NETWORKS, NETWORKING ACTIVITY, AND ORGANIZATIONAL EMERGENCE

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NETWORKS, NETWORKING ACTIVITY, AND ORGANIZATIONAL EMERGENCE

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ABSTRACT

Despite the widely shared belief that networks are essential to organizational emergence, the central propositions of network theory have received less than compelling support in an entrepreneurial context (Hoang & Antoncic 2003). In response, we conduct an empirical analysis of emerging organizations in order to arrive at answers to the following research questions: (1) can entrepreneurs create new organizations by relying on their existing social networks, or must the entrepreneur enlarge that network during the gestation period and (2) how does the nature of an entrepreneur’s social network (such as its content, governance, and/or structure) affect the likelihood that the organization will emerge and the necessity of networking activity? The results of our analysis suggests that (1) while initial the structure of the network is not predictive of emergence, the content is and (2) that the benefit of any increase in the size of the network may be moderated by the initial structure (size and tie strength) and content of the network. We believe that these findings can inform both academics seeking to corroborate network theory in an entrepreneurial context as well as practitioners faced with the daunting task of creating a new organization with limited resources.

INTRODUCTION

In the early stages of the entrepreneurial process, nascent entrepreneurs must access, mobilize and deploy resources in order to exploit discovered opportunities (Garnsey, 1998). In fact, Aldrich and Martinez (2001) argue that the transformation of an idea into an organization requires that entrepreneurs acquire resources. Yet, nascent entrepreneurs rarely possess all the resources required to advance in organization creation. To this end, personal networks of nascent entrepreneurs are means to collecting the resources needed to build a new organization (Johannisson, 1987). In general, social networks contribute to getting access to a large number of diverse sources of information (Aldrich et al., 1987; Dubini & Aldrich, 1991), opportunity identification (Hills, Lumpkin & Singh, 1997) and resource mobilization (Starr & Macmillan, 1990). The use of social networks can thus facilitate successful organizational emergence (Kodithuwakku & Rosa, 2002).

While the distinctive role of personal and business networks in the organization creation has been addressed since the 1980’s (e.g. Birley, 1985; Aldrich and Zimmer, 1986; Johannisson, 1987), the central propositions of network-based approach have gone largely untested in an entrepreneurial context (Hoang & Antoncic 2003). Those hypotheses that have been subjected to empirical inquiry have returned inconclusive and/or mixed results. For example, Jensen & Koenig (2002) and Krackhardt (1992) disagree as to whether access to finance is related to weak or strong network ties. Empirically, many studies about social networks in entrepreneurship mainly follow a qualitative approach, are based on small samples, and ignore important variables that should be controlled for by appropriate statistical procedures (Brüderl and Freisendörfer 1998). As a result, we still do not know what network characteristics are most advantageous in a firm’s early stages (Hite and Hesterly, 2001).

In response to the lack of compelling empirical findings in this area, we endeavour to examine the importance of personal networks and networking activity to entrepreneurial success, defined as the emergence of a new organization. We frame our study by posing the following general research question: How does the nature of an entrepreneur’s social network (such as its content and/or structure) affect the likelihood that the organization will emerge and the necessity of networking activity?
The paper will continue as follows. The second section will review the networking literature to the point that we can identify the core propositions of the theory and put out a tentative model for empirical investigation. The third section will lay out the methodology of our study. The fourth section will present the results, while in the fifth section we will discuss the results and their implications to practice and research.

CONCEPTUAL DEVELOPMENT

In this study we have adopted the position that social networks have an impact on entrepreneurial outcomes, i.e. organizational emergence. Organizational emergence is seen as a process in which a nascent organization moves successfully from conception and gestation phases to infancy phase (Reynolds 1994) to become a new organization. During the conception and gestation phases of organization creation, the personal networks of nascent entrepreneurs are synonymous with the nascent organization’s network. When trying to understand the impact of social networks on organizational emergence, our discussion will be concerned with two related issues, namely the structural features of social networks and networking as an activity. As such, we believe that the successful organizational emergence is a result of structural features of social networks and networking activity of nascent entrepreneurs. Our conceptual model is summarized in Figure 1.

Structural Features of Social Networks

The general proposition of network-based approach is that a more developed network, in terms of the number of ties and quality of the ties, is more beneficial to a start-up than a less developed network (Larsson and Starr, 1993). Indeed, the most intuitive structural measure of networks is size, defined as the number of direct links between a focal actor and other actors (Hoang and Antoncic, 2003). The size of social networks is frequently reported as having a positive effect on new organization founding (Aldrich, Rosen, Woodward, 1987; Johannisson, 1986; Nohria, 1992). Network size is important to the acquisition of resources given that with each contact comes the possibility of access to valuable resources. In fact, by bridging, or connecting, multiple networks, one may develop an elaborate network structure that will inevitably increase the inward flow of information and ideas (Granovetter, 1973; Burt, 1992). Uzzi (1999) finds empirical support for the importance of network size, suggesting that network size is a significant predictor of increasing access to and decreasing costs of capital, an often critical resource for emerging organizations.

Hypothesis 1: The initial size of the network will be positively related to emergence.

Another important structural measure of networks has to do with tie strength. Strong ties involve frequent interaction and are of long duration (Hansen, 1999), whereas weak ties refer to diverse set of persons working in different contexts with which an individual has some business connection and infrequent or irregular contact (Elfring & Hulsink, 2003). The true value of strong ties as compared to weak ties is that network members with whom the entrepreneur has strong ties are argued to be more motivated to help the entrepreneur, more likely to provide access to resources at relatively low cost, more able to facilitate the exchange of tacit knowledge, and more likely to provide trusted feedback on the nature and viability of opportunities (Elfring & Hulsink, 2003). As such, strong ties are often argued to be highly important to resource mobilization (Starr & Macmillan, 1990). For example, nascent entrepreneurs’ family members and friends can be leveraged to get the needed resources (Larson and Starr, 1993). Hite (2005) conceptualizes the previous point by proposing that the greater the relational embeddedness, the more likely the tie will engage in relational exchange. Last, resource constrained emerging organizations often rely on relationally embedded ties for resource acquisitions (Jarillo, 1989).
Yet, while stronger, more direct, more personal ties may offer benefits of trust and joint problem solving, too much embeddedness may limit access potential sources of opportunity (Carruthers & Babb, 2000). In fact, Granovetter (1973) argues that for this reason weak ties are often more valuable than strong ties. He contends that a substantial overlap exists between information already possessed by the individual and that provided by his or her strong ties. Thus, the information and resources accumulated from weak ties will yield additive rather than redundant results (Granovetter, 1973) and are therefore the most advantageous to the focal individual (Burt, 1992). Furthermore, weak ties often act as bridges between otherwise disconnected networks. As such, they allow for the introduction of new ideas and information from one network of individuals to another. As a result, weak, or arm’s length, ties allow the focal individual access to more diverse pools of information than strong, or embedded, ties (Burt, 1992; Uzzi, 1999). Thus, from the perspective of emerging organizations, it seems that networks are considered to be valuable to the extent that they connect the entrepreneur to a large number of diverse sources of information (Aldrich et al., 1987; Dubini & Aldrich, 1991). Because weak ties generally connect individuals to unrelated contacts, they are more likely than strong ties to provide entrepreneurs with access to the least redundant information and resources.

Given these competing dynamics between tie strength and emergence, we predict that both strong and weak ties will be critical for emergence. In other words, entrepreneurs with networks characterized by a high percentage of strong or weak ties will be less likely to successfully create a new organization than those with a balance of both.

**Hypothesis 2:** The relationship between the initial strength of the network ties and emergence will be inverted U-shaped.

**Network Content**

Social contacts can be viewed as the media through which nascent entrepreneurs gain access to variety of resources held by external actors, such as information, advice (Hoang and Antoncic, 2003), and capital (Zimmer and Aldrich, 1987). Thus, the content of the network, or the quality of the resources accessed from it, is also important for predicting organizational emergence. In short, nascent entrepreneur will profit his/her social contacts as a function of how valuable the existing social contacts are in comparison to the needs of the opportunity. If the existing social network does not allow access to valuable resources, the entrepreneur will not benefit from the network’s existence regardless of the static characteristics that might otherwise imply its potential (such as its size or strength of ties). As such, the content provided by the network is an important factor to be considered when trying to understand the role of social networks for organizational emergence.

**Hypothesis 3:** The initial value of network resources is positively related to emergence.

**Networking Activity**

While the great majority of entrepreneurial literature is concerned about the characteristics of personal networks and their impact on entrepreneurial outcomes (Liao and Welsch 2005), we add another element to this discussion. Rather than seeing organizational emergence as a result of (static) structural characteristics of a nascent entrepreneur’s social network, networking activity may also contribute to this end. In fact, Shaw (1997) points out that there has been a general failure to recognize that networks and networking are different constructs. Thus, we believe that nascent entrepreneurs do not always rely on existing social contacts, but need sometimes to enlarge their networks to emerge, particularly in cases where the nascent entrepreneur is pursuing an opportunity outside of the perimeter of his/her earlier experience. In such instances, a new kind of configuration of resources and support may be required for the realization of the opportunity.
Hypothesis 4: The change in network size will be positively related to emergence.

Contingent Effects

While we advocate a view where network-based research should also look at networking, we further develop the dynamics around this construct. More specifically, we believe that the degree of networking that an entrepreneur should undertake is related to the initial network structure and content. In this way, the dynamic activity of networking is inherently related to the static characteristics of the network itself. For example, if an entrepreneur’s network is large, the need for additional networking is expected to be less than for an entrepreneur whose network is comparatively small.

Hypothesis 5: The initial size of the network will moderate the relationship between the change in network size and emergence such that the larger the initial size of the network, the less important it will be to increase the size of the network.

Additionally, the strength of the ties within an entrepreneur’s network will also impact the need for further networking. Above, we hypothesized an inverted U-shaped relationship between tie strength and emergence. Here we argue that because most entrepreneurs (and most individuals) have at least some strong ties (i.e., family members and friends), there will not likely be a need to cultivate additional strong ties during the emergence process. Thus, we believe that the fewer weak an entrepreneur has, the more important it will be for the entrepreneur to enlarge his/her network in the emergence process in search of these weak ties.

Hypothesis 6: The initial strength of network ties will moderate the relationship between the change in network size and emergence such that the stronger the initial strength of network ties, the more important it will be to increase the size of the network.

Lastly, regardless of the network’s structure, if the entrepreneur’s is actually able to access needed resources from his/her network, there will be less of a need to further expand the network in search of additional resources.

Hypothesis 7: The initial value of network resources will moderate the relationship between the change in network size and emergence such that the more valuable the initial network resources, the less important it will be to increase the size of the network.

METHODOLOGY

The dataset used in this study is the Panel Study of Entrepreneurial Dynamics (PSED). This dataset is composed of information concerning the start-up conditions surrounding the organizations of and subsequent actions taken by 830 nascent entrepreneurs randomly selected from the United States population. This data was obtained by these individuals via four telephone interviews conducted at yearly intervals (see Reynolds (2000) for a fuller description of this database).

In order to define the content and structure of the nascent entrepreneurs’ networks prior to the emergence of their organization, we measured these constructs with data collected from the first telephone interview. To operationalize network structure, we focused on the dimensions of size and tie strength (Hoang and Antoncic, 2003). First, we operationalized initial network size as the number of individuals not on the start-up team who provided assistance to the start-up effort at the time of the first telephone interview (t1). The natural log of this value plus one was taken to normalize the distribution. Second, we operationalized initial network tie strength as the average strength of the ties within the network at the time of the first telephone interview (t1). Granovetter argues that “the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual
confiding), and the reciprocal services which characterize the tie” (1973: 1361). The nature of the relationship between the respondent and each network member is characterized in the PSED as spouse/partner, family member, friend/acquaintance, business associate, teacher/counselor, or stranger before the start-up effort. Because spouses/partners are likely to form the longest-term, most emotional, most intimate bonds, they were classified as the strongest ties, followed by family members, and friends/acquaintances, business associates, teachers/counselors, or strangers before the start-up effort. Based on this linear scale, the strength of each tie was quantified as a continuous variable (ranging from a value of five for a tie to each spouse/partner to a value of zero for each tie to a stranger). Finally, the scores for all ties in the network were averaged, resulting in an average strength for all ties in the network. The natural log of this value plus one was taken to normalize the distribution.

To measure network content, we use on the respondents’ evaluation of the degree of importance of all resources provided to the start-up by the network as of the first interview. This variable is operationalized as a continuous variable, ranging from one (not at all important) to four (extremely important).

In order to allow sufficient time to elapse in order to see the largest possible effect of networking behavior on the size of the nascent entrepreneurs’ networks, we measured change in network size as the difference between the number of individuals not on the start-up team who provided assistance to the start-up effort at the time of the first telephone interview (t1) and the time of the third interview (t3). Because this variable was highly skewed in its raw form, we took several steps to normalize it. Unfortunately, due to the high incidence of networks that were not enlarged during this time frame (roughly 81%), these attempts at normalization were unsuccessful. Thus, we ultimately opted to dichotomize this variable with a value of one for networks that were enlarged and a value of zero otherwise. It should be noted, however, that analyses were run with the continuous variable that produced results very similar to those reported in Table 2.

Due to the PSED’s design, the data collected from each interview reflects events that may have occurred at any time during the prior year. Because ties to network members must be developed in order for them to allow for the provision of resources (Granovetter, 1973), we chose to lag our dependent variable by one year. Thus, emergence was measured with data collected at the time of the fourth telephone interview (t4). In operationalizing this variable, we used a multidimensional approach. According to Katz and Gartner (1988), organizations come to exist when they demonstrate intention, establish boundaries, acquire resources, and engage in exchanges. Reynolds and Miller (1992) operationalize this as the investing of personal commitment, hiring of employees, the making of the first sale, and the receipt of external financing. We rely on these definitions as we develop our dependent variable herein.

Since all respondents in the sample have indicated personal commitment, that is all were actively trying start a new business at the time of the first interview, that dimension is a constant for all cases. As such, we define emergence along the remaining three dimensions, hiring of employees, the making of the first sale, and the receipt of external financing, as of the fourth and final telephone interview. A nascent entrepreneur was determined to have hired employees if he or she indicated hiring any full or part-time employees or managers that would not share in ownership. A nascent entrepreneur was determined to have made the first sale if he or she indicated that the new business had received money, income, or fees from the sale of goods or services. A nascent entrepreneur was determined to have received outside financing if he or she had received equity or debt financing from friends, business associates, banks, personal finance companies, venture capitalists, financial institutions, private investors, government agencies, suppliers, and subcontractors. All equity or debt financing from all individuals that are part of the start-up team or are related to members of the start-up team was defined as internal financing. Given these measures, we operationalize the dependent variable as a multidimensional measure of emergence defined as the total number of emergence factors the start-up had achieved divided by the total number of emergence factors relevant to the start-up. It is important to note that while making sales is critical to all
for-profit businesses (representative of all cases in the PSED) the same is not necessarily so for hiring employees and/or obtaining outside financing. Thus, in computing this measure, we only deemed the hiring of employees and the receipt of external financing “relevant” only if the respondent indicated that he/she was seeking or had sought to obtain these ends. This process resulted in a continuous variable pertaining to the percentage of relevant emergence factors achieved, ranging from zero to one.

In order to control for effects that might otherwise influence a nascent entrepreneur’s ability to network and otherwise create a successful firm, we controlled for various individual-level and market-level effects. The uncertainty of the market the emerging organization was seeking to enter was controlled for by the inclusion of a dummy variable with a value of one for markets in which the product/service the organization sought to offer was new to the market (specifically, if it was not available five years prior to the first interview) and a value of zero otherwise. Age is operationalized as the age in years of the respondent. Ethnicity is operationalized as the race of the respondent and is included as a set of two dummy variables (white or “other”) with black as the reference group. Breakdowns beyond this categorization were not practical due to the relatively small number of non-blacks and non-whites in the sample. Gender is operationalized as the gender of the respondent and is included as a dummy variable, with a value of one for female respondents and zero for male respondents. Educational attainment is operationalized as a dummy variable with a value of one for respondents who indicated having obtained a minimum of a four-year college degree and a value of zero otherwise. Lastly, because great variation exists in the amount of time the respondents in the PSED had been active in their start-up efforts at the time of data collection, it is likely that all entrepreneurs had not had an equal opportunity to achieve success by the time of the completion of the interview process. As such, we have also controlled for the duration of the start-up effort, defined as the number of years between the time at which the nascent entrepreneur first conceived of the business idea and the time of the first interview. Since this variable was skewed to the right, the log of this variable plus one was taken in order to normalize the distribution.

ANALYSIS AND RESULTS

First, descriptives and correlation statistics were computed. A visual inspection of these statistics suggests that all variables are normally distributed and that multicollinearity among independent variables is not present (see Table 1).

We tested our model using ordinary least squares (OLS) regression. The results in Table 2 show that the inclusion of the predictor variables results in a significant F-statistic and change in F-statistic as well as a substantial increase in the adjusted $R^2$. As such, the model appears highly predictive of the percentage of emergence factors achieved.

When viewing the parameter estimates for the control variables, it seems that creating an emerging organization is largely unrelated to market factors, but somewhat related to demographic factors. Specifically, the results suggest only that being older and white (as opposed to black) may positively impact the likelihood that an individual will create a successful organization. With respect to the main effects, it appears that network structure, in terms of both the size and ties strength of the initial network is unrelated to emergence. Thus, we conclude no support for Hypotheses 1 and 2. Network content, on the other hand, appears highly predictive of emergence; thus, we conclude support for Hypothesis 3. Networking activity also appears highly predictive of emergence, suggesting support for Hypothesis 4.

An examination of the interaction terms in the model suggests a more complex picture than above. Specifically, the parameter estimate for the interaction of networking activity and network size was negative, as predicted, suggesting support for Hypothesis 5. The parameter estimate for the interaction of networking activity and tie strength was marginally significant and positive, suggesting partial support for
Hypothesis 6. Lastly, the parameter estimate for the interaction between networking activity and the value of network resources was significant and negative, suggesting support for Hypothesis 7.

DISCUSSION

With respect to the control variables, the finding regarding ethnicity is not surprising. In fact, Aldrich (2000: 111) argues that the black community has historically been underrepresented in business ownership in the United States due to that group’s socio-economic disadvantages that resulted from the country’s history of segregation, an argument that may well explain the significant difference between the likelihood of success between black and white entrepreneurs found herein.

With respect to our main findings, we believe two important conclusions can be drawn (see Figure 2). First, the results seem to suggest that while initial the structure of the network is not predictive of emergence, the content is. This finding suggests that who and how many people an entrepreneur has ties to is far less important than what he/she is able to access from them. Given the widely held beliefs regarding the importance of networks as providers of critical resources in the emergence process (Aldrich, 2000), such a finding offers some support for network theory. Relatedly, our finding that increasing the size of the network increases the likelihood of emergence also stands largely in support of network theorists who advocate that when faced with resource constraints, individuals ought to expand their networks in an attempt to gain access to them (Uzzi, 1999). These findings seem supported by our non-findings regarding network structure. The fact that network size is insignificant may highlight a need to tailor ones network to the task at hand. More specifically, while an entrepreneur may have a large group of individuals to whom he/she has ties, only some of them (perhaps very few of them) will have the ability and motivation to help with the emergence process.

Second, our results suggest that the benefit of any increase in the size of the network may be moderated by the initial structure (size and tie strength) and content of the network. Unlike the previous conclusion, this conclusion begins to clarify the conditions under which entrepreneurs should and should not network. Specifically, in cases where entrepreneurs already have ties to comparatively large numbers of largely unrelated contacts who possess valuable resources, further networking may not be relevant. This is particularly important given that networking is a process that requires the investment of significant time, money, and other resources, which entrepreneurs generally lack. Thus, advice for entrepreneurs to expand their networks when trying to create a new organization may be (given the proper context) misguided. This finding may help to explain why network theory has received less than compelling support in the entrepreneurship literature (Hoang and Antoncic, 2003).

We believe that these findings have the potential to inform both academics and practitioners. From an academic perspective, these findings suggest that the reason network hypotheses have not been well supported in studies of new organizations is because many nascent entrepreneurs may already possess the networks necessary to enable their organizations to emerge. From a practitioner perspective, these findings may encourage those nascent entrepreneurs with an established network to focus more on operational activities rather than redundant networking activities, thereby increasing the efficiency to which their limited resources are directed and, in turn, improving their chances for success.

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REFERENCES


Figure 1: Conceptual Model

Network Structure:
- Initial Size of Network ($t_1$)
- Initial Strength of Network Ties ($t_1$)

Networking:
- Change in Network Size ($t_1$-$t_3$)

Network Content:
- Initial Value of Network Resources ($t_1$)

Emergence:
- Made Sales ($t_4$);
- Hired Employees ($t_4$);
- Received Financing ($t_4$)

Hypotheses:
- H5 (-)
- H1 (+)
- H2 (-)
- H3 (+)
- H4 (+)
- H6 (+)
- H7 (-)
### Table 1: Descriptives and Correlations

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* p < 0.05, ** p < 0.01, *** p < 0.001
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<td>6 Education</td>
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<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>7 Duration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>8 Initial network size</td>
<td>-</td>
<td></td>
<td></td>
<td>0.008</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Initial network tie strength</td>
<td>-</td>
<td>0.060</td>
<td>0.712</td>
<td>***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Initial value of network resources</td>
<td>0.064</td>
<td>0.346</td>
<td>***</td>
<td>0.379</td>
<td>***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Change in network size</td>
<td>0.089</td>
<td>*</td>
<td>0.074</td>
<td>*</td>
<td>0.059</td>
<td>0.302</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>12 Hired employees</td>
<td>0.000</td>
<td>0.077</td>
<td>0.084</td>
<td>0.231</td>
<td>***</td>
<td>0.277</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>13 Received external financing</td>
<td>0.085</td>
<td>*</td>
<td>0.114</td>
<td>**</td>
<td>0.032</td>
<td>0.160</td>
<td>***</td>
<td>0.240</td>
</tr>
<tr>
<td>14 Made a sale</td>
<td>0.081</td>
<td>*</td>
<td>0.164</td>
<td>***</td>
<td>0.159</td>
<td>***</td>
<td>0.264</td>
<td>***</td>
</tr>
<tr>
<td>15 All emergence factors</td>
<td>0.028</td>
<td>0.101</td>
<td>**</td>
<td>0.101</td>
<td>**</td>
<td>0.186</td>
<td>***</td>
<td>0.218</td>
</tr>
</tbody>
</table>

* p < 0.05, ** p < 0.01, *** p < 0.001
Table 2: Regression Results: Percent of Emergence Factors Achieved

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
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<tbody>
<tr>
<td>Market uncertainty</td>
<td>-0.057</td>
<td>-0.047</td>
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<tr>
<td>Gender (female)</td>
<td>0.052</td>
<td>0.023</td>
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<tr>
<td>Age</td>
<td>0.082</td>
<td>0.080 *</td>
</tr>
<tr>
<td>Race (white)</td>
<td>0.195 ***</td>
<td>0.183 ***</td>
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<tr>
<td>Race (other)</td>
<td>-0.020</td>
<td>0.004</td>
</tr>
<tr>
<td>Education</td>
<td>0.071 *</td>
<td>0.053</td>
</tr>
<tr>
<td>Duration</td>
<td>0.034</td>
<td>0.002</td>
</tr>
<tr>
<td>Initial network size</td>
<td>0.056</td>
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<tr>
<td>Initial network tie strength</td>
<td>0.152</td>
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</tr>
<tr>
<td>Initial network tie strength (squared)</td>
<td>-0.136</td>
<td>***</td>
</tr>
<tr>
<td>Initial value of network resources</td>
<td>0.178 ***</td>
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</tr>
<tr>
<td>Change in network size</td>
<td>0.287 ***</td>
<td></td>
</tr>
<tr>
<td>Change in network size * Initial network size</td>
<td>-0.163 *</td>
<td></td>
</tr>
<tr>
<td>Change in network size * Initial network tie strength</td>
<td>0.158 +</td>
<td></td>
</tr>
<tr>
<td>Change in network size * Initial value of network resources</td>
<td>-0.163 **</td>
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<tr>
<td>n</td>
<td>784</td>
<td>784</td>
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<tr>
<td>F-statistic</td>
<td>8.947 ***</td>
<td>10.334 ***</td>
</tr>
<tr>
<td>Change in F-statistic</td>
<td>10.760 ***</td>
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</tr>
<tr>
<td>Adjusted R²</td>
<td>0.066</td>
<td>0.152</td>
</tr>
</tbody>
</table>

+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001

Standardized coefficients reported

Figure 2: Summary of findings
Network Structure:
Initial Size of Network ($t_1$)

Network Structure:
Initial Strength of Network Ties ($t_1$)

Networking:
Change in Network Size ($t_1$-$t_3$)

Network Content:
Initial Value of Network Resources ($t_1$)

Emergence:
Made Sales ($t_4$);
Hired Employees ($t_4$);
Received Financing ($t_4$)