

ENTREPRENEURIAL NETWORKS: FINDINGS FROM A SOUTH AFRICAN STUDY

B C Mitchell and M J Co

School of Economics and Management, University of KwaZulu-Natal

Abstract

The purpose of this empirical study is to clarify how entrepreneurs use networks, as well as to describe the characteristics of these networks. A survey of 325 entrepreneurs from the province of KwaZulu-Natal in South Africa was conducted. Results indicate that although South African entrepreneurs have more contacts in their networks, they spend less time in developing and maintaining contacts when compared to their international counterparts. Results show that South Africans have established their network ties for a long time, although most of the contacts were met through the entrepreneur's own effort rather than through referrals. Results also show that most of the network members are either friends or family members, which is different from international findings, where most network members are business associates.

JEL M13, M30

1 Introduction

Entrepreneurship has been identified in literature as critical in the economic development of a nation. For South Africa, the importance of small and medium enterprises (SMEs) has been highlighted (Lekota, 1995; *State of Small Business in South Africa*, 2002; Orford, Wood, Fischer, Herrington, & Segal, 2003), and the critical benefits of entrepreneurship to the African continent have been reinforced by a number of researchers (Adam, 1999; Ramachandran & Shah, 1999; Kiggundu, 2002). There is however, a lack of relevant research on entrepreneurship in the South African context. Previous studies on entrepreneurship in South Africa have looked into psychological traits (Van Vuuren & Boshoff, 1994; De Klerk, 1998), demographic differences (Boshoff, Scholtz & Roodt, 1995) and motivation factors (Mitchell, 2003). In recent investigations, networking theory has been used as a mechanism for exploring the creation and development of new ventures.

Current investigations show a void of research on characteristics of South African entrepreneurial networks as well as how these networks are used.

Researching entrepreneurship using the social networks perspective is important, as studying entrepreneurs' participation in networks accentuates the importance of the social structure (Johannisson, 2000). The establishment of a firm means that entrepreneurs have to mobilise a set of resources to be able to hurdle the establishment process and manage the firm. Social networks are crucial assets for business owners struggling to survive in competitive markets (Aldrich & Zimmer, 1986; Aldrich, Elam & Reese, 1997; Chell & Baines, 2000).

That entrepreneurship is largely a social activity and that entrepreneurs are largely social creatures suggest not only that academics need to continue research on the social networks of new ventures, but that aspiring entrepreneurs

would benefit from learning the rudimentary tools of social network analysis (Burt, 1992). These tools can be used to identify which key people and firms are connected to one another, and which central players are crucial to a start-up's success.

2

Purpose and objectives of the study

This study aims to clarify how South African entrepreneurs use networks. The specific objectives of this investigation are as follows:

- ascertain the size of the network of entrepreneurs;
- determine the extent of the entrepreneurs' networking activity, density and diversity;
- describe the background of the network contacts; and
- compare key networking variables according to the entrepreneurs' descriptive characteristics.

3

Review of literature

The contribution of social networks to entrepreneurship is arguably one of the most important research discoveries in the last generation (Light & Gold, 2000). Recent organisational sociologists have been doing research and developing theory on the implications of viewing entrepreneurship as a social process. Aldrich and Zimmer (1986) propose that entrepreneurship is embedded in a social context, channelled and facilitated (or inhibited) by a person's position in a social network. Networking allows entrepreneurs to enlarge their span of action, save time and gain access to resources and opportunities otherwise unavailable, as well as provide needed resources to a new venture. This view also suggests that success doesn't depend just on the initial structural position of the entrepreneur, but also on the personal contacts he or she establishes and maintains throughout the process (Dodd & Patra, 2002).

Entrepreneurial activity does not occur in a

vacuum. Instead, it is imbedded in cultural and social contexts, and within webs of human networks that are both social and economic (Johannisson, 1990). In addition, Johannisson (1990: 4) affirms that entrepreneurs' personal networks are the "most significant resource of the firm". Empirical studies have illustrated that entrepreneurs use informal network contacts (family, friends, and business people) more than formal network contacts (bankers, accountants, business consultants and lawyers) as information sources (Aldrich, Rosen & Woodward, 1987: 158; Premaratne, 2001). An entrepreneur's personal network ties can expand the boundaries of rationality by creating and allowing access to knowledge and information. Once an entrepreneur has determined which relationships are crucial to the success of his or her new venture, most of his or her time is spent building, negotiating, and maintaining these relationships.

This view that entrepreneurship is a social process, and that entrepreneurs act largely as social rather than solo players, should not lead researchers and educators to conclude that the entrepreneurs' individual knowledge and skill is irrelevant to the success of a new venture (Byers, Kist, & Sutton, 1997). Rather, the essentially social nature of establishing connections and fruitful relationships with both the insiders and outsiders means that the study of entrepreneurship should focus on social behaviour. This includes how people identify which relationships will be crucial to the success of their venture, and how they develop and maintain the relationships that enable their firm to obtain the resources needed for their firm to survive and grow. Granovetter (1973: 1367) claims that weak ties act as "bridges" to information sources not necessarily contained within an entrepreneur's immediate (strong-tie) network. Since an individual does not interact with weak ties regularly, it is likely that weak ties provide more unique information than strong ties (Burt, 1997).

Johannisson (2000) states that the personal network provides not only information and access to important physical and financial resources, but also human and social capital. Aldrich and Zimmer (1986: 12) contend that

there is a number of dimensions of social networks that may be conducive to entrepreneurship. Firstly, the importance of being within a group which, through increasing group identity and group boundary, increases network density: dense networks may produce a collective capacity necessary for an entrepreneur to draw upon. Secondly, the accessibility of persons who can match actors with similar interests is important for increasing the reachability within a network. Thirdly, the diversity of ties is important, and the balance between weak and strong ties is imperative. Fourthly, the access to those people with the most social resources through weak ties is important. Therefore, a high degree of density, reachability, diversity and access to social resources through weak ties are conducive to entrepreneurship.

4

Research methodology

Data for the analysis was collected from 325 entrepreneurs in Durban, the largest city in the province of KwaZulu-Natal, South Africa. Entrepreneurs were requested to fill in a structured survey instrument to ensure reliability and validity in responses obtained. The sample was selected from entrepreneurs from the three dominant ethnic groups in the region: African, European and Indian.

Because a lot of ethnic businesses are still operated in areas dominated by specific ethnic groups, research assistants from the same ethnic group as the respondents' were used. This methodology was utilised by Ram (1991; 1994) in his studies conducted in England. He rationalised that having interviewers with the same ethnic background led to more access and acceptance by the respondents. The data was collected over a four-month period from November 2001-February 2002.

The data analysis consisted of frequency analyses of the demographic information. Comparison of means using chi-square tests, analysis of variance (ANOVA) and t-tests of several networking variables were conducted to determine significant differences of

entrepreneurs based on different personal characteristics. Correlation was also made between key network activity and density variables together with entrepreneur characteristics. Cross-tabulations were also performed to determine network density and diversity.

Measures

The researchers selected three dimensions of networks to investigate in this study: activity, density, and diversity. These three dimensions are related, with activity potentially affecting both density and diversity.

Network activity

This dimension is measured by the size of the network (number of contacts the entrepreneur discusses the business with) and how actively entrepreneurs use these contacts (hours spent developing and maintaining contacts and percentage of time spent networking).

Network density

This dimension is measured by how well the entrepreneur knows each contact's network, the number of years the entrepreneur has known the contacts, and how well the contacts know each other.

Network diversity

This dimension looks at how similar or different the characteristics of the entrepreneur are to those of the members of his network. The relationships (for example, friend, family, colleague or professional acquaintance) that the entrepreneur has with his contacts also determine network diversity.

5

Results

Table 1 presents the different descriptive characteristics of the sample. Almost two-thirds of the respondents were male and married (67.10 per cent). About one-third (34.20 per cent) were from the African ethnic group, 37.30 per cent were Indians and 27.20 per cent were European. Almost half (44.60 per cent) of the entrepreneurs finished matric/12th grade, while 35.70 per cent finished either

a degree or a diploma course. Very few of the respondents had a parent who was an entrepreneur (father – 12.30 per cent, mother – 3.10 per cent) although half of the respondents (49.80 per cent) had other relatives that were entrepreneurs. The average age of the respondents was 43.71 years, with a range from 21 to 73.

Table 1
Descriptive characteristics of the sample

Variables	Frequency	Percentage
<i>Gender</i>		
Male	205	63.1
Female	119	36.6
Missing	1	0.3
Total	325	100.0
<i>Age</i>		
21-30	44	13.5
31-40	64	19.7
41-50	100	30.8
51-60	56	17.2
61-73	23	7.1
Missing	38	11.7
Total	287	100.0
<i>Ethnic group</i>		
African	111	34.2
Indian	121	37.2
European	90	27.7
Other	2	0.6
Missing	1	0.3
Total	325	100.0
<i>Marital status</i>		
Never married	57	17.5
Married	218	67.1
Divorced	32	9.8
Widowed	12	3.7
Missing	6	1.8
Total	325	100.0
<i>Educational attainment</i>		
Primary school or less	6	1.8
High school or less	39	12.0
Matric/12 th grade	145	44.6
Degree/diploma	116	35.7
Postgraduate degree	16	4.9

Missing Total	3 325	0.9 100.0
<i>Father's occupation</i>		
Non-entrepreneur	276	84.9
Entrepreneur	40	12.3
Missing	9	2.8
Total	325	100.0
<i>Mother's occupation</i>		
Non-entrepreneur	297	91.4
Entrepreneur	10	3.1
Missing	18	5.5
Total	325	100.0
<i>Relatives' occupation</i>		
Non-entrepreneur	148	45.5
Entrepreneur	162	49.8
Missing	15	4.6
Total	325	100.0

5.1 Networking activity and size

Table 2 below shows differences in the activity and the size of networks of South African entrepreneurs classified according to the different descriptive characteristics of the entrepreneur. On average South African entrepreneurs have discussed aspects of running their business with 8.70 persons. Males, however, discuss business with more contacts (9.2 persons) as compared to females (7.89 contacts). Older entrepreneurs (ages 61 to 73) also tend to discuss aspects of running the business with more people (18.95) than younger entrepreneurs do. There is also a significant difference in the number of persons South African entrepreneurs discuss their business with when results are classified according to ethnic group. Indians discuss business with 11.7 individuals, Europeans with 10.24 and Africans with 4.5 contacts only. Among the respondents, married entrepreneurs also discuss their business with more people (9.88) compared to those who have never married (6.65), divorced (6.39) or widowed (7.09), although the result of the analysis of variance (ANOVA) shows that there are no significant differences between groups in this classification. The chi-square test

results also indicate that there are no significant differences in the number of people the entrepreneur discusses business with when the sample is classified using the entrepreneur's educational attainment and parent's occupation.

The average number of hours spent developing contacts (in 1 week) for the South African sample was 6.55. The ANOVA results show that only when the sample is categorised according to age is there a significant difference in the number of hours spent developing contacts. Generally, as respondents grow older they spend less time developing contacts (from 8.63 hours at age 21-30 to 4 hours at age 61-73). It is, however, interesting to note that divorced entrepreneurs spend more hours developing contacts (9.33) than their unmarried

(7.62), married (6.10) or widowed (4.27) counterparts.

The average number of hours that South African entrepreneurs spent maintaining contacts was 6.99 hours. According to the t-test results, only when the sample is classified according to gender is there a significant difference in the number of hours spent in contact maintenance. Males spend more time (7.36) maintaining contact than females do (6.34). As with the results relating to the number of hours spent in contact development, divorced entrepreneurs spend more hours maintaining contacts (9.14) than their unmarried (8.65), married (6.40) or widowed (6.64) counterparts do.

Table 2
Comparison of networking activity variables

	Size of network		Hours spent developing		Hours spent maintaining	
Classification	Mean	χ^2	Mean	t value	Mean	t value
<i>Gender</i>		16.712		-0.258		0.830**
Male	9.20		6.44		7.36	
Female	7.89		6.76		6.34	
<i>Age</i>		145.516*		1.094		0.777
21-30	9.14		8.63		8.5	
31-40	4.68		6.80		6.86	
41-50	8.44		5.55		7.77	
51-60	7.04		7.15		6.67	
61-73	18.95		4.00		3.57	
<i>Ethnic Group</i>		119.301*		0.077		0.504
African	4.50		6.68		6.33	
Indian	11.70		6.76		7.27	
European	10.24		6.22		7.74	
Other	20.00		—		—	
<i>Marital Status</i>		101.705*		1.165		1.312
Never married	6.65		7.62		8.65	
Married	9.88		6.10		6.40	
Divorced	6.39		9.33		9.14	
Widowed	7.09		4.27		6.64	
<i>Education</i>		97.710*		1.205		1.777
Primary school	3.8		6.25		3.5	
High school or less	8.97		9.52		9.45	
Matric/12 th grade	9.67		6.95		8.11	
Degree/diploma	7.49		5.37		5.32	
Postgraduate	10.46		6.00		7.08	

* $p \leq .001$

** $p \leq .01$

*** $p \leq .05$

Based on the correlation analysis conducted between several network activity variables and entrepreneur characteristics, the number of persons an entrepreneur discusses aspects of running the business with is correlated to the gender ($\rho=0.000$), age ($\rho=0.027$) and the occupation of the entrepreneur's mother ($\rho=0.007$). The number of hours spent developing contacts is significantly correlated to the marital status ($\rho=0.068$).

5.2 Network density

Table 3 presents three variables measuring different aspects of network density: how well the entrepreneur knows his contacts' network, the number of years the entrepreneur has known the contacts, and how well the contacts know each other. The overall results indicate that the mean of the South African entrepreneurs' knowledge of his network's contacts is 1.51, that is, between the "very well" and "somewhat well" scale. The entrepreneur has known his contact on average 11.72 years and his contacts are "somewhat" to "well" acquainted with each

other (mean = 2.38). Upon further investigation using t-tests and ANOVAs, results show that when these three network density variables are classified according to gender, age and ethnic group, significant differences emerge. On the other hand, marital status as a classification factor is significant only for the entrepreneur's knowledge of his contacts' networks; education for the number of years contacts are known and how well contacts know each other; and the occupation of the entrepreneur's mother is significant only for the variable indicating how well the entrepreneur knows his contacts' networks. Most notably, these results show that entrepreneurs who know their contacts' networks better tend to be females, older, European, divorced and highly educated. Entrepreneurs who have longer established networks tend to be males, older, European, widowed, and have lower educational background. Entrepreneurs who have denser networks tend to have the following characteristics: males, older, Indian, married or widowed, and have either finished high school or have postgraduate education.

Table 3
Comparison of differences in network density variables

Classification	How well network of contacts are known		Number of years contacts are known		How well contacts know each other	
	Mean	t / F value	Mean	t / F value	Mean	t / F value
Gender		1.247**		-0.251***		1.182*
Male	1.4954		12.0862		2.41	
Female	1.5182		11.0602		2.32	
Age		2.425***		6.676*		3.644**
21-30	1.31		9.9		2.36	
31-40	1.40		9.24		2.24	
41-50	1.69		11.48		2.23	
51-60	1.48		14.12		2.57	
61-73	1.51		15.45		2.63	
Ethnic Group		10.547*		21.669*		4.267**
African	1.1340		8.7481		2.3	
Indian	1.6477		13.1372		2.55	
European	1.8931		13.3156		3	

<i>Marital Status</i>		3.158***		2.880***		0.225
Never married	1.26		9.93		2.38	
Married	1.55		12.03		2.39	
Divorced	1.73		11.51		2.29	
Widowed	1.62		16.12		2.39	
<i>Education</i>		0.951		2.278		2.152
Primary school	1.57		17.13		2.51	
High school or less	1.64		13.91		2.55	
Matric/12 th grade	1.43		11.53		2.42	
Degree/diploma	1.53		10.89		2.24	
Postgraduate	1.72		12.46		2.53	

* $p \leq .001$ ** $p \leq .01$ *** $p \leq .05$

Table 3 is based on the results of the correlation analysis performed on several network density variables and the entrepreneurs' descriptors. The variable that measures how well the entrepreneur knows the network of his contacts is significantly correlated to the entrepreneur's ethnic group ($p=0.000$) and marital status ($p=0.008$). The number of years that the entrepreneur has known his contacts is significantly correlated to age ($p=0.000$), ethnic group ($p=0.000$), marital status ($p=0.017$), and education ($p=0.031$). Lastly, how well the contacts know each other is significantly correlated only to the age ($p=0.03$) and educational attainment ($p=0.057$) of the entrepreneur.

Table 4 presents the results of the cross-tabulation analysis of how network contacts were met with respect to different entrepreneurial characteristics. Regardless of the classification variable used, most entrepreneurs' existing contacts were met through their own efforts. The more notable results indicate that older entrepreneurs (age 61-73) have more referrals (41 per cent) than entrepreneurs from the other age groups, females have a higher percentage (30 per cent) of referrals than males (21 per cent), European entrepreneurs have slightly more referrals (28 per cent) than Africans (22 per cent) and Indians (25 per cent), and married entrepreneurs have the lowest percentage of referrals (30 per cent) compared with entrepreneurs who are unmarried. It is also quite striking to see that entrepreneurs with postgraduate degrees have the highest

percentage of contacts referred to them (73 per cent) and that respondents that have mothers who are also entrepreneurs also have a high rate of referred contacts (55 per cent).

Table 4

Comparison of network density variables
(how contacts were met)

Classification	Own (per cent)	Referred (per cent)
<i>Gender</i>		
Male	79	21
Female	70	30
<i>Age</i>		
21-30	77	23
31-40	84	16
41-50	68	32
51-60	83	17
61-73	59	41
<i>Ethnic Group</i>		
African	78	22
Indian	75	25
European	72	28
Other	100	0
<i>Marital Status</i>		
Never Married	60	40
Married	70	30
Divorced	61	39
Widowed	60	40
<i>Education</i>		
Primary school	80	20
High school or less	79	21
Matric/12 th grade	67	33
Degree/diploma	68	32
Postgraduate	27	73

<i>Father's Occupation</i>		
Non-entrepreneur	66	34
Entrepreneur	74	26
<i>Mother's Occupation</i>		
Non-entrepreneur	68	32
Entrepreneur	45	55

5.3 Network diversity

Overall, 39.50 per cent of the South African entrepreneurs' network contacts were friends, 36.03 per cent were family members, 22.93 per cent were colleagues and 1.45 per cent were professional acquaintances. Table 5 presents the distribution of relationships with contacts according to different entrepreneur characteristics.

Both male and female entrepreneurs have more friends in their network than any other type of relation; family members comprise about one-third of these entrepreneurs' networks. Younger entrepreneurs have the largest number

of friends in their networks, while older entrepreneurs have more family members in their list of contacts. In terms of ethnicity, all ethnic groups except the Indians have more friends in their networks than other types of relations. Indians, however, have a higher percentage of family members in their networks. Entrepreneurs who have never married or are widowed have more friends in their networks, while divorced entrepreneurs have predominantly family and colleagues in their networks. Married entrepreneurs tend to have a balance between friends and family in their networks. Entrepreneurs with lower education have friends predominantly composing their networks, while those with higher education levels (matric and degree) have more family and colleagues in their networks. The networks of respondents with postgraduate degrees are composed predominantly of friends and, to a lesser extent, family members and colleagues.

Table 5
Distribution of relationships with contacts

Classification	Friend	Family	Colleague	Prof. acq.	Neighbour
<i>Gender</i>					
Male	38.83	36.83	22.19	2.00	0.15
Female	40.83	34.37	24.29	0.52	0.00
<i>Age</i>					
21-30	45.75	32.68	20.26	1.31	0.00
31-40	38.74	38.74	22.53	0.00	0.00
41-50	41.97	27.54	26.23	4.27	0.00
51-60	38.76	42.70	18.54	0.00	0.00
61-73	25.00	46.43	26.79	0.00	1.79
<i>Ethnic Group</i>					
African	41.58	35.64	22.77	0.00	0.00
Indian	34.10	42.49	23.12	0.29	0.00
European	43.66	28.17	23.24	4.93	0.00
Other	46.91	26.38	26.71	0.00	0.00
<i>Marital Status</i>					
Never Married	45.63	36.89	17.48	0.00	0.00
Married	38.30	37.85	23.40	0.45	0.00
Divorced	32.98	23.40	30.85	12.77	0.00
Widowed	45.65	28.26	26.09	0.00	0.00
<i>Education</i>					
Primary school	62.50	25.00	12.50	0.00	0.00
High school or less	40.46	40.46	19.08	0.00	0.00
Matric/12 th grade	34.21	39.47	23.92	2.39	0.00
Degree/diploma	42.17	34.09	22.48	1.27	0.00
Postgraduate	52.73	23.64	23.64	0.00	0.00

Table 6 presents how similar or dissimilar the entrepreneur is to his network contacts in terms of personal characteristics. Most males have primarily other males in their networks, while females tend to have a more gender-balanced network. Young entrepreneurs (ages 21-30) tend to have younger contacts (ages 21-40) while

older entrepreneurs (ages 51-60) have contacts who are slightly younger or the same age (ages 41-60). Looking at the ethnic groupings, entrepreneurs from all ethnic groups have network members who are of the same ethnicity as them.

Table 6
Comparison of network diversity variables

Classification	Contact characteristics				
	Male		Female		
Gender					
Male	73		27		
Female	56		44		
Age	21-30	31-40	41-50	51-60	61-73
21-30	24.75	34.78	21.07	16.05	3.35
31-40	13.44	38.74	30.44	13.44	3.94
41-50	14.48	12.22	48.42	20.36	4.52
51-60	11.11	6.06	52.53	20.20	10.10
61-73	7.90	10.51	28.95	26.32	26.32
Ethnic Group	African	Indian	European	Other	
African	96.61	1.58	1.81	0.00	
Indian	2.15	95.70	1.23	0.92	
European	4.48	7.24	88.28	0.00	
Other	16.67	50.00	33.33	0.00	

6 Conclusions

This study examined the different networking characteristics of South African entrepreneurs. Three dimensions of networks were used: activity, density and diversity. Overall findings indicate that South African entrepreneurs are not maximising the use of their networks.

Network activity looks into the size of the network and the amount of time spent developing and maintaining networks. The results of the study indicate that South African entrepreneurs discuss their business with an average of 8.7 persons. This figure is lower compared with figures from American (9.5) entrepreneurs but higher than Northern Irish (7.2), Italian (7.7) and Greek (7) entrepreneurs. A high number of people may indicate the possibility of receiving diversified information.

A high number of network contacts also increases the chances of receiving useful information. Compared with results from a cross-country study (Dodd & Patra, 2002), the number of hours South African entrepreneurs spend developing (6.55) and maintaining (6.99) contacts is for fewer than their Scottish (8.1 & 5.5), Northern Irish (13 & 16.4), Greek (19 & 24.6), and Italian (11.5 & 12) counterparts but is higher than in the case of American and Japanese entrepreneurs. When a network is large, the entrepreneur has less time to spend on each contact. By chance, there is a higher possibility of picking up useful information by spending a smaller amount of time with a higher number of persons.

Density refers to how tightly connected the persons in a network are to each other. According to the findings of the study, South African entrepreneurs know their network contacts between the very well and somewhat well scale and their contacts are somewhat to well-acquainted with each other. The entrepreneur has known his contact on average 11.72 years, which, when compared to Japanese (13.39) Italians (11.9) and Greek (15.8) entrepreneurs, is lower (Dodd, Jack & Anderson, 2002). South Africans however, have longer-established ties compared to Canadian (10), Northern Irish (8.1), American (10.6) and Swedish (11.6) entrepreneurs (Dodd et al., 2002). Upon further investigation using t-tests and ANOVAs, results show that when these three network density variables are classified according to gender, age and ethnic group, significant differences emerge. Regardless of which classification variable is used, most entrepreneurs' existing contacts were met through their own effort. The more notable results indicate that entrepreneurs who have higher referrals are older, female, European, unmarried or widowed, and have postgraduate degrees and mothers who are also entrepreneurs.

A network that is highly dense means that persons in the network know each other and to a large extent may share redundant or overlapping information. In a network that has low density, contacts of the entrepreneur do not know each other well and therefore the probability of redundant information is lower. A low-density network also protects the basic business idea. If these contacts do not know each other entrepreneurs can discuss parts of their business ideas with other people and gain access to complementary assets without their discussion partners being able to appropriate them. The density of the entrepreneur's network is also indicated by how his contacts were met. Obviously, referrals would indicate that the entrepreneur's existing contacts help him generate other possible sources of information or complementary assets.

The background of the contacts is critical in determining what type of relationship the entrepreneur has with his contacts and what

kinds of resources they might contribute. Networks will be congenial to entrepreneurship if they are embedded in an entrepreneurial context, because that means that relevant information and resources are available to prospective entrepreneurs (Johannisson, 1988). Network diversity can also be indicated by how similar the contacts' characteristics are to the entrepreneur. Overall, 39.50 per cent of the South African entrepreneurs' network contacts were friends, 36.03 per cent were family members, 22.93 per cent were colleagues and 1.45 per cent were professional acquaintances. Contrarily, results from Japan, Canada, Northern Ireland, USA, Italy, Sweden and Greece (Dodd & Patra, 2002) indicate that entrepreneurs in these countries have more business ties than family or friends in their networks. In terms of diversity of personal characteristics, findings indicate that the network members have very similar characteristics to the entrepreneurs. The principle of homophily suggests that we tend to make friends with people with similar characteristics as us. Furthermore, people in our networks with whom we interact frequently also tend to know each other. However, if an individual's goal is to maximise resources and search for information, it is more advantageous to have diverse networks that contain a variety of people.

The study of networks in South Africa is a complex one. Although potential network elements are very common in this country, such as ethnicity, immigration, family ties and marginality, almost all of which are conditions which elsewhere have been found to favour the formation of networks, one needs to take into account the interacting cultural, political and economic factors. The unique political situation in South Africa which rendered the majority group marginal raises questions about whether theories of ethnic marginality which have been developed in the study of minority groups may be relevant to a marginalized majority group. Also, one needs to ask whether theories of ethnic business, based on immigrant groups, apply to indigenous groups, such as the African ethnic group.

References

- 1 ADAM, S. (1999) "Competencies and other factors affecting the small enterprise sector in Ibadan, Nigeria", in King, K. & McGrath, S. (eds.) *Enterprise in Africa: Between Poverty and Growth*: 179-90, Intermediate Technology: London.
- 2 ALDRICH, H.; ELAM, A. & REESE, P.R. (1997) "Strong ties, weak ties, and strangers: Do women business owners differ from men in their use of networking to obtain assistance?", in Birley, S. & MacMillan, I. (eds.) *International Research on Entrepreneurship*, Routledge: London.
- 3 ALDRICH, H.; ROSEN, B. & WOODWARD, W. (1987) "The impact of social networks on business foundings and profit: A longitudinal study", in Ronstadt, H.; Hornaday, J.A.; Peterson, R. & Vesper, K.S. (eds.) *Frontiers of Entrepreneurship Research*: 7, 154-68, Babson College: Wellesley, Massachusetts.
- 4 ALDRICH, H. & WALDINGER, R. (1990) "Ethnicity and entrepreneurship", *Annual Review of Sociology*, 16: 111-35.
- 5 ALDRICH, H. & ZIMMER, C. (1986) "Entrepreneurship through social networks", in Smilor, S. & Sexton, D. (eds.) *The Art and Science of Entrepreneurship*, New York: Ballinger.
- 6 BOSHOF, A.B., SCHOLTZ, C.P.T. & ROODT, G. (1995) "Measuring attitudes as a way of differentiating entrepreneurs", *South African Journal of Economic and Management Sciences*, 4: 27-42.
- 7 BURT, R. (1992) "The social structure of competition", in Nitkin, N. & Eccles, R. (eds.) *Networks and Organisational Structure, Form and Actions*, Harvard Business School Press: Boston, MA.
- 8 BURT, R. (1997) "A note on social capital", *Social Networks*, 19: 355-77.
- 9 BYERS, T.; KIST, H. & SUTTON, R.I. (1997) "Characteristics of the entrepreneur: Social creatures, not solo heroes", in Doff, R.C. (ed.) *The Handbook of Technology Management*, CRC Press LLC: Boca Raton, Florida.
- 10 CHELL, E. & BAINES, S. (2000) "Networking, entrepreneurship and microbusiness behaviour", *Entrepreneurship and Regional Development*, 12(2002): 195-215.
- 11 DE KLERK, A. (1998) "Variables distinguishing entrepreneurs and non-entrepreneurs from different ethnic groups in the South African environment", *Unpublished D.Com Thesis*. Pretoria: University of South Africa.
- 12 DODD, S.D.; JACK, S. & ANDERSON, A.R. (2002) "Scottish entrepreneurial networks in the international context", *International Small Business Journal*, 20(2): 213-19.
- 13 DODD, S.D. & PATRA, E. (2002) "National differences in entrepreneurial networking", *Entrepreneurship and Regional Development*, 14: 117-34.
- 14 GRANOVETTER, M. (1973) "Strength of weak ties", *American Sociological Review*, 78: 1360-80.
- 15 JOHANNISSON, B. (1988) "Business formation – a network approach", *Scandinavian Journal of Management*, 4(3/4): 83-99.
- 16 JOHANNISSON, B. (1990) "Economics of overview – guiding the external growth of small firms", *International Small Business Journal*, 9: 32-44.
- 17 JOHANNISSON, B. (2000) "Networking and entrepreneurial growth", in Sexton, D. & Landstrom, H. (eds.) *The Blackwell Handbook of Entrepreneurship*, Blackwell Publishers: Oxford.
- 18 KIGGUNDU, M.N. (2002) "Entrepreneurs and entrepreneurship in Africa: What is known and what needs to be done", *Journal of Developmental Entrepreneurship*, 7(3): 239-57.
- 19 LEKOTA, J. (1995) "The role of SMEs in economic development in South Africa", *Development Southern Africa*, 12(1): 11-13.
- 20 LIGHT, I. & GOLD, S.J. (2000) *Ethnic Economies*, Academic Press: San Diego.
- 21 MITCHELL, B. (2003) "African entrepreneurs: An analysis of their motivation for starting their own business", *South African Journal of Economic and Management Sciences*, 6(4): 724-43.
- 22 ORFORD, J.; WOOD, E.; FISCHER, C.; HERRINGTON, M. & SEGAL, N. (2003) *Global Entrepreneurship Monitor: South African Executive Report*, The Graduate School of Business: University of Cape Town.
- 23 PREMARATNE, S.P. (2001) "Networks, resources, and small business growth: The experience of Sri Lanka", *Journal of Small Business Management*, 39(4): 363-71.
- 24 RAM, M. (1991) "The dynamics of workplace relations in small firms", *International Small Business Journal*, 10(1): 44-53.
- 25 RAM, M. (1994) "The dynamics of workplace relations in small firms", *International Small Business Journal*, 10(1): 44-53.

- 26 RAMACHANDRAN, V. & SHAH, M.J. (1999) Minority entrepreneurs and private sector growth in Sub-Saharan Africa (*Discussion Paper RPED, 086*) The World Bank.
- 27 STATE OF SMALL BUSINESS DEVELOPMENT IN SOUTH AFRICA (2002) *Annual Review*, Report compiled by NTSIKA and the DTI.
- 28 VAN VUUREN, J.J. & BOSHOFF, A.B. (1994) "Entrepreneurs: Are they different? A re-analysis of a South African data set", in Klandt, H.; Mugler, J. & Bohling, D.M. (eds.) *Internationalising Entrepreneurship Education and Training*, Forderkreis-Grundungsforschung: Koln-Dortmund.