Southern Cross University
ePublications@SCU

Southern Cross Business School

2009

The innovative behaviour of employees within a small to medium sized enterprise: a social capital perspective

Matthew Xerri
Southern Cross University

Yvonne Brunetto
Southern Cross University

Kate Shacklock
Griffith University

Publication details

Xerri, MJ, Brunetto, Y & Shacklock, K 2009, 'The innovative behaviour of employees within a small to medium sized enterprise: a social capital perspective', *Proceedings of 23rd ANZAM Conference 2009, Sustainability Management and Marketing*, 1-4 December 2009, Crown Promenade Hotel, Southbank, Melbourne / ANZAM, Promaco Conventions, Canning Bridge, WA.

ePublications@SCU is an electronic repository administered by Southern Cross University Library. Its goal is to capture and preserve the intellectual output of Southern Cross University authors and researchers, and to increase visibility and impact through open access to researchers around the world. For further information please contact epubs@scu.edu.au.

The innovative behaviour of employees within a small to medium sized enterprise: a Social Capital Perspective

Mr Matthew Xerri

School of Management Griffith University, Gold Coast, Australia

Email: m.xerri@griffith.edu.au

Dr Yvonne Brunetto

Associate Professor School of Commerce Southern Cross University, Tweed, Australia

Email: Yvonne.brunetto@scu.edu.au

Dr Kate Shacklock

Lecturer Department of Management Griffith University, Gold Coast, Australia

Email: k.shacklock@griffith.edu.au

The innovative behaviour of employees within a small to medium sized enterprise: a Social Capital Perspective

Abstract

This research comprises an examination of some organisational factors that affect the transfer of knowledge used to develop the innovative behaviour of employees within a small-to-medium sized enterprise (SME). In particular, this research uses the dimensions of Social Capital Theory as a lens to provide insight into the relationship between tie strength (social networks), experience of trust and culture as well as their impact upon the innovative behaviour of employees. This study proposes a model that outlines and tests the impact of these three organisational factors upon the innovative behaviour of employees within an SME. In order to address the primary research questions and hypotheses, data was gathered utilising a triangulation of methods within a post-positivist paradigm. The findings confirm that the organisational factors tested affect both the innovative behaviour of workplace social network members and the organisational culture that supports innovation. The implication of the findings is that it provides new knowledge about how the relationship between culture, social networks and trust amongst employees impacts upon their innovative behaviour. Consequently, this new knowledge is one attempt to address the paucity of research about innovation in the service industry, particularly in relation to gaining a better understanding of innovative behaviour in an engineering context.

Key Words: Innovative Behaviour, Organisational Culture, Social Capital Theory, Trust, Social Networks, Small-to-Medium Sized Enterprises (SMEs)

Introduction

Innovation is a term that suddenly everyone is talking about. The unstable and often chaotic environment within which organisations compete, is forcing organisations to be dynamic and innovative to remain competitive. Furthermore, while innovation is generally considered to be a crucial success factor in today's organisations, little is known about the organisational factors that impact upon the innovative behaviour of Small-to-medium sized enterprise (SME) employees within the service industry. Therefore, research into the organisational factors that impact upon the innovative behaviour of SME employees is imperative for organisations seeking a competitive advantage through innovation. As such, this research will add to the body of literature about the impact of some organisational factors upon the innovative behaviour of SME employees. Additionally, the research will outline implications for management that want to develop the innovative behaviour of employees.

This research will use Social Capital Theory (SCT) as the lens for examining some organisational factors that affect the innovative behaviour of SME employee's. Innovative behaviour is defined as the process of bringing new problem solving ideas into use. Subramaniam and Youndt (2005) described innovative behaviour as a knowledge management process that involves recognising a problem, creating solutions for the problem and creating support for the solutions. The importance of social networks becomes evident because despite rapid change and the constant influx of new technology, Nebus (2006) suggests that employees and employers alike still prefer to talk with others who belong to their workplace social networks as a means of gathering important knowledge. SCT suggests that there are intangible benefits that accrue for both the individual and the firm resulting from the network of relationships that are embedded within firms (Adler & Kwon, 2002; Gubbins & MacCurtain, 2008; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). SCT involves individuals or social units investing in social ties to gain access to the resources of others in the group or network (Hezlett & Gibson, 2007). Therefore, SCT suggests that the quality of network relationships affects the access of members to a range of resources and information (Nahapiet & Ghoshal, 1998). Access to such resources will ensure employees have the knowledge to develop innovative solutions.

Past research about innovative behaviour generally is extensive because innovation plays such an important role in the creation of a competitive advantage (Cooper, 1998; Janssen, 2005; Kleysen & Street, 2001). However, studies on innovative behaviour in the service sector have received minimal attention from researchers (Oke, 2007). To date, there has been research about some factors affecting the innovative behaviour of employees. For example, Coakes and Smith (2007) argue that innovative behaviour can be supported and facilitated by innovation "champions". These innovation champions have a natural ability to innovate. As well they are experts in their field and are able to help support

innovative behaviour within their networks because of their reputation (Coakes & Smith, 2007). However, the innovative process would stop at that point unless there were other mechanisms for dispersing the information. Boschma and Terwal (2008) argue that the best mechanism for diffusing new innovations is to facilitate and develop effective workplace social networks. Therefore, this study seeks to examine amongst other things how social networks impact upon the innovative behaviour of employees.

A number of factors highlight the importance and possible contribution of conducting this research. There are few studies that support the management of innovative behaviour within SMEs (Hoffman, Parejo, Bessant & Perren, 1998) and little attention has been given toward how to support such innovative behaviour. In particular, whilst past research has had a strong focus on the importance of innovative behaviour, a review of the literature reveals that there is a lack of research about organisational factors that could affect the innovative behaviour of employees (O'Regan & Ghobadian, 2005). In particular, the focus of the research is to examine innovative behaviour in action by analysing the role of social networks in the transfer of important work-based information, particularly about new knowledge. Therefore, the main contribution of this research is to provide insight into the relationship between an organisations social capital (tie strength and culture) and the innovative behaviour of SME employees. Hence, the following primary research questions are proposed to guide the research so as to identify relevant data:

"What is the impact of tie strength, and culture upon the innovative behaviour of employees in SMEs?"
"What is the impact of tie strength upon the innovative culture of employees in SMEs?"
"Why does tie strength impact upon the innovative behaviour of employees in SMEs"
"Why does tie strength impact upon the innovative culture of employees in SMEs"

Background

The Correlation between Social Networks and Social Capital Theory

SCT suggests that if the embedded rules and norms of an organisation facilitate trust development among members within social networks, the conditions are favourable for promoting the sharing of ideas and information. In addition, such rules and norms are the foundations upon which social relationships are formed because they determine what is acceptable and unacceptable in terms of behaviour and actions. However, social capital can be developed through both personal and business networks (Akdere, 2005). These benefits may include mutual reciprocity of ideas, information, time, respect, support and/or assistance. Therefore, to increase social capital it is imperative to increase the quality of social ties and trust amongst social network members. Past literature suggests that SCT has three highly interrelated components known as the structural, relational and cognitive dimensions

(Nahapiet & Ghosal, 1998). For the purpose of this study, and to examine both tie strength and culture, the structural and cognitive dimensions will be used as lens to examine the research questions.

The structural dimension of SCT refers to examining the development of social capital by analysing the structures embedded within organisations, promoting ties between workplace social network members. Structural social capital can be examined by analysing the number of interpersonal linkages (ties) between workplace social network members (Nahapiet & Ghoshal, 1998). The cognitive dimension refers to a theoretical lens for examining the impact of cultural resources in facilitating a shared understanding of the organisation's collective goals and etiquette within a social system (Nahapiet & Ghosal, 1998). Effective organisations embed structures and mechanisms to facilitate the shared understanding about the rules of sharing information (Anderson, 2007). This is developed over a period of time as members continually interact and build relationships with one another. Therefore, it is important that the structural, relational and cognitive dimensions of SCT be used to operationalise the organisational factors for testing. The structural dimension will be used to examine the strength of network ties and the cognitive dimension will be used to examine culture (Adler & Kwon, 2002; Akdere, 2005; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998).

The Strength of Workplace Social Network Ties

Levin and Cross (2004) suggest that the strength of ties amongst workplace social network members determines the benefits that could result from a social network. Current literature argues that social capital is derived from social relations (networks) because of the strength of ties between dyads (relationships between two people) and the structure of the network (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). A dyad is formed when a relationship (tie) is built between two employees, and this relationship can be measured by the differences in tie strength. Tie strength refers to the closeness of the relationships between two workplace social network members. Granovetter (1973, p. 1361) explains tie strength as the "combination of the amount of time, the emotional intensity, the intimacy and the reciprocal services which characterise the relationship". He argues that the longer the time that social network members have known one another and the greater the contact and rapport established amongst members, the greater the opportunity to form ties with others.

Social network ties can be further broken down into formal and informal relationships (ties). Formal relationships are outlined by policies, job descriptions and organisational charts (Marouf, 2005) and should facilitate the development of informal ties. Informal networks are developed by people who know each other and who will interact to help each other (Nebus, 2006). The informal social system is a tool that is able to assist in co-ordinating and facilitating employees within a workplace social network. The informal social system is an appropriate tool because the contract of employment or daily operations are considered to be socially binding rather than legally binding (Jack, 2005). What

this means is that employees will be willing to follow the goals of the organisation (aligning policy with practice), otherwise their social reputations and/or power could be damaged.

Past literature suggests ties or relationships can be either strong or weak. Granovetter (1973) explains weak ties as relationships that are generally categorised as distant and having infrequent interaction. Furthermore, it is suggested that weak ties are more likely to provide new sources of information, because the knowledge transferred between strong ties tends to already be known by other members in the group where strong ties exist. In contrast, strong ties are considered to involve relationships that have a high level of interaction and emotional closeness (Perry-Smith, 2006). Therefore, for a workplace social network to be effective it is imperative that it contain both strong and weak ties that link everyone together (Hoang & Antoncic, 2003). That is a combination of ties provides the closeness and bond of strong ties for problem solving with the diverse perspectives of weak ties, to provide an environment that fosters knowledge dissemination and innovation.

Organisations that can bring together all of their knowledge and collective expertise are more likely to be an innovative, efficient and effective entity. However, in practice the transfer of knowledge throughout an organisation has manifested as a major organisational challenge (Levin & Cross, 2004). Therefore, it is important that organisations establish effective formal networks of relationships to facilitate and support the informal networks in place to promote knowledge creation and sharing (Zupan & Kase, 2007). Furthermore, Edwards (2000) suggests that innovation is not the work of one brilliant mind; rather, the innovation process represents the building of knowledge through the ties of social networks and hence it is in the firm's interest to facilitate effective informal social networks. The social relationships of employees form high capacity information links that create a motivation for information sharing and reducing ambiguity (Bruton, Dess & Janney, 2007). This means that the more effective the social network, the better the level of information sharing and the smaller the propensity of ambiguity. Therefore, collective knowledge creates a foundation for, and encourages the innovative behaviour of employees, through the facilitation of workplace social networks.

The question then becomes what type of workplace relationships (ties) will facilitate and sustain an environment which supports the development of the innovative behaviour of employees within the organisation? As such, the first hypothesis of this report is:

H1: The strength of ties will be negatively and significantly correlated to the innovative behaviour of employees within an SME.

Innovative Culture

The definition of culture and its true meaning are often debated and there are many definitions within academic literature. One of the most widely recognised definitions explains that culture is the pattern of learned, valid and shared assumptions, which are taught to new members as the most correct way to think, feel and perceive in a firm (Schien, 1984). Similarly, Koberg and Chusmir (1987) argue that it is a construction of collective values, beliefs, attitudes and assumptions that generates the standard of behaviour in the organisation. Another way to describe organisational culture is a shared perception of thoughts, feelings and bonds that motivates employees; it manages the way a business interprets information and its values (McAleese & Hargie, 2004). Therefore, an innovative culture can be considered as a construction of values, beliefs, attitudes and assumptions that support and facilitate innovation.

Firms can send signals to their employees about its desire to promote an innovative culture. For example, innovative behaviour which is supported and developed through the socialisation of workplace social network members is embedded within the shared values, systems and beliefs of the organisation (Martin & Terblanche, 2003). Furthermore, for innovative behaviour to be encouraged, the organisation must first demonstrate that they value innovative shared values, systems and beliefs (innovative culture) (Dobni, 2008). If employees perceive the organisation to value such behaviour, they will strive to be innovative.

The success of social networks depends on whether the organisation develops a supportive culture, such a culture is required to support the transfer of knowledge as well as innovative behaviour. Furthermore, as social networks essentially involve coordinating two or more people within an organisation, effective cooperation and trust is vital to the success of knowledge networks (Das & Teng, 1998). Past literature on networks suggests that there is a need for a high level of trust (McCarthy, 2006). A good organisational culture can impact positively on organisational functions; however, a poor organisational culture can have the opposite effect and severely reduce the effectiveness of the organisation (Martins & Terblanche, 2003). This is due to the fact that the focus on knowledge management currently is knowledge transfer (knowledge sharing) (Al-Alwai, Al-Marzooqi & Mohammed, 2007). Al-Alwai, Al-Marzooqi and Mohammed (2007) suggest that there are several cultural factors that influence the success of sharing knowledge including trust, communication between staff, information systems, reward system and organisational structure. Therefore, to effectively facilitate knowledge sharing, there must be a high level of trust between members of the workplace social network (Casson, 1997). Furthermore, sufficient modes of communication such as emails, mobiles, forums or management systems are required to ensure open bi-directional communication can take place and build the strength of ties amongst workplace network members (Granovetter, 1973; Johlke & Duhan, 2000). In addition, to encourage the continuous transfer of knowledge, it is important that employees are rewarded for innovative behaviour encouraging employees to continually seek knowledge to aid the development of innovative solutions.

For the purpose of this dissertation the importance of an innovative culture and its impact upon the innovative behaviour of employees will be examined.

H2: An organisation's innovative culture is positively and significantly correlated to the innovative work behaviour of employees within an SME.

Innovative Behaviour

As previously mentioned, current literature suggests that developing the innovative behaviour of employees can give organisations the edge when seeking to gain a competitive advantage. Carmeli, Weisberg and Meitar (2006) described innovative behaviour as a multi-staged process, including recognising a problem, creating new ideas and solutions for the problem, creating support for the new ideas and solutions for use in the organisation. Furthermore, the innovation process is often described as being comprised of an initiation and implementation phase (DeJong & Hartog, 2007). This research will focus on the transfer of knowledge that can be used as a resource to aid the innovative behaviour of employees within the context of a SME. The shared knowledge of employees constitutes an important resource and organisations that can facilitate the use of knowledge are able to innovate faster and more successfully (Cavusgil, Calantone & Zhao, 2003). The main aim of knowledge management and knowledge-based social development is to enable and encourage knowledge transfer and sharing as the creation and transfer of knowledge provides a foundation for a competitive advantage (Branchos, Kostopoulos, Soderquist & Prastacos, 2007). Therefore, by creating a culture which fosters the transfer of knowledge and innovative behaviour of employees, a sustainable competitive advantage is more likely.

The growing pressure to innovate is enforced by a turbulent business environment which is contributed to by a number of factors including technology growth, globalisation and hypercompetitive markets. Subsequently, innovative behaviour goes beyond the familiar path of what is accepted and concrete and is often associated with complexity and ambiguity (Kriegesmann, Kley & Schwering, 2007). Therefore, employees are unlikely to display innovative behaviour unless they are enticed, rewarded and supported (Clegg, Unsworth, Epitropaki & Parker, 2002). Furthermore, if an employee makes a mistake when displaying innovative behaviour, it is important that this will not damage their career or reputation otherwise employees will be too concerned about the consequences to think innovatively or creatively (Janssen, 2005). Therefore, the more an organisation rewards and supports an employee's innovative behaviour and listens and trusts their judgement, the more effort employees will put into being innovative (Ramus, 2001). In conclusion, it is pivotal that for an organisation to encourage and facilitate innovative behaviour, a culture of trust and support be created through incentives, rewards and an environment where mistakes are a learning curve.

H3: Tie strength impacts significantly and positively upon innovative culture.

H4: Tie strength and culture impacts significantly and both positively and negatively upon the innovative work behaviour of workplace social network members.

Methods

Context of Study

The context of this study is a small-to-medium sized enterprise (SME). The Australian Bureau of Statistics (2001) defines an SME as an organisation employing more than 20 but less than 200 people. SMEs represent over 90 percent of all organisations in Australia and continue to account for almost half of the Australian economy (Nelson, Brunetto, Farr-Wharton & Ramsay, 2007). Furthermore, it is estimated that only 10% of Australian SMEs are growing. As well, most research seems to demonstrate that an SME can be considerably disadvantaged when competing with larger firms (Cassell, Nadin, Gray & Clegg, 2002). Such a disadvantage is caused by the sheer amount of leverage and buying power large businesses have over their resources. In addition, SMEs have a high failure rate, which is six times that of larger organisations (Daniel & Wilson, 2002). Johnson (2002) suggests that this could be due to the low levels of learning (knowledge management) and training provided within SMEs in comparison to larger organisations, which have internal sources to acquire knowledge and to innovate. The SME chosen for this study is currently feeling the pressure of the current economic crisis and has made several positions redundant in the last few months. Therefore, the issue arises as to whether this SME can continue to grow and compete with larger organisations and markets in the future.

Sampling

The rationale for selecting a single case study is based upon industry typicality and employee typicality. Employee typicality refers to the extent the employees of the organisation match the context of the research that is under investigation (Yin, 2003). For industry typicality to be supported, the organisation selected needs to be representative of a SME that requires innovative behaviour to gain a competitive advantage. A SME was chosen for this study as they are required to develop innovative business practices if they are to remain competitive, especially during a period of intense competition (Brunetto & Farr-Wharton, 2007). Employee typicality was supported by selecting engineering employees that require the use of innovative solutions and the transfer of such solutions. Engineering firms are knowledge based organisations and require the generation of knowledge to support the development of innovative solutions.

Knowledge Based Firms (KBFs) are those where a vital input to production and the key source of value is knowledge and where much of this knowledge resides with employees (Grant, 1996). The

development of learning is extremely important as it epitomises knowledge which is the organisation's source of a competitive advantage (Herling & Provo, 2000). Buchen (2003) argues that KBFs have to make both innovation and learning a part of their core operations. Additionally, some employees of KBFs can also be considered as professionals. Professionals are considered to be respected members of the community who can be set apart from other employees, because of their possession and use of expert knowledge. Furthermore, due to this expert knowledge, the profession manages standards of training and entry, which is controlled by professional associations that determine who may gain the knowledge, skills and accreditation into the profession (Evetts and Buchner-Jeziorska, 1997). Therefore, professionals are a distinct group of employees who have the expert knowledge to belong to a professional association and culture that gives them autonomy to make decisions in the workplace.

Instruments Used

1. **Tie Strength:** was derived from Levin and Cross (2004) and was selected because it is important to examine how close engineering employees perceive themselves to be to others within their social network. This instrument includes three closed ended questions examining the tie strength between engineers in a workplace social network. Additionally, this instrument uses a Likert scale of six (1 = Very close to 6 =very distant).
2. **Innovative Culture:** was developed by Scott and Bruce (1994). This instrument examines whether employees surveyed perceive their organisation to value an innovative culture. Furthermore, it is suggested that organisations that value an innovative culture should have a greater amount of innovative employees than other organisations who do not value an innovative culture (Scott and Bruce, 1994). This measure contains twenty-two closed ended questions and uses a Likert scale of six (1 = never to 6 =very frequently).
3. **Innovative Behaviour:** was developed by Janessen (2005) which was constructed from Scott and Bruce (1994). This instruments contains nine items and uses a Likert scale of six (1 = never to 6 =very frequently). This item has been selected to examine how innovative behaviour is affected by tie strength and culture.

Analysis

Statistical, content and data analysis are used to test the relationship among variables. Statistical data analysis was conducted using SPSS software and included means, standard deviations, factor analysis and linear regressions. The organisation's mission statement was analysed using a content analysis, as well, all policies were scanned for any items associated with innovation. Content analysis can be defined as a methodology that codes text into categories and then calculates the rate of occurrence within each category (Ahuvia, 2001). After the content and statistical analyses were undertaken, an analysis of all forms of data was conducted. This grouped analysis was undertaken utilising a process

known as pattern matching. Yin (2003) suggests that pattern matching increases the internal validity of the research by comparing observed with predicted patterns. In summary, the three methods of analysis are utilised to increase the depth of the analysis.

Results

Demographics

There were 85 respondents to the survey comprising a 56.67% response rate. There were two main professions that formed the core engineering group, 59 (69.4%) were engineers and 26 (30.6%) were draftspersons.

Table One. Survey Demographics

Surveys	Engineering Employees (N =59)	Drafts Employees (N=26)	Total (N=85)	%
Gender				
Male	45	21	59	69.4
Female	14	5	26	30.6
Age				
16-23	13	13	26	30.6
24-30	21	7	28	32.9
30-50	17	6	23	27.1
50+	8	0	8	9.4
Education				
High School	1	8	9	10.6
TAFE	1	18	19	18.8
Undergraduate	42	0	42	52.9
Postgraduate	15	0	15	17.6

Addressing the Hypotheses

The means, standard deviations, Cronbach's alphas and inter-correlations for all variables including tie strength, trust, innovative culture and innovative behaviour are presented in Table Two.

Table Two. Means, Standard Deviations and Correlations of the organisational factors tested

Variable	Mean	SD	Innovative Behaviour	Tie Strength	Innovative Culture	Advice Network
Innovative Behaviour	3.5490	.90436	(.922)			
Tie Strength	2.7725	.96529	-.093	(.913)		
Innovative Culture	3.7947	.56019	-.123	.259*	(.812)	
Advice Network (Q50) (Control)	2.0706	.25766	.047	-.014	.051	1.000

N= 85. Numbers in parentheses on the diagonal are the Cronbach's Alpha in coefficients of the composite scales

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 1: The hypothesis tested was "The strength of ties will be negatively and significantly correlated to the innovative behaviour of employees". The tie strength instrument had a coefficient value of .913 exhibiting a high level of reliability. The mean of the tie strength scale was 2.77 (.97) suggesting that on average workplace social network members perceive themselves to be moderately close to other employees within their social network. What this means is that the majority of relationships within this workplace social network could be considered as strong ties. While tie strength was not significantly correlated to the innovative behaviour of employees it was significantly correlated to the innovative culture of the organisation (.259, P = .05). Furthermore, tie strength is negatively correlated with innovative behaviour and is statistically significant (-.414, $p < .05$). Therefore, results support the acceptance of hypothesis 1 because the strength of ties is negatively correlated with innovative behaviour. Tie strength is negatively correlated which means that weak ties support the innovative behaviour of employees more so than strong ties. This is because weak ties increase a workplace social network member's access to new information, supporting their innovative capabilities and fostering innovative behaviour (Levin & Cross, 2004). This suggests that the tie strength between workplace social network members is positively and significantly related to the innovative culture of the organisation.

Hypothesis 2: The hypothesis tested was "An organisation's innovative culture is positively and significantly correlated to the innovative behaviour of employees". The innovative culture instrument also had a high reliability rating of .873. The mean of the innovative culture scales 3.79 (.56) suggests that on average employees slightly agree to slightly disagree that the organisation values an innovative culture. Hypothesis 2 should be accepted because the more an organisation values an innovative culture the greater should be the innovative behaviour of their employees ($F = 3.588$, $R^2 = 22.3\%$, $P < .05$). Therefore, the results of the linear regression suggest that the innovative culture of the organisation is positively and significantly associated with the innovative behaviour of employees. What this means is that culture can support innovative behaviour in a number of ways including encouragement to be creative: having no negative effect when employees are creative, an effective reward system and the allocation of time and resources (Martins & Terblanche, 2003). The factors just mentioned are a small selection of support functions that if implemented effectively can develop an organisational culture that values innovative behaviour. Therefore, it is important to examine the organisational culture and its dynamics to determine whether employees perceive that the organisation has developed a culture that supports innovative behaviour.

Table Three. Linear Regression: Innovative Culture and Innovative Behaviour

Model	R	R^2	F	Sig.	B

1	.472	.223	3.588	.043	.426*
2	.705	.497	7.317	.001	.508**,.542**

a. Predictors: (Constant), Innovative Culture
b. Predictors: (Constant), Innovative Culture, Tie Strength
c. Dependent variable: Innovative Behaviour

Hypothesis 3: The hypothesis tested was "Tie strength impacts significantly and positively upon innovative culture". The R^2 value suggests that tie strength contributes to 26.7% of the variance in innovative culture for employees. The results therefore suggest that hypothesis 3 should be accepted as tie strength is positively associated with the innovative culture of employees ($F = 5.973$, $R^2 = 6.7\%$. $P < .05$) (see table four). What this implies is the organisation's ability to develop both weak and strong ties is impacted on by the organisation's culture. Furthermore, it is suggested that an organisation's culture functions as a support mechanism for the development of network ties, as well as, the innovative behaviour of employees. The support mechanism is designed to facilitate the development of workplace social networks to transfer knowledge throughout the organisation. Therefore, this increases an employee's resources to develop their innovative behaviour, and facilitates the develop of both strong ties (for decision making) and weak ties (for innovative behaviour).

Table Four. Linear Regression: Innovative Culture and Innovative Behaviour

Model	R	R^2	F	Sig.	B
1	.259	26.7	5.973	.017	.259*

a. Predictors: (Constant), Tie Strength

b. Dependent Variable: (Constant), Innovative Culture

Hypothesis 4: The hypothesis tested was "Tie strength and culture impacts significantly and both positively and negatively upon the innovative behaviour of workplace social network members". H4 should be accepted because as a combination of social network variables, tie strength and culture are positively and significantly correlated with their innovative behaviour ($F = 7.317$, $R^2 = 49.7\%$, $P < .001$) (See table three). These findings imply that if an organisation's culture supports innovation and has an appropriate number of weak social network ties, this will have a positive impact upon the innovative behaviour of employees. In summary, tie strength and culture are directly and significantly related to the innovative behaviour of employees.

Testing the Model

It was expected based on a review of previous literature that tie strength, and innovative culture would be significantly related to innovative behaviour of employees and that tie strength would be significantly related to the organisations innovative culture. The results confirm the findings from this study and identifies that social networks had significant and positive relationships with both the innovative behaviour of employees, and the organisations innovative culture. Overall all hypotheses were accepted.

Discussion

This study used Social Capital theory as a lens to examine the relationship between some organisational factors and innovative behaviour as well as culture. This study tested the impact of tie strength upon the organisation's innovative culture. The study also tested the impact of tie strength and innovative culture upon the innovative behaviour of workplace social network members. Results from this study confirm the proposed model because they stipulate that tie strength is positively correlated with an organisation's innovative culture. In addition, the results also suggest that the innovative culture of employees is positively and significantly associated with the innovative behaviour of workplace social network members. What this means is that the stronger and more developed an organisation's culture is toward supporting the innovative behaviour of employees, the greater will be the individual's innovative behaviour. This also is an important contribution to new knowledge in the management discipline.

The research findings support the current literature that weak ties or weaker relationships are typically beneficial for creativity and innovative behaviour (Gummeson, 2007; Levin & Cross, 2004; Perry-Smith, 2006). However, the results suggest that employees currently use their intra-office networks to solve problems and gather information and these networks are dense in strong ties. What this means is that the organisation already has numerous strong ties for problem solving and now needs to develop weak ties to support creativity and innovative behaviour. Weak ties can be developed between offices by developing effective online communication channels and ensuring that employees have the socially embedded skills required to form informal social networks rich in weak ties (Nie, 2001). Therefore, under ideal conditions it is expected that the structures embedded within the organisation will support high quality relationships that will promote the development of both strong and weak ties that are appropriate for problem solving and the disseminating of knowledge between workplace social network members.

The question then is how can organisations develop an organisational culture that supports the development of the innovative behaviour of employees. The first step required is to communicate the organisation's commitment to developing innovation within the organisation. Dobni (2008) suggests this can be achieved by developing a vision and mission that communicates to employees the

organisation's commitment to developing an innovative practice. However, an analysis of organisational documents confirmed the results from interviews conducted with managers that the current vision and mission are not aligned with the organisation's desire to develop an innovative practice. Furthermore, it is not enough to just align and communicate the vision, the organisation must develop a supportive structure and mechanisms to facilitate the innovative behaviour of employees (Scott & Bruce, 1994). This includes providing adequate resources to employees that support innovation within the organisation. Such resources include the provision of more time and flexibility within the workplace to pursue innovative ideas, as well as adequate technologies to be able to network effectively. Furthermore, it is also important that the vision and policies of the organisation are implemented and embedded into the culture of the organisation effectively. In summary, such actions demonstrate to employees that the organisation is supporting the innovative behaviour of employees and that they value innovation.

The findings provide greater insight into the development of the innovative behaviour of SME employees. The findings of the study address a number of gaps emergent within innovation literature. Consequently, this suggests some implications for the body of theory about innovative behaviour and workplace social networks. This study demonstrates that the proposed model in this study identifies the organisational factors contributing to an employee's innovative behaviour. Therefore, it is suggested that an organisation's culture is the support mechanism or the foundation. This foundation fosters an environment that facilitates positive experiences of trust designed to develop workplace social networks to transfer knowledge. Therefore, this increases an employee's resources to develop their innovative behaviour. These findings highlight the importance of examining the various factors that can contribute to an employee's innovative behaviour.

References

Adler, P. & Kwon, S. (2002). Social Capital: Prospects for a New Concept. *Academy of Management Review*, 27(1), 17-40.

Ahuvia, A. (2000). Traditional, interpretive, and reception based content analyses to address issues of pragmatic and theoretical research. *Social Indicators Research, 54*, 139-172.

Al-Alwai, A., Al-Marzooqi, N. & Mohammed, Y. (2007). Organisational culture and knowledge sharing: Critical success factors. *Journal of Knowledge Management, 11*(2), 22-42.

Akdere, M. (2005). Social Capital Theory and Implications for Human Resource Development. *Singapore Management Review, 27*(2), 1-27.

Anderson, B. L. (2007). The demise of the identity hypothesis and the insufficiency and non-necessity of contour reliability in predicting object interpolation: Comment on Kellman, Garrigan, and Shipley (2005). *Psychological Review, 114,* 470–487.

Australian Bureau of Statistics. (2001). *Small Business in Australia*. Catalogue 1321.0 AGPS, Canberra, Australia.

Boschma, R. & Terwal, A. (2007). Knowledge networks and Innovative Performance in an Industrial District: the case of a Footwear District in South Italy. *Industrial Innovation, 14*(2), 177-199.

Branchos, D., Kostopoulos, K., Soderquist, K.L. & Prastacos, G. (2007). Knowledge effectiveness, social context and innovation. *Journal of Knowledge Management, 11*(5), 31-44.

Brunetto, Y. & Farr-Wharton, R. (2007). The moderating role of trust in SME owner/managers' decision-making about collaboration. *Journal of Small Business Management, 45*(3), 362-387.

Bruton, G., Dess, G. & Janney, J. (2007). Knowledge management in technology focused firms in emerging economies: caveats on capabilities, networks and real options. *Asia Pacific Management Journal, 24*(2), 115-130.

Carmelli, A., Meitar, R. & Weisberg, J. (2006). Self-leadership skills and innovative behaviour at work. *International Journal of Manpower, 27*(1), 75-90.

Casson, M. (1997). Entrepreneurial networks in international business. *Business and Economic History, 26*(2), 811-823.

Cassell, C., Nadin, S., Gray, M And Clegg, C. (2002). Exploring human resource management practices in small and medium sized enterprises. *Personnel Review. 31*(5/6), 671-695.

Cavusgil, S.T., Calantone, R.J. & Zhao, Y. (2003). Tacit knowledge transfer and firm innovation capability. *Journal of Business & Industrial Marketing, 18*(1), 6-21.

Chow, W. & Chan, L. (2008). Social Network, social trust and shared goals in organisational knowledge sharing. *Information and Management, 45*(7), 458-464.

Clegg, C., Unsworth, K., Epitropaki, O. & Parker, G. (2002). Implicating trust in the innovation process. *Journal of Occupational and Organizational Psychology, 4*(75), 409-422.

Coakes, E & Smith, P. (2007). Developing communities of innovation by identifying innovation champions. The Learning Organisation. *The international journal of knowledge and Organisation Learning Management, 14*(1), 74-85.

Cooper, J. (1998). A multidimensional approach to the adoption of innovation. *Management Decision, 36*(8), 493-510.

Das, T & Teng, B (1998). Between Trust and Control Developing Confidence in Partner Cooperation in Alliances. *Academy of Management, The Academy of Management Review, 23*(4), 491-512.

De Jong, J. & Hartog, D. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management, 10*(1), 41-64.

Dobni, B. (2008). Measuring innovation culture in organizations, the development of a generalized innovation culture construct using exploratory factor analysis. *European Journal of Innovation Management, 11*(4), 539-559.

Droege, S., Anderson, J. & Bowler, M. (2003). Trust and Organisational information flow. *Journal of Business and Management, 9*(1), 45-59.

Edwards, T. (2000) Innovation and organisational change developments: towards an interactive process perspective. *Technology Analysis and Strategic Management, 12*(4), 445-64.

Evetts, J. & Buchner-Jeziorska, A. (1997). Regulating Professionals. International Sociology, 12(1), 61-72.

Granovetter, M.S. (1973). The strength of Weak Ties. *The American Journal of Sociology, 78*(6), 1360-1380.

Gubbins, C. & MacCurtain, S.(2008). Understanding the dynamics of collective learning: The role of Trust and Social Capital. *Advances in Developing Human Resources, 10*(4), 578-599.

Gummesson, E. (2007). Case Study Research and Network theory: Birds of a feather. *Qualitative Research in Organisations and Management: An International Journal, 2*(3), 226-248.

Herling, R. & Provo, J. (2000). Knowledge, competence, and expertise in organisations. *Advances in Developing Human Resources, 2*(1), 1-7.

Hezlett, S. & Gibson, S. (2007). Linking Mentoring and Social Capital: Implications for Career and Organization Development. *Advances in Developing Human Resources, 9*(3), 384-412.

Hoang, H. & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of Business Venturing, 18*(2), 165-187.

Jack, S. (2005). The role, use and activation of strong and weak network ties: A qualitative analysis. *The Journal of Management Studies, 42*(6), 1233-1259.

Janssen, O. (2005). The impact of perceived influence and supervisor supportiveness on employee innovative behaviour. *Journal of Occupational and Organisational Psychology, 78*, 573-579.

Johlke, M. & Duhan, D. (2000). Supervisor communication practices and service employee outcomes, *Journal of Service Research, 3*(2), 154-165.

Johnson, S. (2002). Lifelong learning and SMEs: issues for research and policy. *Journal of Small Business and Enterprise Development, 9*(2), 285-295.

Kleysen, R. & Street, C. (2001). Toward a multi-dimensional measure of individual innovative behaviour. *Journal of intellectual Capital, 2*(3), 284-296.

Koberg, C. & Chusmir, L. (1987). Organizational Culture relationships with creativity and other job related variables. *Journal of Business research, 15*(5), 397-409.

Kriegesmann, B., Kley, T. & Schwering, M. (2007). Making organizational learning happen: the value of Creative Failures. *Business Strategy Series, 8*(4), 270-276.

Levin, D. & Cross, R. (2004). The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer. *Management Science, 50*(11), 1477-1490.

Marouf, L. (2007). Social Networks and Knowledge Sharing in Organizations: A case study. *Journal of Knowledge Management, 11*(6), 110-125.

Martins, E. & Treblanche, F. (2003). Building organisational culture that stimulates creativity and innovation. *European Journal of Innovation Management, 6*(1), 64-74.

McAleese, D. & Hargie, O. (2004). Five guiding principles of culture management: A synthesis of best practice. *Journal of communication management, 9*(2), 155-170.

McCarthy, B. (2006). Building and Sustaining trust in networks: Lessons from the performing arts. *Irish Marketing Review, 18*(1/2), 47-57.

McKnight, H., Cummings, L. & Chervany, N. (1998). Initial trust formation in new organisational relationships. *The Academy of Management Review, 23*(3), 473-490.

Nahapiet, J. & Ghoshal, S.(1998). Social Capital, Intellectual Capital and the Organisational Advantage. *Academy of Management Review, 23*(2), 242-246.

Nebus, J. (2006). Building Collegial information networks: A theory of advice network generation. *Academy of Management Review, 31*(3), 615-637.

Nelson, S., Brunetto, B., Farr-Wharton, R. & Ramsay, S. (2007. Organisational effectiveness of Australian fast growing small to medium enterprises (SMEs). *Management Decision, 45*(7), 1143-1164.

Nie, N. (2001). Sociability, interpersonal relations, and the internet: Reconciling conflicting findings. *American Behavioural Scientist, 45,* 420-435.

Oke, A. (2007). Innovation types and innovation management practices in service companies. *International Journal of Operations and Production Management, 27*(6), 564-587.

Patzelt, H. & Sheperd, D. (2008). The decision to persist with underperforming alliances: The role of trust and control. *The Journal of Management Studies, 45*(7), 1217-1254

Perry-Smith, J. (2006). Social Yet Creative: The role of social relationships in facilitating individual creativity. *Academy of Management Journal, 49*(1), 85-101.

Ramus, C. (2001). Organizational support for employees: Encouraging creative ideas for environmental sustainability. *California Management Review, 43*(3), 85-105.

Schien, E. (1990). Organisational culture. American Psychologist, 45(2), 109-119.

Scott, S. & Bruce, R. (1994). Determinants of innovative behaviour: a path model of individual innovation in the workplace. *Academy of Management Journal, 37*(3), 580-607.

Six, F. & Sorge, A. (2008). Creating a high-trust organization: an exploration into organizational policies that stimulate interpersonal trust building. *The Journal of Management Studies, 45*(5), 857-886.

Subramaniam, M. & Youndt, M.A. (2005). the influence of intellectual capital on the types of innovative capabilities. *Academy of Management Journal, 48*(3), 450-463.

Taylor, D., Jones, O. & Boles, K. (2004). Building social capital through action learning: An insight into the entrepreneur. *Education & Training, 46*(4/5), 226-235.

Tsai, W. & Ghoshal, S.(1998). Social Capital and Value Creation: The role of intrafirm networks. *Academy of Management Journal, 41*(4), 464-476.

Yin, R. (2003). *Case study research: Design and Methods.* (3rd Ed). Thousand Oaks, California: Sage publications.

Zupan, N. & Kase, R. (2007). The Role of HR actors in Knowledge Networks. *International Journal of Manpower, 28*(¾), 243-259.