

SOCIAL CAPITAL CONFIGURATIONS FOR NECESSITY-DRIVEN VERSUS OPPORTUNITY-DRIVEN ENTREPRENEURS

Boris Urban

Graduate School of Business Administration, University of the Witwatersrand

Accepted: September 2011

Abstract

There is growing literature suggesting the importance of networking and even arguing that social capital may be the most significant source of advantage for entrepreneurs. This research uses the classification of necessity-driven versus opportunity-driven entrepreneurs, which has been found to differ systematically in terms of venture growth and job creation, and also reflects the schism between the informal and formal sectors. Having unpacked the construct of networking as embedded in the theory of social capital, hypotheses are formulated which allow for statistical testing. The results add to the ongoing debate on this dualistic typology of entrepreneurs, where in several instances significant differences are detected across networking diversity, ties, types of assistance and support perceptions.

Key words: networking, entrepreneurship, necessity-driven, social capital

JEL: D8, J24, L26, M13

1

Introduction

Research among countries in transition underlines the point that entrepreneurship exists in every country (Luthans, Stajkovic & Ibrayeva, 2000). This entrepreneurial spirit can be fostered where environmental factors such as family and support systems, financing sources, local communities, government agencies, and cultural factors have a positive affect on entrepreneurial behaviour (Bygrave & Minniti, 2000). In the absence of political stability, and formal support structures, networking and personal trust become even more important during transition as they offer some form of consistency and predictability in the times of fundamental change.

Entrepreneurial activity does not occur in a vacuum, but instead is rooted in cultural and social contexts, specifically within webs of personal and institutional networks (Chan, Bhargava & Street, 2006; Jackson, Amaeshi & Yavuz, 2008). Not only can an individual's social network be influenced by a variety of social relations and support factors, but the greater the political and societal legitimacy of entrepreneurship in a particular region, the

greater the rate of business formation (Carter, Reynolds & Gartner, 2004; Jack & Anderson, 2002). Social networks provided by extended family, community-based or organizational relationships are theorized to supplement the effects of education, experience and financial capital (Greve & Salaff, 2003).

There is growing literature suggesting the importance of networks to entrepreneurs and even arguing that social capital may be the most significant source of advantage for entrepreneurs (Arenius & De Clercq, 2005; Audretsch & Keilbach, 2004; Davidson & Honig, 2003; Mitchell & Co, 2004). Studies indicate that networking allows entrepreneurs to enlarge their knowledge of opportunities, to gain access to critical resources, and to deal with business obstacles (Adler & Kwon, 2002; Low & Macillan, 1988; McMillan & Woodruff, 2002). Through networks, entrepreneurs can provide the functions of missing formal institutions, such as contract enforcement and credit (Welter & Smallbone, 2006). Researching entrepreneurship using a social capital perspective is important, as social capital is a crucial asset for small business owners struggling to survive in competitive markets (Aldrich & Zimmer, 1986), and

particularly as collaboration between network actors requires expertise and competence if the relationship is to be successfully maintained (Human, 2009).

Entrepreneurial activity in Africa is heavily skewed toward low-expectation entrepreneurial activity; this is according to Global Entrepreneurship Monitor (GEM) report on high-growth entrepreneurship (Autio, 2007; Naude, Thomas, Wood & Aloe, 2008). The primary objective of GEM is to explore differences in national levels and types of entrepreneurship. The relative prevalence of opportunity-motivated versus necessity-motivated (i.e., entrepreneurs who say they are involved in an entrepreneurial effort to take advantage of opportunity or because they have no better choices for work), entrepreneurial activity provides useful insights into the quality of early-stage entrepreneurial activity. GEM research has consistently shown that the economic contribution of opportunity-motivated entrepreneurs is higher than for necessity-driven entrepreneurs, who are alternatively termed as survivalists since they face structural challenges where expected returns are low and intermittent, with low expectations of growth and job creation, and where motivation is personal survival (Morris & Pitt, 1995; Ngiba, Dickinson & Whittaker, 2009). This is in contrast to opportunity-driven entrepreneurs, who say they are pursuing a business opportunity and strive for independence, and are largely responsible for up to 80 per cent of all job creation by entrepreneurs (Autio, 2005).

The classification of necessity-driven entrepreneurship (NDE) versus opportunity-driven entrepreneurship (ODE) with which this paper employs to scrutinize social capital, has been found to differ systematically in terms of (1) expectations of job creation, (2) projections for out-of-country exports, (3) intention to replicate existing business activity versus creating a new niche, and (4) participation in one of four business sectors (Hessels, van Gelderen & Thurik, 2008; McMullen, Bagby & Palich, 2008).

Despite the importance of these differences and entrepreneurial networking, little empirical or theoretical research has examined the

dynamics of social capital in an emerging country context. Not only is there is reason to suspect that the nature of networking between NDE and ODE may differ, but there have been calls for research on these two categories of entrepreneurs, so that this dualistic typology may further be interrogated (McMullen et al., 2008; Williams, 2008). By identifying these dominant categories of entrepreneurs, and linking them with research variables previously not related, will help elucidate how these entrepreneurs react differently or similarly to different phenomena as specified for this article. Recognising that NDE versus ODE has been found to differ systematically on several variables, particularly in terms of growth expectations and of job creation (Hessels, van Gelderen & Thurik, 2008), further investigation advances the topic where it has much relevance.

The critical question that this paper raises, concerns that which we can learn about entrepreneurial social capital, considering that there is an under-explored and unarticulated set of networking principles and practices which have not been previously linked to the categories of NDE versus ODE. Therefore the objective of this study is to identify any differences in networking practices and support perceptions between NDE and ODE. Not only is there a reason to suspect that the nature of networking between NDE and ODE may differ, but by linking these two types of entrepreneurs with social capital, the study's research question will be addressed.

The article starts by reviewing theory on social capital and networking as it relates to entrepreneurship. As an explanation for the phenomena under study, hypotheses are formulated, which allows for differences between the variables to be tested. The study ends by drawing conclusions on the empirical findings and identifies the limitations of the study and provides suggestions for future research.

2

Literature review

Every new venture, from mom-and-pop convenience stores to Silicon Valley superstars

such as Google, starts with an 'investment' from the founders themselves or the so called 3Fs (family, friend, or foolhardy strangers) (Bosma & Levie, 2009:52). This community of investors is vital to the start-up process, with perceptions of social capital provided by a community being essential to entrepreneurial start-ups. This notion of community support may also be captured as the 'Batho pele' principle in the broader South African context (Mofolo, 2009).

The study of social capital and its impact on economic decision-making and actions stems from classic literatures in economics and sociology (Granovetter, 1973). Social capital may be understood as the goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action (Adler & Kwon, 2002; Audretsch & Keilbach, 2004). It refers to the relationships and networks from which individuals are able to derive institutional support and allows them to act together more effectively to pursue shared objectives (Putnam, 1995). Social capital is often explained in terms of social exchange, which allows for better understanding of the effects of exchange ties on performance. Adler and Kwon (2002) argue that the breadth of the social capital concept reflects a primordial feature of social life – namely, that social ties of one kind (e.g., friendship) often can be used for different purposes (e.g., moral and material support, work and social advice). In practice, the social capital concept has been traditionally conceptualized according to two main configurations of networks: structural and relational-cognitive ones (Pirolo & Presutti, 2010:200).

Social capital is often operationalised through the identification of networks and network relationships, sometimes defined by the strength of ties, repetitive group activity such as the frequency of meetings and other formal interactions, as well as informal gatherings and other social activities, and social and family relationships. The analysis of network structure requires, first, attention to the quality of the constituent ties, that is, their frequency, intensity, multiplicity, and so forth, and to their configuration (Adler & Kwon, 2002; McMillan & Woodruff, 2002).

From an entrepreneurial perspective, social capital provides networks that facilitate the discovery of opportunities, as well as the identification, collection and allocation of scarce resources and strategic initiatives (Davidson & Honig, 2003; Miller, Besser & Malshe, 2007). Small firms are important in innovations through their linkages with larger firms (Naude, 2007), thus impacting the performance of internationalized firms, (Pangarkar, 2008; Pollard & Simberova, 2002), and influencing a nation's economic activity through the interplay of established, new and small firms (Minniti, Bygrave & Autio, 2005).

Certain networking activities have been positively associated with firm performance, for instance Aldrich and Zimmer (1986) report a positive relationship between firm survival and number of times per week of contact with network members. Moreover *surviving* entrepreneurs are reported as being more active in social relations than their unsuccessful counterparts (Sawyer, McGee & Peterson, 2003).

In a review of business networks, Blundel and Smith (2001) conclude that during venture creation, most entrepreneurs rely on informal sources in their personal networks in order to mobilize resources, especially before a venture is set up. Based on a synthesis of research investigating the nature of networking in small firms (see: Carson et al., 1995; Curran et al., 1993), networking is described as an activity that varies according to the individual owner-manager and furthermore, according to the person with whom the interaction takes place. Investigating the role of personal networking activities, Sawyer, McGee and Peterson (2003) show that small firms rely on a well-developed web of personal networks in dealing with uncertainty in the external environment. By researching levels of membership and activity in social networks for the self-employed and their employed counterparts, Dodd (1997) finds that both groups exhibit statistically significant levels of similarity. Generally at least some aspects of business networking are generic, and the owners approach some tasks in similar ways in different environments; nonetheless given the

socially-embedded nature of networking activities, differences between communities are generally anticipated (Cooper & Denner, 1998).

Street and Cameron (2007) find that characteristics of small business external relationships, such as relationship strength, network size, network structure, relationship type, goal compatibility, and existing trust, represent the largest area of research regarding antecedents of relationships. An entrepreneur's network of social ties creates opportunities for social capital transactions. External ties to others provide entrepreneurs the opportunity to leverage their resources. Thus, multiple diverse contacts are important, regardless of their strength (Aldrich & Carter, 2004). This diversity in network ties is crucial for entrepreneurs, as diversity increases access to a wider circle of information about potential markets, new business locations, innovations, sources of capital, and potential investors. On the other hand in homogeneous networks, information known to one person is rapidly diffused to others and interpreted in similar ways.

In Granovetter's (1973) classic work, the importance of maintaining an extended network of weak ties in obtaining resources is emphasized. Weak ties are loose relationships between individuals, as opposed to the close ties that would be found in a nuclear family. Weak ties are useful in obtaining information that would otherwise be unavailable or costly to locate. They extend one's network by linking individuals or organizations together and providing an interface for exchanges to take place (Aldrich & Carter, 2004). In contrast, an example of strong ties would be a sibling or parent helping out for free in some aspect of the start-up activities. Thus, strong ties, such as those derived from family relationships, provide secure and consistent access to resources. The most reliable relationships in a personal network are strong ties, which are usually of long duration. They are long-term, two-way relationships, not governed by short-term calculations of self-interest.

Networking and member relationships are nearly invisible to most scholars who study entrepreneurship and economic development

in Africa, however research is emerging which focuses on the phenomenon of entrepreneurship. For instance by focusing on a new entrepreneurial group who founded a system of regional enterprise networks in response to liberalized economic and political conditions, McDade and Spring (2005) describe how with donor funding assistance, these entrepreneurs organized 31 national, three regional, and one pan-African business network in West, East, and Southern Africa. Since joining these networks some members are reported to be doing business with firms in other African countries network members, but have not established linkages with traditional formal or informal sector small-scale entrepreneurs, which comprise most of the entrepreneurial landscape. Moreover, some members contend that there is more 'talking' than actual business being transacted.

Nonetheless in spite of their poor social network infrastructure, African firms of varying size and structure make very effective use of business networks (Ahwireng-Obeng, 2006). Empirical work has in fact provided evidence of some international similarities, as well as some national-level characteristics (Dodd & Patra, 2002).

In South Africa, as in many parts of the world, the schism between the poor and rich is widening and entrenched inequalities act as a major deterrent to growth, development, and employment creation (Lopez-Claros, Altinger, Blanke, Drezniek & Mia, 2006). Additionally South Africa has a dual-logic economy, where on the one side there is a highly developed economic sector and on the other side one struggling for survival (Maas & Herrington, 2007). These schisms in many ways parallel the NDE and ODE divide, which are often construed as the motivational 'push-pull' dichotomy, where in developing countries one would expect greater push factors to be prevalent among entrepreneurs. South Africa's total early-stage entrepreneurial activity (TEA) index, the primary measure used to compare rate of new business start-ups amongst countries was relatively low (5.90 per cent) for 2009 (Bosma & Levie, 2009:21). The profile of people who are categorised within NDE versus ODE in the latest GEM report indicates

that in South Africa approximately 41 per cent of TEA is NDE and 46 per cent is ODE (Bosma & Levie, 2009:25). The ratio of ODE to NDE is 3.8:1 and indicates that the proportion of ODE is almost four times higher than that of NDE, and is substantially higher than the average ratio of 2.5 across all GME countries (Herrington, Kew & Kew, 2008:18). However this high ratio of ODE over NDE in 2008 is not borne out by an increase in the TEA index. Moreover South Africa has staggeringly high levels of unemployment (2007 = 23 per cent) relative to the rest of GEM sample (Herrington, Kew & Kew, 2008:16). One would expect, therefore, that necessity would serve as a strong stimulus for an increased TEA rate for South Africa. Despite these anomalies the NDE versus ODE rates are significant when read in conjunction with high-growth expectation early-stage entrepreneurs (HEA) indicators of job-growth expectation, innovation and international orientation. South Africa was one of the countries with the lowest HEA rates over the 2004-2009 periods. Additionally if one compares ODE rates with NDE rates of other developing countries, and excludes NDE, South Africa's entrepreneurial activity is still the lowest of developing countries (von Broembsen, Wood & Herrington, 2006:19).

3

Research problem and hypotheses

Currently in South Africa most research and policy initiatives focus on NDE, who represent the unemployed masses. Although micro enterprises or survivalists may have entrepreneurial characteristics, their ability to grow and create employment, are restricted by their scarcity of skills, business knowledge and resources (Pretorius & van Vuuren, 2002; Urban, Barreira & van Vuuren, 2008). The level of growth aspiration of these necessity-driven entrepreneurs, or lack thereof appears to vary significantly according to economic context, quality of populations in terms of high-growth potential, the difference between income substitution and income generation, and the different societal opportunity structures

that these entrepreneurs face (Autio, 2007).

After the construct of networking as embedded in the theory of social capital, has been unpacked, hypotheses are formulated which allow for statistical testing. Based on the theoretical underpinnings discussed in the literature review, the following hypotheses are formulated and set at the 0.05 significance level (p -value < 0.05):

Null Hypothesis 1: Configurations of diversity in entrepreneurial networking will not differ between NDE and ODE.

Null Hypothesis 2: Configurations of networking ties will not differ between NDE and ODE.

Null Hypothesis 3: Configurations of networking assistance and support relationships will not differ between NDE and ODE.

Null Hypothesis 4: Configurations of networking climate support perceptions will not differ between NDE and ODE.

HA: For all the above hypotheses the alternative states that there will be a difference between NDE and ODE in the configurations of networking diversity, ties, assistance and support relationships, and climate support perceptions.

4

Nature of research

Since existing research has not yielded generalisable knowledge on differences in variables of social capital under scrutiny for NDE versus ODE, it was posited that a cross-sectional survey based descriptive study, generating empirical results will add to the body of knowledge in this new direction of study.

Several studies have shown that the patterns of social capital development are strongly influenced by the social context where business partners are embedded (Pirolo & Presutti, 2010). Subsequently the empirical research was conducted inside two delimited geographical areas, conducive to yielding respondents in both category of entrepreneur.

The unit of analysis for this study was the individual entrepreneur who then also served as a proxy for their venture.

5

The sample frame

Recognizing that the question between NDE and ODE is polyvalent and people operating somewhere in-between these extremes tend to answer as being opportunity-driven (Bosma, Jones, Autio & Levie, 2007), specific sampling frames were identified for each type of entrepreneur.

For ODE, a generic sampling frame was identified from membership lists of businesses operating in the greater Johannesburg area, these included: the Johannesburg Chamber of Commerce and Industry (JCCI), the Business Referral and Information Network (BRAIN), the Department of Trade and Industry (DTI), and the SA Institute of Intellectual Property Law. The population of these databases is approximately 4600 firms. The survey was solicited electronically with periodic reminder telephone calls. NDE were solicited as part of an experiential exercise conducted by trained university students in the SOWETO township area. Informal activity is pervasive in townships (Bradford, 2007) most of which are single-person operations (Morris & Pitt, 1995).

Both categories of entrepreneurs are based in the Gauteng province, the economic hub of South Africa, which has the highest number of both formal and informal entrepreneurs (SA Business Guidebook, 2005).

6

The sample

Given the difficulty of accessing sampling frames for probability samples in social sciences research (Mitchell et al., 2002), non-probability sampling was used to gather data from respondents who met the pre-determined screening criteria of owning and managing a running business that has paid salaries, wages or any other payments to the owners for more than 3 months, (Autio, 2007), and not employing more than 200 people (SA Survey, 2006). Coinciding with previous discussions and definitions, when operationalising the sample, the following broad criteria were used for NDE – “were you pushed into entrepreneurship because all other options for work

are either absent or unsatisfactory”, and for ODE – “did you become an entrepreneur to exploit a perceived business opportunity” (Bosma & Levie, 2009). Respondent’s biographical data served as control variables, which included age, gender, and race/ethnicity.

Based on eligibility criteria and suitability of respondents, 101 usable responses (an effective 47 per cent response rate) from an initial 213 surveys were generated as the final sample for ODE. Based on pre-determined selection criteria, and using structured personal interviews, 102 usable responses (an effective 39 per cent response rate), from an initial 255 surveys were obtained as the final sample for NDE. For both ODE and NDE a wide range of businesses were sampled which included: agriculture, small-scale manufacturing, construction, financial, business, retail, motor trade and repair services, catering, accommodation and other trade, transport, storage and communications businesses. For NDE, the trading environment was characterized by mostly informal premises, and some of these included; street trader or hawker, craft market, home or friend’s home, container or caravan, or local shopping centre. A profile of respondents is shown in Table 1.

7

The measures

Apart from the respondents biographic details, the questionnaire surveyed several networking activities and sought a number as an answer (for example, of meetings per week, or hours expected), therefore responses were solicited in a manner to allow for quantitative analysis and most items were measured with either categorical, ratio or interval (1-5 Likert) scales.

To allow for meaningful comparisons with earlier work, a core set of questions based on the Panel Study of Entrepreneurial Dynamics (PSED) (Gartner, Shaver, Carter & Reynolds, 2004) survey were selected. The PSED provides systematic, reliable data on those variables that explain and predict nascent entrepreneurship. The first section (A) of the questionnaire was concerned with the diversity and tie strength in network relationships and focused on the number of persons who had

been helpful to the respondent with the start-up process.

Next three aspects of the respondents' relationship with these helpers were surveyed: First, how similar are the helpers to the respondent and to other helpers. Second, how strong is the tie between the respondent and the helpers? Questions included how long have you known (each helper), and how many times have you talked with (each helper) about business matters in the last week? By asking respondent how long he/she has known the helper is relevant because a number of previous studies have argued that ties of long duration almost reflect a strong commitment and most likely reciprocal relations between two people. Thirdly, the respondent would describe his or her relationship in terms of network support, based on a list of role relationships.

For section (B), respondents were asked in what way has each helper contributed to the start-up effort and on what terms? They were also asked which of these forms of assistance has been most important for the new business start-up.

In section (C), climate support perceptions of entrepreneurial networking were measured. Respondents were asked to what extent they agree/disagree with the various types of influences on networking in terms of business start-ups.

8

Data analysis

The proposed measures have been previously subjected to factor analysis, with satisfactory results achieved in terms of factor loadings and reliability (Carter, Reynolds & Gartner, 2004). Nonetheless reliability was re-tested, and item statistics were calculated using the Cronbach's Alpha. Descriptive statistics were calculated

and the result output was split by group (NDE versus ODE) which entailed conducting crosstabs on the categorical variables. Following prior methods used to detect significant differences in entrepreneurs (Chan, Bhargava & Street, 2006), and based on data type collected, the hypothesized differences across variables were tested using Chi-Square methods.

9

Empirical results

To test for reliability of scales, Cronbach's coefficient alpha was used as it has the most utility for multi-scales at interval level of measurement. A correlation matrix was calculated for items per scale, indicating relatively low inter-correlations between items. An overall satisfactory Cronbach's Alpha of 0.712 was obtained for total items measuring networking principles of diversity, ties, and support relationships. For items measuring climate perceptions of entrepreneurial start-ups, the Cronbach Alphas for total items was 0.700 indicating an acceptable degree of reliability (Cooper & Emory, 1995).

Having calculated sample statistics, results in Table 1 show that the only significant differences detected on the demographic variables, in terms of helpers for opportunity-driven entrepreneurs versus necessity-driven entrepreneurs are on race/ethnicity (Helper 1 = $\chi^2 = 9.536$, $df = 4$, $p = .049$; Helper 3 = $\chi^2 = 13.079$, $df = 4$, $p = .011$). It is noteworthy that the number of people identified as helpful was the 1-3 category of helpers, with no significant differences detected between the groups. Research on entrepreneurial networking has found that most business owners name no more than three helpers (Aldrich & Carter, 2004), which resonates with the present study results.

Table 1
Sample statistics with differences between NDE (n = 102) vs. ODE (n = 101)

Variables	NDE per cent	ODE per cent	χ^2	Sig. (p-value)
Gender			2.186	(0.139)
Male	47	57		
Female	53	43		
Age in mean years	32	34		
Standard deviation	11.4	11.6		
Race/ethnicity			9.526	(0.049)*
Black SA	47	40		
Asian/Indian SA	12	6		
White SA	22	41		
Coloured SA	9	6		
Non- SA (immigrant)	11	8		
Number of people identified as helpful			0.195	(0.907)
1-3	58	59		
4-7	33	31		
< 7	9	10		

*Indicates statistical significant difference where $p < .05$ (two-tailed).

To test hypothesis 1 in terms of configurations of diversity in entrepreneurial networking between necessity-driven entrepreneurs and opportunity-driven entrepreneurs, Table 2 shows that the three helpers' characteristics in terms of age and gender tend to be relatively similar to the demographics of the necessity-driven entrepreneurs and opportunity-driven entrepreneurs themselves. These results add support to the argument that a degree of homogeneity in networks exists and that people tend to associate with others who have similar characteristics, values and interests, that is, diversity is relatively low. The only significant differences in Table 2, are detected on race/ethnicity for helper 1 ($\chi^2 = 9.536$; $df = 4$; $p = .05$), and helper 3 ($\chi^2 = 13.079$; $df = 4$; $p = .011$). Subsequently null hypothesis 1 is rejected and the alternative is accepted as some network diversity is evident between NDE and ODE.

Hypothesis 2 was tested in terms of networking ties, which measured length of relationship and frequency of contact, i.e., by asking how many times the respondents had talked with helpers about business matters in the past month. In terms of networking ties, measured via length of relationship and frequency of contact, see Table 2. Results indicate that the both ODE and necessity-driven entrepreneurs have known helper 1 mostly for a length of 2-4 years. Necessity-driven entrepreneurs knew helper 2 for 5-7 years and opportunity-driven entrepreneurs

new him or her for 2-4 years while opportunity-driven entrepreneurs knew helper 3 for 2-4 years and necessity-driven entrepreneurs knew him or her for 5-7 years. These results are pertinent because of the relatively strong commitment and likely reciprocal relations to occur between two people who have accrued this length in a relationship. Furthermore by asking how many times the respondents had talked with each helper about business matters in the past month – significant differences exist relating to all three helpers: helper 1 = ($\chi^2 = 10.086$; $df = 3$; $p = .013$), helper 2 = ($\chi^2 = 12.446$; $df = 3$; $p = .002$), and helper 3 ($\chi^2 = 11.455$; $df = 3$; $p = .005$). Following Granovetter (1973) strong-ties are defined as those with whom the entrepreneur interacts at least twice a week. Weak-ties are relationships that are enacted less than twice a week, but at least once a year. Based on these results null 2 is rejected, since entrepreneurial networking relationships differ between ODE and NDE in terms of strong network ties as opposed to weak network ties.

Testing hypothesis 3 for differences in configurations of networking assistance and support relationships first required that the respondents rank 6 different forms of assistance rendered by each helper. Based on these rankings significant differences were found for helper 1 on total items = ($\chi^2 = 18.758$; $df = 9$; $p = .027$) (not shown). Additionally, to establish on what terms the help was provided, respondents indicated that the assistance was

mostly provided free, with significant differences between groups for helper 1 = ($\chi^2 = 20.942$; $df = 4$; $p = .001$) helper 2 = ($\chi^2 = 12.695$; $df = 4$; $p = .05$), helper 3 = ($\chi^2 = 18.925$; $df = 4$; $p = .001$) (not shown). Once respondents had delineated their network support structure in terms of helpers, basic descriptives were calculated from a list of role relationships, to establish any differences between ODE and NDE (see Table 3). Based on interval scales, mean scores and standard deviations were calculated. Moreover, by applying tests of normality, and calculating the Kolmogorov-Smirnov and Shapiro-Wilk statistics, test scores indicate that normality was violated. Hence, to test between the two groups, non-parametric tests were calculated, and the Mann-Whitney U and Wilcoxon W test statistics rendered an overall non-significant *Z score* (-.214). These results mean that the alternative hypothesis 3 is rejected as no

significant differences were detected on items measuring support relationships.

Testing hypothesis 4, where configurations of networking climate support perceptions were surveyed, by applying tests of normality and calculating the Kolmogorov-Smirnov and Shapiro-Wilk statistics, test scores indicate that normality was violated. Based on non-parametric tests, the Mann-Whitney U and Wilcoxon W test statistics rendered an overall significant *Z score* (-3.910; $p = .001$). Therefore significant differences were detected between ODE and NDE in terms of climate perceptions, leading to the rejection of null hypothesis 4. Moreover, the relatively high level of scores in terms of all the variables measuring climate perceptions suggests that necessity-driven and opportunity-driven entrepreneurs are generally positive about environmental conditions.

Table 2
Differences in networking relationships, diversity and ties with helpers between NDE (n = 102) and ODE (n = 101)

Variables	Type	Helper 1 per cent	χ^2	Sig. (p-value)	Helper 2 per cent	χ^2	Sig. (p-value)	Helper 3 per cent	χ^2	Sig. (p-value)
Gender			1.679	(.167)		0.731	(.547)		0.411	(.514)
Male	Opportunity	59			60			43		
	Necessity	41			40			57		
Female	Opportunity	42			36			38		
	Necessity	58			64			62		
Age in mean years										
	Opportunity	36			36			34		
	Necessity	64			64			66		
Race/ethnicity			9.536	(.049)*		4.172	(.383)		13.079	(.011)*
Black SA	Opportunity	53			38			40		
	Necessity	43			46			38		
Asian/Indian SA	Opportunity	18			20			18		
	Necessity	12			12			13		
White SA	Opportunity	18			28			23		
	Necessity	37			33			40		
Coloured SA	Opportunity	10			12			19		
	Necessity	7			8			7		
Non- SA immigrant	Opportunity	1			2			0		
	Necessity	1			1			1		
Length of relationship with helper			3.377	(.3467)		7.554	(.053)		0.790	(.887)
Less than 1 year	Opportunity	9			8			10		
	Necessity	12			25			17		
2-4 years	Opportunity	35			35			33		
	Necessity	40			26			29		
5-7 years	Opportunity	24			28			28		
	Necessity	27			31			31		
8 years or more	Opportunity	32			29			29		
	Necessity	21			18			23		

Number of times talked ... last week			10.086	(.013) *		12.446	(.002)***		11.455	(.005) **
Once or less	Opportunity	10			16			11		
	Necessity	15			17			22		
2-5 times	Opportunity	36			28			29		
	Necessity	52			51			40		
6-9 times	Opportunity	19			29			22		
	Necessity	21			22			18		
10 times or more	Opportunity	35			27			38		
	Necessity	12			10			20		

* Indicates statistical significant difference where * $p < .05$ (two-tailed); ** $p < .01$ (two-tailed); *** $p < .005$ (two-tailed).

Table 3

Statistics for networking support relationship between NDE (n = 102) and ODE (n =101)

Role player		Mean	Std. deviation	Mann-Whitney U Z	Sig. (p-value)
Spouse/partner	Opportunity	3.41	0.706		
	Necessity	3.22	0.687	-1.131	0.221
Family/relative	Opportunity	3.30	0.798		
	Necessity	3.45	0.712	-1.722	0.545
Business associate	Opportunity	3.13	0.566		
	Necessity	2.94	0.755	-.985	0.664
Friend/acquaintance	Opportunity	3.22	0.761		
	Necessity	2.78	0.744	-1.145	0.299
Teacher/counsellor	Opportunity	2.94	0.635		
	Necessity	3.03	0.675	-1.977	0.355
Other relationship	Opportunity	3.47	0.776		
	Necessity	3.77	0.778	-1.112	0.244

Note: A non-parametric test was used because data were not normally distributed. Mann-Whitney U and Wilcoxon W test statistics rendered an overall non-significant Z score (-.214).

Table 4

Statistics for climate support perceptions between NDE (n =102) and ODE (n = 101)

Type of support	Mean	Std. dev.	Cronbach's Alpha	Mann-Whitney U Z	Sig. (p-value)
Bankers and other investors go out of their way to help new firms get started.					
Opportunity	2.69	1.032	0.737		
Necessity	2.14	0.788	0.788	-2.114	0.020**
State and local governments provide good support for those starting new firms.					
Opportunity	2.64	1.082	0.739		
Necessity	2.54	1.278	0.764	-1.544	0.050*
Other community groups provide good support for those starting businesses.					
Opportunity	2.80	0.985	0.737		
Necessity	2.99	0.885	0.774	-3.122	0.000***
Young people are encouraged to be independent and start their own businesses.					
Opportunity	3.45	1.212	0.702		
Necessity	2.32	0.865	0.700	-4.114	0.001***
The local media do a good job of covering local business news.					
Opportunity	2.89	1.154	0.731		
Necessity	2.14	1.002	0.755	-1.227	0.002***
Many of my family and kin have started new firms.					
Opportunity	2.85	1.116	0.740		
Necessity	2.99	1.114	0.788	-1.421	0.003***

Those with successful businesses get a lot of attention and admiration.					
Opportunity	3.53	1.287	0.726		
Necessity	2.01	0.778	0.711	-2.997	0.004***
Most of the leaders in this community are people who own their own businesses.					
Opportunity	3.27	1.116	0.723		
Necessity	3.22	1.416	0.785	-3.989	0.001***
There are many examples of well respected people who made a success...					
Opportunity	3.63	1.154	0.700		
Necessity	2.99	1.121	0.711	-1.558	0.000***

A non-parametric test was used because data were not normally distributed. Mann-Whitney U and Wilcoxon W test statistics rendered an overall significant Z score (-3.910; $p = .001$).

*Indicates statistical significant difference where $*p < .05$ (two-tailed); ** $p < .01$ (two-tailed); *** $p < .005$ (two-tailed).

10 Conclusion

In line with contemporary views on the importance of social capital for entrepreneurs, the centrepiece of this study focused on uncovering differences in networking activities and perceptions of support between NDE versus ODE.

At a general level the empirical findings provide mixed results in terms of the four hypotheses, where in several instances significant differences were detected. The findings related to the first hypothesis add to the ongoing debate of diversity in entrepreneurial networking, as differences were detected between ODE and NDE, leading to rejection of the null hypothesis. However, the results indicate a tendency towards homogeneity in networks, suggesting that network diversity is relatively low for both NDE and ODE.

At the same time, the prediction that networking ties will not differ between NDE and ODE, as formulated in hypothesis two, is rejected as several significant differences were reported in terms of length of relationship and frequency of contact with each of the helpers. Moreover, these relationships are based on strong network ties rather than weak network ties.

On the other hand, null hypothesis three is accepted as no significant differences were detected between NDE and ODE with respect to network support relationships.

Configurations of networking climate support perceptions were predicted not to differ between NDE and ODE, however, several differences were found, leading to the

rejection of hypothesis four.

Plausible explanations for some of these empirical results are made and interpreted in conjunction with previous findings. While it can be assumed that the degree of networking is indeed related to the type of entrepreneur investigated, this present research together with similar research (O'Donnell, 2004) shows that networking also varies according to individual differences and the context in which the actor is involved. Mitchell and Co (2004) find that most network members are either friends or family members, that is, most of the contacts were made through the entrepreneur's own effort rather than through referrals. South African entrepreneurs have been found to have established their network ties for a long time, although they spend less time in developing and maintaining contacts compared to their international counterparts. Previous comparative studies on networking in different countries provide evidence of some international similarities, as well as national-level characteristics (Cooper & Denner, 1998).

In the present study networking practices differ between ODE and NDE in terms of diversity, and on networking ties which for ODE seem to be based more on strong than weak ties. Past research points out that ties to more than one person with similar characteristics or in a similar social location are redundant and thus of questionable value in providing new information (Aldrich & Carter, 2004). Moreover, these findings on network diversity suggest that homogeneous networks are prevalent in terms of helpers for both opportunity-driven and necessity-driven entrepreneurs. A network's level of diversity

depends, in part, upon the mix of strong and weak ties. Two forces promote homogeneity in personal networks. First, people tend to associate with others who have similar values and interests. It has been argued that people learn more from people like themselves than from other groups or experts (Flora & Flora, 1993), and that communities tend to learn best from those that are at the same level as themselves. Second, people tend toward emotional and personal balance across their social relations.

Reflecting on the relatively average mean scores obtained on variables measuring networking assistance and relationship support obtained through networking, it could be postulated that in an emerging country context, such as South Africa, individuals and firms often form loosely-structured networks without clear governance mechanisms to coordinate activities, pool resources, and pursue joint growth (Luthans, Stajkovic & Ibrayeva, 2000). This means that networking is largely unstructured and coincidental in nature. As complex networks of socio-economic institutions are formed and shape the development of new technologies, knowledge intensive or ODE are particularly affected, as they must deal with and act in these dynamic networks (Groen, 2005).

Although this study makes a unique contribution by investigating a set of networking principles and practices which have not been previously linked to NDE versus ODE, this dualistic typology has begun to be questioned (Williams, 2008). Particularly NDE and ODE are largely treated as entirely separate categories constituted via their negation of each other. Recently, however, researchers have questioned the separateness of opportunity and necessity drivers and argued that they co-exist in entrepreneurial motives. The co-presence of necessity and opportunity drivers among informal entrepreneurs notes that motives shift over time, and that there is a transition from necessity to opportunity orientated motives as businesses mature. Indeed necessity-driven informal entrepreneurship may well provide a seedbed or platform from which opportunity-driven entrepreneurs emerge (Williams, 2008).

11 Implications

Based on this original investigation into social capital of ODE and NDE, several interesting practical and theoretical implications are observed.

Although efforts are under way to improve South Africa's human capital through education and skills training (Urban, 2008), aspects of social capital are often neglected. A strong entrepreneurial culture cannot develop and flourish in areas with limited access to social capital, networking structures, social relations and support factors (Welter & Smallbone, 2006). Key to countering these obstacles is to improve the country's social capital base through entrepreneurial networking. One way to increase the social capital base of entrepreneurs is to devise a coherent and nationally-aligned government vision for building entrepreneurship which includes a better working relationship between government, intervention agencies and target communities.

It is important to clarify that the findings and propositions made in this paper do not suggest that NDE should be discouraged – particularly as these necessity-driven entrepreneurs can make a living for their families and could support their children's education. This in turn could position them better in the job market to become opportunity-driven entrepreneurs (Bosma & Levie, 2009:11). National policy makers need to tailor their entrepreneurial development programmes to the profile of these broad categories of entrepreneurs.

One of the strategies in promoting entrepreneurship is conducting appropriate research aimed at better understanding the capacities of different types of entrepreneurs in South Africa. Such research may help target advisory services and finance more precisely so that entrepreneurial performance improves. Understanding networking behaviours would assist national policy makers who are trying to encourage more opportunity-focused entrepreneurial behaviour.

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Limitations and future research

Limitations of the study include that data may have been contaminated by common method variance, since all variables were surveyed from the same set of respondents. Another limitation of this research is that a cross-sectional study loses its dynamic aspects of entrepreneurial networking. A relatively static picture of network positions was surveyed. By investigating the dynamics of networking processes in a temporal framework, Jack, Dodd and Anderson (2008) demonstrate that networks are vital living organisms, changing, growing and developing over time.

As a directive for future action, it is suggested that policy makers and entrepreneurial development agencies, facilitate the emergence of both NDE and ODE social capital, allowing for strengthening of specific network practices, as well insuring that the benefits of co-operation increase between these two types of entrepreneurs. Such practices would allow for the development of a new type of integrated economy, where the intensive development of local and international networks allows for expansion into areas of specific application that would transform into a new economy based on extensive integrated networking or 'network economy' (Pollard & Simberova, 2002).

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