



Journal of Applied Sciences

ISSN 1812-5654

science
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A Qualitative Research on Social Network and Opportunity Recognition of Social Entrepreneurship with Nvivo

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Abstract: Analyzing types of social network and discerning impacts of different dimensions of social network on opportunity identification are very useful for research on the formation mechanism of opportunity identification in the context of social entrepreneurship. Using the Nvivo8.0 analysis software, this study discusses composition of social network and its influence on opportunity identification in social entrepreneurship, based on the qualitative study of twenty successful social entrepreneurs. This research has certain significance for potential social entrepreneurs to make full use of social network in order to identify more social opportunities.

Key words: Social entrepreneurship, opportunity recognition, social network, NVivo

INTRODCUTION

As similar as business entrepreneurship, opportunity recognition is one of the key characters of the definition (Mair and Marti, 2006) and is also the starting point of social entrepreneurship (Austin *et al.*, 2006), as well as influencing opportunity evaluation and opportunity development. So, opportunity recognition has gradually become one of the research topics of scholars' attention. For the impact factors of opportunity recognition in social entrepreneurship, scholars point out entrepreneurial alertness (Perrini *et al.*, 2010), prior knowledge (Alsos *et al.*, 2007), previous experience (Corner and Ho, 2010), social network (Sharir and Lerner, 2006; Shaw and Carter, 2007) and so on may be useful. Similar to studies of social network in the field of business entrepreneurship, scholars of social entrepreneurship emphasized the positive effects of social network on opportunity identification (Sharir and Lerner, 2006; Shaw and Carter, 2007; Jiao and Wu, 2008; Yan, 2008).

To sum up, existing research has the following deficiencies. First, in research contents, related research mostly only emphasized the importance of social entrepreneurs' social network but not mentioned the different dimensions of social network and their relationships with opportunity recognition. Second, to the point of research methods, existing research mostly adopted normative research or simple descriptive statistics and lacked qualitative research of depth analysis.

Thus, by using qualitative research and software Nvivo 8.0, throughout interviews with successful social entrepreneurs, this research analyses the main

components of social entrepreneurs' social network and their influence on opportunity recognition, in order to explore the mechanism of opportunity recognition in social entrepreneurship and provide certain reference value for social entrepreneurs.

RESEARCH METHOD AND DATA ANALYSIS

Research method: Qualitative research is usually used in the micro level of natural situation and through describing and analyzing individual things carefully and dynamically, it can get a more comprehensive explanatory comprehension on the "quality" of things (Chen, 2000).

Based on grounded theory, NVivo, which is the most popular computer aided qualitative analysis tool internationally, can manage information from documents, PDF, audio, video and photos and analyses and finds data quickly and efficiently. NVivo has the biggest advantage of coding and can help researchers make analysis of relationships between information and the underlying theories, as well as data querying, restructuring and hypotheses testing. By the latest NVivo8.0, using the data encoding, data analysis and statistical functions, this study carries out theme coding and hierarchical coding and analyses the explicit and implicit relationships between data, so as to test assumptions.

Data analysis: By Semi-structured interviews with twenty successful social entrepreneurs, this research collected a large amount of data, which then was sorted, transcribed and coded and finally was Imported to NVivo 8.0. After that, this research took four steps further.

Table 1: Opportunity recognition and social network in social entrepreneurship

(Texts = 20)	
Social network	Opportunities identified
Size of social needs network	18
Density of social needs network	19
Size of personal network	16
Density of personal network	19
Size of government network	15
Density of government network	16
Size of training and consulting network	11
Density of training and consulting network	15
Size of financial support network	7
Density of Financial support network	11

Table 2: Percentage agreement about coding

Codes	percentage agreement
Size of social needs network	94.20
Density of social needs network	96.35
Size of personal network	95.43
Density of personal network	93.72
Size of government network	95.83
Density of government network	96.47
Size of training and consulting network	84.38
Density of training and consulting network	90.37
Size of financial support network	83.67
Density of financial support network	89.12

Step one, researchers read each text of interviews carefully and learned them by heart, so as to form a preliminary overall concept.

Step two, based on step one, the authors began to code data and try to find out important and highlighted themes. To coding, the standard is the frequency of related words or content. That means when a particular topic or concept appears repeatedly and forms a certain mode, it may become our focus.

Step three, Theory construction. After coding, with already coded data as query target, by using the "matrix coding" function in Nvivo8.0, this research analyzed logical relations between concepts and searched out the coding contents that conformed to the query conditions between the two concepts at the same time and thus further understood how they interact with and influence each other. It was found that the number of opportunities that were identified was influenced by social network of the social entrepreneur. So, we made the two concepts overlap and searched and showed the result in Table 1.

Step four, reliability test. To guarantee the reliability, this study made two coders code the same text independently and calculated the "percentage agreement" by "coding comparison" function in Nvivo8.0 (Table 2). It is generally thought that reliability has reliability when it is above 0.7. Table 2 showed all were above 85%, proving high consistency between the two coders' coding.

Table 3: Tree nodes and child nodes

Tree nodes	Child nodes	Source of materials	Reference point
Social needs network	Size	18	34
Personal network	Density	19	45
Government network	Size	16	32
Training and Consulting network	Density	19	40
Financial Support network	Size	15	30
	Density	16	33
	Size	11	30
	Density	15	30
	Size	7	18
	Density	11	20

RESEARCH FINDINGS

Theoretical structure of social entrepreneurs' social network: After selection of the nodes, this research finally built five tree nodes and 10 child nodes, as showed in Table 3. Through analysis of these tree nodes, we can find that in the early of social entrepreneurship, the social network of social entrepreneurs was made up of social needs network, personal network, government network, training and consulting network and financial support network.

Influence of social network on opportunity recognition: Through the number of source of materials and reference points, we can judge the influence of different types of social network and different dimensions of social network on opportunity recognition in social entrepreneurship.

Firstly, in terms of tree nodes, social needs network had the greatest influence on opportunity recognition. Because opportunity identification in social entrepreneurship was essentially to identify unmet social needs, so keeping close relationships with these groups of pluralistic social needs could make social entrepreneurs find their real needs and then identify more opportunities. Then, personal network, government network, training and consulting network were following in turn. Finally, financial support network played the smallest part in opportunity recognition, because social entrepreneurship was "innovative behavior that was not limited by current resource dilemma" (Dees, 1998).

Secondly, in terms of those child nodes, network size and density of different types of social networks were all useful for opportunity recognition in social entrepreneurship. The larger the network size, namely social entrepreneurs communicated with more persons and got larger information about social entrepreneurial opportunities, the more opportunities they would recognize (Hills *et al.*, 1997). Moreover, the greater the network density which meant more efficient of information exchange between individuals and easier to

Table 4: Different cognitions on network size and density

Nodes	Local improving social entrepreneurs	System changing social entrepreneurs
Network size	28.47%	71.53%
Network density	67.26%	32.74%

deliver some scarce private information, the more opportunities would be identified (Coleman, 1990).

Different social entrepreneurs have different cognition on the importance of different dimensions of social network: According to the percentage of reference points in data coding, we found that local improving social entrepreneurs and system changing social entrepreneurs had different cognitions about the role of network size and network density playing on opportunity recognition (Table 4). Local improving social entrepreneurs focus on small-scale social improvement, mainly discovering and exploring social needs in their own region which means network density was more important than network size and the larger the network density, the more unmet demands would be discovered, the more opportunities would be identified. To the contrary, system changing social entrepreneurs focused on massive social changes and they tried to solve social problems by setting up a new market structure (Wang, 2011). Thus, network size played a more important role than network density for this kind of social entrepreneurs and network size was more useful for identifying social entrepreneurial opportunities.

DISCUSSION

Through in-depth interviews with 20 successful social entrepreneurs and under the premise of in completely faithful to original data, this study came to the following conclusions.

First, this study points out that the social network of social entrepreneurs is comprised of social needs network, personal network, government network, training and consulting network, financial network which has the same and different points with traditional commercial entrepreneurs'. As the same as commercial business, social entrepreneurs need to get the material and spiritual support from their family and friends, need to strengthen communication and contact with government departments to gain political legitimacy support and resources, needs to attend various training in order to enhance their entrepreneurial ability, needs to open up a variety of sources of funds, thus creating personal network, government network, training and consulting network and financial support network are necessary for the success of social entrepreneurship. However, different from

commercial entrepreneurship that takes economic value as the fundamental goal, social entrepreneurship is based on social mission and social value creation, so social entrepreneurs are more focused on social needs network so as to discover more unmet demands and then meet these demands by innovative commercial approach.

Second, these above networks all play important parts in opportunity recognition and their significance decreases in turn. At the same time, for the five different types of social network, network size and network density both are important for opportunity recognition. Moreover, local improving social entrepreneurs take more emphasis on the importance of social network density and system changing social entrepreneurs pay more attention to network scale in opportunity identification, which may be related to these two kinds of social entrepreneurs' focus on different social problems.

In short, this study made a detailed analysis about the composition of social entrepreneurs' social network and their influence mechanism on opportunity recognition, which provided a certain reference for potential social entrepreneurs to identify opportunities correctly by building effective social network in order to gain information about social needs. However, it is necessary to point out that not only social network plays an important part on opportunity recognition in social entrepreneurship but also entrepreneurial alertness, prior knowledge, prior experience, personal background, environment and so on play important roles.

This study was based on a qualitative research framework, needing to be validated in future studies. Future study needs to combine other factors influencing opportunity recognition, as well as quantitative analysis and empirical research, so as to construct a rich theoretical framework.

ACKNOWLEDGEMENTS

This study was supported by the National Natural Science Foundation of China (Grant No. 71162018).

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