Comparing Networking Activities of Entrepreneurs in Australia and Neighbouring Countries – Challenging the Universal Nature of Entrepreneurial Networking

ABSTRACT
By investigating differences in structural diversity in social networks among entrepreneurs in the Australasian area, this paper contributes to the debate on whether there is universality in the process of entrepreneurial networking. Four hypotheses were developed based on previous research. Representative samples of entrepreneurs were identified in the same manner in eight countries, from 2000 to 2004, given a total of 63,350 respondents. The sampling methodologies and the questions asked were similar across all eight countries. Logistic regression was used to test for significant regional interaction effects involving business stage and structural diversity. The empirical results confirm previous indications of cultural differences in the networking practice adopted by entrepreneurs. Results are contrary to the existence of any mono-dimensional form of networking practice but do support the existence of both variform universality (culture moderates the importance of networking) and functional universality (cultural similarities in networking practice exist).

KEYWORDS
Entrepreneurship, social network, Global Entrepreneurship Monitor (GEM), culture, Australasian, universality

IMPORTANCE OF ENTREPRENEURIAL NETWORKING
Recent entrepreneurship literature has changed from viewing entrepreneurs as autonomous and rational decision makers toward viewing entrepreneurs as embedded in social networks (Aldrich & Zimmer 1986; Hoang & Antoncic 2003; O’Donnell, Gilmore, Cummins & Carson 2001). As a reaction to the former atomistic and under-socialized view of the entrepreneur often taken in the psychological perspective (e.g. Brockhaus 1980; Brockhaus 1982; Brockhaus and Horwitz 1986), an increased recognition of the importance of social networks has developed since the mid eighties.

Social networks (in diverse ways) provide entrepreneurs with a wide range of valuable resources not already in their possession and help them achieve their goals (e.g. Hansen 1995; Jenssen 2001; Jensen & Greve 2002; Jenssen & Koenig 2002; Singh 2000). The resources entrepreneurs obtain from networks involve a whole range of variations (e.g. Foss 1994;
Among the most important resources that networks can provide are:

- information (sensible as well as non-sensible, diverse as well as non-diverse);
- access to finance;
- access to skills, knowledge and advice (all aids to competency);
- social legitimacy.

Although difficulties exist in terms of how to measure social capital, it is more and more often argued that social capital is the value generated by social networks (Burt 1997). Burt argues that capital can be divided into three categories. Human capital is the knowledge and capacity within human beings; financial capital is the money in people’s pockets; and social capital is the value of resources generated by people’s social networks (Burt 1992).

CULTURE AND ENTREPRENEURIAL NETWORKING

Many previous empirical studies have investigated the impact of social networks in different contexts. Some have investigated specific industries (e.g. Elfring and Hulsink 2001; Neergaard 2005; Neergaard and Madsen 2004; Perren 2002) and some have investigated specific regional areas (e.g. Aldrich, Reese & Dubini 1989; Johannisson and Monsted 1997; Manev, Gyoshev & Manolova 2005). These context specific studies have given birth to a debate on the universal nature of social networks. In this context, ‘universality’ is a concept akin to ‘mono-dimensionality’. It argues that the forms, structures and nature of the networking process tend to be the same irrespective of the environment (particularly national environment) in which they take place. More simply still, the ‘hard-core’ universal networking argument holds that the process is essentially the same in every country.

In the context of received theory and research, two extreme positions can be identified, although most research places itself in between these extremes. One extreme position argues that social networking plays a generic and universal role regardless of the culture and the
industry in which entrepreneurs operate. There might be differences in how social networking is practiced. However, the role of research, according to this position, is to explore the common and generic elements across contexts. In contrast, the other extreme position argues that social networking is context determined. Here, networking differs dramatically depending on the culture and the industry in which entrepreneurs operate. According to this stream of arguments, it does not make sense to search for any generic, universal, mono-dimensional nature of entrepreneurial networking. Between these extremes, the really interesting research question becomes: ‘to what extent entrepreneurial networking is either completely mono-dimensional or completely situation-specific?’

Although, the debate on the nature of entrepreneurial networking has continued for nearly two decades, empirical research still appears only occasionally. Basically, except for a few studies (e.g. Freeman and Ruan 1997; Johannisson and Monsted 1997; Leonard-Barton 1984), only one group of studies has specifically dealt with the issue of culture and entrepreneurial networking. This group of studies has used various surveys to collect more or less similar data on entrepreneurs’ social networks in different nations: US (Aldrich et al. 1989), Italy (Aldrich et al. 1989), Norway (Greve 1995), Sweden (Johannisson and Nilson 1989), Northern Ireland (Birley, Cromie & Meyer 1991), Japan (Aldrich and Sakano 1995), Canada (Staber and Aldrich 1995), Scotland (Dodd, Jack and Anderson 2002) and Greece (Dodd and Patra 1998). Interest in most of these studies focused on international comparisons. The main research question was to investigate “… how culturally diverse entrepreneurial networks are” (Dodd and Petra 2002: 119). However, other research agendas influenced data collection in the different countries (Dodd and Patra 2002). Some studies focused specifically on young entrepreneurs, some on women, and some on urban or rural groups (Dodd and Patra 2002). Sample selection and questionnaire administration techniques also differed among the studies.

Even though these limitations have to be acknowledged, some international comparisons have been possible using this group of studies. Staber and Aldrich (1995) argued that: “at least
some aspects of business networking are generic and that owners approach some tasks in similar ways in different environments” (Staber and Aldrich 1995: 443). Further, Dodd and Patra (2002) summarise the studies’ results in the following manner: “In summary, the results from this series of linked (although not methodologically identical) studies indicate some homogeneity, suggesting a degree of generic universal entrepreneurial behaviour, and some heterogeneity, highlighting the importance of cultural differences” (Dodd and Patra 2002: 119).

Following the conclusions achieved in the linked studies but a little bit more radical, a Greece-based study argued that cultural differences substantially alter the nature of entrepreneurial networks (Dodd and Patra 2002). A less conclusive argument was put forward in the same year by Dodd et al. (2002) arguing that “… while the general picture of a degree of broad international homogeneity in networking, offset by specific areas of national idiosyncrasy, continues to hold true, the network characteristics and activities of Scottish entrepreneurs display some interesting differences” (Dodd et al. 2002: 217). Greve and Salaff (2003) analysing the Norwegian, the Italian, the Swedish and the US data also acknowledge that differences exist, but concluded that “… cultural differences do not play a major role in networking (Greve and Salaff 2003: 17).

Clearly, research in this area is struggling on how to interpret its results. Sometimes emphasis is put on similarities among entrepreneurial networks across countries, and argument for a degree of generic entrepreneurial networking is put forward. Other times, with the focus on dissimilarities, entrepreneurial networking is viewed as a culturally influenced phenomenon. The problems with reaching an agreement might be due to the high degree of cultural commonality among the countries that so far have been investigated – a view first advanced by Dodd and Petra (2002). This suggests that when investigating the interrelationship between culture and entrepreneurial networks, more focus on cultural diversity is necessary.
The research conducted by researchers to date has been valuable because it has raised the essential issue of culture and social networks. However, future research needs more cultural diversity in order to improve our knowledge of the effect of culture on entrepreneurial networking. Further, greater homogeneity in sampling methodology is needed. Similar samples of entrepreneurs in each nation need to be compared if the research interest is about measuring the effect of culture. Otherwise, differences in samples might be due to the variation in sampling methodology.

The study presented in this paper investigated differences in entrepreneurial networking activities among entrepreneurs in Australia and neighbouring countries. Representative samples of entrepreneurs were identified in the same manner in Australia and seven other countries and respondents were asked the same question regarding their social networks. The next section presents the hypotheses. Then the applied methodology is described before the findings are outlined. The paper ends with a discussion of the implications of the findings.

**HYPOTHESIS DEVELOPMENT**

*From a Plethora of Choices to a Single Measure*

The concept of ‘social networks’ is a complex, multi-faceted phenomenon. It has been described and operationalized in many different ways but a useful approach is to view social networks as consisting of three key dimensions: structural, relational (Granovetter 1992) and cognitive (Nahapiet and Ghoshal 1998). Each dimension is itself a composite of many variables. The structural dimension focuses on the overall pattern of connections between actors, for example the presence or absence of ties, the network configuration, and its morphology (e.g. size, density, connectivity or hierarchy). The relational dimension focuses on the kinds of relationships people have developed with each other through a history of interaction. The cognitive dimension focuses on shared representations, interpretations and system of meaning among actors within the network.
The depth and diversity of variables contained within this three-dimensional approach to social networks means that social networks can be described and examined in a wide variety of ways depending upon the emphasis given to different dimensions and variables comprising the phenomenon. Any particular investigation in the complex area of social networks therefore needs to articulate with great clarity the particular choice of dimension(s) and variables that the study addresses. The study reported in this paper focused on the structural dimension and was limited to measuring a single variable representing the construct of ‘structural diversity’.

In previous literature it has been argued that many different aspects of the structural dimension of social networks impact upon entrepreneurship (see Hoang and Antoncic (2003) and O’Donnell (2001) for comprehensive reviews). These aspects include network size, network density, structural holes\(^1\) and structural diversity. This paper focuses on structural diversity using only one question ‘Do you know someone personally who started a business in the past 2 years?’ to measure the structural diversity of networking. We argue (in the next section) that the answer to this question is a good measure of the structural diversity aspect of social networks in the context of entrepreneurship.

**Entrepreneurial Network Theory**

Some people have entrepreneurs in their social networks and some do not. Personal knowledge of an entrepreneur has been shown to be associated with a statistically significant increase in the likelihood that a person undertakes entrepreneurship him or herself (Hindle and Rushworth 2001; Klyver and Schøtt 2004; Morales-Gualdron and Roig 2005). It may be assumed that people who have entrepreneurs in their social networks have access to valuable resources. These resources vary and include: knowledge on the start-up processes; access to business contacts; and emotional support from people with similar career interests. These resources are not easily obtained by people without entrepreneurs in their social networks and our first hypothesis suggests that it is less likely for these people to become entrepreneurs.

\(^1\) Structural holes in networks appear when certain actors function as brokers between groups of actors who, without the broker, would remain disconnected (Burt 1992).
Hypothesis 1: Belonging to a social network that includes one or more entrepreneurs increases an individual’s likelihood of being an entrepreneur.

Entrepreneurs face a lot of challenges that have to be managed throughout the entrepreneurial process. For measurement purposes it is usual to distinguish different broad-level stages in the continuous process of entrepreneurship as though they were synonymous with precise stages of a business life cycle. Challenges differ according to the life-cycle stage of the entrepreneurial venture (Davidsson and Honig 2003; Evald, Klyver & Svendsen 2006; Greve and Salaff 2003). Entrepreneurs, therefore, rely on different compositions of social networks in different stages of the entrepreneurial process. It is a well-demonstrated fact that social networks are dynamic. However, the manner in which any given social network actually develops through the entrepreneurial process – the key issue of how? – has never been satisfactorily investigated. Nevertheless, emerging results indicate that entrepreneurs searching for business opportunities rely heavily on diverse social networks with many ‘structural holes’ and weak ties (e.g. Ardichvili and Cardozo 2000; Davidsson and Honig 2003; Klyver 2004b; Klyver 2006; Puhakka 2002; Singh 2000). At a later stage when they are about to commit or are searching for external finance, entrepreneurs rely more heavily on dense networks often including a high proportion of family members. Close ties, such as those often involved in family membership, provide emotional support for stressful commitment decisions (Anderson, Jack & Dodd 2005; Brüderl and Preisendörfer 1998; Greve and Salaff 2003; Klyver 2004c; Klyver and Schött 2004; Larson and Starr 1993; Neergaard, Shaw & Carter 2005). Furthermore, family members are the most frequent informal investors in new ventures (Bygrave, Hay & Reynolds 2003). There is a third stage, the final stage considered in this study. It occurs after a business has been started, at the time when the entrepreneur or entrepreneurs need to create the conditions for sustainability in a market place. At this stage, they return to reliance upon diverse (rather than dense) social
networks that again include structural holes and many weak ties (Greve 1995; Havnes and Senneseth 2001; Hite and Hesterly 2001; Larson and Starr 1993). However, social networks at this stage are more embedded in a business context than before (Larson and Starr 1993; Evald et al. 2006), suggesting that support from fellow entrepreneurs may be more important at this stage. In summary, previous research strongly indicates that social networks change dynamically during the entrepreneurial process. Accordingly, existing studies support the proposition that the need for entrepreneurs in the social network will change during the entrepreneurial process.

Hypothesis 2: The likelihood that entrepreneurs will have other entrepreneurs in their social networks varies at different stages of the business life cycle.

The Australasian Region as an Empirical Context
Studies on cultural differences among nations are common as are studies on cross cultural management (e.g. Dickson, Den Hartog & Mitchelson 2003). Different regions worldwide have been investigated and some studies have specifically investigated the Australasian region (e.g. Adler 1993). It is beyond the scope of this paper to review all this literature. However, recognition of established knowledge on cultural differences is appropriate. Hofstede’s (1980) research is probably the most widely known and cited within the area of business ethics. He developed four dimensions to distinguish national cultural distinctions and collected data from IBM employees in 50 different countries. Power distance is the first dimension. It is a measure of the degree to which less powerful members of a society accept that power is distributed unequally. The second dimension – uncertainty avoidance – measures the degree to which people in a society feel threatened by uncertainty. Individualism – the third dimension – measures the degree to which people in a society are concerned for their own and their immediate family members’ well being as opposed to relying on more general groups in exchange for their loyalty. The final dimension – masculinity - measures the degree to which the dominating values in a society are achievement and success, as opposed
to caring for others and quality of life. Table 1 shows Hofstede’s empirical results for the nations investigated in this study.

INSERT TABLE 1

The table clearly shows cultural differences among the eight countries. Some countries are similar on one or more dimension, but each country still possesses its own uniqueness in the way it blends all four elements. Superficially, Australia and New Zealand can potentially be viewed as a pair best associated with the Anglo countries, whereas Singapore, Japan, Korea, China and Hong Kong often are associated with Confucian Asia, and India with Southern Asia (Dickson et al. 2003)

Accordingly, this study used nation as a surrogate of culture. This is in line with Hofstede’s (1980) approach to culture and follows the stream of research that has previously been completed on entrepreneurial networking and culture.

It seems as though cultural diversity is more pronounced in this study compared to the cultural diversity observed in previous networking research. Therefore, cultural differences in entrepreneurial networking might be expected to distinguish Australian entrepreneurs from their neighbours.

_Hypothesis 3: Structural diversity in social networks varies among Australasian entrepreneurs_

Still, each stage in the entrepreneurial process contains different main tasks, decisions and challenges. The influence of culture on entrepreneurial networking is therefore expected to vary during the entrepreneurial process.
Hypothesis 4: Structural diversity in social networks varies across the different stages of the entrepreneurial process between entrepreneurs in Australia and neighbouring countries.

METHODOLOGY

Data: Global Entrepreneurship Monitor
The Global Entrepreneurship Monitor (Reynolds, Bygrave & Autio 2004; Minniti, Bygrave & Autio 2006) is an international project trying to detect whether and to what extent entrepreneurial activity varies across countries; what makes a country entrepreneurial; and how entrepreneurial activity affects a country’s rate of economic growth and prosperity. It was launched in 1999 with 10 countries and since then new countries have joined the project each year. The project has generated an extensive database on a wide range of issues and factors germane to entrepreneurship worldwide. Every calendar year, each participating nation completes a GEM National Population Survey embracing a minimum of 2000 randomly selected adult respondents who are asked a variety of questions regarding their engagement and attitude towards entrepreneurship. Table 2 shows the countries selected for this study, which years each country participated and how many respondents were interviewed each year.

INSERT TABLE 2

The cumulative number of GEM Australasian respondents for the five years (2000-2004) is 63,350 people. Some are classifiable as entrepreneurs; some are not.

A contentious discussion takes place in entrepreneurship research concerning the definition and operationalisation of entrepreneurship. Broadly, this discussion can be divided into two perspectives. The first perspective (the opportunity perspective) argues that entrepreneurship is about discovery, evaluation, and exploitation of opportunities (Eckhardt & Shane 2003; Shane & Venkataraman 2000; Venkataraman 1997). It puts emphasis on
entrepreneurship as a disequilibrium activity. The second perspective (the emergence view) regards entrepreneurship as ‘firm emergence’ or ‘firm creation’ (Gartner 1993). It emphasises evolutionary and dynamic aspects of entrepreneurship and focuses on organizing activities in a Weickian sense (Davidsson 2004). For its analytical purposes, the study reported in this paper took a very broad emergence perspective and focused on participation in ownership of new ventures. In this paper entrepreneurship is regarded as behaviour associated with creating new organisations regardless of degree of the five other factors which GEM measures: motivation, innovation, growth orientation, financial sophistication and the entrepreneurial capacity of founders (Hindle 2006).

In a subsequent section describing variables employed in the analysis, the precise questions used to classify entrepreneurs are presented. This classification divides entrepreneurs into three categories: those who operate in the early discovery stage (trying to recognize a business opportunity to pursue); those operating in the start-up stage (actively trying to start a business); and those running a young business operating in the young business stage.

Variable Description

Dependent variables
Three dependent variables were utilised in this study. All three variables have to do with engagement in entrepreneurship but at different stages of the entrepreneurial process: discovery stage, start-up stage and young business stage.

Discovery stage: People who within the next three years alone or with others expect to start a new business, including any type of self-employment.

Start-up stage: People who alone or together with others are trying to start an independent new business or a new venture together with their employer. This must be a business or venture they have been actively trying to start, will own all or part of, and from which they have not received salary for more than three months.
Young business stage: People who alone or together with others currently are owner(s) of a business they help to manage, are self-employed, or are selling goods or services to others. In order to qualify for the young business stage the owners may not have received salary for more than 42 months.

Independent variables
The GEM Australia data set used for this study contained questions capable of producing measures of the 5 independent variables classified below.

Networking: People who personally know someone who has started a business in the past two years. This is the variable that is at the heart of our investigation. The point of the statistical testing conducted in this study was to try to determine the effects of networking (isolated from the compounding influence of other factors) upon the three dependent variables. The remaining independent variables function as control variables.

Gender: Peoples’ gender was coded 1 for male and 2 for female. The entrepreneurial network literature indicates that gender influences entrepreneurial networking. Although results from all studies are still not thoroughly consistent, predominant emerging results indicate that female entrepreneurs have different social network than male entrepreneurs (e.g. Aldrich, Elam & Reese 1997; Renzulli, Aldrich & Moody 2000; Aldrich et al. 1989; Carter, Brush, Greene, Gatewood & Hart 2003; Cromie and Birley 1992; Greve & Salaff 2003; Neergaard et al. 2005; Weiler and Bernasek 2001).

Age: A respondent’s exact age was recoded using two indicator variables – one for the age group between 30 and 49 years old and another for the age group over 50 years old, with a reference group of younger than 30 years old. Previous literature shows that age affects how entrepreneurs use and activate their social networks (e.g. Greve and Salaff 2003; Renzulli et al. 2000). Entrepreneurs’ age influences the resources already in their possession, and thus, the resources entrepreneurs need to obtain from their social networks. Entrepreneurs’ age may also influence the generation of the general network from which resource persons can be activated.
**Competence:** This variable describes people who have the knowledge, skill and experience required to start a new business. The entrepreneurship literature argues that competence (otherwise called ‘human capital’) impacts on entrepreneurship (Bellu, Davidsson & Goldfarb 1990; Bosma, van Pragg & de Witt 2000; Davidsson & Honig 2003; Evans and Leighton 1989; Gimeno, Folta, Cooper & Woo 1997; Honig 1996; Reynolds 1997). The purpose of social networking is to gain access to resources not already held by the entrepreneurs. Thus, competence impacts on which resources are needed and thus how social networking is practiced.

**Alertness:** This variable identifies people who think that in the next six months there will be good opportunities for starting a business in the area where they live. Discoveries of new opportunities are crucial to the entrepreneurial process (e.g. Davidsson 2004; Eckhardt & Shane 2003; Shane & Venkataraman 2000; Stevenson & Jarillo 1990; Venkataraman 1997). Being alert to opportunities seems to have a positive impact on entrepreneurship (e.g. Ardichvile & Cardozo 2000; Kirzner 1997). Entrepreneurial networking is a way of stimulating alertness. Research has shown that social networks are important, influential factors in opportunity recognition (Ardichvili and Cardozo 2000; de Konig 2000; Hills, Lumpkin & Singh 1997; Puhakke 2002; Singh 2000)

**Statistical Analysis**
Descriptive statistics were used to summarise the data. In order to test the four hypotheses, logistic regression (Hosmer and Lemeshow 2000) was used as the principal statistical technique of the study. Specifically, interactions effects were used to test for cultural differences in networking activity (Cozy 1997). All analyses were performed using SPSS software version 13.
FINDINGS

Descriptive Statistics
Table 3 shows the characteristics of entrepreneurs in the different countries. The mean age of entrepreneurs in the eight countries is 38 years, with a range from 34 years old in Hong Kong to 43 year old in Australia. 42% of the entrepreneurs in the sample were female, ranging from 36% female entrepreneurs in Hong Kong to 48% in New Zealand. However, Minniti et. al. (2005) suggest that women may have been over sampled in this GEM sample. The percentages of entrepreneurs who are networking, in that they have a personal relationship with someone who started a business in the last two years, ranged from 30% in India to 75% in Korea and China with an average of 59% throughout the region.

The Importance of Structural Diversity
The logistic regression results reported in table 4, tested the relationship between networking and the participation in entrepreneurship after controlling for gender, age, competence and alertness. Before analysing the effect of cultural differences on social networks it was appropriate to test whether structural diversity significantly influences entrepreneurship participation.

Table 4 shows, that among the independent variables, having the knowledge, skills and experience required to start a business is the strongest predictor of entrepreneurship regardless of the stage of the entrepreneurial process. People who think they have the knowledge, skills and experience required to start a business have 2.78 times better odds of operating in the discovery stage (p=0.0001), 4.54 better odds of operating in the start-up stage
compared to people who do not think they have the competence. Being a female reduces the odds of being an entrepreneur in all three stage (p=0.0001). Age also seems to have a significant negative impact on entrepreneurship. Finally, the last control variable – alertness – also seems to be a strong predictor of entrepreneurship in all three stages (p=0.0001) increasing the odds of entrepreneurship by a factor of 2.23 during the discovery stage, 2.33 during the start-up stage and 1.54 during the young business stage.

Networking is a strong predictor of whether people are entrepreneurs. The coefficient B for networking is positive, which shows that having entrepreneurs in one’s social network increases the probability or the odds of being an entrepreneur. For networking in the discovery stage the odds ratio is a significant 2.29 (p=0.0001). This means that for networking people the odds of being an entrepreneur in the discovery stage are 2.29 times the odds for non-networking people. In other words, networking increases the odds of being an entrepreneur in the discovery stage by 129% (holding the other conditions constant). In the start-up stage, for networking people the odds of being an entrepreneur are 1.67 times higher than for non-networking people (p=0.0001) and in the young business stage the odds are 2.25 times higher (p=0.0001) for networking people. On the right side of the table 4, the effect of networking on entrepreneurship is estimated for all three stage. These results show that people who are networking have 2.31 times higher odds of being an entrepreneur than non-networkers. Thus, table 4 confirms previous research arguing that social networks impact upon a person’s tendency to be an entrepreneur and that this impact varies during stages of the entrepreneurial process. As expected, networking has the least effect on entrepreneurship during the start-up phase when family support is so important. However, the networking effect appears to be similar for the discover and young business stages. Hypothesis 1 and hypothesis 2 therefore receive strong support in this study.
Differences in Structural Diversity among Australasian Entrepreneurs

In order to investigate differences in structural diversity among entrepreneurs in this region, interaction effects between networking and country have been added to the regressions. An interaction effect is “… the differing effect of one independent variable on the dependent variable, depending on the particular level of another independent variable …” (Cozby 1997: 314). Thus, with use of interaction effects it is possible to investigate the effect of country on the impact of networking on entrepreneurship participation. The different interaction effect variables are obtained by multiplying networking with each of the country indicators.

Networking Australians were chosen as the reference group. Table 5a shows the results. Table 5b reports the odds ratios for each country as a combined main/interaction effect. Overall Japan has the strongest relationship between networking and entrepreneurship while India has the weakest relationship. In all stages of the process India has the weakest relationship, while Japan has the strongest relationship only for the young business stage. Korea has the strongest relationship for the discovery stage and Singapore has the strongest relationship for the start-up stage.

Table 5a shows that for Australians networking increases the odds of entrepreneurship by 169% on average; 147% for the discovery stage, 142% for the start-up stage and 132% for the young business stage. To some extend table 5a indicates that the effect of knowing someone who has started a business within the last two years differs among countries. However, some insignificant interaction coefficients suggest that the effect of networking does not differ between all countries in all stages of the entrepreneurial process. The effect of networking on
entrepreneurship does not seem to differ among Australian entrepreneurs and their cohorts in Singapore, Korea and Hong Kong in any of the three stages. The importance of knowing people who have started a business within the last two years in not significantly different, in these countries indicating that a similar networking practice is applied among entrepreneurs in these countries. For entrepreneurs in New Zealand, networking is less important (odds ratio =2.05) than for Australians (odds ratio = 2.69) when considering all three stages together (p=0.05), but not significantly different in any of the three stages when they are considered in isolation. For Japanese entrepreneurs in the young business stage knowing other entrepreneurs is significantly more important with an odds ratio of 5.75 than for Australian entrepreneurs with an odds ratio of 2.32 (p=0.05), but no significant difference could be found for the other two stages. For Chinese entrepreneurs in the young business stage networking is less important (odds ratio = 1.32) than for Australian entrepreneurs (p=0.005), but there is no significant difference in the discovery and start-up stage. Finally, for Indian entrepreneurs networking is less important in the discovery (p=0.005), start-up stage (p=0.005) and in the young business stage (p=0.0001) compared to their Australian counterparts. The odds ratios for Indian entrepreneurs in these three stages are 1.49, 1.30 and 1.01 as opposed to 2.47, 2.42 and 2.32 for Australian entrepreneurs.

Table 5 shows that the effect on entrepreneurship participation of knowing someone who has started a business within the last two years, termed structural diversity, varies little between Australasian entrepreneurs at different business life cycle stages. However, there are noticeable differences for Japanese and Chinese entrepreneurs. In the case of Japanese entrepreneurs the strongest relationship between networking and entrepreneurship occurs during the young business stage while this stage produces the weakest relationship between network and entrepreneurship in the case of Chinese entrepreneurs. Therefore, although more similarities were found than differences, both hypotheses 3 and 4 have received partial support and cannot be rejected.
DISCUSSION AND CONCLUSION

The empirical results show a main effect of networking on entrepreneurship participation which is moderated by country in this region when networking is defined as knowing someone who has started a business within the last two years. This result is true for all three stages of the entrepreneurial process. To entrepreneurs, knowing other entrepreneurs has a different entrepreneurship participation effect from Australia in some countries, but not all countries. In most countries entrepreneurs apply similar networking practice. It was further found that the effect of structural diversity also varies during the entrepreneurial process, but only in some countries (Japan and China).

The results presented in this study to some extent confirm previous evidence of cultural differences in networking practice adopted by entrepreneurs (e.g. Dodd and Patra 2002; Staber and Aldrich 1995) and argue against simple universal networking activity. The importance of networking – or more specifically the importance of structural diversity – definitely differs among entrepreneurs living in different countries, but not among all countries. It seems that networking practice in the discovery and start-up stages is more universal and more generic than the practice applied in the young business stage with only India showing less of a relationship between networking and entrepreneurship participation than Australia. However, this study showed more differences in networking practice in the young business stage than in the earlier stages. In particular, during this stage China and India showed less of a relationship between networking and entrepreneurship than Australia while Japan showed a stronger relationship. In 1980 Lonner introduced different universal relationships into the cross-cultural management literature. The term ‘simple universal’ means a phenomenon is constant worldwide. ‘Variform universal’ refers to a general relationship that holds across countries, but which is moderated by culture. ‘Functional universal’ refers to situations where relationships are the same within groups. These three dimensions allow researchers to think more carefully and with greater sophistication about the nature of
universality (Dickson et al. 2003). It is not longer a matter of either being totally universal or totally cultural determined.

This study suggests that cultural differences exist in networking practice and that culture matters for this practice. Accordingly, it suggests that some variform universal exists. Networking seems to be important in all countries in all stages of the entrepreneurial process. However, cultures moderate the effects obtained from networking. Thus, networking matters in all countries, but how it exerts its influence differs.

The study also provides some indications of a functional universal. The patterns in networking activities in different countries seem to be very complex. However, the networking practice adapted by entrepreneurs in Australia, Singapore, Korea and Hong Kong seemed similar. Within this group the effect from networking was not significantly different. Considering the stages separately, the networking practice of entrepreneurs from Australian and New Zealand were similar, which is not totally unexpected as both countries have Anglo origins (Dickson et al. 2003). India, belonging to Southern Asia, produced a weaker relationship between networking and entrepreneurship participation than Australia for all three stages. Together, this indicates some functional universality. However, the results from the Confucian Asian countries did not indicate any functional universality, suggesting that the networking practices of entrepreneurs differ in this region.

Thus in, summary, results from this study reject the simple universality of entrepreneurial networking. The study partly supports the proposition that there is a functional universality in networking and fully supports the variform universality of entrepreneurial networking.

The mechanisms within culture have not been directly investigated in this study. Future research is therefore needed to investigate not if networking differs among countries or cultures, but rather what mechanisms drive the diversity of entrepreneurial networking. Future
research should address which values enforce networking in different stages of the entrepreneurial process. This will move research closer to explaining the specific and distinct nature of entrepreneurial networking behaviour in different countries.

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### Table 1: Hofstede’s Cultural Dimension Across the Eight Countries

<table>
<thead>
<tr>
<th>Cultural dimensions</th>
<th>Power distance</th>
<th>Uncertainty avoidance</th>
<th>Individualism</th>
<th>Masculinity</th>
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<td>77</td>
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<td>48</td>
<td>56</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>68</td>
<td>29</td>
<td>25</td>
<td>57</td>
</tr>
</tbody>
</table>

Source: Hofstede (1983; 2001)

### Table 2: Respondents in the Eight Countries from 2000-2004

<table>
<thead>
<tr>
<th>Year of survey</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>2089</td>
<td>2072</td>
<td>3378</td>
<td>2210</td>
<td>1991</td>
<td>11740</td>
</tr>
<tr>
<td>New Zealand</td>
<td>0</td>
<td>1960</td>
<td>2000</td>
<td>1969</td>
<td>1933</td>
<td>7862</td>
</tr>
<tr>
<td>Singapore</td>
<td>2120</td>
<td>2004</td>
<td>2005</td>
<td>1874</td>
<td>3852</td>
<td>11855</td>
</tr>
<tr>
<td>Japan</td>
<td>1249</td>
<td>2000</td>
<td>1999</td>
<td>1977</td>
<td>1917</td>
<td>9142</td>
</tr>
<tr>
<td>Korea</td>
<td>2003</td>
<td>2008</td>
<td>2015</td>
<td>0</td>
<td>0</td>
<td>6026</td>
</tr>
<tr>
<td>China</td>
<td>0</td>
<td>0</td>
<td>2054</td>
<td>1607</td>
<td>0</td>
<td>3661</td>
</tr>
<tr>
<td>India</td>
<td>2002</td>
<td>2011</td>
<td>3047</td>
<td>0</td>
<td>0</td>
<td>7060</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>0</td>
<td>0</td>
<td>2000</td>
<td>2004</td>
<td>2004</td>
<td>6004</td>
</tr>
<tr>
<td>Total</td>
<td>9463</td>
<td>12055</td>
<td>18498</td>
<td>11637</td>
<td>11697</td>
<td>63350</td>
</tr>
</tbody>
</table>


### Table 3: Characteristics of Entrepreneurs in the Eight Countries

<table>
<thead>
<tr>
<th>Entrepreneurs</th>
<th>Number of entrepreneurs</th>
<th>Mean age</th>
<th>% of females</th>
<th>% networking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1147</td>
<td>40</td>
<td>46</td>
<td>61</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1231</td>
<td>41</td>
<td>48</td>
<td>65</td>
</tr>
<tr>
<td>Singapore</td>
<td>1111</td>
<td>35</td>
<td>35</td>
<td>53</td>
</tr>
<tr>
<td>Japan</td>
<td>186</td>
<td>43</td>
<td>25</td>
<td>63</td>
</tr>
<tr>
<td>Korea</td>
<td>567</td>
<td>37</td>
<td>38</td>
<td>75</td>
</tr>
<tr>
<td>China</td>
<td>1379</td>
<td>36</td>
<td>46</td>
<td>75</td>
</tr>
<tr>
<td>India</td>
<td>1064</td>
<td>39</td>
<td>43</td>
<td>30</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>504</td>
<td>34</td>
<td>36</td>
<td>56</td>
</tr>
<tr>
<td>Total</td>
<td>7189</td>
<td>38</td>
<td>42</td>
<td>59</td>
</tr>
</tbody>
</table>

Table 4: Main Effects Model for Entrepreneurship Participation

<table>
<thead>
<tr>
<th></th>
<th>Discovery</th>
<th></th>
<th>Start-up</th>
<th></th>
<th>Young</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Exp(B)</td>
<td>B</td>
<td>Exp(B)</td>
<td>B</td>
<td>Exp(B)</td>
<td>B</td>
<td>Exp(B)</td>
</tr>
<tr>
<td>Networking</td>
<td>0.83</td>
<td>****</td>
<td>0.52</td>
<td>****</td>
<td>1.67</td>
<td>0.81</td>
<td>2.25</td>
<td>0.84</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.27</td>
<td>****</td>
<td>-0.21</td>
<td>****</td>
<td>0.81</td>
<td>-0.45</td>
<td>0.64</td>
<td>-0.28</td>
</tr>
<tr>
<td>Age (reference is young)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid (30-49 years old)</td>
<td>-0.36</td>
<td>****</td>
<td>-0.08</td>
<td>0.93</td>
<td>0.19</td>
<td>**</td>
<td>1.21</td>
<td>-0.22</td>
</tr>
<tr>
<td>Old (50+ years old)</td>
<td>-1.36</td>
<td>****</td>
<td>-0.69</td>
<td>****</td>
<td>0.50</td>
<td>-0.42</td>
<td>****</td>
<td>0.66</td>
</tr>
<tr>
<td>Competence</td>
<td>1.02</td>
<td>****</td>
<td>2.78</td>
<td>1.51</td>
<td>4.54</td>
<td>1.34</td>
<td>****</td>
<td>3.83</td>
</tr>
<tr>
<td>Alertness</td>
<td>0.80</td>
<td>****</td>
<td>2.23</td>
<td>0.85</td>
<td>2.33</td>
<td>0.43</td>
<td>****</td>
<td>1.54</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.82</td>
<td>****</td>
<td>-3.73</td>
<td>****</td>
<td>0.02</td>
<td>-3.71</td>
<td>****</td>
<td>0.03</td>
</tr>
</tbody>
</table>

N=20709  N=29652  N=29652  N=21367
R² = 0.23  R² = 0.17  R² = 0.14  R² = 0.26


Note:
* < 0.05  ** < 0.005  *** < 0.001  **** < 0.0001
### Table 5a: Interaction Model for Entrepreneurship Participation

<table>
<thead>
<tr>
<th></th>
<th>Discovery</th>
<th>Start-up</th>
<th>Young</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Exp(B)</td>
<td>B</td>
<td>Exp(B)</td>
</tr>
<tr>
<td>Networking</td>
<td>0.91</td>
<td>**** 2.47</td>
<td>0.89</td>
<td>**** 2.42</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.25</td>
<td>**** 0.78</td>
<td>-0.20</td>
<td>**** 0.82</td>
</tr>
<tr>
<td>Age (reference is young)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mid (30-49 years old)</td>
<td>-0.41</td>
<td>**** 0.66</td>
<td>-0.07</td>
<td>0.94</td>
</tr>
<tr>
<td>Old (50+ years old)</td>
<td>-1.21</td>
<td>**** 0.30</td>
<td>-0.57</td>
<td>**** 0.57</td>
</tr>
<tr>
<td>Competence</td>
<td>1.06</td>
<td>**** 2.87</td>
<td>1.43</td>
<td>**** 4.17</td>
</tr>
<tr>
<td>Alertness</td>
<td>0.84</td>
<td>**** 2.31</td>
<td>0.78</td>
<td>**** 2.18</td>
</tr>
</tbody>
</table>

#### Interaction

**Network effect (reference is Australia):**

- New Zealand: 
  - B: -0.18, Exp(B): 0.84
- Singapore: 
  - B: -0.10, Exp(B): 0.90
- Japan: 
  - B: 0.11, Exp(B): 1.11
- Korea: 
  - B: 0.25, Exp(B): 1.28
- China: 
  - B: -0.10, Exp(B): 0.90
- India: 
  - B: -0.51, Exp(B): 0.60
- Hong Kong: 
  - B: 0.08, Exp(B): 1.08

**Constant:**

- B: -2.53, Exp(B): 0.08

Additional notes:
- N = 20709, 29652, 29652, 21367
- R² = 0.30, 0.18, 0.16, 0.32


Note:

- The effects from nations are not shown in the regressions.

* < 0.05
** < 0.005
*** < 0.001
****  < 0.0001
Table 5b: National Comparison for the Importance of the Networking/Entrepreneurship Relationship

<table>
<thead>
<tr>
<th>Overall network effect</th>
<th>Discovery</th>
<th></th>
<th>Start-up</th>
<th></th>
<th>Young</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B  Order  Exp(B)</td>
<td></td>
<td>B  Order  Exp(B)</td>
<td></td>
<td>B  Order  Exp(B)</td>
<td></td>
<td>B  Order  Exp(B)</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>0.91 4 2.47</td>
<td></td>
<td>0.89 2 2.42</td>
<td></td>
<td>0.84 4 2.32</td>
<td></td>
<td>0.99 3 2.69</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.73 7 2.08</td>
<td></td>
<td>0.59 4.5 1.80</td>
<td></td>
<td>0.86 3 2.36</td>
<td></td>
<td>0.72 7 2.05</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>0.81 5.5 2.25</td>
<td></td>
<td>0.91 1 2.48</td>
<td></td>
<td>1.03 2 2.80</td>
<td></td>
<td>0.83 5 2.29</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>1.02 2 2.77</td>
<td></td>
<td>0.54 6 1.72</td>
<td></td>
<td>1.75 1 5.75</td>
<td></td>
<td>1.19 1 3.29</td>
<td></td>
</tr>
<tr>
<td>Korea</td>
<td>1.16 1 3.19</td>
<td></td>
<td>0.59 4.5 1.80</td>
<td></td>
<td>0.54 6 1.72</td>
<td></td>
<td>1.06 2 2.89</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>0.81 5.5 2.25</td>
<td></td>
<td>0.37 7 1.45</td>
<td></td>
<td>0.28 7 1.32</td>
<td></td>
<td>0.74 6 2.10</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>0.40 8 1.49</td>
<td></td>
<td>0.26 8 1.30</td>
<td></td>
<td>0.01 8 1.01</td>
<td></td>
<td>0.49 8 1.63</td>
<td></td>
</tr>
<tr>
<td>Hong Kong</td>
<td>0.99 3 2.69</td>
<td></td>
<td>0.72 3 2.05</td>
<td></td>
<td>0.70 5 2.01</td>
<td></td>
<td>0.86 4 2.36</td>
<td></td>
</tr>
</tbody>
</table>