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Cannot make do without you: Outsourcing by knowledge-intensive new firms in supplier networks

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ABSTRACT

How do new firms operating in dynamic environments organize their operations? Building on the transaction cost theory and the resource based view and using case study data from ten biotechnology start-ups and twenty of their suppliers, this research reveals that new firms outsourcing to highly-embedded suppliers are likely to secure access to a wider supplier network, attain best-in-class operational knowledge, and avoid supplier opportunism while facing low levels of relationship-specific investments. New firms outsourcing to suppliers at the network periphery are more likely to realize cost efficiencies, expose themselves to opportunism, uncertainty, and higher levels of relationship-specific investments but low levels of operational knowledge. We propose that new firms build five outsourcing competencies to realize benefits.

1. Introduction

Outsourcing is a strategic move which involves both sourcing absent activities that new firms may not have completed in-house in the past, or the substitution of internal activities by transferring these, in part or whole, to a third party supplier that performs the task, function, or process (Gilley & Rasheed, 2000; Holcomb & Hitt, 2007). Advances in information and communication technologies have enabled new firms to pursue the outsourcing of value-creating activities such as software development, engineering, and research and development (Hui, Davis-Blake, & Broschak, 2008). To date, researchers have focused on outsourcing by large, established firms (Bhalla, Sodhi, & Byung-Gak, 2008; McIvor, 2009); however there is evidence that new biotechnology firms also utilize intermediate markets for a variety of value chain activities (Mills, 2002).

Why might new firms outsource activities, including value-creating activities such as research and development, which are known to contribute to the value-creating potential of firms (Kumar, Van Fenema, & Von Glinow, 2009)? Researchers subscribing to the integrated view of transaction cost theory (TCT) and resource-based view (RBV) argue that by establishing relationships specifically with high-status firms, new firms can not only reduce the search and monitoring costs associated with finding a reliable partner but also acquire recognition and use it to draw vital combinations of resources such as status and physical resources (Lin, Yang, & Arya, 2009). This is crucial for new firms as they face adverse initial resource and capability barriers such as scarcity of talent and operational know-how, presented by liabilities of newness and smallness (Aldrich & Auster, 1986; Baum & Oliver, 1992; Stinchcombe, 1965). In response to these difficulties, new firms must mobilize resources in unusual ways, while economizing on resource requirements (Baker & Nelson, 2005). Forming supplier relationships is appealing for new firms as it opens up the possibility to tap into supplier competencies (Hugo & Garnsey, 2005). New biotechnology firms, for instance, often opt to outsource high value-added R&D activities such as the construction of genome databases to avoid significant fixed operational costs and expand their flexibility to scale appropriately. By supplier, we refer to any outsourcing partner.

By their nascent nature, new firms often possess little experience and use immature and unrefined operating routines (Baum & Silverman, 2004). On the other hand, suppliers – for instance, law firms handling regulatory approval and compliance or dedicated research centers focusing on conducting clinical trials – are more likely to have perfected a small number of organization routines and developed specialization which new firms are unable to match (Huckman & Zinner, 2008). To increase their ability to introduce radical innovations and make a commercial breakthrough, new firms may have no option other than to outsource value-creating activities.

When selecting specialized suppliers for value-creating activities, new firms are faced with a choice of suppliers who are either embedded in the network or are less established and operating at the network periphery. By outsourcing to embedded suppliers, new firms can promote embeddedness in knowledge-intensive networks and improve their access to market intelligence and ability to find solutions to complex

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problems (Song & Thieme, 2009; Uzzi, 1997). Relationships with embedded suppliers can also confer external legitimacy on a new firm signaling to the wider network that the firm has access to the capabilities and resources needed for successful product introduction (Rao, Chandy, & Prabhu, 2008).

However, embedded suppliers may be out of reach for new firms as they are likely to be less flexible in offering attractive terms and conditions, leading new firms to opt for suppliers operating at the network periphery. New firms thus need to develop competencies so that they can draw benefits from outsourcing in supplier networks, while avoiding supplier opportunism. While there is much debate concerning the underlying drivers and complexities of outsourcing in large, established firms operating in mature industries (e.g. Kroes & Ghosh, 2010; Tapon & Thong, 1999) and the capabilities these firms need when outsourcing large projects (Davies, Gann, & Douglas, 2009; Ranganathan & Balaji, 2007), most research overlooks the experiences of new firms outsourcing to expand their competencies and access supplier networks. It also ignores the competencies that new venture managers need to develop to outsource effectively in knowledge-intensive networks (Arikan & McGahan, 2010; Dowling & Helm, 2005; McGee, Dowling, & Megginson, 1995). Scholars have also called for further research on the processes of integration and measurement of value chain capabilities and the need to consider a wide range of research settings (Holcomb & Hitt, 2007; McIvor, 2009), including biotechnology (McGrath & Nerkar, 2004) and start-ups.

The present study answers these calls by focusing on two exploratory research questions: First, how do new firms use outsourcing to access valuable resources and capabilities residing in supplier networks, and second, what capabilities do new firms need to successfully outsource in supplier networks? The terms new firm, start-up, and venture are used interchangeably to refer to independent, early stage entrepreneurial ventures that are three years or younger. We investigate a range of outsourced activities, particularly focusing on value-creating activities of a 'knowledge-intensive' nature (Gupta, Woodside, Dubelaar, & Bradmore, 2009) such as pre-clinical and clinical research, legal, business development, and marketing.

This research makes the following contributions. First, in providing one of the first empirical studies of outsourcing by new firms operating in dynamic, knowledge-intensive industries, the present study investigates the role of suppliers' embeddedness on outsourcing experience. We point out that when outsourcing, new firms need to balance the need to access best-in-class knowledge and networks of highly-embedded suppliers and the low relationship-specific investments these suppliers may make in case of new firms. Furthermore, this research investigates the competencies that new firms must possess to realize benefits from outsourcing, specifying the importance of technical, evaluation, relational, entrepreneurial, and integration competencies. Finally, based on the above, we offer implications for theory, practice, and future research.

2. Theoretical foundation

Globalization, environmental turbulence, and the centrality of speed to innovate lead firms to pay close attention to the strategic decision to outsource or to vertically integrate value chain activities. Technological advances enable firms to easily exchange data and coordinate activities, giving rise to a radical new vision of a firm as one in which individual companies outsource many activities to an array of partners (Chesbrough & Appleyard, 2007). On the other hand, integration may be a necessity for new firms to create competitive advantage by building unique bundles of assets and resources that can be deployed in distinctive ways (Barney, 1991). TCT and RBV scholars have devoted a great deal of attention to this managerial paradox, and enhanced our understanding of how transaction costs and firm specific capabilities influence firms' vertical boundary decisions (Ellram, Tate, & Billington, 2008; Vivek, Banwet, & Shankar, 2008). These theories provide insight into dealing with liabilities of newness, smallness, and unconnectedness.

2.1. New firms and the necessity to outsource

The central argument of TCT is the economics of specialization and the administrative and incentive limits of organization hierarchies compared to markets (Williamson, 1981, 1991). New firms may be particularly attracted to competitive market tendering to minimize the bureaucratic costs of coordinating activities in-house and to secure the most efficient pricing and quality available in the market (Brettel, Engelen, Müller, & Schilke, 2011). Emphasizing the benefits of market exchange, Alston and Gillespie point out "…unless there are costs associated with using the market, transactions will not be organized through firms. Organization through a firm creates depreciation, agency, coordination, and shirking costs which will not be incurred unless there are larger costs associated with market transactions" (1989: 199).

However, new firms face greater uncertainty of continuity and identity (Michael, 2007), and in the absence of prior transaction experience are more likely to be unable to forecast contractual hazards that may emerge from potential opportunism by their contractual partners, and devise contractual structures to mitigate them (Mayer & Argyres, 2004; Provan & Skinner, 1989; Stump & Heide, 1996). Furthermore, new firms are still in the process of negotiation with resource gatekeepers such as financial providers or reputable suppliers and strive to secure legitimacy (Zimmerman & Zeitz, 2002). New firms have few suppliers to choose from due to financial constraints (Song & Di Benedetto, 2008), face uncertain market conditions, and may possess little accurate information relevant to the transaction. For these new firms there are benefits to internalizing the transaction and exercising managerial fiat.

RBV scholars provide support to this by pointing out that the firm is a heterogeneous entity consisting of bundles of idiosyncratic resources (Wernerfelt, 1984). Furthermore, because most valuable capabilities reside in the firm and are idiosyncratic in nature (Sirmon, Gove, & Hitt, 2008), new firms must build resource-position barriers by focusing on internal resource development. For instance, new firms could develop intangible resources such as proficient industry-specific human capital (Peteraf & Barney, 2003) which if superior relative to competitors could result in securing much needed comparative resource advantage (Jacobides & Winter, 2005). After all, suppliers are unlikely to perceive benefits in developing relationship-specific human capital for a new firm due to a lack of previous ties and, if they do, both parties may be exposed to a high degree of opportunism (Williamson, 1991).

Relative to established firms, new firms are yet to build a resource portfolio (Sirmon, Hitt, & Ireland, 2007) and need access to the best possible operational knowledge, while facing urgency to minimize costs and conserve precious financial resources. As a result, new firms are likely to seek suppliers for value-creating activities involving know-how, such as research and development (Song & Di Benedetto, 2008) and legal work (Bagley, 2008). Access to suppliers possessing capabilities to carry out such activities may determine new firms' survival in the marketplace (Song & Di Benedetto, 2008). New firms are unable to match the depth of specialist knowledge possessed by suppliers (Quinn, 2000). For example, new firms find it increasingly difficult to acquire, develop, and retain the people and technical know-how in-house (Kor & Misangyi, 2008). There is also hesitation about the new firm's ability to afford development risks for any desired innovation, as compared to suppliers who have vested interests in innovation and can spread risks across multiple present and future clients (Quinn, 2000). Developing a relationship with a supplier with a high degree of related skills to what the new firm seeks to develop (Gulbrandsen, Sandvik, & Haugland, 2009) may help the new firm to speed its products to market and also to learn faster. A recent study by Song and Di Benedetto (2008) points out that new firms need to work harder to encourage supplier involvement in new product development processes.