

## MAY PARENTS INHERIT FROM HEIRS? TOWARDS AN UNDERSTANDING OF THE PARENT-SPUN-OFF RELATIONSHIP

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### ABSTRACT

Spin-offs create financially and administratively stand-alone units that hold a strong affiliation with the parent firm due to the concurrence of the ownership structure. So far, few studies have adopted a process perspective to investigate on the value creation of spin off transactions. We argue that spin-off generation does not constitute firm failures, as parents have clear channels to appropriate values of network structure from their spun-off units. We use a network perspective on inter-firm collaboration to observe parent-spun-off unit relationship and develop research propositions to shed new light on the mechanisms that drive the post spin-off events.

**Keywords:** Divestiture, Parent Spun-off Relationships, Network Analysis, Vicarious Learning

### 1. INTRODUCTION

Spin-offs, also known as demergers (Moschieri and Mair, 2008), create financially and administratively stand-alone units that hold a strong affiliation with the parent firm due to the concurrence of the ownership structure. In the last years, a greater number of firms has reduced their size, spinning-off one or more units (Veld and Veld-Merkoulova, 2009). Prior works considers a spin off (divestiture) a way to correct previous strategic mistakes, but a positive view seems to emerge (Brauer, 2006; Moschieri, 2010; Moschieri and Mair, 2011; Peruffo *et al.*, 2013; Peruffo, 2013). Spin off is undergone when the unit's resources and capabilities are valuable but is less effective to manage them under full ownership (Rose and Ito, 2005). In general, spin-offs show a positive market reaction. Although the success of spin off depends on how they are conducted, few studies (Bergh *et al.*, 2008; Moschieri, 2010) have adopted a process perspective to investigate on the value creation of spin off transactions. So far, we know very little about divestitures where the parent company retains a relationship with the divested unit in the post

divestiture period. Prior works have completely neglected this aspect, but formal and informal exchanges between parent and divested unit are likely to continue (Brauer, 2006) because of the temporary nature of spin off transaction. This study addresses these gaps, focusing on how the post-spin-off process affects the firm's subsequent corporate development activities, namely on innovation. Spin off, indeed, may foster innovation and in turn wealth creation (Rose and Ito, 2005) and the parent's support to the divested unit and the structure and reward designed in the new company, may enhance innovation (Moschieri and Mair, 2008).

We use network perspective on inter-firm collaborations to observe the relationship among parent firm and the spun-off unit. Doing so, we develop research propositions to shed new light on the mechanisms that drive the post spin-off events. In an earlier phase, the spun-off benefits of the parent company support in terms of assets and knowledge (Ito and Rose, 1994). This may impact on partnership and on the relationship with other firms within the networks. At a later stage, the situation may reverse and the parent may appropriate benefits from the spun-off. As the parent and the spun-off unit

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share a common heritage they may also share a common sets of relationships (Kogut and Zander, 1992). Specifically, we propose to observe network dynamics in order to analyze temporal sequencing and causal linkages behind the creation of direct and indirect ties in the parent and spun-off unit network. We draw on the creation of *vicarious networks*. We define a vicarious network drawing on the definition of vicarious learning processes. A vicarious network may be interpreted as an extension of the benefit of vicarious learning from other organizations. Instead of learning through interaction, or simple observation, of a single referent firms, we shift the observation to the benefits of learning from the network of the referent firms. Thus, as vicarious learning allows gaining the benefits of accumulating knowledge and avoiding the expense of accumulating experience (Bingham and Davis, 2012), enacting a vicarious network may allow exploiting the network of the referent firm without experiencing the cost of creating and maintaining the ties to its partners.

This study argues that spin-off generation does not constitute firm failures. It is because the parent has clear channels to appropriate values of network structure with her spun-off units. In fact, this study suggests that spin off transactions could be an efficient way to create value for the parent firms, while “acquiring knowledge”, bridging on the spun-off company, is an efficient way to appropriate value. Thus, this work is organized around two main research questions:

*How does vicarious network work in spin off transactions? At what conditions Vicarious Network is preferred to direct ties?*

## 2. THEORETICAL FRAMEWORK

The extant literature puts forth various arguments to explain firms’ spin-off performance. A large body of work points to the information asymmetry problem between managers and owners as a reason for spin-off wealth creation (Krishnaswami and Subramaniam, 1999; Veld and Veld-Merkoulova, 2009; Bergh *et al.*, 2008). Other studies examine the sources of gains from spin-off decisions such as wealth transfer from bondholders to shareholders (Maxwell and Rao, 2003; Veld and Veld-Merkoulova, 2009; Parrino, 1997), tax and regulatory motives (Veld and Veld-Merkoulova, 2009) and improved focus (McIvor, 2007).

So far, these works have neglected the relationship between parent and divested units after divestiture and the role of network ties. This may be applied for sell-

offs, but in the spin-offs and equity carve-outs, all ties are not instantly cut off (Brauer, 2006). Both formal and informal exchanges may continue, following lockup periods, temporary transfer agreements and, finally, social ties. Specifically, we want to investigate on how these inter-firm relationships influence the behavior of both parent and divested unit in the post-divestiture.

### 2.1. Vicarious Networks

Inter-firm relationship has been studied from a wide range of perspectives. According to a resource-based view, firms partner as they cope with the arising uncertainty by restructuring their exchange relationships and accessing resources held by partners (Pfeffer and Salancik, 1978). Knowledge-based explanations, on the other hand, view alliances as a mean to learn or absorb critical knowledge or capabilities from partners. Literature recognizes that firms turn to vicarious learning processes when they have insufficient information from their own experience. Observing the actions and the conduct of other players contributes to the creation of templates for evaluating actions and modeling the effects of different behaviors (Holcomb *et al.*, 2009).

Vicarious learning processes lead firms to imitate the behaviors of other visible and comparable firms, reducing the uncertainty arising from unfamiliar firm choices by observation and imitation of the practices adopted by others (Baum *et al.*, 2000). The more the contexts and actions associated with observed players are similar to future contexts in which firms will operate the more accurate is the observational process (Holcomb *et al.*, 2009).

In this light, the firm does not learn by its direct experience but learns vicariously by observing the positive-or negative-results of a model firm’s behavior within or outside the reference industry (Kim and Miner, 2007). Through interaction, or simple observation, organizations accumulate information about the characteristics and performances of other organizations, leading to vicarious learning and imitation processes. In this light, we interpret vicarious network as an extension of the benefit of vicarious learning from other organizations. We shift the observation to the benefits of learning from the network of the referent firms, instead of focusing on the learning through interaction, or simple observation, of a single referent firm. Thus, as vicarious learning allows avoiding the expense of accumulating experience while maintaining and accumulating knowledge (Bingham and Davis, 2012), enacting a vicarious network may allow exploiting the network of the referent firm without experiencing the cost of creating and maintaining the ties to its partners.

## 2.2. Vicarious Network Building: Status

A critical point is identifying the determinants of performance on the basis of observations of other firms (Denrell, 2003), so firms tend to select their model firms based on their traits and because of their status, visibility of action and similarity.

This mechanism may be extended to learning processes happening at the network level. The relationship between parent and divested unit allows to transfer the vicarious learning output of the spun-off firm to the parent company, opening it to new knowledge and allowing the parent firms to benefit of a vicarious network, that is the network in which the spun-off unit is embedded. Spun-off firms share with parent firms a common heritage, but may have a different status within the network and a diverse set of attributes. By enacting a vicarious network mechanism, high-status firms may appropriate the benefit of their spun-off firms' network without having to enter the network directly, avoiding the cost of establishing ties and the drawback of status perception among other high-status firms.

Indeed, high-status firms are more likely to form additional alliances (Podolny, 2001) but the status asymmetry and the dissimilarity may hinder their capacity-or retain them-to form alliances with potential partners embedded in different subgroups in the network. In vicarious learning processes, firms choose referent firms on the basis of traits that serve as proxies of the practice's technical value (Terlaak and Gong, 2008). As Spun-off firms share with parent firms a common heritage, but may have a different status within the network and a diverse set of attributes, we argue that they may serve as referent firms in vicarious network mechanism. Spun-off firms can themselves develop a different set of relationships as their partnering choice can differ substantially from the ones of their parent companies, as they may aim at sharing different resources, knowledge and skills and access diverse knowledge. Their structural similarity with potential partners, specifically homophily (Mcpherson and Lovin, 1987; Powell *et al.*, 2005) and status may also impact of their strategic partnering choices.

As the spun-off firm retains the parent support in terms of assets and knowledge (Ito and Rose, 1994), even if its structural position may not grant higher status, it may become an attractive partner due to the heritage shared and granted by the parent firm and benefit of its status within the network. Consolidating the above arguments about the effects of difference in status between parent and unit, we propose the following:

## Proposition I:

*Ceteris paribus, the greater the differences in status between parent and unit, the higher unit's ability to create non-redundant ties*

## 2.3. Vicarious Network Exploitation: Trust and Relational Closeness

Formal and informal exchanges between the parent company and the divested unit in the post divestiture period are likely to exist (Brauer, 2006). According to the network perspective, the spun-off unit becomes a bridging tie between the parent and its partners, representing the vicarious network, to which the parent firm is not connected. A firm bridges a structural hole if it connects two otherwise unconnected firms Literature agrees on considering bridging structural holes as a valuable asset, granting focal firms access to non-redundant information and control over partners that are not themselves connected (Burt, 1992).

Trusting potential partners that bridge structural holes may be difficult (Jensen, 2008); bridging actors are seen as brokers exploiting the advantages related to the asymmetries experienced by their counterparts. However, firms that share a common heritage overlap more extensively and although the spin-off company structurally acts as a bridge, the level of trust with the parent company is higher, overcoming the aforementioned problems. The benefits arising from the presence of direct and indirect ties depend not only on the structural embeddedness of an actor and therefore on *whom one knows*, but also on quality of its ties, therefore *how well one knows* (Moran, 2005). Once a firm has reached the access to external information, in order to use the knowledge learnt vicariously it must consider the information relevant (Baum *et al.*, 2000; Schawb, 2007). If a spun-off unit bridges a structural hole between its parent company and its direct ties, the parent company can still benefit of the circulation of information arising from the spun-off unit ties that represent its indirect ties. Specifically, the number of direct ties a firm maintains (the number of its partners) provides the firm with the benefits of knowledge sharing, as firms who collaborate are likely to share resultant knowledge (Berg *et al.*, 1982), complementarities in skills (Arora and Gambardella, 1990) and scale, with a resultant amount of resources which is proportionally higher than that of a single firm (Ahuja, 2000).

A tie provides partners with the potential to access the resources available from the other; nonetheless, their willingness to provide those resources depends on the

relational closeness among partners. The transfer of tacit knowledge and intangible resources, is likely to be facilitated by the existence of a common identity and shared contextual understanding. In this light, Hansen (1999) finds that the transfer of rich, non-codified, information appears fostered in dense networks. Network closure and the cohesion among partners increase the extent and speed of information transfer and by the effect of trust, give them assurances on how the transferred information will be used.

In the context of a *vicarious network*, then, the spun-off firm is likely to allow the Parent to appropriate the value of information, know-how and resources. The Parent firm, on the other hand, will decide whether to use the option of using this network based on different criteria. We therefore make the following proposition:

**Proposition II:**

*The Parent firm will use the option to appropriate the knowledge benefits arising from its vicarious network on the basis of its relational closeness to the spun-off unit and on the number and quality of the ties activated by the spun-off unit*

**2.4. Vicarious Network Conditions: Bridging Tie Cost**

Vicarious networking is also likely to decrease cost for the focal firm. First, vicarious learning enacts learning processes without imposing on the firm the costs of exploration and experimentation (Terlaak and Gong, 2008). Indeed, the goal of this vicarious learning process is to enjoy the benefits of gaining knowledge and to discard the expense of accumulating experience (Bingham and Davis, 2012).

Nevertheless, the cost of tie formation can also be very high for firms. Actors may experience constraints in terms of money, time and resources for the creation and maintenance of links. Cooperation with familiar partners results easier and less costly compared to the formation and consolidation of new ties (Gargiulo and Benassi, 2000). Actors benefit from a favorable network structure as well as from the resources they can access from their alters (Podolny, 1994): The more innovative is the alter, the more the focal agent may learn and create from its interaction with the alters (Nahapiet and Ghoshal, 1998). Bridging ties are costlier to maintain, as it is difficult to sustain relationships with those unlike oneself and actors connected through bridges are likely to be dissimilar. Opportunities for cooperation may arise due to unintended

spillovers or intended agreements (Walker *et al.*, 1997); so, we propose that the parent company may develop new direct ties connecting to its spun-off unit partners.

**Proposition III:**

*In a dynamic view, the higher the cost to maintain the bridging tie, the more the Parent will develop new direct ties connecting to its spun-off unit partners*

**2.5. Vicarious Network Conditions: Knowledge Complexity**

Through vicarious learning processes, decision makers engage in non-local search, looking beyond their boundaries for new ideas and practices, thus emphasizing exploration, rather than exploitation (Bingham and Davis, 2012). In network literature, this process is commonly favored by bridging structural holes and maintaining weak ties (Burt, 2001), in contrast with the common assumptions that closure and strong ties are the best combination for exploitative organizations, as the stronger the tie between two actors, the more their social networks overlap and the higher the redundancy in their information sources (Granovetter, 1973). Since explorative organization typically depend on broader searches within their environments and on gathering new information, they place a premium on fast access to knowledge and so are willing to tolerate some “noise” in order to gain access to a wider breadth of innovation sources. Learning is expedite as firms avoid direct trial-and-error; nonetheless, the knowledge gained is based on making weak causal inferences from observation of behavior of referent firms and their networks and could therefore be less useful (Bingham and Davis, 2012). Moreover, even when the organization successfully acquires valid knowledge, other factors, for example the failure to apply the knowledge correctly, could prevent the firm from using it (Schwab, 2007).

Extant literature proposes that cohesive relationships stimulate firms to invest time and efforts in co-generating and sharing knowledge with partners (Regans *et al.*, 2004). Other researchers have found that strong ties promote the transfer of complex knowledge because they are more likely to be embedded in dense relationships (Granovetter, 1973; Hansen, 1999), while weak ties tend to foster the transfer of simple knowledge (Hansen, 1999). Cognitive closeness (Knockaert *et al.*, 2011) and inter-organizational connections are important to ease knowledge transfer (Hansen, 1999). Bridging

relationships that are themselves embedded in dense social structures fosters co-operation and co-ordination, due to their propensity for knowledge-sharing and having common ground between knowledge sources and recipients, which can promote both the absorption of diverse knowledge and the generation of new ideas (Krackhardt, 1999; Tortoriello and Krackhardt, 2010). So, we propose that:

#### **Proposition IV**

*In a dynamic view, the more complex the knowledge to be transferred, the more the Parent will develop new direct and strong ties connecting to its spun-off unit partners*

### **3. RESULTS**

An ideal research context here is the pharmaceutical industry and the biotechnology industry, for a compelling number of reasons, among which its structure, level of profitability, innovation capacity, knowledge-driven characteristics, as well as an easiness of tracing data such as patents or R&D expenditures. Previous studies have analyzed the healthcare, pharmaceutical and biotechnology industry under a number of different perspectives, such as innovation propensity and firm profitability (Roberts, 2001; Lee *et al.*, 2008), inter-organizational collaboration and learning effects (Powell *et al.*, 1996; 2005; D'Alise *et al.*, 2010; Brunetta *et al.*, 2012), vertical integration and collaborative agreements (Pisano, 1990; 1991, Suresh and Alli, 2012), outsourcing (Giustiniano *et al.*, 2014; Brunetta *et al.*, 2014; Marchegiani *et al.*, 2013; Brunetta and Marchegiani, 2009), alliance formation (Baum *et al.*, 2000) and network perspectives (Powell *et al.*, 1996; 2005; Gulati and Singh, 1996). Firms in this industry are "multivocal" and commonly perform different activities with a diverse set of partners (Powell *et al.*, 2005). The formation and dissolution of linkages happens very quickly, as agreements between firms may span from spot transactions as co-commercialization of products, to equity based agreements. It is therefore relatively easy to trace the activities of parent and spun-off units post spin-off and determine change in their respective network composition.

Nevertheless, further research requires operationalizing the propositions and investigating the flowing hypotheses.

### **4. DISCUSSION**

Literature has put forth various arguments to explain firms' spin-off performance, but only few contributions

(Bergh *et al.*, 2008; Moschieri, 2010) adopt a process perspective to investigate on the value creation of spin off transactions. This is due to the fact that, with few notable exception (Semadeni and Cannella, 2011; Peruffo *et al.*, 2013; Peruffo, 2013), most works have neglected the relationship between parent and divested units after divestiture, but, although this may be applied for sell-offs, in the spin-offs and equity carve-outs, all ties are not instantly cut off (Brauer, 2006) and indeed, exchanges, at the informal and formal level, may to continue in the light of lockup periods, temporary transfer agreements and-most importantly in our view-social ties.

We have used a network perspective, underlying structures, relations and outcomes of inter-firm collaboration to observe the relationship among parent firm and the spun-off unit and shed new light on the mechanisms that drive the post spin-off events.

Drawing on multiple bodies of related literature, we have proposed to observe temporal sequencing and causal linkages behind the creation of relations in the spun-off unit network. The results of this study, from a theoretical perspective, provide knowledge on how the post-spin-off process affects the firm's subsequent corporate development activities, namely on innovation. We suggest viewing network structure as an additional strategic lever used by parent firms. We have focused on offering several points of departure from extant research to investigate on how these inter-firm relationship affect the conduct of the parent and of the divested unit in the post-divestiture period.

This study has lead us to four propositions offered for future research. Our first proposition focuses on Vicarious learning processes, meant as those that lead firms to imitate the behaviors of other visible and comparable firms (Baum *et al.*, 2000). Literature has well established that firms tend to select their partners based on traits and because of their status, visibility of action and similarity, so we have focused on the heterogeneous Status of Parent and Spun-off firms. Spun-off firms are different in status from their parents and play a rather different role in partner matching. They share a common heritage, but have a different status within the network and a diverse set of attributes, thus attracting partner that their parents may find hard to connect to. High-status firms may appropriate the benefit of their spun-off firms' network without having to enter the network directly. We have therefore shifted the level of analysis from organizational vicarious learning process to network vicarious learning process, observing how a parent firm may use the spun-

off network vicariously, without drawback of status perception among other high-status firms. The spun-off firm is therefore not just a bridging actor connecting the Parent with its network; it is, indeed, a hub and a referent firm, playing a pivotal role in the formation of its networks and in enacting vicarious network mechanisms.

Secondly, we drew on the strength of ties that bind Parent and Spun-off firms. Bridging actors, such as Spun-off firms connecting the Parent to their network are seen as brokers. Literature has identified brokering actors as firms trying to exploit the advantages related to the asymmetries experienced by their counterparts, as these firms enjoy a central position and manage their network catching the benefits of being a central actor. The spun-off firm is a bridging tie providing its parent access to information and some control over their unconnected partners (Burt, 1992). Although structurally acting as a bridging tie and a broker, the level of trust with the parent company is higher and this relational closeness influences the motivation of either party to share and distribute the non-redundant knowledge of the vicarious network.

We then moved towards network dynamics, formulating two different research propositions, the first one related to the costs of establishing and maintain ties, the second to the transfer of knowledge. Although in a first stage, enacting a vicarious network can be motivated by the cost of establishing direct ties and difficulties for the parent firm to connect to heterogeneous partners, later on, maintaining bridging ties can be costlier as it is difficult to sustain relationships with those unlike oneself and actors connected through bridges are likely to be dissimilar. Second, exploiting a vicarious network can expedite learning by avoiding direct trial-and-error and using the spun-off as a referent firm, filtering knowledge and ideas. Nevertheless, the knowledge gained through vicarious process could be less useful as it is based on making weak causal inferences and noisy data. It can also be very hard to transfer complex knowledge when source and recipient are not strongly connected.

## 5. CONCLUSION

Our research plan towards the understanding of post-spin-off process and how it affects the firm's subsequent corporate development activities starts from observing that spin-offs do not constitute firm failures. Indeed, we argue that parent firms have clear channels to appropriate values of network structure with her spun-out firm and

suggest that spin-off transaction could be an efficient way to create value for the parent firms.

The primary objective of this study was to formulate propositions to future research related to a better understanding of how post-spin-off process affects the firm's subsequent corporate development activities, namely on innovation. This study has several limitations that should be acknowledged. Indeed, we don't consider any network contingency that may influence the flow of assets, information and status asymmetries between parent and unit. This may be an oversimplification, particularly in highly dynamic and hypercompetitive settings. Further, we have limited our discussion to single-hub networks without considering wider network dynamics.

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