compared with independent venture capital funds

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A B S T R A C T
Government venture capital (GVC) funds have been a common policy initiative in European countries to overcome funding gaps in the promotion of early-stage ventures. In this work, we focus on the performance of such government funds. We compare the importance for the firm's development of post-investment, value-added activities by GVC firms and independent venture capital (IVC) firms.

We use a unique data set based on the results of a survey addressed to young high-tech VC-backed firms from seven European countries. The survey gauged the importance of the contribution by the first lead investor in a variety of activity areas, as assessed by the investee companies. Attention was paid to potential adverse effects of the post-investment engagement of investors.

Using a composite indicator of the value added, we find no statistically significant difference between the two types of investors. However, the profiles of value added differ across investor types, and, in particular, the contributions of IVC funds prove to be significantly higher than those of GVC funds in a number of areas, including the development of the business idea, professionalisation and exit orientation.

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1. Introduction

The literature on venture capital (VC) has long acknowledged that, in addition to financial resources, VC investors provide portfolio companies with a complex bundle of value-adding activities (Denis, 2004; Gorman and Sahlman, 1989; Kaplan and Strömberg, 2004; Sapienza, 1992; Sapienza et al., 1996). First, professional investors directly add value to portfolio firms by "coaching"; that is, providing them with financial, administrative, marketing, strategy and management support, which is especially lacking in young, innovative firms operating in high-tech industries. Second, VC fosters the managerial "professionalisation" of young, innovative firms (Bottazzi et al., 2008; Hellmann and Puri, 2002), facilitates access to specialised professional services and establishes alliances with third parties (Colombo et al., 2006; Hsu, 2006; Lindsey, 2008), thus extending their social capital. Moreover, VC can signal the quality of the portfolio firms to third parties such as customers, alliance partners, skilled workers and other financial intermediaries (Stuart et al., 1999).

VC investors, however, differ dramatically in terms of their ability to perform value-adding activities for their portfolio companies. First, venture capitalists differ in the extent to which they possess human capital, which has implications for their ability to provide high-quality, value-adding services to portfolio firms (Knockaert et al., 2006). Second, the investment motives of venture capitalists differ (Hellmann, 2002), and this will have implications for the amount of time and effort they devote to their portfolio firms. Third, venture capitalists have different investment patterns in terms of the types of firms in which they invest (Siegel et al., 1988), and this will lead to differences in post-investment behaviour; e.g., VCs have been noted to devote more time to early-stage than later-stage portfolio firms (Sapienza et al., 1994) and to add more value to portfolio firms when uncertainty is high (portfolio firms are in the earliest stages and are pursuing innovation strategies compared with those in later stages that are pursuing less innovative strategies (Sapienza et al., 1996). Fourth, the investment horizon varies substantially among different venture capitalists, and this translates into different incentives in providing coaching (e.g., having longer vs. shorter term impact on a firm's performance) (Gompers, 1996).

It is particularly important to distinguish VC investors based on their ownership and governance structures (Da Rin et al., 2011). The most typical form of VC is an independent VC (IVC) fund (Sahlman, 1990). An IVC fund is a limited partnership in which a management company (the general partner) raises capital from limited partners (often institutional investors). The capital is then used to locate selected investment targets, provide
financial injections and perform post-investment value-adding activities. IVC funds normally have a limited lifespan and have to exit the investment before the fund expires. The management company (the IVC investor) typically runs several funds with different vintages at the same time. Although this is the most common type of VC investor, VC forms other than IVC (collectively known as captive VC) exist and are especially important in Europe (Bottazzi et al., 2008).

In this paper, we will compare the value-adding activities performed by IVC firms with those of a particular form of captive investor: governmental VC (GVC). From a policy perspective, GVC is the most interesting and under-researched type of VC investor. The establishment of GVC funds has been common in many European countries as a part of an effort by governments to fill funding gaps in early stage investments. GVC investors may have varying objectives ranging, for example, from the seeding of a young industry or supporting industry by providing a credible signal to private investors or supporting regional development and job creation by setting up regional funds (Leleux and Surlemont, 2003). The way in which these overall objectives are translated into investment decisions that affect post-investment behaviour has not been studied thoroughly. In this study, we aim to address this gap in the literature.

Comparing GVC with IVC is particularly useful. First, IVC is the most common type of VC in Europe (Bertoni et al., 2012; estimate that 55.2% of all VC investments in young high-tech companies in Europe between 1994 and 2004 were made by IVC funds). Second, because IVC is also the type of VC that is most frequently studied in the literature (Hellmann and Puri, 2002; Higashide and Birley, 2002; Hsu, 2006; Kaplan and Strömberg, 2004; Knockaert et al., 2006; Sapienza et al., 1994, 1996), and thus, most conclusions drawn on the value added and behaviour of VC are based on IVC. To gauge the extent and composition of value-adding activities, we submitted a survey to young, innovative companies in Europe. A section of the survey questions pertained to the value added by VC investors. The survey data provide us a fine-grained assessment of the importance of the contribution of VC as perceived by its portfolio companies. This allowed us to compare both the overall level and composition of the value added by IVC and GVC firms. Moreover, we were able to study the potential interaction of the value added with the characteristics of the investee company. We compared each dimension of value added between IVC and GVC firms by comparing the level of value added as perceived by respondents from IVC- and GVC-backed companies. We also estimate multivariate regression models in which we control for firm characteristics. Finally, we pay attention to the potential adverse effects that the engagement of VC may cause to the firm company by the venture capitalist. The literature shows that investment managers of captive funds were less involved in value-adding activities than other investors. Schöfer and Schilder (2006) noted that GVC firms had limited potential for hands-on activities because they had more portfolio firms per manager, fewer contacts and were less engaged in such activities. Furthermore, Tyková and Walz (2007) found that firms backed by foreign and reputable IVC investors performed better than firms with other types of VC, especially GVC investors. There is a growing literature comparing IVC to other forms of captive VC. Chemmanur et al. (2010) studied corporate VC (CVC) and compared its value creation to that of IVC. Their findings indicated that CVC has an important signalling effect, both to IVC firms and to various financial market players, allowing CVC-backed firms to access the equity market at an earlier stage in their lifecycles. Moreover, certification by CVC investors also translates to higher IPO market valuations compared with firms backed by IVC firms alone. Chemmanur et al. (2010) found that GVC investors added value by investing significant resources in younger and riskier firms involving pioneering technologies: because many such firms would not have received external financing from IVC investors, these firms would not have been able to grow and mature without CVC funding. Controlling for selection, however, Bertoni et al. (forthcoming-a) did not find any superior treatment effect of CVC investors on a firm’s growth in sales and employees. Instead, they found that IVC investors have a more immediate impact on a firm’s growth than CVC investors and interpreted this result as a consequence of the different levels of importance that short-term results have for these two types of investors.

Maula et al. (2005) provided evidence that CVC and IVC investors added value to their portfolio companies in a complementary way. IVC firms are more engaged in enterprise ‘nurturing’—helping to raise additional finance, recruiting key employees, and professionalising the organisation—whereas CVC firms excelled in building commercial credibility and capacity and in providing technological support. Tyková (2006) found that CVC and IVC investors played a more pronounced role in corporate governance than other types of captive VC, including GVC firms. The findings of these studies are not fully consistent, and there is a tendency to use different classifications or combinations of investors and different categories of value-adding activities. However, the findings seem to indicate that GVC investors tend to be less actively engaged in their portfolio firms than IVC investors. This leads to our first hypothesis concerning GVC and IVC:

**Hypothesis 1.** The value added by GVC funds to portfolio companies is smaller than that of IVC funds.

On the basis of previous studies, we may also conclude that investor types have differentiated roles in providing non-financial added value to their portfolio firms. Thus, our second hypothesis suggests the following:

**Hypothesis 2.** The areas of value-adding activities offered by GVC funds differ from those provided by IVC funds.

Some of the different impacts of investor types may be related to their different investment patterns. There is evidence that the degree of involvement by the investor in the portfolio firm varies across portfolio firm characteristics (Fredriksen and Klofsten, 2001; Sapienza and Gupta, 1994; Sapienza et al., 1996): venture capitalists added the most value to companies that were in early stages and highly innovative, and the value added was strongly related to the amount of time devoted to the portfolio company by the venture capitalist. The literature shows that differences exist in the patterns of investment among different types of VC firms (Bertoni et al., 2012), and this could
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