WORKING WITH UNFAMILIAR PARTNERS: RELATIONAL EMBEDDEDNESS AND PARTNER SELECTION IN PRIVATE EQUITY SYNDICATES

Miguel Meuleman  
Ghent University, miguel.meuleman@ugent.be

Andy Lockett  
Nottingham University

Mike Wright  
Nottingham University

Recommended Citation
Meuleman, Miguel; Lockett, Andy; and Wright, Mike (2006) "WORKING WITH UNFAMILIAR PARTNERS: RELATIONAL EMBEDDEDNESS AND PARTNER SELECTION IN PRIVATE EQUITY SYNDICATES," Frontiers of Entrepreneurship Research: Vol. 26: Iss. 3, Article 2.  
Available at: http://digitalknowledge.babson.edu/fer/vol26/iss3/2
ABSTRACT

While one stream of research in partner selection has emphasized stability in a firm’s social network, another stream has emphasized the need to expand a firm’s network. In order to reconcile these two perspectives, we explore transaction, partner and industry conditions that lead firms to work with unfamiliar partners. Using a unique hand-collected dataset, results from the formation of private equity investment syndicates demonstrate that firms are more likely to select unfamiliar partners for lower levels of primary and behavioral uncertainty and higher levels of competition. Our findings provide insights in conditions that lead firms to expand their social network.

INTRODUCTION

Inter-firm cooperations are a widespread phenomenon. An important question that has received substantial attention is how firms select partner firms. Two major approaches have been used. First, from a resource dependence perspective (Pfeffer et al., 1978), firms select partners with complementary skills and resources. Second, from a social embeddedness perspective, organizations reduce the uncertainty associated with inter-organizational exchange by working with partners with whom they have previous direct or indirect experience (Granovetter, 1985).

One problem with the social embeddedness approach is that it provides few insights into conditions that lead firms to work with unfamiliar partners since it mainly stresses the risk associated with doing so and not the potential benefits to new knowledge (Beckman et al., 2004). Our central research question, therefore, concerns the circumstances that induce firms to overcome the risk and uncertainty associated with pursuing collaborative relationships with unfamiliar organizations. We use a multi-level approach to obtain more fine grained insights into the mechanisms driving partner change. Specifically, we develop and empirically test hypotheses with respect to micro and macro conditions under which previous partner experience becomes less important for the selection of partners.

At the micro level, we focus on the uncertainty associated with the transaction in which firms participate. To examine transactional uncertainty, we employ transaction cost theory and distinguish between primary uncertainty at the level of the underlying transaction or event in which firms participate and behavioral uncertainty at the level of the partners involved in a transaction (Williamson, 1985). At the macro level, we investigate whether the extent of market competition influences the role of previous partner experience in the selection of partners in inter-firm collaborations. In general, the social embeddedness approach has neglected the role of competition. Traditional neo-classical economics has typically assumed that competition reduces the impact of social relations on the decision taken by rational, self-interested economic actors.

The empirical context of our paper is the formation of one particular form of inter-firm collaboration, namely equity investment syndicates in the management buyout market in the UK between 1993 to 2002. Syndicated investments are a common feature of venture capital and later stage private-equity backed buyout investments both in the US and in Europe (Sorenson et al., 2001; Wright et al., 2003).
The rest of this paper is organized as follows. First, we provide our theoretical framework and related hypotheses. The following section outlines the research setting of our study, the data and method used in the analyses. Next, we present the results from the empirical analyses. Finally, we discuss our findings, conclude and outline potential avenues for future research.

**THEORETICAL FRAMEWORK AND HYPOTHESES**

Social embeddedness scholars have argued that an established network of inter-organizational relationships helps to reduce uncertainty and the problem of information asymmetry associated with inter-organizational collaborations (Granovetter, 1985). One major source of information about potential partners provided through a firm’s network is relational embeddedness or a firm’s direct experience with partner firms through previous inter-firm collaborations (Gulati et al., 1999). A natural solution to reduce the hazards associated with inter-organizational collaboration is to rely on previous partners. This strategy offers several benefits. First, as direct relationships provide firms with experience-based knowledge about current and future partner firms, informational asymmetries will be mitigated and the search cost of identifying potential partners will be lower (Gulati, 1995). Second, previous partner experience will lead to enhanced levels of trust (Podolny, 1994). Trust can reduce the transaction costs involved with screening potential partners, writing contracts and monitoring partners ex-post. Prior studies have consistently shown that firms prefer to work with existing exchange partners (Chung et al., 2000; Gulati, 1995).

**Primary Uncertainty and the Role of Relational Embeddedness**

Primary uncertainty can be defined as uncertainty surrounding the underlying transaction or event in which firms participate. Primary uncertainty may cause problems of communication and coordination and, consequently, adversely impact the final execution of transactions. Relational embeddedness is likely less important for partner selection if the underlying transaction has lower levels of primary uncertainty. First, the higher the level of primary uncertainty associated with the underlying transaction, the higher the probability that firms will have to adapt to unforeseen environmental conditions. The number of possible unexpected contingencies that may affect contracts between firms increases with the number of possible changes. Due to problems of bounded rationality, future contingencies are hard to stipulate and contracts will be incomplete. Consequently, the more likely it is that cooperation problems, or problems arising from opportunism, will emerge (Williamson, 1985).

Second, transaction cost theory also describes the problem of coordination, referring to the cost of aligning the actions of different partners to a transaction. Even when interests are aligned, coordination problems can arise due to the lack of shared and accurate knowledge about the decision rules that partners within a cooperative agreement will use (Williamson, 1985). The costs are likely to be higher when primary uncertainty increases, as unexpected future contingencies will put greater demand on the joint decision making capability of the partners in an inter-firm collaboration.

One response to this source of uncertainty is to restrict exchange partners to those with whom one has had prior interactions in order to reduce potential transaction costs (Granovetter, 1985; Podolny, 1994). For lower levels of primary uncertainty, however, firms will have the opportunity to involve less familiar exchange partners as cooperation and coordination problems are likely to be less severe. When the underlying event is characterized by lower levels of primary uncertainty, therefore, it is more likely that firms will pursue network expansion strategies and hence involve less familiar partners. This discussion suggests that firms are more likely to work with unfamiliar partners when the underlying transaction is characterized by lower levels of primary uncertainty. Hence:

*Hypothesis 1. The lower the primary uncertainty associated with the underlying transaction, the less important will be the role of relational embeddedness for the selection of partner firms in a*
Behavioral Uncertainty and the Role of Relational Embeddedness

A second major source of uncertainty derived from transaction cost economics is behavioral uncertainty (Williamson, 1985). Behavioral uncertainty arises from human action and refers to the effects of opportunism on transactions that are executed through incomplete contracts. Following Koopmans (1957), behavioral uncertainty also results from a lack of knowledge about the actions or decision rules of other economic actors.

Two informal mechanisms have been identified as being able to mitigate the problems of behavioral uncertainty: relational embeddedness and reputation (Dyer et al., 1998). Whereas relational embeddedness provides a firm with private access to information about an actor’s behavior, a firm’s overall reputation in the organizational community provides a public signal of an actor’s behavior. If a firm has established a reputation in the organizational community, the need to rely on private information to assess a partner’s behavior might be reduced. An important question then is to what extent does the role of relational embeddedness for partner selection decrease when a firm has an established reputation? Alternatively, do reputation and relational embeddedness act as complements or substitutes?

There are several reasons why relational embeddedness is likely to be less important for the selection of partners firms when firms have established a strong reputation. First, the reputation of an exchange partner reduces the perceived risk of opportunism and hence problems of cooperation (Hill, 1990). Second, the reputation of a firm helps to reduce potential coordination problems. Since a firm’s reputation acts as an important signal of its overall effectiveness (Fombrun et al., 1990), there will be less uncertainty regarding the decision rules that reputable exchange partners use when unexpected contingencies should arise. These arguments indicate that the reputation of an exchange partner may be a substitute for direct experience with that partner. As such, the role of relational embeddedness for partner selection will be mitigated if exchange partners have established a reputation in the organizational community. Hence:

*Hypothesis 2. The higher the reputation of a firm, the less important will be the role of relational embeddedness for the selection of partner firms in a cooperative arrangement.*

The Intensity of Competition and the Role of Relational Embeddedness

The social embeddedness approach has tended to neglect the role of competition for the selection of partners in inter-firm cooperation. Firms might take on the risk of collaborating with unfamiliar but potentially important firms if not doing so could lead them to compete against each other. After all, one important motive for inter-firm collaborations is to reduce the intensity of competition. For example, Brander et al. (2002) have suggested that the syndication of venture capital investments may be a mechanism to reduce the level of competition. Few studies, however, have actually considered the impact of the level of competition on the role of embeddedness for the selection of partners in cooperative agreements.

There are several reasons why relational embeddedness might decrease when competition for the underlying transaction is more intense. First, firms will enter a collaborative arrangement when the expected gains from collaborating are higher than the expected costs of forming and managing it. As competition harms the economic interests of competing firms, the benefits associated with inter-organizational exchange increase when firms are in direct competition. For highly competitive situations, the costs associated with working with unfamiliar partners might be lower than the potential benefits of working together. Macy and Skvoretz (1998) show experimentally how strangers are more likely to cooperate when the costs of refusing to work together increase. The expected costs of missing out on an
interesting deal or the costs associated with bidding away expected returns increase the likelihood that firms will join with unfamiliar partners even when the likelihood of partner conflicts are higher. Second, increased competition appears to reduce social norms (Roth et al., 1991). Relational embeddedness, therefore, may be less important for the selection of partners in collaborative arrangements when there is increased competition for a deal. This discussion suggests that increased levels of competition will reduce the role of relational embeddedness as a driver of partner selection in inter-firm collaboration. Hence:

Hypothesis 3. The higher the level of competition associated with the underlying transaction, the less important will be the role of relational embeddedness for the selection of partner firms in a cooperative arrangement.

DATA AND METHODS

Research Setting: Syndication in the UK Private Equity Market for Management Buyouts

We investigate the selection of partner firms by studying the formation of investment syndicates in the buyout segment of the private equity market in the UK. Equity investment syndicates are a form of inter-firm alliance in which two or more firms co-invest in an investee firm (the buyout target) and share a joint pay-off. The buyout setting is a particularly fruitful arena for studying inter-firm collaborations as buyout investing is characterized by a considerable degree of uncertainty and therefore issues of inter-firm governance are especially important (Wright et al., 2003). Further, syndication has been an established practice in the buyout market for some time, which enables the use of longitudinal data. Additionally, syndicates are a relatively homogenous type of transaction which avoids issues of heterogeneity often found with other types of inter-firm collaborations.

Data

The data are obtained from two major sources. First, buyout deals are identified through a hand collected database maintained by the Centre for Management Buyout Research (CMBOR). This database covers the entire population of buyouts in the UK from the beginning of the 1980s onwards. In order to enhance reliability, the CMBOR collects its data from a variety of sources so as to reduce common method bias. The total sample consists of 369 syndicated buyout transactions that occurred between 1993 and 2002 in the UK. Second, data on the characteristics of the private equity investors involved in these transactions and on the state of the overall private equity market was gathered. Data on firm characteristics were collected through directories issued by the British Venture Capital Association (BVCA) and the European Venture Capital Association (EVCA). Additional information sources were used to collect information when individual investor characteristics were missing, notably the Guide to Venture Capital in the UK and Europe and Venture Economics.

Variables

The independent variables measure relational embeddedness, primary uncertainty, the reputation of the lead investor, and the level of competition. Control variables are added.

Relational embeddedness. Relational embeddedness is operationalized by counting the number of previous syndicates in which the pair of firms had jointly participated in the five years preceding the year of the buyout transaction and one of these firms acted as lead investor (Gulati et al., 1999). A five-year moving window is used to calculate our measure of relational embeddedness based on the average lifespan of a syndicate relationship. We take the logarithm of this variable (Chung et al., 2000).

Primary uncertainty. In syndicate arrangements, primary uncertainty is the possibility that different eventualities at the level of the underlying investee company influence the economic outcome of the
transaction. We use three measures to capture different dimensions of the primary uncertainty associated with a buyout transaction. Our first measure is the logarithm of the total deal value. Uncertainty associated with the underlying transaction is expected to decrease the larger the size of the transaction as small firms likely suffer from the liability of smallness (Aldrich et al., 1986). Since smaller firms are more vulnerable to shocks in the economic environment, the uncertainty associated with the underlying transaction will be higher. Our second measure of primary uncertainty addresses uncertainty associated with the agency risk posed by the management of the buyout company. Agency risk varies inversely with the management ownership (Jensen et al., 1976). In buyouts, it is more difficult for management to obtain a substantial stake of the equity in larger transactions, given that managers are wealth constrained. The absolute investment made by management may, therefore, be a better predictor of agency risk (Kaplan et al., 1993). Therefore, the absolute amount invested by management is used as an indicator of the uncertainty posed by the management of the company. We log transformed this variable. A higher value indicates a lower level of primary uncertainty. Our third measure is the leverage of the underlying deal. Higher leverage in a deal is associated with lower overall uncertainty as high leverage signals the potential for future cash flow generation to service high debt levels. Highly levered transactions are therefore characterized by less operational or market uncertainty. Our last measure of uncertainty is therefore the total amount of senior secured debt as a percentage of total financing used to structure the buyout transaction. A higher value points to a lower level of primary uncertainty.

Reputation. We focus on the reputation of the lead investor as the lead investor is the most prominent actor in a syndicate (Wright et al., 2003). Two measures are used to capture the reputation of the lead investor. First, the logarithm of the number of previous investments. In the private equity market, firms mainly gain a reputation by building up a track record of previous investments (Gorman et al., 1989). Therefore, reputation is measured by counting the number of investments by the lead investor from the beginning of the 1980s when the market began to develop until the year prior to the investment. Second, we use the logarithm of the number of times a private equity firm acted as lead investor in an investment syndicate. This measure is related to the reputation measure used for investment banks in underwriting syndicates (Megginson et al., 1991). This measure was calculated from the start of the observation period onwards i.e. the beginning of the 1980s.

Intensity of competition. We use two different measures to capture the intensity of competition. First, we measure competition for a specific deal (deal competition). The intensity of competition for a particular deal is proxied by counting the number of investors active in the year of the buyout that invested in the same industry as the company involved in the buyout in the five previous years. Firms with previous experience in a particular industry are more likely to be aware of potential deals and will also be more inclined to invest (Sorenson et al., 2001). The number of competitors is an important determinant of the level of competition in an industry (Porter, 1980). We distinguish between 35 different industries. We divided the number of firms with previous experience by the number of buyout transactions in that particular industry in the year of the buyout. A higher value indicates a higher potential level of competition. Second, similar to Gompers and Lerner (2000), we measure overall industry competition by the total funds raised for buyout investment in the year preceding the buyout transaction. The EVCA yearbook only has detailed information on the total funds raised in the UK for buyout transaction from 1998 onwards. For the period 1993 to 1997, we estimated the funds that will be allocated to buyout investments by multiplying the total private equity funds raised by the percentage that was actually invested in buyouts in the years the funds were raised. These figures were inflation adjusted to control for nominal price increases.

Control variables. Several control variables are included with respect to the relation between the lead investor and the potential partner, characteristics of the potential partner and characteristics of the lead investor. First, previous research has shown that structural embeddedness is an important driver in the formation of inter-firm cooperations (Gulati et al., 1999). Structural embeddedness refers to the number of shared partners from previous ties between partner firms. For each pair of firms in our sample, we
calculate the number of partner firms shared based on the syndicate relationships of the five years preceding the year of the buyout transaction. Further status similarity is an important driver of inter-organizational exchange (Podolny, 1994). Therefore, we include a variable that captures the similarity in status for a pair of firms. To calculate this measure, we take the ratio of the smaller to the larger Bonacich (1987) centrality score of the two firms. The status similarity measure is based on the syndicate relationship in the five years preceding the buyout transaction. Status similarity is expected to have a positive effect on the selection of partners in a syndicate arrangement. Further, we include a variable that captures the effect of reciprocity in exchange behavior (Chung et al., 2000). To measure reciprocity, we divide the number of deals in which the lead investor was invited by a potential partner to participate in a syndicate by the number of deals in which the potential partner was invited as syndicate member by the lead investor in the three years preceding the year of the buyout transaction. The higher this value, the more likely firms will be selected to join a syndicate.

Another driver of the formation of inter-firm collaborations is resource interdependencies (Brander et al., 2002; Pfeffer et al., 1978). We expect firms who are more specialized with respect to the industry of the buyout company to be selected as partner firms. Industry specialization is measured by the proportion of previous buyout investments a potential partner firm has in the industry of the buyout company in the five years preceding the year of the buyout. We distinguish between 35 industries. We also include a variable that captures the geographical specialization of a potential partner with respect to the geographical region of the buyout company. A distinction is made between 12 different regions in the UK. We take the proportion of investments a firm has in the region of the buyout company in the five years preceding the buyout investment.

We also control for other characteristics of potential partner firms. We include the logarithm of the total funds managed by a partner firm since if syndication is mainly driven by financial considerations, potential partner firms with larger funds will be more likely to invest. We also include an interaction between the logarithm of the value of the deal and the logarithm of the size of the funds managed by a potential partner firm. The coefficient of this interaction term is expected to be positive: the larger the size of the deal, the more important will be the size of the funds managed by a potential partner. Two measures that capture the reputation of a potential partner firm, namely the logarithm of the number of times acted as lead and the logarithm of the number of previous investments are included. The effect of reputation on the probability that a firm will be selected to join a syndicate is unclear. On the one hand, more reputable firms might be more visible and therefore more attractive as syndicate partners. On the other hand, more reputable firms might be less inclined to invest as a non-lead investor as they prefer to act as lead or sole investor (Manigart et al., 2006). We further include a measure that captures the activity level of a potential partner firm in a specific year as more active investors are more likely to be invited to join as a syndicate member. Therefore, we include the number of investments in the year of the buyout a potential partner firm was involved in. The higher this variable, the more likely a potential partner firm will be selected to join an investment. Additionally, we introduce a variable that indicates whether potential partner firms are originally from the UK as other rationales might drive the formation of syndicates with international partner firms.

Following Chung et al. (Chung et al., 2000), we include a set of control variables for the lead investor initiating the transaction. First, we include the main effect of the two measures of reputation discussed earlier namely the logarithm of the number of times acted as lead and the logarithm of the number of previous investments. More reputable firms will be more attractive as syndicate partners and therefore other investors might be more willing to join as a non-lead investor. We also include the size of the funds under management as larger private equity firms might need less partners to close a deal.

Further, we control for the size of a syndicate in order to handle the common actor effect in network analyses (Lincoln, 1984). Lastly, in order to control for unobserved temporal factors that may influence the formation of syndicate relationships, we include dummy variables for each year. Such factors could
capture the overall network configuration which might have an impact on the formation of inter-firm cooperations.

Method

The method used is similar to Chung et al. (2000) who study the formation of investment syndicates in the market for public equity offerings. The buyout transaction is the unit of analysis. As such, we assume that each lead investor considers its partner firms for a specific deal. The dependent variable is the probability that a specific partner firm will be selected given that a lead investor was already assigned. For each investment we have a lead investor, the investors that joined as syndicate members and the investors that did not join the syndicate which constitute the risk set. We use three criteria to select the risk set or investors that did not join the syndicate but could potentially have been interested to invest. First, in order to exclude investors that invest only occasionally, we include those investors who made at least 5 buyout investments either as sole investor or as syndicate member between 1993 and 2002. Second, we restrict our risk set to private equity investors that invested in buyouts in the UK in the same year of the buyout transaction and therefore expressed their willingness to invest in a particular year. Third, we only included investors that showed a propensity to invest in syndicated investments. Therefore, the risk set of potential investors is also restricted to firms who at least invested once as syndicate member in the two years preceding the year of the buyout transaction.

Since the dependent variable is a binary outcome, we employ logistic regression to analyze the determinants of partner selection in a syndicate arrangement. A value of 1 indicates that a firm was selected to join as a non-lead investors in a particular buyout transaction whereas a value of 0 indicates that a potential partner firm was not selected. The general model takes the following form of equation 1:

Selection as non-lead member = f(relation embeddedness, control variables) \[ (1) \]

Hypotheses 1, 2 and 3 are tested by adding interaction terms to model 1. The interaction terms enable us to investigate the conditions under which relational embeddedness will be more and less important in partner selection. The model estimated is presented in equation 2:

Selection as non-lead member = f(relation embeddedness (RE), primary uncertainty*RE, reputation index lead investor*RE, intensity of competition*RE, control variables) \[ (2) \]

Sample Description

The sample consists of 212 private equity backed buyout transactions in which 51 private equity firms participated as lead investor and 57 private equity firms participated as non-lead investor. For each year, we combine the lead investors who were active in that year with all the potential partner firms in the risk set of that year. As such, we have a total of 5697 different yearly dyads. The summary statistics for the characteristics of the yearly dyads and the private equity firms in our sample are shown in Table 1. These statistics represent averages of the years in which the private equity firms and dyads were included in the sample. The summary statistics for the investments included in the analyses are also shown in Table 1.

As our two reputation variables, the number of previous investments and the number of times acted as lead investor, are highly correlated (r > 0.95) we combine them into one single reputation index for use in the regression analyses (Cohen et al., 2003). To calculate this reputation index, we convert each of the measures into z scores and take the average of these z-scores. As such, we use a reputation index for both the lead investor and the potential partner firms in our analyses. The correlations between all the other variables used in the regression analyses are below 0.70 and do not pose multicollinearity problems.
RESULTS

Table 2 presents logistic estimates for the effects of factors influencing the selection of partners in syndicate partnerships. The dependent variable takes a value of 1 when a partner is selected as non-lead member in a syndicate and 0 otherwise. All the models are statistically significant and have reasonable r-squares. The p-values reported are two-tailed significance tests. To limit the size of the tables, we do not show the effect of the year dummies.

Model 1 is a baseline model which includes all the control variables. The independent variables of interest are added in the other models. As expected, the coefficient of relational embeddedness is positive and highly significant. Lead investors are more likely to select firms with whom they have previous experience. Hypotheses 1, 2 and 3 are tested in models 2 to 5 by including different interaction terms. Except for model 3, chi-square tests show that adding the interaction terms improves the fit of the models significantly.

Model 2 introduces the interaction terms between relational embeddedness and the three indicators of primary uncertainty. All the coefficients have the expected sign but only one of them is marginally significant namely the interaction with the absolute amount invested by the management. These results provide weak support for hypothesis 1.

Model 3 includes the interaction between relational embeddedness and the reputation index of the lead investor. The sign of this interaction term is negative, as expected, and highly significant. As the reputation index represents a z score with an average of 0, the coefficient of the main effect of the number of direct ties between the lead investor and a potential partner shows the effect for a lead investor with an average reputation. This indicates that for investors with an average reputation, there is still a positive effect of the number of direct ties on the probability that a partner will be selected to join a syndicate. The effect decreases for investors with a higher than average reputation. These results suggest that relational embeddedness is less important for the selection of partners when firms have established an above average reputation thereby supporting hypothesis 2.

In model 4, we introduce the interaction between relational embeddedness and the level of competition for the deal. Only the deal specific competition variable has the expected sign and is highly significant supporting hypotheses 3. The industry competition variable is not statistically significant.

Lastly, in model 5 we introduce all the interaction terms to test the robustness of our results. This model shows that some of the coefficients of the interaction terms that were previously not significant turn out to be significant. More specifically, the effect of the interaction terms between relational embeddedness and primary uncertainty, as measured by the size of the deal and the absolute amount invested by management, have the expected sign and are significant. These results provide support for hypothesis 1. The other results stay the same.

DISCUSSION AND CONCLUSION

In this study, we sought to extend previous research on partner selection by examining micro and macro conditions under which the role of relational embeddedness or direct partner experience is less important for the selection of partners in inter-firm cooperations. In line with previous studies (Chung et al., 2000; Gulati et al., 1999), our results consistently show that firms are more likely to select partners with whom they have previous experience providing support for the social embeddedness approach. Our findings, however, show that the role of previous partner experience for partner selection is contingent on the uncertainty associated with the transaction. We found support that lower levels of primary uncertainty, as measured by the size of the transaction and the absolute amount invested by the management of the buyout company, reduced the need to rely on existing exchange partners. Further, we also found strong
support that the lower the extent of behavioral uncertainty associated with an exchange partner, as measured by its reputation, the less important was previous partner experience for the selection of partner firms. Lastly, we found evidence that higher levels of competition for the underlying transaction prompted firms to work with less familiar partner firms.

This study contributes to the existing management literature in several ways. First, most of the existing literature on the formation of inter-firm cooperations have typically assumed that uncertainty leads to the formation of embedded transactions. This approach, however, provides few insights in the forces driving partner and network change. In their search for exchange partners, firms are confronted with two competing forces. On the one hand, firms prefer to work with existing exchange partners in order to reduce the search costs of locating partners and to reduce partner uncertainty. One the other hand, firms might look for opportunities to increase the reach of their social networks. How can firms manage these two competing demands? Our results suggest that firms manage this trade-off by using different selection criteria depending on the situation. Specifically, our results show that firms are more likely to pursue collaborative strategies with more unfamiliar partners when there is less primary or behavioral uncertainty.

Second, the approach taken in this paper is that the risk of opportunism differs among exchange partners and hence the hazards associated with inter-firm cooperation will depend on the behavioral uncertainty associated with an exchange partner. Transaction cost economics has traditionally assumed that either all economic actors have a tendency to behave opportunistically or that it is impossible to distinguish between those that have good intentions and those that have bad intentions (Williamson, 1985). A more behaviorally oriented approach, however, rejects this assumption and assumes that the tendencies to behave opportunistically differ among economic actors. Our results show that the reputation of an exchange partner mitigates behavioral uncertainty and hence reduces the need to rely on private information through previous relationships. In line with Barney and Hansen (1994), the findings of this study also suggest that the reputation of an exchange partner constitute an important resource that helps to reduce transaction costs in economic exchanges by increasing a partner’s trustworthiness.

Third, previous research has emphasized how inter-firm collaborations can be used to respond to competitive pressures. For example, Park and Zhou (2005) suggested how firms might involve themselves in inter-firm cooperation despite weak alliance gains in order to respond to the actions of rival firms. Few studies, however, have actually looked at how competition influences the selection of partner firms. Our study provides evidence that higher levels of competition lead firms to take on more risk and hence work with more unfamiliar partners. This might help to explain the high failure rate among inter-firm cooperations. Future research should look more deeply into how the competitive environment shapes the formation of inter-firm cooperations.

CONTACT: Miguel Meuleman; Ghent University, Department Accounting & Finance, Kuiperskaai 55E, 9000 Ghent, Belgium; (T): 0032(0)92643515; (F): 0032(0)92643577; miguel.meuleman@ugent.be

NOTES

1. We use the term buyout to refer to management buyouts as well as related transactions such as buy-ins, buy-in and buyout combinations (so-called BIMBOs), or investor-led buyouts.

2. As the total number of 1s is less than 5% of the total number of observations, we also used rare events logistic regression (King & Zeng, 2001) to estimate our model. The results stay the same however.

REFERENCES


Posted at Digital Knowledge at Babson
http://digitalknowledge.babson.edu/fer/vol26/iss3/2


### TABLE 1: Description of the sample

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>S. D.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relational embeddedness</td>
<td>5697</td>
<td>0.67</td>
<td>2.30</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td><strong>Reputation variables lead investor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># previous investments</td>
<td>183</td>
<td>149.34</td>
<td>377.75</td>
<td>1</td>
<td>2166</td>
</tr>
<tr>
<td># times lead investor</td>
<td>183</td>
<td>27.69</td>
<td>56.37</td>
<td>0</td>
<td>313</td>
</tr>
<tr>
<td><strong>Primary uncertainty variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value deal</td>
<td>212</td>
<td>45.22</td>
<td>114.42</td>
<td>0.37</td>
<td>825</td>
</tr>
<tr>
<td>Absolute amount invested by management</td>
<td>212</td>
<td>0.43</td>
<td>0.79</td>
<td>0.1</td>
<td>6.7</td>
</tr>
<tr>
<td>Leverage (%)</td>
<td>212</td>
<td>52.22</td>
<td>20.71</td>
<td>0</td>
<td>95.85</td>
</tr>
<tr>
<td><strong>Intensity of competition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deal competition</td>
<td>212</td>
<td>1.38</td>
<td>1.54</td>
<td>0</td>
<td>20.2</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># shared partners</td>
<td>5697</td>
<td>2.80</td>
<td>3.17</td>
<td>0</td>
<td>28</td>
</tr>
<tr>
<td>Status similarity</td>
<td>5697</td>
<td>0.43</td>
<td>0.30</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>5697</td>
<td>1.03</td>
<td>0.32</td>
<td>0.25</td>
<td>5</td>
</tr>
<tr>
<td>Industry specialization potential partner (%)</td>
<td>333</td>
<td>12.06</td>
<td>9.10</td>
<td>2.82</td>
<td>100</td>
</tr>
<tr>
<td>Geographical specialization potential partner (%)</td>
<td>333</td>
<td>11.50</td>
<td>3.68</td>
<td>0</td>
<td>35.61</td>
</tr>
<tr>
<td>Funds under management potential partner</td>
<td>333</td>
<td>676.04</td>
<td>1301.32</td>
<td>3</td>
<td>10577</td>
</tr>
<tr>
<td>Funds under management lead investor</td>
<td>183</td>
<td>846.65</td>
<td>1624.50</td>
<td>1.4</td>
<td>10577</td>
</tr>
<tr>
<td># previous investments potential partner</td>
<td>333</td>
<td>114.29</td>
<td>308.95</td>
<td>2</td>
<td>2190</td>
</tr>
<tr>
<td># times lead investor potential partner</td>
<td>333</td>
<td>22.30</td>
<td>46.94</td>
<td>0</td>
<td>318</td>
</tr>
<tr>
<td># investments potential partner in year buyout</td>
<td>333</td>
<td>8.00</td>
<td>19.41</td>
<td>1</td>
<td>171</td>
</tr>
<tr>
<td>Dummy potential partner located in UK (%)</td>
<td>333</td>
<td>88.59</td>
<td>31.84</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Size syndicate</td>
<td>212</td>
<td>2.40</td>
<td>0.90</td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

These statistics are calculated by taking the mean of the values for each dyad year in the years the dyad was included in the sample.

These statistics are calculated by taking the mean of the values for each firm in the years they were included in the sample.

The amounts are expressed in £ million.
TABLE 2: Logistical Regression using Robust Standard Errors\textsuperscript{ab}

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relational embeddedness</td>
<td>0.73***</td>
<td>1.21***</td>
<td>1.00***</td>
<td>1.04***</td>
<td>1.91***</td>
</tr>
<tr>
<td>Log value deal* relational embeddedness</td>
<td>-0.03</td>
<td>-0.60†</td>
<td>-0.60†</td>
<td>-0.14**</td>
<td>-0.26</td>
</tr>
<tr>
<td>Log absolute amount invested by management* relational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>embeddedness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage* relational embeddedness</td>
<td>-0.45</td>
<td>-0.45</td>
<td>-0.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reputation index lead investor* relational embeddedness</td>
<td>-0.42**</td>
<td>-0.42**</td>
<td>-0.53***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deal competition* relational embeddedness</td>
<td>-0.06***</td>
<td>-0.06***</td>
<td>-0.08***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry competition* relational embeddedness</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size syndicate</td>
<td>0.29***</td>
<td>0.19***</td>
<td>0.32***</td>
<td>0.29***</td>
<td>0.23***</td>
</tr>
<tr>
<td>Log # shared partners</td>
<td>-0.19</td>
<td>-0.23</td>
<td>-0.25</td>
<td>-0.21</td>
<td>-0.20</td>
</tr>
<tr>
<td>Status similarity</td>
<td>-0.11</td>
<td>-0.02</td>
<td>0.09</td>
<td>-0.08</td>
<td>-0.26</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>0.10</td>
<td>0.07</td>
<td>-0.04</td>
<td>0.12</td>
<td>0.19</td>
</tr>
<tr>
<td>Industry specialization potential partner</td>
<td>2.50**</td>
<td>2.66*</td>
<td>2.21*</td>
<td>2.41**</td>
<td>2.05***</td>
</tr>
<tr>
<td>Geographical specialization potential partner</td>
<td>2.45***</td>
<td>2.42***</td>
<td>2.39***</td>
<td>2.42***</td>
<td>2.05***</td>
</tr>
<tr>
<td>Reputation index potential partner</td>
<td>-0.32</td>
<td>-0.31</td>
<td>-0.30</td>
<td>-0.38</td>
<td>2.27</td>
</tr>
<tr>
<td>Log funds managed potential partner</td>
<td>-0.12</td>
<td>-0.19*</td>
<td>-0.11</td>
<td>-0.10</td>
<td>-0.37†</td>
</tr>
<tr>
<td>Interaction log funds managed potential partner * log value</td>
<td>0.04***</td>
<td>0.07***</td>
<td>0.04***</td>
<td>0.04***</td>
<td>-0.21***</td>
</tr>
<tr>
<td># investments potential partner in year buyout</td>
<td>0.67***</td>
<td>0.73**</td>
<td>0.59**</td>
<td>0.74**</td>
<td>0.07**</td>
</tr>
<tr>
<td>Dummy potential partner located in UK</td>
<td>0.30</td>
<td>0.47</td>
<td>0.30</td>
<td>0.24</td>
<td>0.69</td>
</tr>
<tr>
<td>Reputation index lead investor</td>
<td>-0.62†</td>
<td>-0.77*</td>
<td>-0.63*</td>
<td>-0.51†</td>
<td>0.42*</td>
</tr>
<tr>
<td>Log funds managed lead investor</td>
<td>-0.20*</td>
<td>-0.20†</td>
<td>-0.20*</td>
<td>-0.14†</td>
<td>-0.67†</td>
</tr>
<tr>
<td>P-value of log likelihood test</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>R-Square</td>
<td>0.126</td>
<td>0.132</td>
<td>0.144</td>
<td>0.143</td>
<td>0.164</td>
</tr>
</tbody>
</table>

\textsuperscript{a} N=6178, dependent variable equals 1 if potential partner is selected, 0 otherwise.
\textsuperscript{b} Year dummies are not reported here.
† p<0.10
* p<0.05
** p<0.01
*** p<0.001