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Cohesiveness or competitiveness: Venture capital syndication networks and firms' performance in China

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ABSTRACT

We use a time-sequence dataset of 837 Venture Capital Firms in China to investigate how the social network characteristics of these VC firms affect their performance. We identified three network positional features: degree centrality, Eigen-value centrality, and efficiency that hypothetically are consequential to a VC firm's performance. Our data analysis reveals that network efficiency is a significant but negative determinant of a VC firm's performance – the network inefficiency, measured by the extent to which the alter firms of an ego firm are connected with each other boosts the ego firm's performance. We discuss such findings by contextualizing them in the unique institutional environment and emerging market of China.

1. Introduction

A Venture Capital (VC) syndication network is comprised of venture capitalist firms investing in a common set of venture capital projects. Such a co-investment network between VC firms draws significant attention from a broad spectrum of audiences from practitioners to academics such fields as finance/accounting, management science, and sociology. Scholars from different disciplines investigate the issue with different perspectives and emphases. For example, finance and accounting faculty examine the syndication network and its fiscal returns to the VC firms. Management scholars are interested in how the syndication network affects the negotiations and power structures in corporate governance structures, especially between top management and board members. Sociologists tend to focus on the network structure itself, describing the centralities, connectivity, and efficiency of VC firms in a syndication network. This study makes use of a time-sequence dataset of VC firms in China, constructing the syndication network between VC firms from 2005 to 2009 and examining the effects of the network on firm performance between 2010 and 2014.

The purpose of this study is twofold: first, the industry of Venture Capital is characterized by widespread activities of interfirm networking. VC firms are the most motivated to form network partnerships. So, an important research question is, do such active networking activities payoff? We especially want to know how such an effect unfold in a very different institutional environments. This study intends to develop this line of research by examining the efficacy of a syndication network on a VC firm's performance in China, an operating setting drastically different from its western counterparts. Second, at the theoretical level, this paper intends to enrich the long dispute between structural hole theory (Burt, 2001) on the one hand, and social closure on the other (Coleman, 1990) regarding what type of network configuration is conducive to social capital. The debate between the two streams of arguments inspired, rather than stifled, a great number of research trying to apply each insight into different research areas (see Burt 2001: 31–57). We can add to this fruitful line of contention through the empirical examination of a VC syndication network in China. As we will show, the two lines of contention generate diverging predictions regarding what type of network configuration is beneficiary to Chinese VC firms. Our empirical study demonstrates that social closure, rather than a structural hole, is instrumental in helping VC firms achieve IPO in their sponsored projects. We state that our research does not refute the structural hole argument, but instead, adds scope conditions to this line of theoretical debate. That is: with the unique institutional environment under which the Chinese VC firms operate, social closure matters more than any structural hole in affording structural leverage to those VC firms.

The remainder of this paper is organized as such: first, we discuss social networks in general, and the syndication networks among VC firms in particular, and how such networks affect a firm's performance. Second, we describe the unique institutional features of Chinese VC

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firms, looking at the regulatory/coercive, normative, and cognitive/mimetic environments and how those interfere with the development of a VC firm's syndication network and its effect on the firm's performance in China. This section is followed by research hypotheses relating the network characteristics of the VC firms to their performances. Third, we explain our dataset and variable constructions, followed by discussions of main findings from our data analysis. We complete our paper with a discussion of our findings in reference to the unique cultural and institutional features of the Chinese market, alluding to future topics in this line of work.

2. Social networks: why do they matter?

Social scientists have been paying attention to social networks as early as the 1920s when scholars were examining children's playground behaviors (see Freeman, 2004). Fast forwarding to the 1970s, Granovetter (1973) studied job seekers, reporting that those with many weak ties to remote others end up having better job perspectives than those with a few strong ties. Behind the "strength of weak tie" phenomenon is an informational benefit: while strong-ties lead to redundant information, weak-tie contacts provide job-seekers with useful, non-redundant information. In this case, the social network is a structure; information is the substance flowing in the structure. Other scholars developed the concept of social capital to describe in general the substances embedded in the network. For example, Bourdieu (1980) stated that social capital is the sum of the resources, actual or virtual, that accrues to an individual or group by virtue of their possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition. Coleman (1990) proposed that social capital can be defined by its function: it consists of some aspect of a social structure, and it facilitates certain actions of individuals who are within the social structure. To Lin (2001), social capital is a social asset embodying all of an actor's connections and access to resources in the network or group of which they are members. Much like other capitals such as physical capital or human capital, social capital requires deliberate investment by individuals and calculated acts to recoup those investment by mobilizing those resources embedded in the social networks (Lin, 2001: 21).

Hence, scholars (Coleman, 1990; Granovetter, 1973; Lin, 2001) converge in identifying substances such as trust, norms, information, influences, credentials or reinforcement (Lin, 2001: 20), which are embedded in social networks. Those embedded resources are social capital that, upon mobilization, can be used to facilitate the actions of members in the networks or goals of the entire collective entities. However, researchers diverge at the issue of which network configurations are conducive to resource mobilization to facilitate individual actions. For example, Coleman (1990) asserted that network closure is facilitative to the passage of useful information, the building of trust, and the formation of strong norms that in turn benefit all members of the network. In contrast, Burt (1992) propagated that network structural holes broker the flow of information between people and control the projects that bring together people from opposite sides of the hole. The section below briefly describes and compares the two distinctive network mechanisms that bring about social capital for the network members.

Key to Coleman's view of social network structure in the creation of social capital is establishing trust and norms that have binding force on the members of the network structure (Coleman, 1990: 318). A network configuration that has many dense connections between its nodes is conducive to the creations of trust and norms. Only through such dense and often redundant connections between network members can trust be developed, norms be created, and durable structures begin to emerge. In Coleman's example of a network of parents and children under supervision, a network of closure, in which all pairs of parents are connected with each other, accomplishes effective supervision of all the children in the network. This is because the dense connection between parents allows trust between parents to develop and norms to supervise all other children to emerge. In contrast, a network without closure, in which some connections between pairs of parents have gone missing, supervision suffers. The parents falling outside of the inter-parental linkages do not have obligations to supervise other children and cannot be expected to do so by others. Thus, Coleman's network structure that is conducive to the production of social capital emphasizes strong connections and social closures between the network components.

Contrary to the social closure process, Ron Burt (1992) underscored non-redundant sources of information. While cohesive contacts (contacts strongly connected to each other) are likely to have similar information, structural holes separate non-redundant information, information coming from disjointed rather than overlapping sources. Therefore, individuals who bridge over many structural holes in their networks have the structural leverage to broker the flow of information between people, facilitating their professional performances. For example, individuals who diversify their network contacts across multiple separate groups are the first ones to know first-hand information from those disconnected groups, the first ones to exercise control over that information, and the first ones to reap the benefits from the flow of that information. Therefore, for network actors, being connected to people who are already connected with each other results in social closure and low network efficiency as the information available in the network is redundant. Instead, network actors should strategically establish connections with disjointed groups of people to receive non-redundant information.

To better illustrate the two lines of contention, we borrow a graph from Burt (1997: 341). Fig. 1 shows that two individuals occupy different network positions. James benefits from having a strong close-knit but redundant circle of friends, while Robert is situated in a network with four distinctive non-overlapping groups of people. Who has the better network structure in terms of receiving social capital to facilitate action? It depends on who you ask. Per Coleman (1988), James will benefit because the dense connections and strong ties produce norms and sanctions against opportunism, which James can capitalize on to further his personal endeavors. However, to Burt (1997), Robert would

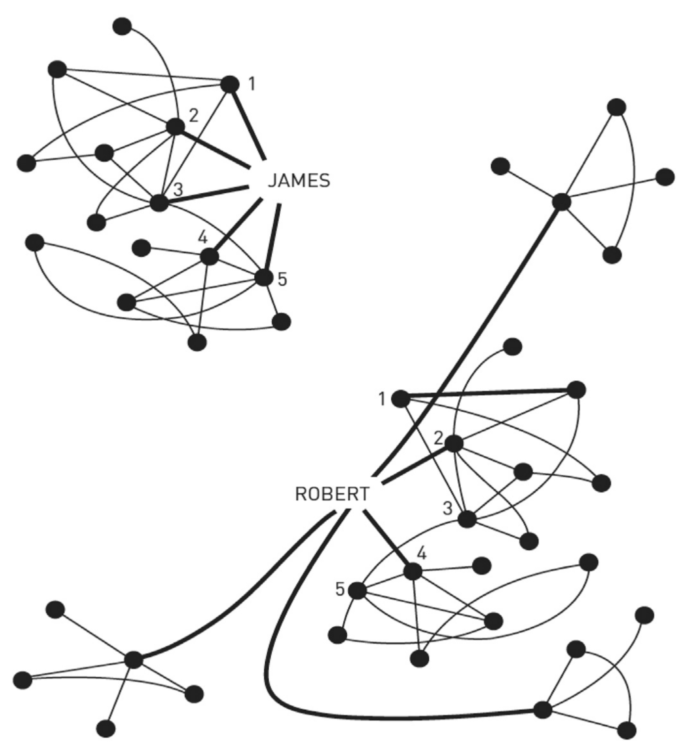

Fig. 1. An illustration of structural hole versus social closure.