The Role of Social Capital in Fostering Entrepreneurship in Established Organizations

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Abstract

This study investigates social behavior of employees and its effect on entrepreneurial activities. Social capital is a strategic resource available through the network of relationships may be exploited in the direction of organizational and individual objectives. The study posited that this powerful asset may be leveraged in fostering entrepreneurial orientation of employees, which is an antecedent for improving the performance. A developed survey was sent to a selected sample of academic staff in five public universities in Victoria. The collected data were subject to statistical analysis and the result was derived. The findings indicated that there is a positive and significant relationship between social behavior and entrepreneurial orientation of academics. The predictability of entrepreneurial activities by social relationships was tested.
Introduction

Entrepreneurship within institutional context has widely touted in the literature as an effective means to improve the performance of established organizations (Zahra, 1999; Sathe, 2003). The reason behind this pervasive belief is that entrepreneurial activities enable firms to respond to their dynamic setting. Drucker (1981) noted that organizations are encouraging entrepreneurship as they are to survive and thrive in this turbulent and unpredictable environment.

The review of literature on entrepreneurship in organizations indicates that most studies have focused on inhuman aspects of organizations such as strategies, structure and culture (Sathe, 2003; Zahra, 1993; Miller and Freisen, 1982). While human resources are playing a vital role in embarking any entrepreneurial activities in institutional context, the people base of organizations has been neglected in the literature. This study attempted to fill the gap in the field by focusing on social capital of people and assets embedded in social relationships.

The concept of social capital has been investigated increasingly in recent years as a useful resource in the form of the cooperative behaviour and trust that is engendered by the fabric of social relationships (Adler & Kown, 2002). It has been applied to solve many problems in societies since its appearance in the literature. Such applications include education, public health, economic development, community life, youth behaviour problems and general problems of collective actions (Fukuyama, 1999; Coleman, 1988; Loury, 1987; Jackman & Miller, 1998; Portes & Sensenbrenner, 1993; Woolcock, 1998; Baker, 1990; Putnum, 1993; 1995; Zahra, 2006). Originating in sociology, it gained currency in different disciplines, including organizational studies, entrepreneurship, psychology, economy and politics. This study examined the role of social capital in fostering entrepreneurial orientation in organizational context; more specifically, to what extent social capital available to academics fosters entrepreneurial orientation.

In the next section, we review the theoretical background on entrepreneurial orientation and social capital. Subsequently, we present the association between these research constructs. Then, the methodology applied for the study discussed. In the next section, we present the results and then, we discuss our findings. In the last section, conclusion and recommendation were presented.
Review of Literature

Entrepreneurial orientation

Several scholars defined entrepreneurship as encompassing acts of organizational creation, renewal, or innovation that occur within or outside an existing organization (Schumpeter, 1934; Covin and Selvin, 1999; Zahra, 1996). Thus, entrepreneurs are individuals or groups of individuals, acting independently or as part of a corporate system, who create new organizations, or instigate renewal or innovation within an existing organization. Whether they are self-employed or are employed by an organization, they have some characteristics or attitudes in common which distinguished them from non entrepreneurs. The review of literature indicated that people who have characteristics such as innovativeness, risk-taking, proactiveness and self-renewal are entrepreneurially oriented. In the next section the dimensions of entrepreneurial orientation were discussed.

Dimensions of Entrepreneurial orientation

Innovativeness

Schumpeter (1934) defined entrepreneurs as people who create new or better products by reallocating resources and combining existing resources in new ways. Thus, the processes of resource exchange and combination may be associated with innovation that may result in creating value. Organizational scholars indicated that innovation requires combinative capacity and diverse resource inputs (Pascal, 1990; Kogut & Zander, 1992). In the process of exchange and combination, an entrepreneur introduces something new into the marketplace that has value. According to Drucker (1985) innovation is not just generating the idea but is only achieved when the idea has been transferred into an outcome that has value. In the context of this study, academics who continuously introduce new ideas into their interested research services are entrepreneurially oriented.
Risk-taking

The importance of risk-taking in entrepreneurial activities has been the focus of the literature of entrepreneurship for a long time. Cantillon (1734) distinguished between entrepreneurs and non-entrepreneurs and argued that the most important characteristic of entrepreneurs is that they are venturing into the unknown. Schumpeter (1934) has used the word entrepreneur, for those people who are radically innovative and risk-takers. Depending on the contexts, risk has different meanings. It can be defined financially when incurring heavy debt or commitments of assets are involved (Brockhaus, 1982). In addition, risk can be defined in personal, social or psychological contexts. In academic institutions, entrepreneurial staff take risks by conducting research in a variety of environments; extending their research projects; risking their prestige; accepting problems that may have effects on their duties.

Proactiveness

One of the main characteristics of entrepreneurs is their forward-looking perspective and their instinct to pursue opportunities. In other words, proactive people foresee the threats and opportunities and have a prepared plan for dealing with them. Venkatraman (1989) noted that the entrepreneur is a leader rather than a follower, a creator of change, rather than waiting for change, because they have the will and foresight to seize new opportunities, even if not always the first. Thus, the quickest to innovate and first to introduce new ideas has also become one of the crucial dimensions of entrepreneurial orientation which is often referred to as proactiveness. In such cases, proactiveness refers to how a firm or individual relates to market opportunities. In the context of this study, academic staff who are proactive will come up with new ideas and new research projects, rather than imitating the ideas of others. Thus, academic staff who are forward-thinking introduce new ideas in their research activities are entrepreneurially oriented.
Self-renewal

One of the most important facets of entrepreneurial orientation is self-renewal. Covin and Miles (1999) noted that renewal refers to changing and improving the relationship with the external environment. Similarly, Zahra et al. (1999) emphasized the role of strategic renewal in revitalizing the ideas that organizations have been established on that basis. In the context of this study, academic staff who are closely connected to the world outside the university are entrepreneurially oriented. Having relationships with industry and the business community and improving relationships within academic circles has a direct impact on the performance of academic staff. By conducting research for industry and the business community, the publications of academic staff increase. Therefore, improving and changing the relationships of academic staff with industry and the business community is a vital component of entrepreneurial orientation. The next section examined social capital as an antecedent of entrepreneurial activities in institutional context.

Social Capital

The richness of social capital in organizational settings persuaded scholars to examine the relationship between this emerging concept and main concerns in organizational studies (Adler & Kown, 2002; Reagan & Zuckerman, 2001; Burt, 1992; Chong & Gibbons, 1997; Walker, Kogut & Shan, 1997; Grannovetter, 1973; Tsai & Ghoshal, 1998; Nahapiet & Ghoshal, 1998). The reason for this pervasive belief is based on this fact that institutional environments are conducive to this asset (Burt, 2004) and therefore it will deliver a powerful resource available for promoting individual and organizational objectives. Therefore, this study is an effort to examine the role of social capital in fostering entrepreneurial activities in organizational context.

Nahapeit and Ghoshal (1998) comprehensively reviewed the literature and identified three dimensions for social capital which have been identified as structural, relational and cognitive dimensions. The Structural dimension of social capital refers to social interactions and the existence of network ties. Without social ties and interactions, resources will not be available. Granovetter (1992) has used the term “structural embeddedness” to refer to this dimension of social capital, which is concerned to the properties of the social system and the network of relations as a whole. In the context of this research, structural dimension of social capital of academic staff is the time which
academics have spent with their contacts, such as colleagues and business or industry alliances.

Interpersonal relationships are viewed as the media through which actors gain access to a variety of resources held by other actors. With the exception of work on the role of networks to access capital, most research has focused on the entrepreneur’s access to intangible resources. A key benefit of networks for the innovation process is the access they provide to information and advice (Adler and Kown, 2002). Ties to venture capitalists and professional service organizations, for example, are a means for tapping into key talent and market information. Entrepreneurs continue to rely on networks for business information, advice, and problem solving, with some contacts providing multiple resources.

Granovetter’s (1973) notion of weak ties, in particular, describes the extent to which actors can gain access to new information and ideas through ties that lie outside of their immediate cluster of contacts. Structural holes defined as the absence of ties between actors. By bridging structural holes, actors can profit from establishing ties that bridge these otherwise unconnected actors (Burt, 2004). Occupying a bridging position provides an opportunity to wield power, or influence those who are otherwise unconnected to the broader network. Given this opportunity for diverse, non-redundant contacts, spanning structural holes can also increase the focal actor’s exposure to novel information (Burt, 1992). This in turn may spur learning and the development of internal capabilities that ultimately enhance performance.

Organizational concern

As a result of social interactions, the behavior of people is being influenced by factors such as respect, friendships and sympathy. Mishra (1996) defined concern in terms of balancing one’s self-interest with other’s interests at any societal level. Some scholars noted that concern is a perception which is accompanied by this belief that not only will the other party not take advantage of one’s vulnerability but that they will also be concerned about one’s interests or the interests of the whole (Bromiley & Cummings, 1993; Ouchi, 1981). The perception of concern is not only dependent on hierarchical relations but also on the willingness of employees at the same level to help create a caring environment. Therefore, the degree of concern that leaders have for the interests and welfare of their followers and colleagues will determine the level of trusting relationship within the organization.
Some research evidence indicates that a caring culture will be developed by mutual understanding of the interests and welfare of parties (Pascal, 1990). According to Ellis and Shakley-Zabalak (1999) caring and empathy not only foster team trust, but also enhance trust in leadership and subsequently in the organization as a whole. Having concern for the interests and welfare of employees will enhance the trust and trusting relationships in the entire organization. In the context of the study, creating a caring environment within universities not only depends on the extent to which the central administration show concern for the interests and welfare of academic staff, but also the extent of empathy and caring that superiors and colleagues in departments and schools show each other.

**Association between social capital and entrepreneurial orientation**

Empirical studies indicated that social capital plays an important role in facilitating innovation and creativity (Ruef, 2002; Tsai & Ghoshal, 1998; Gabby & Zuckerman, 1998). As an asset rooted in the relationships, social capital can provide opportunities to combine and exchange resources which are essential in the process of innovation. Burt (2004) noted that good ideas or alternative ways of thinking and behaving are disproportionately in the hands of people whose networks span structural holes. Ruef (2002) examined the role of network ties in inducing novel ideas. He argues that people who are connected to groups beyond their own can expect to find themselves delivering valuable ideas, seeming to be gifted with creativity. Ibarra (1993) noted the relationship between network characteristics and innovation roles. Generally speaking, the propensity among entrepreneurs toward innovation is seen to be a function of the types of social relationships that those entrepreneurs have. Therefore, academics that have more social interactions are more innovative.

There are empirical and theoretical studies that indicate the association between social capital and risk-taking (Gabby, Gibbons, 1997; Brockhaus, 1982). Social capital may foster risk-taking behavior. Drawing on literature, Gabby and Gibbons (1997) indicated that shared vision and belief among participants in a collective like an organization reduces risk, as it directs and focuses attention and effort and persuades employees to take bold actions. In addition, through support which flow in the networks, people may be encouraged to take risks in their actions. In his study on the behavior of public entrepreneurs, Osborne (1992) indicated that entrepreneurs who were taking risks in public sector organizations without exception had support in their networks. Thus, social capital as an antecedent can foster risk-taking behavior in those undertaking entrepreneurial activities.
Social capital embedded in social interactions results in proactiveness by helping in the detection and identification of environmental threats and opportunities as well as in taking action to exploit or neutralize environmental uncertainty (Kohli & Jaworski, 1990). Social capital makes it easier for organizational participants to transfer knowledge (Noanka, 1994). In addition, information channels among organizational participants play an important role in transferring and exchanging information, which serves as the raw material for any proactiveness. Therefore, social capital encourages information exchange about opportunities and enhances learning and provides an effective means of encouraging entrepreneurial activities in organizations.

Utilizing social capital within organizational contexts will benefit both individuals and organizations in gaining advantage by economizing on their expenses and enabling them to make a timely response to environmental needs and demands (Chong & Gabby, 1997). Renewal indicates the relationship between organizations and individuals and their environment. The relational dimension of social capital has been linked to responsiveness to environmental changes (Gabby & Gibbon, 1997). In organizational settings, the participants who exchange information with increased accuracy, completeness and appropriateness can better respond to crisis, changes or challenges in the external environment (Mishra, 1996). When information is flowing smoothly between people in organizations they will be more adaptable and responsive to the changes of the settings. Thus, social capital assists academic staff to recognize the trends and changes in the external environment of academic institutions. Regarding to these relationships between research constructs in the literature, following hypotheses have been evaluated:

**H1:** There is a relationship between social interactions and entrepreneurial orientation

**H2:** Organizational concern predicts entrepreneurial orientation

**Methodology**

The research design consisted of a quantitative analysis using data collection in the form of an online survey approach. Methodology is hypothesis lead, using constructs and variables from an in-depth literature review embracing social networks and entrepreneurship. The conceptual framework incorporating these two constructs was ex-
posed to descriptive and inferential statistics, highlighting relationship and prediction of appropriate variables. We provide an overview of the method from a perspective of the sample, dependant and independent variables, control variables and data analysis.

Sample

The sample of this study consisted of full time academic staff at universities in metropolitan Melbourne. The statistic population of academic staff embraced various levels of academic positions, ranging from Lecturer to Professor. There were 162 males (60.4 percent) and 106 females (39.6 percent) in the sample, giving a total of 271 respondents. Data was collected via electronic media, whereby academic staff were encouraged to participate in an online questionnaire via an email hyperlink. The online and electronic media survey approach as amplified by Dillman (2000) was adapted for the study. The response rate was about 40%.

Measures

The dimensions of entrepreneurial orientation are innovativeness, risk taking, proactiveness and self-renewal (Lumpkin & Dess, 1996; Covin & Slevin, 1991). There is a well known instrument which measures the dimensions of entrepreneurial orientation in organizational level. However, considering that this study examined the entrepreneurial orientation at an individual level and also in an academic context, there was a necessity for revision to make the questionnaire more suitable for academic institutions. Further, a study in an academic context in Canada developed a validated scale of entrepreneurial orientation at departmental level (Todovoros, 2005). Therefore, the researcher developed a new scale which measured these dimensions of entrepreneurial orientation, which is an important part of the construct definition. To adapt it into an academic context, 18 items were added to the scale. Therefore, the questionnaire for the construct has 25 items. Questions 1 to 25 in this section of the survey refer to entrepreneurial orientation.

Social capital is comprised of two measures, namely social interactions and concern in an organizational context. Those social interactions of academic staff that have an im-
pact on their job were listed and academic staff were asked to specify the time that they have spent on such contact during a week. Communication frequency refers to how frequently individuals speak with one another. Questions 1 to 8 in the survey refer to these interactions. The findings in this part indicate social interaction of academic staff with colleagues, superior, the central administration, colleagues, business/industry and colleagues in other departments. Therefore, the sum of time that academics spent with these contacts indicates their social interactions.

As a result of social interactions, the behavior of people is being influenced by factors such as respect, friendships and sympathy. Mishra (1996) defined concern in terms of balancing one’s self-interest with other’s interests at any societal level. Creating a caring environment within universities not only depends on the extent to which the central administration show concern for the interests and welfare of academic staff, but also the extent of empathy and caring that superiors and colleagues in departments and schools show each other. To operationalize the organizational concern, 9 questions were developed.

The characteristics of the statistical sample such as gender, age, and experience in the field of study, experience in their institutions, function and position have served as control variables. One way analysis of variance (ANOVA) was used to examine statistically significant differences among groups classified by social capital, entrepreneurial orientation. A significance level of 0.05 was set for the various analyses. When the ANOVA provided an F ratio which was statistically significant beyond the 0.05 level, Post hoc procedure as outlined in Tabachnik and Fidell (2001) was used to compare individual sub-groups within a scale in an attempt to locate differences which contributed to the analysis of variance result. To compare females and males scores for each research constructs t- test were used.

Data analysis consisted of descriptive and inferential statistics. Descriptive measures included mean, median, mode and frequency of distributions of the sample. Inferential statistics included two statistical methods. To examine the relationships between research variables, correlation method was applied and to examine the level of predictability of dependent variable by factorial variable, regression was used.
Results

The sum of social interactions of academic staff were operationalized in 8 survey questions that asked respondents to indicate the time that they spent in communication with people within and outside their department. Within departments, they may have communication with their colleagues and superiors, and participate in social gatherings. Outside their department, they may communicate with industry/business, colleagues from other departments or international peers. Survey questions asked respondents how many hours a week they spend communicating with these people. Therefore, the sum of hours spent in communicating determines the score for frequency of communications for each participant.

As can be seen, 38.4% of academic staff were communicating with their colleagues for between 3 and 5 hours a week, about 23% spent more than 9 hours a week in communication, 20% between 6 and 8 hours, 17 percent between 1 and 2 hours a week and 1.1% had no communication with their colleagues, with a mean 3.46 and standard deviation of 1.06. Positive Skewness value (0.093) indicates that scores are clustered to the low values and Kurtosis value (-0.992) demonstrates a distribution that is relatively flat, with too many cases at the extremes.

Question 2 in the social interaction scale asked respondents about the time that they spent in communicating with the chancellery or the central administration. As Table 1, 51% of academics in the sample were communicating with central administration between 1 and 2 hours, 30% between 3 and 5 hours, 4% more than 9 hours, 5.5% between 6 and 8 hours and 9% had no communication with central administration, with a mean 2.44 and standard deviation 0.887. Positive Skewness value (0.906) indicates that scores are clustered to the left at low values and Kurtosis value (1.130) indicates that the distribution is rather peaked.

Question 3 in the social interactions scale related to communication with superiors. As can be seen from Table 1 66% of respondents were communicating between 1 and 2 hours a week with their superiors, 12% between 3 and 5 hours, 1% between 6 and 8 hours, 0.04% more than 9 hours and about 20 percent had no social interactions with their superior, with the mean 1 and standard deviation (0.629). Positive Skewness value (0.662) indicates that scores are clustered to the left at the low values and Kurtosis value (2.323) shows that the distribution is rather peaked clustered in the center.

Question 4 in the survey related to the participation of academics in social gatherings
and occasions. As the table indicates, 54% of respondents spent between 1 and 2 hours attending social gathering and occasions, 7% between 3 and 5 hours and 37% of academic staff were not attending at any social gathering in their department or faculty. The mean is 1.7 and standard deviation is 0.616. Positive Skewness value (0.377) indicates that scores are clustered to the left at the low values and Kurtosis value (-0.127) indicates that the distribution is relatively flat with too many cases in the extremes.

Question 5 asked about the time that academics in the sample spent with their colleagues in other departments. As shown in Table 1, 30% of academics had no social interactions with their peers in other departments. While, 56% were communicating with their colleagues in other departments for between 1 and 2 hours, 12% between 3 and 5 hours, 1.5% between 6 and 8 hours, and 0.4% more than 9 hours, with the mean 1.859 and standard deviation 0.7. Positive Skewness (0.721) indicates that scores are clustered to the left at the low values and Kurtosis value (1.351) indicates that the distribution is rather peaked in the center.

Question 6 in the survey is related to communication of respondents with their colleagues outside their own institutions. As can be seen from Table 1, 55% of respondents spent 1 to 2 hours a week communicating with their colleagues outside their institutions, 12% between 3 and 5 hours, 1.5% between 6 and 8 hours, 0.7 percent more than 9 hours and 20% had no communication with academics in other institutions, with the mean 2.084 and standard deviation 0.786. Positive Skewness (0.723) indicates that scores clustered to the left at the low values and Kurtosis value (0.981) reflects the fact that the distribution is rather peaked at the center.

Question 7 in the social interactions scale asked about communication of respondents with their international colleagues. About 36% of respondents did not communicate with their international colleagues. However, 53 percent were communicating between 1 and 2 hours a week with their colleagues in other countries, 8% between 3 and 5 hours, 2% between 6 and 8 hours, and 0.7% more than 9 hours, with the mean 1.788 and standard deviation of 0.744. Positive Skewness (1.126) indicates that scores are clustered to the left at the low values and Kurtosis value (2.436) shows that the distribution is rather peaked, clustered in the center.

Finally, Question 8 related to the communications of respondents with industry or busi-
ness related to their field of study. Table 1 indicates that 31% of academic staff had no communication with the business and industry related to their field of study. However, 51% of respondents spent between 1 and 2 hours a week in communication with industry/business, 14% between 3 and 5 hours, 2% between 6 and 8 hours, and 1% more than 9 hours, with the mean 1.899 and standard deviation of 0.787. Positive Skewness (0.964) indicates that scores are clustered to the left at the low values and Kurtosis value (1.775) reflects that the distribution is rather peaked.

In this part the association between social capital and entrepreneurial orientation has been examined. The first hypothesis is related to the frequency of communication with colleagues and other contacts and its relationship with entrepreneurial orientation.

The relationship between social interaction and entrepreneurial orientation was investigated using the Pearson product-moment correlation coefficient. There is a positive relationship between frequency of interactions at 1% level of, \( r = 0.184, \text{Sig} = 0.005, N = 227 \). Therefore, it can be confirmed that there is a positive relationship between the time spent in communication and entrepreneurial orientation. In addition, there is a significant relationship between frequency of interactions and innovativeness \( r = 0.167, \text{Sig} = 0.009, N = 248 \) with entrepreneurial orientation. Table 2 indicates that there is a significant relationship between frequency of interaction with renewal as well \( r = 17, \text{Sig} = 0.007, N = 248 \).

Furthermore, there is a positive relationship between concern and entrepreneurial orientation. Table 3 indicates that there is a statistically significant relationship between organizational concern with entrepreneurial orientation at 5% level, \( r = 0.154, \text{Sig.} = 0.023, N=220 \). Moreover, there is a significant relationship between concern and proactiveness \( r = 0.139, \text{Sig.} = 0.032, N= 237 \).

Table 4 indicates the unstandardized regression coefficients (B) and intercept, the standardized regression coefficients (beta), sr square. R for regression was significantly different from zero, \( F(3, 173) = 17.54, p<0.001 \). For the regression coefficient that differed significantly from zero, 95% confidence intervals were calculated. The confidence limits for concern were 0.08 to 0.484.

The independent variable contributed significantly to prediction of entrepreneurial orientation as concern is 0.034 (sr Square). Beta coefficient in Table 4 provides informa-
tion regarding the level of contribution of independent variable in predicting dependent variable. As the standardized coefficient column shows, the beta coefficient for concern is (0185). This means that this variable makes the unique contribution to explaining the dependent variable.

**Discussion**

Social relationships may be utilized in direction of organizational and individual objectives. The literature on social capital indicates that this asset may be mobilized to facilitate social and individual actions (Putnum, 1993; Coleman, 1990; Fukuyama, 1995). Utilizing social capital within organizational contexts will benefit both individuals and organizations in gaining advantage by economizing on their expenses and enabling them to make a timely response to environmental needs and demands (Chong & Gabby, 1997). This study was an attempt to exploit social relationships of employees in the interest of organizations and individuals goals.

To substantiate the results of the research hypotheses, a t-test and one-way analysis was undertaken to investigate the differences between different groups. The analysis showed that there is no significant difference between males and females in terms of the scores for the research constructs. In addition, the findings in the analysis of variance for demographic characteristics of respondents indicated that there was no significant difference in social capital, entrepreneurial orientation fields of study. There was no significant difference between other fields of study.

The role of social interactions in fostering innovation and developing new ideas has been the focus of studies in recent times (Burt, 2004; Ruef, 2002). The findings of the study supported the notion propounded in the literature that interactions and communications with others assist people to be innovative and entrepreneur. The findings indicate a strong and significant relationship between the frequency of communications or interactions with entrepreneurial orientation. The study found a significant relationship between frequency of interactions and innovativeness, renewal and entrepreneurial orientation after controlling for possible effects from other variables.

Furthermore, the significant relationship between frequencies of interaction with renewal was found in this study. Renewal means improving relationship with the external environment. In the context of this study, when academics improve their re-
relationships with academic circles, conducting research in diverse environments and continuously improving methods and procedures of research activities are engaging in renewal activities. This finding is consistent with the literature in social capital. For example, Burt (2004) argued that having access to networks, give people advantage of knowing about the opportunities in the market. It is through social interactions that information and other facets of assets embedded in relationships are exchanged (Adler & Kown, 2002).

The organizational concern was found to have a relationship with entrepreneurial orientation. Concern has positive and significant relationship with proactiveness and entrepreneurial orientation. Zahra and et al (2006) conceptually examined the role of social capital in triggering entrepreneurial activities. This study empirically indicated that there is a significant association between concern, proactiveness and entrepreneurial orientation in the academic context.

The other objective of this study was to find some means of predicting entrepreneurial orientation. The literature in the field found several variables as antecedents of entrepreneurial orientation (Zahra, 1999; Lumpkin & Dess, 1996; Bolton & Thompson, 2004). However, the role of social relationships has not been examined in previous studies. This study indicated that organizational concern predicts entrepreneurial orientation. The effects of other variables such as age and experience in the field of study have been controlled for, and still these variables predict entrepreneurial orientation significantly. In general, the findings of the study confirmed the relationship between components of social capital and dimensions of entrepreneurial orientation.

**Conclusion and recommendation**

The external environment of organizations is highly dynamic and competitive. To respond to these ever-changing and unpredictable challenges, they should wisely exploit their available resources. This study was undertaken to assist established organizations to utilize the social capital as a strategic resource. The social behavior can foster entrepreneurial orientation and thereby improve the performance of their staff. Zerbinati and Solidaries (2005) highlighted the need for studies to examine the peculiarities in the cognitive process, in the individual characteristics and in the resource base of people in organizational context to exploit opportunities. This study attempted to fill the gap in the literature by empirically testing the relationship between social capital
and entrepreneurial orientation in the context of academic institutions.

Adler and Kwon (2002) extensively reviewed the literature on social capital in organizational context; they indicated that social capital is in an emerging phase and more research should be done to clarify its dimensions and outcomes. In addition, as their extensive review of literature on social capital indicates, the role of social capital in fostering entrepreneurial orientation has not been examined. Therefore, this study filled this scientific gap in the literature by empirically indicating social capital as an antecedent of entrepreneurial orientation.

Regarding to the importance of social capital, it is recommended that organizations facilitate the social relationship between their employees. Also, they should help their staff to make relationship with business and industry, international colleagues, and superiors and attend social gatherings. It is recommended that employees spend more time in communication with their contacts and therefore, more entrepreneurially oriented they would be. Regarding the role of organizational concern in predicting entrepreneurial orientation, it is recommended to academic institutions to show concern for their employees. Also, employees should pay attention to the interests and welfare of colleagues, departments and institutions. This way, a caring environment would be developed which is very productive to entrepreneurial activities.
Table 3 Relationship between Concern and Entrepreneurial Orientation

<table>
<thead>
<tr>
<th>Concern</th>
<th>Proactiveness</th>
<th>Entrepreneurial Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>0.139</td>
<td>0.154</td>
</tr>
<tr>
<td>Sig.</td>
<td>0.032</td>
<td>0.023</td>
</tr>
<tr>
<td>N</td>
<td>237</td>
<td>220</td>
</tr>
</tbody>
</table>

Table 4 Prediction of Entrepreneurial Orientation by Organizational Concern

Model 1

<table>
<thead>
<tr>
<th>Concern</th>
<th>B</th>
<th>Beta</th>
<th>Sr(square)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.282**</td>
<td>0.185</td>
<td>0.034</td>
<td></td>
</tr>
</tbody>
</table>

**p<0.01

Organizational Concern as Independent Variable

Entrepreneurial Orientation as Dependent Variable
Table 1 the Frequency of Communications of Respondents with their contacts

<table>
<thead>
<tr>
<th>How many hours a week do you spend communicating with your:</th>
<th>Non e</th>
<th>1-2 hours</th>
<th>3-5 hours</th>
<th>6-8 hours</th>
<th>More than 9 hours</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Colleagues</td>
<td>1.1</td>
<td>17.3</td>
<td>38.4</td>
<td>20.3</td>
<td>22.9</td>
<td>3.46</td>
<td>1.06</td>
<td>0.093</td>
<td>-0.992</td>
</tr>
<tr>
<td>2. Administration</td>
<td>9.2</td>
<td>51.3</td>
<td>29.9</td>
<td>5.5</td>
<td>4.1</td>
<td>2.44</td>
<td>0.887</td>
<td>0.906</td>
<td>1.130</td>
</tr>
<tr>
<td>3. Superior</td>
<td>19.6</td>
<td>66.4</td>
<td>12.2</td>
<td>1.1</td>
<td>0.4</td>
<td>1</td>
<td>0.629</td>
<td>0.662</td>
<td>2.323</td>
</tr>
<tr>
<td>4. Attending social occasions</td>
<td>37.3</td>
<td>54.2</td>
<td>7.4</td>
<td>0.4</td>
<td>0</td>
<td>1.70</td>
<td>0.616</td>
<td>0.377</td>
<td>-0.127</td>
</tr>
<tr>
<td>5. Colleagues in other departments</td>
<td>29.9</td>
<td>56.5</td>
<td>11.8</td>
<td>1.5</td>
<td>0.4</td>
<td>1.859</td>
<td>0.700</td>
<td>0.721</td>
<td>1.351</td>
</tr>
<tr>
<td>6. Colleagues outside institutions</td>
<td>20.7</td>
<td>55.7</td>
<td>18.8</td>
<td>4.1</td>
<td>0.7</td>
<td>2.084</td>
<td>0.786</td>
<td>0.723</td>
<td>0.981</td>
</tr>
<tr>
<td>7. International colleagues</td>
<td>35.8</td>
<td>52.8</td>
<td>8.1</td>
<td>2.2</td>
<td>0.7</td>
<td>1.788</td>
<td>0.744</td>
<td>1.126</td>
<td>2.436</td>
</tr>
<tr>
<td>8. Business/industry contacts</td>
<td>31</td>
<td>51.3</td>
<td>14</td>
<td>1.8</td>
<td>1.1</td>
<td>1.899</td>
<td>0.787</td>
<td>0.964</td>
<td>1.775</td>
</tr>
</tbody>
</table>

Table 2 Relationship between Social Interaction and Entrepreneurial Orientation

<table>
<thead>
<tr>
<th>Innovativeness</th>
<th>Renewal</th>
<th>Entrepreneurial Orientation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>0.167</td>
<td>0.170</td>
</tr>
<tr>
<td>Sig.</td>
<td>0.009</td>
<td>0.007</td>
</tr>
<tr>
<td>N</td>
<td>248</td>
<td>248</td>
</tr>
</tbody>
</table>
References


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