



Indian Institute of Management Calcutta

Working Paper Series

WPS No 872/ December 2021

**Uncovering the secrets of small family businesses in a developing economy: the unsuspected
role of social capital and household income interactions**

Saravana Jaikumar*

Assistant Professor, Marketing,
Indian Institute of Management Calcutta, India,
Email: saravana@iimcal.ac.in

Rashmi Kumari

Assistant Professor, Marketing,
Indian Institute of Management Amritsar, India
Email: rashmik@iimamritsar.ac.in

* Corresponding author

Indian Institute of Management Calcutta, Joka, D.H. Road, Kolkata 700104

URL: <https://www.iimcal.ac.in/faculty/publications/working-papers/>

Uncovering the secrets of small family businesses in a developing economy: the unsuspected role of social capital and household income interactions

Saravana Jaikumar¹

Rashmi Kumari²

Abstract

We examine the impact of various dimensions of social capital – family, structural, cognitive – on businesses in an emerging economy context. Using Indian household panel data (2004 and 2011), we find that family social capital (family size, family members in business) hurts business income (the effect is weaker for low-income households). Structural social capital (bonding ties and informal social networks) positively influences business outcomes. Our findings suggest the importance of increasing the involvement of low-income household members in the business and developing structural social capital.

Keywords: Emerging Economies, Social Capital, Indian Human Development Survey, Business Performance, Business Income.

¹ Professor, IIM Calcutta , Email:saravana@iimcal.ac.in

² Assistant Professor, IIM Amritsar, Email:rasmik@iimamritsar.ac.in

Uncovering the secrets of small family businesses in a developing economy: the unsuspected role of social capital and household income interactions

Introduction

Emerging economies, characterized by institutional voids (Khanna & Palepu, 1999), market liberalizations, rapid economic growth, and widespread resource constraints, present a unique context for studying small business performance. A prominent characteristic of emerging economies is that majority of businesses are of small scale and are owned by low to middle-income households (Gindling & Newhouse, 2014). In such emerging economies, the business initiative is a means to livelihood for these households and is one of the preferred types of employments (Peng, 2001). Further, in such family-owned small businesses, the business goals are typically coupled with social goals (Wheelock & Baines, 1998). Unlike developed economies, wherein well-established institutions facilitate effective flow of labor and capital resources for business activities, these economies are marked with dysfunctional formal structures (e.g., lack of good quality financial market intermediaries) and underdeveloped informal institutions (e.g., inchoate ecosystem for business advice and information exchange) (Khanna & Palepu, 1999). The relatively poor market supporting institutions in emerging markets makes the role of social networks in mobilizing resources even more important. Majority of entrepreneurs in these economies rely on their personal networks or social capital to sustain and grow their business. Further, the prevalence of collectivist culture in such economies increases dependency on social networks and ties (Acquaah, 2007). The networks facilitate the exchange of information and resources (Acquaah, 2007) and create avenues to acquire and exploit knowledge (Dyer & Singh,

1998; Lane & Lubatkin, 1998). These unique characteristics of emerging economies induce entrepreneurs to utilize their social capital differently than their counterparts in developed economies. They use personal networks and relationships more often to survive in an uncertain business environment (Acquaah, 2007).

Despite the theoretical attention and few studies that evaluate a certain aspect of social capital on business performance (e.g., Vissa & Chacar, 2009), there is a lack of empirical studies that examine the impact of various dimensions of social capital in an emerging economy, such as India. Further, there is no systematic empirical investigation into the role of social capital on business performance among low-income households (referred to as ‘bottom of the pyramid’ households) in emerging economies. In this paper, we adopt the multidimensional construct of social capital conceptualized by Nahapiet & Ghoshal (1998) to examine the impact of different dimensions of social capital on business performance in the context of India. Specifically, we explore the effect of the family (household size, family members in business), structural (civic participation – bridging ties and bonding ties, political participation, social networks), and cognitive (social cohesion and collective efficacy) dimensions of social capital on business income. We further compare the role of social capital between businesses run by low-income and high-income households.

Social capital plays an important role in the businesses run by entrepreneurs in emerging economies, characterized by the asymmetric flow of information and incomplete or non-existent markets (Ma, 2002). We propose that family social capital (family size, number of family members in business) may have a negative impact on business income. The large family size may impose

greater responsibility on the family member handling the business, thus negatively affecting one's productivity (Fafchamps & Minten, 2002). Further, keeping family members in the business blurs the firm-household boundaries (Viswanathan et al., 2010) and obstructs business activities by creating free-riding problems (Adler & Kwon, 2002).

Next, structural social capital, resources embedded in the networks (Bourdieu, 1986), may have a positive effect on business income. Further, structural social capital facilitates the acquisition of other forms of capital such as human and intellectual capital (Acquaah, 2007) and provides benefits such as influence, control, power, information access, and solidarity (Adler & Kwon, 2002). The four components of structural social capital – i) civic participation: bonding (or strong ties), ii) civic participation: bridging (or weak ties), iii) political participation, and iv) informal social networks – reduce transaction costs (Fafchamps & Minten, 2002), facilitate the sharing of high-quality private information (in otherwise information-poor environments) (Uzzi, 1997), provide business growth opportunities (Poortinga, 2012) and access to information, finance, skills, knowledge, advice, and opportunities (Klyver et al., 2008).

Finally, we argue that cognitive social capital, “resources providing shared representations, interpretations and systems of meaning among parties (Nahapiet & Ghoshal, 1998),” may also have a positive effect on business income. The two components of cognitive social capital - i) social cohesion (level of conflict in the community) and ii) collective efficacy (extent to which the community comes together to solve common issues) – may motivate low-income entrepreneurs to exchange their business knowledge with each other (Nahapiet & Ghoshal, 1998) by inducing a feeling of solidarity and mutual trust (Story, 2014).

Using panel data of 34,621 Indian households, we extracted a subsample of 3,913 households that reported running a business in both rounds of the Indian Human Development Survey (henceforth, IHDS) (2004 and 2011) and examined the effect of different dimensions of social capital on business income. Our findings suggest that family social capital (family size - number of adult members) hurts the per capita income from the business - although by a lesser amount for low-income households. Among the components of structural social capital, while strong ties (bonding) with people sharing similar social identities and resources embedded in the informal social network have a positive effect on the income from business, weak ties (bridging) with people of different social identities and political participation do not have any significant effect. Finally, cognitive social capital does not have any influence on business income.

Our findings have significant contributions to the understanding of the role of social capital in small businesses in India, an emerging economy. They help us isolate the effect of different dimensions (family, structural, and cognitive) of social capital on the performance of small businesses. Further, specific components (such as household size, bonding, bridging, and informal social networks) through which these dimensions influence business outcomes are identified. The negative effect of household size on small business performance suggests the need for government initiatives to generate employment opportunities for adult members of the families. Further, the positive impact of bonding (strong ties) and informal social networks on business performance highlight the need for initiatives that foster connections with individuals who share similar social identities or are from different professions such as teachers, government officials, doctors, etc.

The rest of the paper is structured as follows. First, we provide the conceptual background and develop hypotheses on the effects of social capital on business performance. Second, we describe the IHDS panel dataset, and key variables used to investigate the relationship of interest. Third, we outline the empirical frameworks followed by the results of the analysis. Finally, we conclude with implications of our findings.

Conceptual background and hypothesis development

Social capital was originally conceptualized as a unidimensional construct encompassing resources embedded in the social networks and relationships, but was later broadened to include norms and values concomitant with the relationships (Liao & Welsch, 2005). Ever since its conception, the concept of social capital has been applied to a wide range of areas, from poverty alleviation to organizational performance and entrepreneurship (Narayan, 1999; Acquaah, 2007). The impact of social capital on economic performance, growth, and productivity of firms (Fafchamps & Minten, 2002) have also been observed in the context of developed economies. Nahapiet & Ghoshal (1998) propose three dimensions of social capital, viz. family, structural, and cognitive.

Family social capital

A prominent family social capital for businesses in emerging economies is the household itself. The behavior of small family-owned businesses in such emerging markets typically depends on the entire household (Wheelock & Baines, 1998). Hence it is essential to consider the entire household as a unit rather than the individual heading the business (Ram et al., 2001; Sieger et al., 2011). The involvement of the household members in such businesses is high to the extent

that a family-embeddedness perspective for entrepreneurship has been advocated in the literature (Pearson et al., 2008). As the boundaries between business and household are blurred in emerging economies, household members are typically involved in business strategy decision-making (Brannon et al., 2013).

Prior literature states that the family dimension (e.g., family) may not have a positive impact on business (Fafchamps & Minten, 2002). The large size of the family may overburden the member handling the business, and hence may reduce his/her productivity (Fafchamps & Minten, 2002). Further, keeping family members in the business may blur the firm-household boundaries (Viswanathan et al., 2010). The strong ties with them may create free-riding problems and obstruction in business activities (Adler & Kwon, 2002). Members may not work as hard as hired employees as the members may perceive their primary function to be 'to keep company to the owner than to work' (Fafchamps & Minten, 2002). Hence, we argue that family social capital (family size, number of family members in the business) will have a negative effect on business income. Further, the cost of poor business performance would be even more for low-income households as these small businesses are, if not only, then a major source of their livelihood. Therefore, we argue that the family social capital would have a lower negative effect on business income for low-income households.

H1: Family social capital (a. family size; b. number of family members in business) of a household will have a negative effect on business income.

H2: Family social capital (a. family size; b. number of family members in business) of a household will have a lower negative impact on the business income of low-income households compared to high-income households.

Structural social capital

Structural social capital, resources embedded in the network (Bourdieu, 1986), may facilitate the acquisition of other forms of capital such as human and intellectual capital (Acquaah, 2007) and provide benefits such as influence, control, power, information access, and solidarity (Adler & Kwon, 2002). Structural social capital has four dimensions – i) civic participation: bonding (or strong ties), ii) civic participation: bridging (or weak ties), iii) political participation, and iv) informal social networks. Civic participation, including bonding with individuals sharing similar social identities (e.g., caste and religion) and bridging ties with those having different social identities (Granovetter, 1983), may affect business outcomes by reducing the transaction costs (Fafchamps & Minten, 2002) through social interactions (Tsai & Ghoshal, 1998). Specifically, bonding ties enable the entrepreneurs in emerging economies to obtain high-quality private information (in otherwise information-poor environments) due to high trust embedded in the relationships that is unavailable through bridging ties (Uzzi, 1997). Political participation, involving ties with influential people (Poortinga, 2012), can provide business growth opportunities and protection against any form of exploitations by local law authorities or other powerful entities. Finally, social networks may provide access to information, finance, skills, knowledge, advice, and opportunities (Klyver et al., 2008) that are crucial for business

performance. These networks serve as reservoirs to leverage ideas and resources for poor communities (Woolcock, 2001).

H3: Structural social capital (a. bonding; b. bridging; c. political participation; d. informal social networks) of a household will have a positive effect on business income.

H4: Structural social capital (a. bonding; b. bridging; c. political participation; d. informal social networks) of a household will have a higher impact on the business income of low-income households compared to high-income households.

Cognitive social capital

Cognitive social capital, “resources providing shared representations, interpretations and systems of meaning among parties” (Nahapiet & Ghoshal, 1998, p.4), can be segregated into – i) social cohesion and ii) collective efficacy. Social cohesion is defined as “extent of connectedness and solidarity among groups in society” (Kawachi & Berkman 2000), and collective efficacy is defined as “social cohesion among neighbors combined with their willingness to intervene on behalf of the common good” (Sampson et al., 1997), are more aligned with the notions of social norms, trust, and reciprocity (Story, 2014). Social cohesion would induce a feeling of solidarity and mutual trust (Story, 2014) among low-income entrepreneurs, motivating them to exchange their business knowledge with each other (Nahapiet & Ghoshal, 1998). Similarly, collective efficacy, focused on keeping group interest over self-interest (Coleman, 1988), may lead to a culture of helping each other in running small businesses. Thus, we hypothesize that cognitive social capital (social cohesion and collective efficacy) may have a positive effect on business income. Further, we argue that the role of cognitive social capital would be even more crucial for

low-income households as the paucity of money increases the dependency on peer groups for subsistence.

H5: Cognitive social capital (a. social cohesion; b. collective efficacy) of a household will have a positive effect on business income.

H6: Cognitive social capital (a. social cohesion; b. collective efficacy) of a household will have a higher impact on the business income of low-income households compared to high-income households.

Data and measures

We use data from IHDS 2004 and 2011 to empirically test our hypotheses in the context of India. In 2004, the University of Maryland and the National Council of Applied Economic Research (NCAER) organized and conducted the IHDS. Data was collected from a nationally representative sample of 41,554 households across India, covering all 33 states and union territories. The survey covered 1,503 villages and 971 urban areas across the country. Further, the sample consists of 27,010 rural and 13,126 urban households (Desai & Vanneman, 2005). In 2011, the second round of interviews (IHDS II) was conducted with a sample of 42,152 households. Majority of the households interviewed in 2004 (83%) were re-interviewed in IHDS II. Further, the second wave of IHDS covered 1,420 villages and 1,042 urban areas across the country (Desai & Vanneman, 2011). We merged the two surveys to create a panel of 34,621 households (69,242 observations across two time periods). Further, we also used the deflators specified in IHDS II to convert all amounts (business profits, income from various sources, and

expenses) in 2011 to 2004 values³, thus creating a unique dataset that could provide rich insights into the changes at the household level. The waves of the survey captured a number of variables - whether the household members owned a business (of any scale) and, if so, the details, including revenues, expenses, net income, and the list of household members participating in the business.

Family social capital

Household size

IHDS captures household composition and reports the number of adults and number of children in each household. We use the number of adults as the household size metric⁴ (under the assumption that only adults contribute to the business activities and are also responsible for the social capital of the household).

Family members in business

Households report the details of family members participating in business activities. We verify that these members are adults (if any children are included, we drop them under the assumption that only adults contribute to the social capital of the household). We use the number of adult family members contributing to business activities as another independent variable contributing to business performance.

³ Income and consumption expenses in 2011 survey data were converted to 2004 values using deflators. The deflators are based on CPI (Consumer Price Index) and are month adjusted.

⁴ We also use total household size (number of adults and children) and redo the analysis as a robustness check.

Structural social capital

Civic participation

The survey waves capture information on membership in associations and organizations. Households responded to whether they are a member of 9 associations such as self-help groups, credit groups, cooperatives, and so on (entire list given in Appendix A). Based on prior research (e.g., Story, 2014), we separated the associations into two groups – *bridging ties and bonding ties*. Memberships in women’s groups such as Mahila mandals and self-help groups, credit or savings group, youth clubs, sports groups, trade unions, and cooperatives were classified as bridging ties. Memberships in any religious, caste or festival organizations were classified as bonding ties. We add the number of memberships in associations to obtain a proxy for each of the bridging and bonding dimensions of civic participation.

Political participation

Households responded to whether any member attended any public meetings and whether any member holds an official position with the village panchayat or similar units. Specifically, households responded to “Have you or anyone in the household attended a public meeting called by the village panchayat/Nagar Palika/ward committee in the last year?” (1 - yes / 0 - no response). Further households also responded to “Is anyone in the household an official of the village panchayat/Nagar Palika/ward committee?” (3 point scale: 0 - nobody close to the household is a member; 1 - somebody close to the household is a member; or 2 - someone in the

household is a member). Responses to these two questions (sum of the two responses) were used to operationalize political participation.

Informal social networks

IHDS captures information on the informal social network of the household. In short, the survey prompted whether the household is acquainted with people working in specific professions (doctors, teachers, and government officials) and whether such acquaintances belonged to a) own relatives/caste/community, and b) outside the caste/community. A household could respond yes/no for (a) and (b) for each of the professions. We add the number of 'yes' to indicate the informal social network of a household. Responses to these six elements were added to operationalize social networks.

Cognitive social capital

Social cohesion

IHDS recorded the level of cohesion in the community using two questions – i) “In this village/neighborhood, do people generally get along with each other or is there some conflict or a lot of conflicts?” and (ii) “In this village/neighborhood, how much conflict would you say there is among the communities/jatis that live here?” Households responded to these questions on a 3 point scale (a lot of conflicts, some conflict, and not much conflict). Responses were coded as: 0 – a lot of conflicts, 1 – some conflict, and 2 – not much conflict, with higher values indicating higher social cohesion.

Collective efficacy

Collective efficacy in the community is operationalized as the response to the question: “In some communities, when there is a water supply problem, people bond together to solve the problem. In other communities, people take care of their own families individually. What is your community like?” Households choose one of two options: each family solves individually (coded as 0) or bond together to solve the problem (coded as 1), where bonding together represents a greater level of collective efficacy.

Other metrics

IHDS has detailed information on household demographics and location in 2004 and 2011 enabling us to account for several household-level characteristics in our analysis. We control for literacy level of the household (based on the number of years of education of the most literate adult in the household). We also control for the location of the household (urban/rural), as the increased opportunities in the urban areas may affect the decision to start an enterprise. Finally, we also include the social group to which the household belongs⁵, to account for any potential differences in opportunities or business performance among the social groups. We also control for the type of business (based on industry classification codes) that is run by the household.

⁵ The sample is divided into seven social groups (exclusive) – Brahmins, forward castes, other backward classes, Dalits, Adivasis, Muslims and Christians, Sikhs and Jains.

Social capital and business income

Sample and descriptive measures

To assess the effect of social capital on business income, we extract a subset of the data (to enable us to run a panel model effectively). Using data from both survey waves, we retained a subset of households that reported running a business both in 2004 and 2011, yielding a sample size of 3,913 households that contribute 7,826 observations. As we are interested in estimating the effect of various dimensions of social capital on business income, we use these 3,913 households in our analysis.

Households reported revenue from business and expenses incurred in the last year. Net income from the business was computed based on revenue and expenses. However, few households that did not readily have this information reported only the net income from the business in the last year. We use income from business as the key business performance metric in our analysis. When assessing the impact of family social capital, we use net income per capita (per adult member) as our dependent variable, whereas when assessing the impact of other dimensions of social capital, we use net income as our dependent variable while controlling for household size. The descriptive measures of the key variables are presented in Table 1.

[Insert Table 1 here]

We also classify the households in our sample into either relatively lower income or higher income group in 2004. Specifically, we use a state-level⁶ median split using the household income information in 2004. Within a state, if income for a specific household in 2004 was lower than the median, we classify it as a relatively lower-income household and vice versa. This classification enables us to estimate whether family, structural and cognitive elements of social capital had differential effects on relatively lower versus higher-income households (in terms of business income).

Empirical framework

We are interested in learning how different dimensions of social capital affect the business income of households. Having a panel sample of households with businesses in 2004 and 2011, allows us to estimate this effect effectively. First, using a fixed-effects model enables us to account for household and/or business-specific time-invariant factors in the estimation. Second, having detailed household-level time-varying and time-invariant details allow us to control for a number of confounding factors, such as the location of the household (urban or rural), social group that the household belongs to, the composition of the household, and the literacy level. Further, we also include a number of fixed effects (such as state-year fixed effects) to account for other confounding factors. We begin by estimating the average effect of different

⁶ India was comprised of 28 states and 7 union territories at the time of the surveys (currently India has 29 states and 7 union territories). Data was captured from 28 states and 5 union territories (2 union territories – Andaman and Nicobar, and Lakshadweep - are islands and were not covered in the surveys). We refer to these states and union territories as ‘states’, and hence, the survey has data from 33 states. The state level median incomes in 2004 range from a minimum of Rs. 16,877 (Orissa) to a maximum of Rs. 105,450 (Mizoram), with the median of the state level median incomes being at Rs. 33,520 (Rajasthan).

dimensions of social capital on business performance. Specifically, we estimate the following fixed effects panel regression:

$$\text{Eqn. (1)} \quad Y_{it} = \beta_0 + \beta_1 \text{Year}_t + \beta_2 \text{SC}_{it} + \beta_3 (\text{Year} * \text{SC})_{it} + \beta_4 \text{HH}_{it} + \alpha_i + \varepsilon_{it}$$

Where $i = 1, \dots, 3,913$ households, $t = 1, 2$ (panel time period: 1 – 2004 and 2 - 2011), Y_{it} refers to the outcome variable – log(income per capita) or log(income), Year_{it} takes the value of 0 in 2004 and 1 in 2011, SC_{it} refers to the specific dimension of social capital of household i in time t , HH_{it} refers to a vector of covariates which represent the household characteristics and α_i refers to the time-invariant household-specific fixed-effects that are accounted for in a panel fixed-effects regression. The coefficients of interest are β_2 (coefficient of SC) and β_3 (coefficient of $\text{Year} * \text{SC}$) which capture the effect of social capital on business income in 2004 and 2011 respectively. We include several additional fixed effects to Eqn. (1): state-year fixed effects, urban-year fixed effects, and social group-year fixed effects (to account for time-varying state-specific, location-specific, and social group-specific effects on business income). Finally, to identify whether social capital had a differential effect on income and consumption for the lower income group (compared to the higher income group), we add interaction terms $(\text{SC} * \text{LowIncomeGroup})_{it}$ and $(\text{Year} * \text{SC} * \text{LowIncomeGroup})_{it}$ to Eqn. 1 and test the coefficients for direction and significance (LowIncomeGroup takes the value of 1 when the income of household i is below the state level median in 2004).

Results

Family social capital and business income

We assess the effect of different components of family social capital (number of adult members and number of members participating in business) on net income per capita (per adult member). Results of the panel regression assessing the different dimensions of family social capital are presented in Table 2. We find that the number of family members (adults) has a significant negative effect on business income per adult (column 1: $\beta_2 = -2,882$). Further, this negative effect is (marginally significant) lower for the low-income households compared to the high-income households (column 2: coefficient of *Family SC * Low income* = 3,321; coefficient of *Year * Low income * FamilySC* = -2,968). Specifically, the effect of number of family members on net income per capita of the low-income households is -383 in 2004 (-3,704 + 3,321) and -3,351 in 2011 (-3,704 + 3,321 - 2,968) whereas that of the high-income households is -3,704 in 2004 and 2011. Hence, low-income households have a relatively less negative return from the number of family members. However, we do not find any significant effect of the number of family members participating in the business on business income (columns 3 and 4). Hence, we find support for hypotheses H1a and 2a, but do not find support for H1b and H2b.

[Insert Table 2 here]

Structural social capital and business income

Results of the panel regression assessing the effect of civic participation (bridging and bonding ties) are presented in Table 3. We find that bonding ties have a significant positive effect on business income (column 1: $\beta_2 = 18,451$). There is no significant difference in this positive effect between low-income and high-income households (column 2). Further, we do not find

bridging ties to have a significant effect on business income (columns 3 and 4). Hence, we find support for hypothesis H3a, but not for H3b, H4a, and H4b.

[Insert Table 3 here]

Results of the panel regression assessing the effect of political participation and informal social networks are presented in Table 4. We find that political participation does not have any significant effect on business income (columns 1 and 2). However, we find informal social networks to have a positive effect (marginally significant) on business income in the year 2011 (column 3: coefficient of *Year * StructuralSC* = 5,205). Further, this effect is not different between low-income and high-income households (column 4). Hence, we find support for hypothesis H3d, but not for H3c, H4c, and H4d.

[Insert Table 4 here]

Cognitive social capital and business income

Results of the panel regression assessing the effect of cognitive social capital (social cohesion and collective efficacy) are presented in Table 5. We do not observe any effect of cognitive social capital on business income. Hence we do not find support for H5a, H5b, H6a, and H6b.

[Insert Table 5 here]

General discussion

Using fixed effect linear regression on panel data of 3,913 households, engaged in business activities over 2004 and 2011, we isolate the effect of different dimensions (family, structural, and cognitive) of social capital on business performance. Further, we identify specific components through which these dimensions influence business outcomes. We find that family social capital (family size) hurts the per capita income from the business, with this effect being weaker for low-income households. Further, structural social capital, specifically interaction with strong ties (bonding) and utilization of resources embedded in the informal social networks, positively affects net income from the business. The other two components- political participation and informal social network- do not have any significant effect. Finally, cognitive social capital (social cohesion and collective efficacy) do not seem to have any influence on business income.

Theoretical and practical implications

Our findings have significant implications for understanding the role of social capital in small businesses in emerging economies. Our results point out specific aspects of social capital that government and policymakers can focus on while designing interventions to create a conducive milieu for small businesses in these economies. Considering the impact that social capital has on the performance of businesses run by low and middle-income households, policymakers should develop social structures and institutions to provide small business owners access to assets and resources present in the social networks and relationships. First, contrary to conventional wisdom (Granovetter, 1995), the negative effect of family capital (family size) on the business performance (per capita income) indicates that families can be an unproductive

component of social capital in emerging economies, characterized by scarcity in financial and economic resources. Further, our finding suggests the need to provide alternate earnings opportunities for non-working adult members of the households, engaged in business, to reduce the burden on the person heading the business. Special provisions can be made in the rural employment guarantee programs to hire unemployed members of such households.

The positive impact of civic participation (bonding and bridging) on business outcomes suggests the possibility of utilizing civic structures, including caste and religion-based organizations to cooperatives and self-help groups, to support business activities. These structures may aid in the creation of human, financial and intellectual capital to support small businesses. With regards to business performance, bonding (interaction with strong ties) seems to be more beneficial than bridging (interaction with weak ties) in the emerging market context, indicating that knowledge transfer largely remains restricted to within communities. Thus, interventions to foster bonding (strong) ties are required to bring people and resources together (Narayan, 1999). The trust and commitment embedded in the strong ties facilitate the transfer of high-quality information needed to boost the financial returns from the business.

Further, the positive effect of informal connections with people from different fields such as education, medicine, and public policy on business income indicates that these connections serve as a source of human and intellectual capital. Therefore, meet-ups and business conferences/conventions to facilitate knowledge exchange among people from diverse backgrounds (from business to education and healthcare) may lead to the integration of

interdisciplinary knowledge and may abet small business owners to come up with innovative strategies to grow and sustain the business.

Finally, in conclusion, we like to acknowledge few limitations of our study. While the panel model is effective in controlling for household-level time-invariant unobservables, our model may still have endogeneity issues.

References

- Acquaah, M. (2007). Managerial social capital, strategic orientation, and organizational performance in an emerging economy. *Strategic Management Journal*, 28(12), 1235-1255.
- Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1), 17-40.
- Bourdieu, P. (1986). The forms of capital. In JG Richardson (Eds.). *Handbook of Theory and Research for the Sociology of Education* (pp. 241-258). Greenwood Publisher.
- Brannon, D. L., Wiklund, J., & Haynie, J. M. (2013). The varying effects of family relationships in entrepreneurial teams. *Entrepreneurship Theory and Practice*, 37(1), 107-132.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95-S120.
- Dehejia, R. H., & Wahba, S. (2002). Propensity score-matching methods for nonexperimental causal studies. *Review of Economics and Statistics*, 84(1), 151-161.
- Dyer, J. H., & Singh, H. (1998). The family view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23(4), 660-679.
- Fafchamps, M., & Minten, B. (2002). Returns to social network capital among traders. *Oxford Economic Papers*, 54(2), 173-206.
- Gindling, T. H., & Newhouse, D. (2014). Self-employment in the developing world. *World Development*, 56, 313-331.

- Granovetter, M. (1983). The strength of weak ties: a network theory revisited. *Sociological Theory*, 1, 201-233.
- Granovetter, M. (1995). Coase revisited: Business groups in the modern economy. *Industrial and Corporate Change*, 4(1), 93-130.
- Kawachi, I., & Berkman, L. (2000). Social cohesion, social capital, and health. *Social Epidemiology*, 174(7), 290-319.
- Khanna, T., & Palepu, K. (1999). Policy shocks, market intermediaries, and corporate strategy: The evolution of business groups in Chile and India. *Journal of Economics & Management Strategy*, 8(2), 271-310.
- Klyver, K., Hindle, K., & Meyer, D. (2008). Influence of social network structure on entrepreneurship participation—A study of 20 national cultures. *International Entrepreneurship and Management Journal*, 4(3), 331-347.
- Lane, P. J., & Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, 19(5), 461-477.
- Liao, J., & Welsch, H. (2005). Roles of social capital in venture creation: Key dimensions and research implications. *Journal of Small Business Management*, 43(4), 345-362.
- Ma, Z. (2002). Social-capital mobilization and income returns to entrepreneurship: the case of return migration in rural China. *Environment and Planning A*, 34(10), 1763-1784.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.
- Narayan, D. (1999). *Bonds and Bridges: Social Capital and Poverty (Vol. 2167)*. World Bank.
- Pearson, A. W., Carr, J. C., & Shaw, J. C. (2008). Toward a theory of familiness: A social capital perspective. *Entrepreneurship Theory and Practice*, 32(6), 949-969.
- Peng, M. W. (2001). How entrepreneurs create wealth in transition economies. *Academy of Management Perspectives*, 15(1), 95-108.
- Poortinga, W. (2012). Community resilience and health: The role of bonding, bridging, and linking aspects of social capital. *Health & Place*, 18(2), 286-295.
- Putnam, R. D. (1995). Tuning in, tuning out: The strange disappearance of social capital in America. *PS: Political Science & Politics*, 28(4), 664-683.
- Ram, M., Abbas, T., Sanghera, B., Barlow, G., & Jones, T. (2001). Making the link: households and small business activity in a multi-ethnic context. *Community, Work & Family*, 4(3), 327-348.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277(5328), 918-924.

- Sieger, P., Zellweger, T., Nason, R. S., & Clinton, E. (2011). Portfolio entrepreneurship in family firms: a resource-based perspective. *Strategic Entrepreneurship Journal*, 5(4), 327-351.
- Smith, J. A., & Todd, P. E. (2005). Does matching overcome LaLonde's critique of nonexperimental estimators?. *Journal of Econometrics*, 125(1-2), 305-353.
- Story, W. T. (2014). Social capital and the utilization of maternal and child health services in India: a multilevel analysis. *Health & Place*, 28, 73-84.
- 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. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, 35-67.
- Vissa, B., & Chacar, A. S. (2009). Leveraging ties: the contingent value of entrepreneurial teams' external advice networks on Indian software venture performance. *Strategic Management Journal*, 30(11), 1179-1191.
- Viswanathan, M., Sridharan, S., & Ritchie, R. (2010). Understanding consumption and entrepreneurship in subsistence marketplaces. *Journal of Business Research*, 63(6), 570-581.
- Wheelock, J., & Baines, S. (1998). Dependency or self-reliance? The contradictory case of work in UK small business families. *Journal of Family and Economic Issues*, 19(1), 53-73.
- Woolcock, M. (2001). The place of social capital in understanding social and economic outcomes. *Canadian Journal of Policy Research*, 2(1), 11-17.
- [dataset] Desai, S., Vanneman, R., 2005. India Human Development Survey-I (IHDS-I) 2004-05. <https://www.icpsr.umich.edu/icpsrweb/DSDR/studies/22626>
- [dataset] Desai, S., Vanneman, R., 2011. India Human Development Survey-II (IHDS-II) 2011-12. <https://www.icpsr.umich.edu/icpsrweb/DSDR/studies/36151>

Table 1: Delhi to Descriptive measures

	2004	2011
<i>Sample size</i>	<i>3,913 entrepreneur households</i>	
Annual income from business (Rs.)	55,809	67,285
Annual income from business (Rs.) per adult	15,862	18,434
Family social capital		
No. of family members (adult)	4.02	4.15
No. of family members in the business	1.45	1.42
Structural social capital		
Civic participation – Bridging ties	0.40	0.54
Civic participation – Bonding ties	0.29	0.26
Political participation	0.36	0.56
Social networks	1.55	2.81
Cognitive social capital		
Social cohesion	5.05	4.95
Collective efficacy	0.57	0.72

Notes: All amounts are in Indian Rupees (in 2004 values).

Table 2. Family social capital and business income

Explanatory variables	Dependent variable: Business income per adult member (in INR)			
	(1)	(2)	(3)	(4)
Year (1=2011)	-22,073.418* (11,615.198)	-30,294.475** (11,859.617)	-3,502.858** (11,622.715)	-30,440.058** (11,833.935)
FamilySC	-	-3,704.364***	244.978	-768.887
	2,881.875***			
	(707.051)	(775.060)	(1,374.864)	(1,574.878)
Year * FamilySC	-168.335	676.003	937.575	2,572.416
	(695.523)	(763.904)	(1,555.406)	(1,762.904)
Year * Low income		18,593.842** *		14,359.588***
		(6,783.558)		(5,489.548)
FamilySC * Low income		3,320.545*		3,121.128
		(1,832.963)		(3,143.051)
Year * Low income * FamilySC		-2,968.188*		-4,989.813
		(1,712.603)		(3,589.890)
Education	76.172 (376.247)	-51.778 (378.225)	-434.884 (364.039)	-583.598 (367.198)
Year * Education	78.266 (316.435)	338.302 (324.084)	144.372 (301.998)	392.364 (312.456)
Constant	24,332.853** (11,163.706)	26,101.952** (11,187.096)	17,254.285 (11,131.336)	19,427.540* (11,141.374)
Observations	7,760	7,760	7,760	7,760
R-squared	0.043	0.047	0.038	0.041
Number of households	3,913	3,913	3,913	3,913
Industry-year FE	Yes	Yes	Yes	Yes
Social group-year FE	Yes	Yes	Yes	Yes
Urban-year FE	Yes	Yes	Yes	Yes
State-year FE	Yes	Yes	Yes	Yes

Notes: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

(1) and (2) – FamilySC refers to No. of adults in the household

(3) and (4) – FamilySC refers to No. of family members working in the business

Table 3. Structural social capital (civic participation) and business income

Explanatory variables	Dependent variable: Business income (in INR)			
	(1)	(2)	(3)	(4)
Year (1=2011)	-63,384.285*	-76,219.775**	-	-
	(37,149.037)	(37,447.647)	70,070.002*	81,149.343**
StructuralSC	18,451.163***	22,557.635***	5,637.103	5,891.011
	(6,332.412)	(7,163.496)	(4,477.052)	(5,342.553)
Year * StructuralSC	-2,034.979	-1,280.551	2,969.979	3,559.777
	(8,806.211)	(9,939.699)	(5,823.512)	(6,699.254)
Year * Low income		18,757.617**		20,335.958**
		(9,461.130)		(9,799.137)
StructuralSC * Low income		-17,119.579		-1,459.006
		(12,938.424)		(9,200.600)
Year * Low income * StructuralSC		-3,325.052		-2,192.742
		(17,399.350)		(11,063.870)
Education	478.647	102.798	464.296	86.650
	(1,160.318)	(1,170.624)	(1,165.180)	(1,176.734)
Year * Education	568.677	1,210.305	608.965	1,221.359
	(971.190)	(1,006.394)	(974.446)	(1,010.031)
Constant	39,993.578	44,625.172	39,412.048	43,566.277
	(35,366.424)	(35,400.722)	(35,530.748)	(35,565.010)
Observations	7,744	7,744	7,731	7,731
R-squared	0.036	0.038	0.034	0.036
Number of households	3,913	3,913	3,913	3,913
Industry-year FE	Yes	Yes	Yes	Yes
Social group-year FE	Yes	Yes	Yes	Yes
Urban-year FE	Yes	Yes	Yes	Yes
State-year FE	Yes	Yes	Yes	Yes

Notes: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

(1) and (2) – StructuralSC refers to bonding ties

(3) and (4) – StructuralSC refers to bridging ties

Table 4. Structural social capital (political participation and informal social networks) and business income

Explanatory variables	Dependent variable: Business income (in INR)			
	(1)	(2)	(3)	(4)
Year (1=2011)	-65,325.769*	-76,403.511**	-71,299.220*	-83,908.966**
	(37,164.667)	(37,506.175)	(37,164.209)	(37,672.261)
StructuralSC	4,648.849	3,534.400	-225.898	-900.206
	(5,745.555)	(6,751.574)	(2,544.463)	(2,827.724)
Year * StructuralSC	2,745.419	3,452.081	5,205.343*	5,938.507*
	(7,117.684)	(8,182.743)	(3,097.087)	(3,409.200)
Year * Low income		19,262.245*		20,050.854
		(10,568.443)		(14,167.530)
StructuralSC * Low income		2,781.221		1,647.028
		(12,140.890)		(5,612.251)
Year * Low income * StructuralSC		-1,176.034		-337.308
		(13,900.548)		(6,288.823)
Education	559.714	189.721	864.446	498.023
	(1,159.356)	(1,169.933)	(1,173.193)	(1,181.512)
Year * Education	611.347	1,216.780	-108.353	465.271
	(966.490)	(1,001.414)	(1,035.807)	(1,061.938)
Constant	41,667.655	45,851.433	41,308.457	45,624.502
	(35,265.288)	(35,303.172)	(35,327.038)	(35,364.846)
Observations	7,760	7,760	7,760	7,760
R-squared	0.033	0.035	0.034	0.036
Number of households	3,913	3,913	3,913	3,913
Industry-year FE	Yes	Yes	Yes	Yes
Social group-year FE	Yes	Yes	Yes	Yes
Urban-year FE	Yes	Yes	Yes	Yes
State-year FE	Yes	Yes	Yes	Yes

Notes: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
(1) and (2) – StructuralSC refers to political participation
(3) and (4) – StructuralSC refers to informal social networks

Table 5. Cognitive social capital and business income

Explanatory variables	Dependent variable: Business income (in INR)			
	(1)	(2)	(3)	(4)
Year (1=2011)	-43,519.376 (43,883.964)	-46,125.284 (46,067.968)	-52,197.122 (37,925.644)	-62,675.775 (38,511.693)
CognitiveSC	2,879.595 (3,524.768)	5,106.166 (4,110.621)	4,787.209 (7,163.170)	3,746.856 (8,376.448)
Year * CognitiveSC	-3,681.109 (4,547.652)	-5,381.040 (5,241.183)	-14,273.609 (10,660.113)	-15,878.626 (12,334.577)
Year * Low income		-14,005.803 (48,282.158)		17,228.440 (17,825.811)
CognitiveSC * Low income		-8,479.538 (7,292.919)		4,165.012 (15,536.243)
Year * Low income * CognitiveSC		6,593.111 (9,533.589)		3,218.322 (23,748.278)
Education	461.251 (1,169.927)	64.081 (1,180.802)	559.439 (1,163.373)	179.021 (1,174.291)
Year * Education	690.974 (973.888)	1,309.709 (1,009.988)	579.297 (968.611)	1,230.526 (1,003.869)
Constant	29,951.589 (39,324.990)	34,555.044 (39,379.643)	39,363.775 (35,508.556)	43,741.239 (35,542.739)
Observations	7,716	7,716	7,736	7,736
R-squared	0.033	0.035	0.033	0.035
Number of households	3,913	3,913	3,913	3,913
Industry-year FE	Yes	Yes	Yes	Yes
Social group-year FE	Yes	Yes	Yes	Yes
Urban-year FE	Yes	Yes	Yes	Yes
State-year FE	Yes	Yes	Yes	Yes

Notes: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

(1) and (2) – CognitiveSC refers to social cohesion

(3) and (4) – CognitiveSC refers to collective efficacy

Appendix A: Operationalization of social capital

Social capital dimension	Operationalization
<u>Family social capital</u>	
Household size	No. of adult members in the household
Family members in business	No. of members participating in business
<u>Structural social capital</u>	
<i>Civic participation</i>	
Bonding ties	Religious group and caste association Mahila mandal, youth club, trade union, self-help group, credit or savings group, development group and co-operatives
Bridging ties	
<i>Political participation</i>	
Item 1	Have you or anyone in the household attended a public meeting called by the village panchayat/Nagar Palika/ward committee in the last year?
Item 2	Is anyone in the household an official of the village panchayat/Nagar Palika/ward committee?
<i>Informal social network</i>	
Doctors	Own relatives/caste/community or outside the caste/community
Teachers	Own relatives/caste/community or outside the caste/community
Government officials	Own relatives/caste/community or outside the caste/community
<u>Cognitive social capital</u>	
<i>Social cohesion</i>	
Item 1	In this village/neighborhood, do people generally get along with each other or is there some conflict or a lot of conflicts?
Item 2	In this village/neighborhood, how much conflict would you say there is among the communities/jatis that live here?
<i>Collective efficacy</i>	
Item	In some communities, when there is a water supply problem, people bond together to solve the problem. In other communities, people take care of their own families individually. What is your community like?