

EFFECTS OF NETWORKS ON ENTREPRENEURIAL PERFORMANCE IN A TRANSITION ECONOMY: THE CASE OF RUSSIA

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CHAPTER MENU

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ABSTRACT

Drawing on the *embeddedness* perspective, this paper examines the impact of entrepreneurs' social capital on their firm performance in post-Soviet Russia. Based on face-to-face interviews with 75 Russian entrepreneurs in 1995, and the follow-up with 56 original respondents in 1999, the study contrasts the effects of *structural embeddedness*, *relational embeddedness* and *resource embeddedness* on firm performance. The main finding is that relational embeddedness and resource embeddedness have direct positive impacts on sales growth, profit margin and return on assets in contrast to structural embeddedness that has no impact on performance. The research implies that further research should focus on finding out what dimensions of social capital affect what performance indicators and how they affect. The practical implication is that entrepreneurs should recruit more resource-rich weak ties into their personal networks.

INTRODUCTION

Economic performance of firms in transition economies has been explained by ownership category, industry, and geographic region (Earle, Estrin & Leshchenko, 1996, Richter & Schaffer, 1996), start-up capital

and previous private sector experience of the entrepreneur (Johnson & Loveman, 1995). In this study, I examine the impact of initial social capital on firm performance and suggest a socialized explanation of company performance. In his seminal essay, Granovetter (1985) postulated that actions of economic agents are *embedded* in concrete, ongoing systems of social relations and these relations facilitate and constrain agents' profit and rent seeking actions. Although there are recent successful attempts to operationalize and empirically test the exchange process of embedded actions (Uzzi, 1996, 1997, 1999), the bulk of the empirical research has been devoted to the aspect of instrumental utilisation of personal relations and networks by corporate and individual actors (Portes, 1998).

Social capital defined as networks of relationships and assets located in these networks (Bourdieu, 1986, Burt, 1997a, Coleman, 1988) has positive impacts on firm performance (Baker, 1990), product innovation (Tsai & Ghoshal, 1998), and industry-wide network formation (Walker, Kogut & Shan, 1997). Similarly, social capital of individuals facilitates job and status attainment (Lin, Ensel, & Vaughn, 1981, Marsden & Hurlbert, 1988), enhances individual's power (Krackhardt, 1990) and career mobility (Podolny & Baron, 1997), and impacts CEO compensation (Belliveau, O'Reilly III, & Wade, 1996). Research on personal networks of entrepreneurs revealed that entrepreneurs perceive and exploit business opportunities in disconnected networks (Burt, 1992), seek information, advice and social support from network alters (Aldrich & Zimmer, 1986, Birley, 1985, Nohria, 1992), control and manage exchange structures through network dyads (Larson, 1992), access financial capital (Shane & Cable, 1999), and get an endorsement from prestigious players to influence perceptions of the quality of their ventures (Stuart, Hoang, & Hybels, 1999).

Drawing on the *embeddedness* perspective and research on entrepreneurial networks, I attempt to link varieties of firm performance with initial social networks of entrepreneurs in the context of a transition economy—the Russian Federation. I argue that different dimensions of social capital, e.g., structural composition, relational content and resources, have varying effects on company performance confirming Granovetter's idea of differentiated influences of various types of embeddedness on individuals' economic action (Granovetter, 1990: 99).

I seek to make two contributions to the research literature: First, by applying the embeddedness argument and social capital theory developed and tested in the Western social environment to the Russian reality, I

expand the paradigm boundary to formerly communist societies. Second, in addition and contrast to the previous research, I demonstrate the varying utilitarian value of different components of social capital for several performance indicators and establish a ranking order of their instrumental usefulness.

Resources of individuals defined as valuable assets possessed by persons and embedded in a social network constitute the fundamental linkage between actors' purposive actions and their outcomes, e.g., entrepreneurial entry and exit (Abell, 1996). Initial resources of entrepreneurs, therefore, are found to have a lasting impact upon the venture's performance (Brush & Chaganti, 1999, Cooper, Gimeno-Gascon, & Woo, 1994, Eisenhardt & Schoonhoven, 1990). However, the pattern of dispersion of various resources among individuals at a given moment in time is a function of social structure (Stinchcombe, 1965). Different resources or capital are dispersed unevenly across the hierarchical as well as segmented groups in society (Anheier, Gerhards & Romo, 1995). The volume of resources possessed by an individual or groups is contingent on the overall position of that individual or group in the social space. This uneven resource dispersion across social groups and individuals is referred as *resource heterogeneity* of social actors. The resource heterogeneity forms the set of constraints that governs the functioning of society in a durable way determining the chances of success for instrumental actions of individuals (Bourdieu, 1986). *Social capital heterogeneity* of entrepreneurs refers to the uneven endowment of entrepreneurs with social resources in terms of network range (Burt, 1983b), relations and contact resources (Lai, Lin & Leung, 1998). Due to the socially embedded nature of business transactions, it is assumed, social capital heterogeneity of entrepreneurs leads to varieties of firm performance.

Sociologists elaborated three dimensions of individual's social capital: *structural embeddedness*—the structure of the overall network of relations, *relational embeddedness*—the extent to which economic actions are affected by the quality of actors' personal relations (Granovetter, 1990: 98), and *cognitive embeddedness*—the degree to which an individual shares common code and systems of meaning with a community or collective (Nahapiet & Ghoshal, 1998: 244). Fourth dimension of social capital may be articulated as *resource embeddedness*—the degree to which network ties contain valuable instrumental resources (Lai, et al., 1998, Lin & Dumin, 1986, Marsden & Hurlbert, 1988). The resource embeddedness has been referred as “the material quality of ties” (Uzzi, 1996: 675), and it is a function of

attributes and characteristics of individual alters, e.g., high status contact versus low status contact (Ibarra, 1993). In this study, I focus upon structural embeddedness, relational embeddedness and resource embeddedness of entrepreneurs' social capital.

I operationalize structural embeddedness as network size, heterophily and nonredundancy. *Network size* is defined as the number of direct ties involving individual units (Burt, 1983b, Marsden, 1990). *Network heterophily* refers to the degree which an ego network contains diverse alters, e.g., demographic characteristics or occupational status (Burt, 1983b, Ibarra, 1993, Marsden, 1987, Renzulli, Aldrich & Moody, 1999). *Network nonredundancy* is referred as the extensiveness of contact among the members of an individual's network (Burt, 1992, Marsden, 1990, McEvily & Zaheer, 1999).

Relational embeddedness has been interpreted as relational content (Burt, 1983a, 1997b, Podolny & Baron, 1997), tie strength (Marsden & Campbell, 1984), and relational trust (Galunic & Moran, 1999, Tsai & Ghoshal, 1998). I operationalize relational embeddedness as "*the friendship domain*" indicating strong ties and "*the acquaintance domain*" indicating weak ties (Burt, 1983a, Krackhardt, 1992, Lin & Dumin, 1986).

Lai et al. (1998) operationalized resource embeddedness as contact's resource characteristics that are contingent upon occupational status, authority position, and core versus peripheral sector. I operationalize resource embeddedness as the extent to which an egocentric network is comprised of actors of high socioeconomic status and the extent to which entrepreneurs have been able to marshal financial and material resources from their personal networks.

The instrumental use of personal connections characterized Soviet society at its core. *Blat*—the system of informal contacts has served as an alternative social mechanism for overcoming rigidities in Soviet factory's production and supply practices (Berliner, 1957) and obtaining consumer goods and services under the rationing system that characterized the Soviet economy (Ledeneva, 1998). The scale of informal ties and resources located in these networks were dependent on the political power of social actors (Shkaratan & Figatner, 1992). The transition to market economy made Russians more reliant on personal networks due to the social and institutional chaos prevalent in the country (Ledeneva, 1998).

Based upon the logic of social embeddedness and social capital heterogeneity of entrepreneurs, I propose a number of empirical hypotheses.

HYPOTHESES

Structural Embeddedness

Network Size. It is assumed that large personal networks of entrepreneurs may increase the likelihood of locating clients for their products and services and suppliers to their firms, who are socially bound. This may facilitate sales stabilization and eventual growth since the embeddedness provides a flexible room for negotiations that might allow entrepreneurs to convert the social bonds into revenue growth and other tangible benefits. The personal chemistry between the entrepreneur and the supplier is likely to enable the entrepreneur to purchase raw materials and other production inputs at lower prices, and that might influence profit margin boosting the overall performance. There are empirical evidence that personalized relations between entrepreneurs and their bankers lead to cheaper interest rates on loans (Uzzi, 1999), and spin-off firms get favourable rates on equipment leasing from their parent companies (Webster & Charap, 1993). These arrangements may improve firm's financial performance ratios such as return on assets.

Network Heterophily. The heterophilous networks are conducive to interactions of entrepreneurs with diverse others of different attributes. Bankers may be able to build a broad range of clients' base with differentiated needs across different industries, and this may enable them to customize their products building customer loyalty and spread risks of defaults. In this way, bankers are likely to build customers' dependence, which may enhance their client retention and wallet penetration capabilities. Trading firms may get better access to overdraft facilities, speedy cash management and other services from embedded relationships with bankers whereas production firms may deliver goods in time and be flexible to *ad hoc* customer demands. The network diversity may be crucial for manufacturing firms in the Russian condition: the wide-spread phenomenon of inter-enterprise loans and credits, enterprise arrears for delivered products and barter exchanges that had plagued the Russian economy ever since the late 1980s (Dolgopyatova, 1995) may have forced Russian industrialists to diversify their networks in order to survive. The available empirical evidence supports the proposition that firms in transition economies enter and build deliberately a complicated web of interconnected firms where assets and liabilities are creatively

dispersed in order to reduce the harming effects of environmental uncertainties (Stark, 1996). The simple production chain of resource firms makes them less reliant on personal relations with managers of trading or manufacturing firms although they are likely to gain benefits from bankers in services such as foreign currency exchange or international money transfer and etc.

Network Nonredundancy. A structural hole defined as a relationship of non-redundancy or disconnectedness between two contacts (Burt, 1992: 18) provides rich entrepreneurial opportunities, i.e., conditions for profit generating from being between others, through the manipulative game of *tertius gaudens* (the third who benefits). Besides, entrepreneurs maximize information and control benefits through structural holes: actors harvest monetary benefits from brokering relationships between other players (Burt, 1992: 47).

The vital role of social networks in Russian entrepreneurship has been widely reported although most of the evidence researchers displayed remain descriptive (Huber & Worgotter, 1998). Sedaitis (1998) found that low dense networks of start-up entrepreneurs were associated with better sales records in contrast to high-density networks of spin-off entrepreneurs in Russia.

H1a. The greater the size of initial networks of entrepreneurs, the better the firm's performance.

H1b. The greater the heterophily of initial networks of entrepreneurs the better the firm's performance.

H1c. The greater the nonredundancy of initial networks of entrepreneurs the better the firm's performance.

Relational Embeddedness

Strong and Weak Ties. In contrast to structural embeddedness, Granovetter (1990) stated, relational embeddedness has typically quite direct effects on individual economic actions. Constrained and facilitated by a history of interactions and consequent mutual expectations, actions of economic agents such as price negotiation is largely a function of the personal chemistry as much as rational cost-benefit calculations. For example, Baker (1984) found that the increase in number of option traders impeded communication among actors and that resulted in option price volatility. This happened because as group size increased, the number of personalized trading relations that the average trader could

sustain did not. In this way, relational quality preconditioned option price stability that affects directly firm or trader performance.

Strong ties are described to enhance firm performance directly through trust building, information transfer, and joint problem solving arrangements (Uzzi, 1997). Weak ties also are regarded as performance boosting devices: vaguely defined relationships provide that crucial freedom to act upon opportunities and entrepreneurs with structural autonomy are likely to gain most being not bound by expectations and obligations (Burt, 1992).

H2a. The greater the number of strong ties in initial networks of entrepreneurs the better the firm's performance.

H2b. The greater the number of weak ties in initial networks of entrepreneurs the better the firm's performance.

Resource Embeddedness

Network Resourcefulness. Personal networks that are composed of resourceful and powerful ties will produce higher rates of returns when they are utilized. Burt wrote: "a person with a poorly structured network that includes just one well-placed contact can do well through that contact's sponsorship regardless of how well the person's network as a whole is structured (Burt, 1992: 272). Connections with executives that manage large corporations and banks are conducive to greater volumes of material resources and lucrative contracts. Powerful bureaucrats will be able to provide such "services" as state contracts, tax release and other tangible benefits for firms. Bureaucratic services are prevalent in Russia where political power has a definite market value. A meager empirical research on contact resources i.e., wealth, status and power, found that both the availability of resources and the actual mobilization of resources played a crucial role in finding better jobs (Lai et al., 1998).

H3a. The greater the resourcefulness of initial networks of entrepreneurs the better the firm's performance.

H3b. The greater the resources mobilized from initial networks the better the firm's performance.

METHODOLOGY

Sample and Data Collection

The empirical data of the study is composed of the face-to-face interviews with 75 Russian entrepreneurs in February-June 1995, and the follow-up interviews with 56 original respondents in March-May 1999. Pilot interviews with six Moscow firms were conducted in August 1994.

In 1995, I selected 75 firms on the basis of a stratified random sampling procedure in three Russian cities, i.e., Moscow, Ekaterinburg, and Petrozavodsk. The computerised database of registered businesses of the Moscow City Committee of Statistics, Business Assistance Centre of the Sverdlovsk Regional Administration in Ekaterinburg, and the State Committee of Statistics of the Republic of Karelia in Petrozavodsk were used as sampling populations. I created twelve lists of firms (four sectors and three sizes) each of which contained twenty firm names.

Banks were classified in accordance with the following criteria: small—charter funds < 50,000 US\$, medium—50,001–250,000 US\$, and large—> 250,001 US\$. This grouping was confirmed in interviews with Russian experts and Central bank officials. A similar classification has been established in another study of Russian banks (Lapidus & van de Waal-Palms, 1997). In manufacturing and the resource sector, firms were grouped: small— < 100 employees, medium—101–500 employees, and large— > 501 employees. Trade firms were classified: small— < 50 employees, medium—51–200 employees, and large— > 201 employees. The classification is based on the definition of small firms in the Russian law and discussions with Russian experts (Rossiiskaya federatsiya, 1995).

Every second firm on these lists was selected for contact. In all, 120 entrepreneurs were contacted and 82 agreed to be interviewed. The response rate was 68 percent. 7 respondents were discovered as ineligible in the field, so that the final sample consisted of 75 entrepreneurs and directors. Seventy-five entrepreneurs were from four sectors (banking—22, trade—21, manufacturing—22, and the resource sector—10) in three cities (Moscow—30, Ekaterinburg—23, and Petrozavodsk—22). In the sample, there were 30 large firms, 22 medium-sized firms, and 23 small firms, and 50 new ventures or *de novo* firms and 25 privatized companies. Interviews were conducted with a specially designed questionnaire that contained questions on entrepreneurial networks and firm characteristics.

The follow-up study concentrated on firm performance. I was able to contact 66 original respondents. The remaining 9 respondents were not contacted for the following reasons: 2 were murdered, 1 committed suicide, 2 left the country, 2 were hiding abroad from criminal charges, and 2 were unreachable. 59 respondents were still in business and 3

declined to be re-interviewed. Among those 7 respondents that discontinued their businesses 2 were working as middle managers, 1 became civil servant, a banker became local politician, small entrepreneur was unemployed and a director of a privatised firm retired.

Financial data was collected from firms as well as other sources such as the Central Bank of Russia, Association of Russian Banks, the Foundation for Small Business Development in three cities, and local tax offices. Accounting data in Roubles have been deflated by the year's average exchange rate of US\$ and Russian Roubles published in *The Economist*.

Dependent Variables

Firm performance is measured by sales growth, operating profit margin and return on assets (Earle et al., 1996). *Sales growth* for each year (1996, 1997, 1998) and the average sales growth for three years were expressed in percentage. I use sales growth rather than sales figures because of the mixed sample of large, medium and small firms as well as firms from four different industries. *Operating profit margin* for each year and the average operating profit margin were expressed in percentage. *Return on assets* for each year and the average return on assets was expressed in percentage.

Independent Variables

Network size is measured by the number of ties indicated by entrepreneurs. I presented a table where twelve types of occupations (high rank official in ministries and agencies, middle and low rank official in ministries and agencies, high rank official in local governments, middle and low rank official in local governments, managers of large banks, managers of medium and small banks, managers of large manufacturing plants, managers of medium and small manufacturing plants, managers of large trade firms, managers of medium and small trade firms, managers large resource sector firms, and managers of medium and small resource sector firms) were listed in rows, and two types of tie strength (friendship and acquaintances) were placed in columns (Lin & Dumin, 1986). I asked the respondents to indicate how many people were in each cell. *Network heterophily* measures the degree to which an egocentric network contains alters from different industries, i.e., positions in ministries and local governments, banking, trade, manufacturing, and the resource sector. It is measured as the proportion of non-industry contacts within the total number of ties. *Network nonredundancy* captures the proportion of nonredundant ties. Redundant

ties include all “friends”, and “acquaintances” that know each other. During the interviews, respondents were asked to indicate how many of alters-acquaintances know each other (Minor, 1983).

Strong ties are the numbers of “friends.” *Weak ties* measure the number of “acquaintances.” Due to the culture sensitive nature of concepts “friendship” and “acquaintance,” I presented the Russian translations: “*drug*” as friend and “*znakomyi*” as acquaintance.

Network resourcefulness captures the number of high rank officials in ministries, high rank officials in local governments, managers of large banks, managers of large manufacturing plants, managers of large trade firms, and managers of large resource sector firms. *Financial resources mobilized 95* are measured as “yes = 1” and “no = 0.”

Control Variables

Industry (banking, trade, manufacturing, and the resource sector), firm size (large, medium and small), region (Moscow, Ekaterinburg, and Petrozavodsk) and firm origin (new venture versus privatized) are controlled in this study.

RESULTS

Descriptive Statistics

The mean performance indicators given in **Table 1** show that Russian firms performed poorly: average sales growth for three years was 1% (s.d. = 0.33), average profit margin was—22% (s.d. = 0.86), and average return on assets was—9% (s.d. = 0.96).

The mean network size was 34 persons (s.d. = 9.42). The mean heterophily was 82% (s.d. = 0.06) whereas 39 % (s.d. = 0.14) of ties were nonredundant. A typical entrepreneur had 12 friends (s.d. = 4.7) and 22 acquaintances (s.d. = 6.5). The mean of resource-rich ties was 16 (s.d. = 6.6), and 41 percent of interviewees (s.d. = 0.49) had mobilized financial resources.

Firm Performance

Based on significant correlation coefficients, I included weak ties and resources mobilized 95 as independent variables and sales growth 98, profit margin 98, return on assets 98 and average sales growth as dependent variables in the regression analysis.

Table 2 provides the results of multivariate regression predicting firm performance as a function of social capital of entrepreneurs, controlling for industry, firm size, firm origin and region. The baseline model (1) includes industry, size, firm origin and region dummies. Resource sector dummy, Petrozavodsk dummy, medium size dummy, and privatised dummy were excluded in the regression analysis due to their weak contributions to the models. Models 2-7 show the effects of two independent variables on various performance indicators. Model 2 demonstrates that weak ties ($B = 0.02$, $p < 0.05$) are positively related to sales growth 98 although the model is not significant. Model 3 indicates that resources mobilized 95 ($B = 0.35$, $p < 0.01$) are associated with sales growth 98 and the model is significant ($F = 2.11$, $R^2 = 0.25$). Model 4 reports that weak ties ($B = 0.01$, $p < 0.05$) and resources mobilized 95 ($B = 0.37$, $p < 0.01$) both are positively and significantly correlated to sales growth 98. The overall model is also significant ($F = 3.50$, $R^2 = 0.39$). Models 5 and 6 reveal that weak ties are positively correlated to profit margin 98 ($B = 0.05$, $p < 0.05$) and return on assets 98 ($B = 0.05$, $p < 0.05$). None of the models is significant. Model 7 shows that resources mobilized 95 ($B = 0.26$, $p < 0.01$) are associated with average sales growth, and the model ($F = 1.97$, $R^2 = 0.17$) is significant.

DISCUSSION

Pearson's correlations presented in **Table 1** confirm that no indicator of structural dimension of entrepreneurs' social capital is associated with firm performance variables. This means that the proposed hypotheses on network size (H1a), heterophily (H1b), are nonredundancy (H1c), are not affirmative. The finding is consistent with Granovetter's (1990) conclusion that structural embeddedness does not affect directly individuals' economic actions. The heterogeneity in structural characteristics of social capital does not lead to differentiated performance of Russian entrepreneurial firms.

While strong ties (friendship) do not facilitate better performance, weak ties (acquaintance) do influence positively firm's sales growth, profit margin and return on assets. Hypothesis 2a is not supported whereas hypothesis 2b is confirmed. The finding is in the line to confirm tentatively the proposition that relational embeddedness directly impacts economic actions. The initial heterogeneity in relational dimension of social capital is conducive to diverse performance outcomes.

The empirical evidence rejects the hypothesis on resourcefulness (H3a), i.e., the availability of resources, but supports the hypothesis on resources

mobilized 95 (H3b), i.e., the actual utilization of resources. The fact confirms the relative explanatory power of resource embeddedness as a dimension of social capital. In contrast to weak ties that had affected all three performance indicators, resources mobilized 95 have boosted sales growth 98 and average sales growth. This indicates that different aspects of social capital influence different performance indicators. Overall, varieties in performance parameters are the result of the resource heterogeneity of social networks of Russian entrepreneurs.

The striking finding is that weak ties and resources are useful in the period of economic crisis: two variables are significant in 1998, the year of the Russian default. It may be tentatively concluded that social capital is particularly valuable in the condition of extreme uncertainty.

CONCLUSION

Various dimensions of individuals' social capital have different effects on entrepreneurial performance in Russia: *Relational embeddedness* and *resource embeddedness* have direct positive impacts on sales growth, profit margin and return on assets in contrast to *structural embeddedness* that has no impact on performance. The heterogeneity in relational and resource dimensions of initial social capital of entrepreneurs, therefore, determines varieties of entrepreneurial performance in Russia.

The study leads to the conclusion that the basic assumptions of *embeddedness* perspective and social capital theory pertains in the Russian social and economic conditions.

Several limitations should be emphasized. The sample size is relatively small, and therefore, one should be cautious of over-generalization of the results. The research site is Russia, which is going through the simultaneous social, economic and political crises, and therefore, this limits the generalizability of the findings to more stable Western societies. Company performance influencing variables such as strategy or entrepreneurial human capital were not incorporated in the model, and therefore, the study may have over-emphasized the effects of social capital.

The research implies that further research should focus on finding out what dimensions of social capital affect what performance indicators, and how they affect. The practical implication is that entrepreneurs should recruit more resource-rich weak ties into their personal networks.

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REFERENCES

Abell, P. (1996) "Self-employment and entrepreneurship. A study of entry and exit." In *James Coleman*, ed. J. Clark, 175–206. London: Falmer Press.

Aldrich, H., & Zimmer, C. (1986) "Entrepreneurship through social networks." In *The art and science of entrepreneurship*, ed. D. Sexton and R. Smilor, 3–23. Cambridge, Mass: Ballinger Publishing.

Aldrich, H., Rosen, B., & Woodward, W. (1987) "The impact of social networks on business foundings and profit: A longitudinal study." In *Frontiers in entrepreneurship research*, ed. J. Churchil et al., 154–168. Wellesley, Mass: Babson College.

Anheier, H., Gerhards, J., & Romo, F. (1995) "Forms of capital and social structure in cultural fields: Examining Bourdieu's social topography." *American Journal of Sociology*, 100 (4): 859–903.

Baker, W. (1984) "The social structure of a national securities market." *American Journal of Sociology*, 89 (4): 775–811.

Baker, W. (1990) "Market networks and corporate behavior." *American Journal of Sociology*, 96 (3): 589–625.

Belliveau, M., O'Reilly, C., & Wade, J. (1996) "Social capital at the top: Effects of social similarity and status on CEO compensation." *Academy of Management Journal*, 39(6): 1568–1593.

Berliner, J. (1957) *Factory and manager in the USSR*. Cambridge, MA: Harvard University Press.

Birley, S. (1985) "The role of networks in the entrepreneurial process." *Journal of Business Venturing*, 1(1): 107–117.

Bourdieu, P. (1986) "The forms of capital. *Handbook of theory and research for the sociology of education*, 241–258. New York: Greenwood.

Brush, C., & Chaganti, R. (1999) "Businesses without glamour? An analysis of resources on performance by size and age in small service and retail firm." *Journal of Business Venturing*, 14: 233–257.

Burt, R. (1983a) "Distinguishing relational contents." *Applied network analysis: A methodological introduction*, ed. R. Burt and M. Minor, 35–74. London: Sage.

Burt, R. (1983b) "Range." *Applied network analysis: A methodological introduction*, ed. R. Burt and M. Minor, 176–194. London: Sage.

Burt, R. (1992) *Structural holes: The social structure of competition*. Cambridge: Harvard University Press.

Burt, R. (1997a) "The contingent value of social capital." *Administrative Science Quarterly*, 42: 339–365.

Burt, R. (1997b) "A note on social capital and network content." *Social Networks*, 19: 355–373.

Coleman, J. (1988) "Social capital in the creation of human capital." *American Journal of Sociology*, 94: S95–S120.

Cooper, A., Gimeno-Gascon, J., & Woo, C. (1994) "Initial human and financial capital as predictors of new venture performance." *Journal of Business Venturing*, 9: 371–395.

Dolgopyatova, T. (1995) *Rossiiskie predpriyatiya v perekhodnoi ekonomike, ekonomicheskie problemy i povedenie*, Moscow: Delo.

Earle, J., Estrin, S., & Leshchenko, L. (1996) "Ownership structures, patterns of control, and enterprise behaviour in Russia." In *Enterprise restructuring and economic policy in Russia*, ed. S. Commander, Q. Fan, & M. Schaffer, 205–252. Washington, DC: World Bank.

Eisenhardt, K., & Schoonhoven, C. (1990) "Organizational growth: Linking founding teams, strategy, environment, and growth among U.S. semi-conductor ventures." *Administrative Science Quarterly*, 28: 274–291.

Galunic, C., & Moran, P. (1999) *Social capital and productive exchange: Structural and relational embeddedness and managerial performance link*. Manuscript, London Business School.

Granovetter, M. (1985) "Economic action and social structure: The problem of embeddedness." *American Journal of Sociology*, 91 (3): 481–510.

Granovetter, M. (1990) "The old and the new economic sociology: A history and an agenda." *Beyond the market place: Rethinking economy and society*, ed. R. Friedland & A. Robertson, 89–112. New York: Walter de Gruyter.

Huber, P., & Worgotter, A. (1998) "Observations on Russian business networks." *Post-Soviet Affairs*, 14: 81–91.

Ibarra, H. (1993) "Personal networks of women and minorities in management: A conceptual framework." *Academy of Management Review*, 18 (1): 56–87.

Johnson, S., & Loveman, G. (1995) *Starting over in Eastern Europe: Entrepreneurship and economic renewal*. Boston: Harvard Business School Press.

Krackhardt, D. (1990) "Assessing the political landscape: Structure, cognition, and power in organizations." *Administrative Science Quarterly*, 35: 342–369.

Krackhardt, D. (1992) "The strength of strong ties: The importance of *philos* in organizations." In *Networks and organizations: Structure, form, and action*, ed. N. Nohria & R. Eccles, 216–239. Cambridge, Mass: Harvard Business School Press.

Lai, G., Lin, N., & Leung, S. (1998) "Network resources, contact resources and status attainment." *Social Networks*, 20: 159–178.

Lapidus, M., & van de Waal-Palms, P. (1997) *Understanding Russian banking*. Moscow: Mir.

Larson, A. (1992) "Network dyads in entrepreneurial settings: A study of the governance of exchange relationships." *Administrative Science Quarterly*, 37: 76–104.

Ledeneva, A. (1998) *Russia's economy of favours: Blat, networking and informal exchange*. Cambridge: Cambridge University Press.

Lin, N., & Dumin, M. (1986) "Access to occupations through social ties." *Social Networks*, 8: 365–385.

- Lin, N., Vaughn, J., & Ensel, W. (1981) "Social resources and occupational status attainment." *Social Forces*, 59(4): 1163–81.
- Marsden, P. (1987) "Core discussion networks of Americans." *American Sociological Review*, 52: 122–131.
- Marsden, P. (1990) "Network data and measurement." *Annual Review of Sociology*, 16: 435–463.
- Marsden, P., & Campbell, K. (1984) "Measuring tie strength." *Social Forces*, 63 (2): 482–501.
- Marsden, P., & Hurlbert, J. (1988) "Social resources and mobility outcomes: A replication and extension." *Social Forces*, 67: 1038–1059.
- McEvily, B., & Zaheer, A. (1999) "Bridging ties: A source of firm heterogeneity in competitive capabilities." *Strategic Management Journal*, 20: 1133–1156.
- Minor, M. (1983) "Panel data on ego networks." In *Applied network analysis: A methodological introduction*, ed. R. Burt & M. Minor, 89–99. London: Sage.
- Nahapiet, J., & Ghoshal, S. (1998) "Social capital, intellectual capital, and organizational advantage." *Academy of Management Review*, 23 (2): 242–266.
- Nohria, N. (1992) "Information and search in the creation on new business ventures: The case of the 128 venture group." In *Networks and organizations: Structure, form, and action*, ed. N. Nohria & R. Eccles, 240–261. Boston: Harvard Business School.
- Podolny, J., & Baron, J. (1997) "Resources and relationships: Social networks and mobility in the work place." *American Sociological Review*, 62: 673–693.
- Portes, A. (1998) "Social capital: Its origin and applications in modern sociology." *Annual Review of Sociology*, 24: 1–24.
- Reese, P., & Aldrich, H. (1995) "Entrepreneurial networks and business performance: A panel study of small and medium-sized firms in the research triangle." In *International Entrepreneurship*, ed. S. Birley, and I. Macmillan, 124–146. London: Routledge.

Renzulli, L., Aldrich, H., & Moody, J. (1999) *Family matters: Gender, networks, and entrepreneurial outcomes*. Manuscript. Department of Sociology, University of North Carolina at Chapel Hill.

Richter, A., & Schaffer, M. (1996) "The performance of *de novo* private firms in Russian manufacturing." *Enterprise restructuring and economic policy in Russia*, ed. S. Commander, Q. Fan, and M. Schaffer, 253–274. Washington, DC: World Bank.

Rossiiskaya federatsiya. (1995) *Zakon o gosudarstvennoi podderzhke malogo predprinimatel'stva*. Moscow.

Sedaitis, J. (1998) "The alliances of spin-offs versus start-ups: Social ties in the genesis of post-Soviet alliances." *Organization Science*, 9 (3): 368–381.

Shane, S., & Cable, D. (1999) *Social capital and the financing of new ventures*. Manuscript. MIT Sloan School of Management.

Shkaratan, O., & Figatner, Yu. (1992) "Starye i novye khozyaeva Rossii." *Mir Rossii*, 1(1): 67–90.

Stark, D. (1996) "Recombinant property in East European capitalism." *American Journal of Sociology*, 101 (1): 993–1027.

Stinchcombe, A. (1965) "Social structure and organisations." In *Handbook of organisations*, ed. J. March, 142–193. Chicago: Rand McNally.

Stuart, T., Hoang, H., & Hybels, R. (1999) "Interorganizational endorsement and the performance of entrepreneurial ventures." *Administrative Science Quarterly*, 44: 315–349.

Tsai, W., & Ghoshal, S. 1998. "Social capital and value creation: The role of intrafirm networks." *Academy of Management Journal*, 41 (4): 464–476.

Uzzi, B. (1996) "The sources and consequences of embeddedness for the economic performance of organisations: The network effect." *American Sociological Review*, 61: 674–698.

Uzzi, B. (1997) "Social structure and competition in interfirm networks: The paradox of embeddedness." *Administrative Science Quarterly*, 42: 35–67.

Uzzi, B. (1999) “Embeddedness in the making of financial capital: How social relations and networks benefit firms seeking financing.” *American Sociological Review*, 64: 481–505.

Walker, G., Kogut, B., & Shan, W. (1997) “Social capital, structural holes, and the formation of an industry network.” *Organization Science*, 8(2): 109–125.

Webster, L., & Charap, J. (1993) *The emergence of private sector manufacturing in St. Petersburg*. Technical paper no. 228. Washington DC: World Bank.

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