Collaboration between Venture Capital Firms and MNEs: Optimal Syndication for Innovation and the Shaping of Regional Innovation Networks

Andrew Watkins
London School of Economics and Political Science
Houghton Street
London, WC2A 2AE
United Kingdom

Abstract-This exploratory paper aims to capture and understand the how, why, and under what circumstances do independent venture capital firms engage in collaborative partnerships with multi-national enterprises, and to present a preliminary understanding as to the role that this particular collaborative activity plays in both the venture capital investment process, and the shaping and characterizing of regionally based venture capital networks.

INTRODUCTION

The intersection of innovation and geography has remained a prominent focus of research for much of the past decade. In the literature, two related trends have emerged which are challenging initial assumptions regarding the mechanisms and structures of both the innovation process and regional innovation systems. First, research and development is increasingly viewed as an open innovation system where firms pursue innovation, both internally and through formal and informal inter-organizational networks (i.e. innovation networks); therefore establishing connections to external knowledge flows and partnerships [1]. Second, it is increasingly understood that the dynamism and productivity of regional innovation systems are based, in part, on the extent to which these regionally based innovation networks are able to both economize and leverage regional capacities while remaining open to external flows of knowledge and finance [2]. It can be said that open innovation and related networks are about connections. So, who is connecting and providing this open bridge between regional and global innovation capacities?

It has been proposed that venture capital investment structures that combine the financial and management expertise of venture capital firms and the technology and commercial expertise of large corporations might offer optimal investment syndication for innovation [3]. Research, however, on the collaborative practices between venture capital firms and large corporations has only recently emerged. The primary aim of this exploratory paper is to capture and understand 1) how, why, and under what circumstances do independent venture capital firms (VC) engage in collaborative partnerships with multi-national enterprises (MNEs), and 2) to present a preliminary understanding as to the role that this particular collaborative activity plays in both the risk capital investment process, and the shaping and characterizing of regionally based venture capital networks.

Employing a primarily qualitative research approach involving in-depth interviews with upwards to thirty UK based VC firms and ten corporate venturing divisions (CVC) of leading MNEs, this research builds the case that collaboration between VC firms and MNEs is a growing trend that contributes significantly to the innovation process, as well as functioning as one of several important global links by which regional innovation systems access external sources of knowledge and finance; hence bolstering regional innovation capacities.

An overarching aim of this research will be 3) to explore the ways in which collaborative activity between venture capital firms and MNEs can illuminate current VC behavior within the context of a severe economic downturn, a related decrease in early stage VC investment, and increasing skepticism regarding VC aims and effectiveness.

INNOVATION AND LOCATION

Building upon the works of Schumpeter, Krugman, Porter and others, recent research regarding the location dynamics of innovation continues to expound two main conclusions arrived at in earlier studies: 1) innovation is central to the growth and dynamism of modern economic systems, and 2) that high levels of innovative activity tend to agglomerate within the boundaries of large metropolitan regions [4]. Additional studies identify the overarching drivers of innovation as being the sustained spatial concentration and interplay of knowledge and capital, and the associated presence of highly skilled labor [5] [6]. More recent studies suggest strongly that formal and informal networks are the mechanism through which the transfer and diffusion of knowledge and capital is facilitated [7].
Open innovation and alliance building

Firms agglomerate not only to be in close proximity to competitors, but also to facilitate and enhance both the externalization of R&D and production, as well as knowledge transfer through the creation of external relationships and alliance building. In establishing linkages to external partners and knowledge flows, it is thought that transaction and investment costs decrease while better facilitating the capturing of synergies associated with positive feedback loops and local knowledge spill-over affects [8]. Studies suggest that through agglomeration and open innovation practices, firms are able to better utilize endogenous regional capacities (e.g. global transport links, skilled labor markets, financial and legal services, and public research institutes) and that an important function of these external partnerships is to establish robust links with key regional actors (e.g. universities and government agencies) [9] [10].

The importance of networks

The primary mechanisms by which regional actors develop and maintain these external partnerships, and economize regional capacities are through the formation of business and social networks [11]. These networks can be formal and very sector specific, as well as less formal, self organizing social networks. In actuality, the line between the formal and informal network has become increasingly blurred, feeding into one another; greatly facilitating the exchange of information and knowledge flows, it is thought that through agglomeration and open innovation practices, firms are able to better utilize endogenous regional capacities (e.g. global transport links, skilled labor markets, financial and legal services, and public research institutes) and that an important function of these external partnerships is to establish robust links with key regional actors (e.g. universities and government agencies) [9] [10].

Extra-regional linkages

Finally, more recent studies point to the importance and interplay between regional networks and associated knowledge flows and network linkages to knowledge and finance sources that are extra-regional. As advanced by Maskell, Bathelt and Malmberg (2006, 998): “Firms therefore develop global pipelines not only to exchange products or services, but also in order to benefit from outside knowledge inputs and growth impulse. Such findings imply that, in a globalising knowledge-based economy, each cluster’s economic prospects depend not only on its internal interactions, but also on its ability to identify and access external knowledge sources far away” [see ref. 2]. It is widely assumed that in the absence of effective global bridging, technological lock-in can develop, resulting in regional economic decline [14].

Rychen and Zimmermann (2007) suggest that certain actors, due to their prominent position in a particular regional network, may act as key entry nodes for which extra-regional actors may gain access to more formal regional innovation networks [15].

Therefore, what regional actors or regional network of actors both leverage regional innovation capacities and facilitate the inflow of knowledge and capital from external sources?

THE IMPORTANCE OF VENTURE CAPITAL

Research on the innovation process and innovative regions point to the need for available risk capital for the funding of entrepreneurial firms, and the presence of a dynamic venture capital market to provide a substantial portion of this funding in the absence of bank related debt finance [16] [17]. Studies by Gompers and Lerner suggest, based on patent data in the US, that VC backed companies are significantly innovative when compared to traditional R&D activity [18].

The regional significance of VC is well documented with studies demonstrating that close spatial proximity allows VC firms to perform necessary investment oversight and conduct frequent interaction with portfolio firms, syndicate partners and multiple knowledge flows. In the UK, for example, nearly 60 percent of all VC firms are headquartered in London and the greater South East, as well as the majority of all early stage and expansion stage venture capital investment [19]. So, why venture capital?

Managing asymmetric information

The innovation process typically involves the often difficult capture and transmission of ‘tacit’ knowledge – knowledge which Zook (2004, 621) explains “is acquired through observation or interaction in which one largely learns by doing”. Furthermore, “tacit knowledge is said to be sticky and is best transferred through direct experience” [20]. The tacit stickiness of innovation is further complicated by inherent asymmetric knowledge flows that are often situational and prone to change; compounding uncertain development trajectories and overall risk. Unlike commercial banks, it’s these inherent asymmetries and tacit knowledge which VC firms are able to effectively navigate, exploit, and manage for the financing of entrepreneurial firms [see ref. 20].

Multiple funding rounds

Successful VC investments are typically five to ten years from initial investment to exit. This long investment time-frame necessitates that VC investments be structured using multiple funding ‘rounds’ or ‘stages’. Gompers (2004, 171) suggests, these “staged capital infusions are the most potent control mechanism a venture capitalist can employ”. Financing by stage allows VC firms to effectively evaluate investment progress, and to better handle asymmetric information by helping to keep entrepreneurs aligned with investor expectations. Later funding stages can be adjusted; both in terms of funding amount, and applied oversight and expertise, with underperforming investments either being sold off or dropped altogether. This staged investment structure also allows venture capital firms to apply their expertise more effectively – building businesses stage by stage; hence increasing the probability for entrepreneurial success [21].
Syndication

Facilitating this staged investment structure, almost all VC investments are syndicated. For syndicating investments, venture capital firms typically syndicate with other venture capital firms. These syndications co-invest funds, share information and expertise; often coordinating investment selection, oversight and decision making on investment direction and exit. A typical VC investment syndication will involve a lead VC firm – providing a substantial portion of the funding and initial investment oversight -- and up to five or more VC firm partners. The lead VC firm will almost surely remain the lead investor throughout the investment cycle, while other VC firms may join and leave the syndication with the onset of subsequent funding rounds. This allows the syndication to utilize different investment capacities [22].

It could be argued that it is through syndication that VC firms are able to provide significant value added to their portfolio firms in the forms of complementary expertise, market knowledge, and access to valuable networks of potential partners and customers. Studies suggest that certain venture capital firms hold central positions within 'rigid' syndicate networks. Keil, Maula, and Wilson (2007) argue that for entering into syndication with a centrally positioned VC firm and thus gaining access to a richer network of possibilities, peripheral VC firms, as well other investment actors external to the network, will likely need to bring certain unique resources that add value to the syndication [23]. Networks are about interactions. So, who are VC firms linking to for external knowledge and finance?

CORPORATE VC AND EXTERNAL VENTURING

Large companies have engaged in corporate venture capital (CVC) activities since at least the 1960s. Coinciding with the cyclic flows of venture capital activity, the past thirty years have seen major corporations such as Exxon, GE, DuPont, Johnson & Johnson, and more recently Microsoft, Intel, and Apple all engaging in robust CVC programs (Dushnitsky 2006) [24]. The term ‘corporate venture capital’ is used here rather broadly and will cover a number of activities that do not typical fall under the traditional CVC definition. As CVC has evolved, previously separate corporate venturing activities have become blurred under a wider CVC umbrella.

These corporate venturing activities include direct investment in and acquisition of entrepreneurial firms, activities involving corporate spin-outs, and, as discussed here in more detail, activities involving syndication with independent venture capital firms [see ref. 24]. What is common among most CVC activities is that 1) they aim to develop and acquire new product innovations and new products through investment platforms external to the firm, and 2) have typically involved the increasing engagement of and partnership with independent venture capital firms.

Corporate VC syndication

Research suggests that nearly 90 percent of all CVC programs engage in investment syndication with investment partners, including independent venture capital firms [25]. Based on preliminary interviews conducted for this research, this type of syndication might take several forms, from very limited corporate involvement, to the CVC being heavily involved in most facets of the investment process. In a typical VC-CVC syndication, the VC firm will likely be the lead investor (i.e. coordinating funding, and determining investment structure and oversight) while the CVC provides funding, as well as participating in the monitoring efforts (e.g. sitting on the board) and potentially providing science and technical assistance to the portfolio firm. Besides return on investment, the CVC might forge particular license agreements, as well as position itself as a serious bidder for either merging with or acquiring the portfolio firm(s). A corporate spin-out might involve a similar syndication arrangement.

OPTIMAL SYNDICATION?

Research by Chesbrough (2002) and others, argue that corporations pursue corporate venturing to gain, in part, certain strategic benefits. These might include: 1) gaining particular insight on emerging technology; 2) improving CVC operations (i.e. organizational learning); 3) acquiring new technology; and 4) developing valuable partnerships leading to possible mergers or acquisitions [26]. In seeking out these strategic returns, research suggests that CVCs bring with them unique resources (e.g. market knowledge; science, product and commercial expertise; potential spin outs; and investment validation) which VC firms might find attractive in a potential syndicate partner [27]. Keil, Maula, and Wilson (2007) argue that corporations and their venturing divisions use these ‘unique resources’ to gain access and strategically position themselves, through syndication with centrally positioned venture capital firms, into what are fairly exclusive venture capital syndication networks [see ref. 23].

Hellmann (2005) suggests that entrepreneurial firms might benefit most through the complementary ‘value added’ that both VCs and CVCs can provide [28]. Research is incomplete, however, on the various processes, arrangements, and motivations for such collaboration, particularly from the perspective of venture capital firms. This research attempts to fill some of these gaps in our understanding of this important collaborative behavior and offer insights in to whether such collaboration is being leveraged to develop more successful and innovative entrepreneurial firms; hence bolstering regional innovation capacities.

METHODOLOGY

Focusing on collaborative venture capital activity in London and the greater South East, this research is built upon 45 in-depth interviews, including 30 leading UK venture capital firms and 10 corporate venturing divisions, all actively investing in UK portfolio firms. The interviews explore the
varying structures, motivations, and conditions under which such collaboration occurs, as well as the disincentives and the obstacles involved. A main line of inquiry is the extent to which collaboration is pursued to gain access to new markets and expertise, and the role that this collaboration plays in the shaping of regional innovation networks. Additional interviews are conducted with leading UK university tech transfer offices, industry network organizations, and policy makers; thus establishing how this collaborative activity further shapes regional innovation networks and for understanding the potential policy implications.

INITIAL FINDINGS

Interviews with VC firms strongly suggest that interaction and collaboration between VC firms and industry leading MNEs is not only common, but has become a critical component to VC activity in the UK; from investment selection, investment structure and oversight, to investment exit – interaction with multinationals is pervasive and integral. Second, the level of collaborative formality runs the spectrum from consultation and strategic partnerships, to highly formal syndications, and that the level of this formality appears, at first glance, to be rather sector specific. Third, the value of this collaboration is particularly felt at the very early stages (i.e. investment selection), and the very late stages of the investment cycle (i.e. investment exit).

Furthermore, collaborative activity with MNEs has become more heightened and open as an investment practice since about 2004, with the expectation being that this collaborative activity will become ever more common and increasingly complex in the years ahead. Finally, this collaborative activity is supported by a growing web of both industry and related social networks that are concentrated within the South East; with London being the hub of network knowledge exchange, but which are complemented by strong, inherent global linkages.

Consultation and strategic partnering

The foundation for collaborative activity with industry leading MNEs are frequent formal and informal interactions with personal and business contacts in the corporate venturing and R&D divisions of these companies. Almost all VCs interviewed had substantial previous industry experience, particularly those VCs focused on life-sciences and those focused on clean tech – previously holding senior positions at leading pharmaceutical and energy companies. These past industry ties were said to be crucial in developing and maintaining investment relationships with MNEs. Mature relationships with MNEs were described as “strategic partnerships” where corporate pipeline needs and aligned portfolio firms are routinely discussed for potential partnering, investing, and acquisition.

To facilitate this interaction and strategic partnering, several VC firms interviewed described internal initiatives for coordinating periodic meetings and functions with industry players – devoting much of their public relations resources to such efforts – and assigning particular firm partners to specific industry leading MNEs, tasking them to build relationships. Additionally, annual industry venture conferences held both globally and in the South East were also described as very useful for initiating collaborative activity, with all VC firms interviewed describing MNEs being more open and aggressive in courting partnerships with the VC community at such events.

Syndication

Instances of formal syndication between VC firms and CVC divisions of MNEs are the least common form of collaborative arrangement, but such arrangements are still significant (roughly half of the VCs interviewed describing such activity), with such syndication being a dominant form of collaboration in the life sciences. The syndication arrangement described by life science focused VCs closely resemble the syndication model mentioned earlier. If the VC and CVC interests align, syndication is formed with the VC firm taking the lead in investment structure, funds raised and oversight. The CVC provides both funding and expertise, with corporate representatives typically sitting on the board, as well as providing the portfolio firm with science and technical guidance, along with business development. The syndication concludes upon exit, generally resulting in corporate acquisition of the portfolio firm. Syndication structured around spin-outs also occurred, but on a more limited basis.

Outside of the life sciences, syndication with MNEs occurs, but is more the exception. For these VC firms, the syndication process was described as very “hands off” regarding corporate involvement, with the MNE only involved in the early selection stage and exit stage. Several IT focused VC firms commented that “the less formal the syndication arrangement, the better”, while several clean tech focused VC firms stated that more formal syndications with MNEs are an intended goal of their collaborative initiatives. Interestingly, a number of VC firms had previously engaged in what could be described as “dedicated funds” (e.g. a VC firm managed a fund where a corporation was the sole investor), but no dedicated funds were currently active, or planned.

Why collaboration?

The primary motivations for pursuing both quasi-formal relationships and more formal strategic partnerships with industry leading MNEs include: to help the VC firm in its evaluation of potential investments (i.e. commercial potential of technology); gaining a better understanding of industry needs, shifts in the overall market, and changes to sector specific regulation, all of which allows the VC to better select investments; and to better position portfolio firms for exit by gauging and developing corporate interest for potential acquisition or merger.

As several VCs emphasized, “it is very unlikely that we will invest without corporate validation, of the technology or the firm itself”, adding that “these industry leaders are really the customers of our portfolio firms, hence they are our customers”, and that “early stage investments must still have identified commercial viability – corporations provide this
Motivations for more formal syndication with MNEs include those mentioned above, specifically the benefits associated with investment validation and exit through corporate acquisition. But, the importance of validation goes beyond a decision to invest, in that syndication with MNEs results in increased “deal flow”: additional investment opportunities through a CVCs’ wider portfolio, as well as raising the profile of the VC firm among potential investors, and entrepreneurs that are seeking VC funding.

The added expertise that syndication can bring, however, particularly science and commercial, is the perceived benefit which is increasingly driving VC firms to syndicate with MNEs. Through syndication, several VC firms described arrangements where they had unrestricted access to corporate scientists and technologists, often placing these experts within the management structures of specific portfolio firms. These VC firms argued that this direct linking of portfolio firms to corporations allowed their portfolio firms to build strong corporate relationships and link into robust industry networks; to be utilized by the portfolio firms well after the investment exit. However, even in the life sciences, the extent to which this value added is passed onto portfolio firms is unclear and is fertile ground for further research.

Obstacles and challenges to collaboration
The UK VC community appears to be increasingly comfortable with and adept towards collaboration with MNEs. From a venture capital perspective, however, such collaboration does pose certain risks and challenges. The primary risk involves potential complications upon investment exit. It’s to the VCs advantage and prerogative to have multiple bidders for acquisition – driving up the sale price. In having MNEs as strategic partners, and particularly as syndicate partners, there is a risk that these corporations will have an expectation of exclusivity in terms of licensing and acquisition towards the portfolio firm(s) they are co-investing in. Such complications are generally avoided through up-front, non-exclusive agreements, but tensions during the exit phase can and do occur.

In terms of challenges, most VCs noted that it is often difficult to commit the necessary time and resources to develop and maintain effective relationships with corporate contacts. Regarding spin-outs, most VCs interviewed stressed the importance of skepticism concerning corporate motivations, in that “spin-outs are spin-outs for a reason – they might very well be junk”. Coupled with issues of exclusivity, syndications involving spin-outs are the least common forms of collaboration reported, and typically occur only after repeated collaborations with a particular corporate partner have occurred. Surprisingly, overcoming different organizational cultures was not mentioned as a significant challenge to collaboration. Again, the strong corporate backgrounds of most VCs seem to nullify most of the potential or expected obstacles to collaboration.

Policy considerations
With life sciences being the exception, the apparent lack of VC-MNE syndication geared toward early stage investment is not entirely surprising given the unique complexities and risk in the life sciences, and the precipitous drop in overall early stage VC investment due to the current economic downturn. Regional innovation policy, however, might consider certain incentives for both spurring more collaboration at the early stage, and for more effectively involving MNEs in UK government venture funds which are aimed at filling this early stage equity gap; hence increasing overall early stage investment. Although not touched upon here, certain public/private venturing entities have emerged in the UK where particular hybrid syndication arrangements involving MNEs are being pursued.

Finally, this research suggests that collaborative activity between VC firms and MNEs provides regional innovation networks with a valuable global link. While the network dynamics of this collaboration are not yet fully understood, this research positions MNEs and their CVC divisions firmly within regional venture capital networks. However, the benefits, and value added from this collaboration are not yet fully recognized or leveraged. Regional innovation policy might, therefore, refocus efforts on facilitating more synergistic connections between the venture capital community, MNEs, entrepreneurs, and universities, particularly in terms of lowering barriers that are often based on mutual skepticism and inexperience.

Conclusion
In the UK, collaborative activity between VC firms and industry leading MNEs is 1) widespread, and has become an increasingly important mechanism for venture capital investment, and 2) provides regional innovation networks with a valuable global link. A diverse range of collaborative arrangements are employed, from consultation and strategic partnerships, to formal investment syndication. For VC firms, the primary motivations for collaborating with MNEs are investment validation, the subsequent capture of deal-flow, and the building of partnerships for exit through acquisition. Through collaboration, however, VC firms can also accrue additional knowledge benefits regarding corporate product pipeline needs, regulatory developments, and increasingly: science, technical, and commercial expertise. Further research and potential policy should consider the extent to which UK VC firms pass on this value added to their portfolio firms, and possibilities for leveraging this collaboration and related networks for more robust and effective early stage venture capital investment.
REFERENCES