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Friends with benefits: an investigation into the social dynamics of network creation in the born-global SME.

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Abstract

Previous literature on the social dynamics of network creation in enterprises has drawn a sharp division between the utility of personal and professional networks. This has been particularly marked in social network analysis of born-global SMEs operating in emerging markets and seeking to internationalise. Using the case study of International Housing Solutions (Pty) Ltd (IHS) – a born global SME with both a global and a regional network – this research creates a deeper and more nuanced understanding of what such networks look like, what human factors are key to their operation, and what the relative importance is of the personal and professional drivers of networking.

The study employs a mixed-method research design including network mapping and both qualitative and quantitative analysis of questionnaire responses from 35 participants in the IHS network, providing both hard data and rich qualitative insights into the ingredients and processes required for effective networking in such an enterprise.

The results provide robust evidence for crossover between professional and personal networking activities; both are equally relevant in enabling the born-global SME to grow networks, increase innovation and enter otherwise impenetrable markets. Though the weighting of networking attributes is marginally different – for personal networks, the key attributes are advice, trust, friendship and communication; for professional networks, knowledge and referrals – in practice, both the personal and the professional are assimilated into a single complex of network activity and cannot be viewed in isolation.

The research thus contributes innovative findings to a hitherto under-researched aspect of networking in the born-global SME.

Keywords

Social Network Analysis, Professional Networks, Personal Networks, Born-global SME.

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Joel Louis Rosen

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Chapter 1: Introduction

1.1 Research Title

Friends with benefits: an investigation into the social dynamics of network creation in the born-global SME.

1.2 The problem and its background

This research examines the nature, perceptions and uses of personal and professional networking to support innovation in a born-global SME.

Networks have long been summed up in the simple saying: “It’s not what you know, it’s who you know”. What is defined as a network can range from the personal ties linking individuals who have played on the same soccer team to the business relationships formed between entrepreneurs who leverage their ties to enter new markets.

Social network theory has emerged from the formal investigation of these kinds of interactions, and has historically assumed a clear distinction between personal and professional networks e.g. studies by Ellis (2000); Van Laere and Heene (2003); Zhou, Wei-ping and Xueming (2009) and Reinholt, Pederson and Foss (2011).

However, this under-examined assumption poses a problem. A far more nuanced understanding of the interactions that lead to network creation is required, especially for small and medium enterprises (SMEs).

SMEs, without large-scale physical and financial resources, need to be able to use their social networks as a source of early competitive advantage when starting new businesses and entering new markets. Understanding how to leverage social networks is particularly important for ‘born-global’ SMEs which, from their inception, are designed to operate across national boundaries.

This more nuanced understanding demands research that is novel in three respects. First, it requires the integration of key theories from network research and the body of work on globalisation that has emerged over the past decade.

Secondly, it requires an examination of the networking practice of companies operating across both regional and global contexts (Van Laere & Heene, 2003; Marouf, 2005; Madhavan & Iriyama, 2009). And thirdly, it requires investigation in both qualitative and quantitative terms of how the networkers themselves perceive, build and use their networks.

1.3 Objectives of the Study

International Housing Solutions (Pty) Ltd (IHS), the company that is the focus of this research, essentially acts as a broker connecting both a regional and a global network in an emerging market. It is a company which research (Viruly, 2012) has already indicated is both innovative and successful in practice, and whose geographical spread demands effective networking.

Although it is a small enterprise, it has sufficient employees and managers plus an external community of developers and investors to provide an adequate survey sample of 30-40 individuals.

IHS therefore presents an ideal research environment for the study of how personal and professional networks are created, perceived and used in innovative practice across regional and global contexts, and whether role players maintain and enact the distinction between personal and professional networking.

The study employs evidence gathered from a case study of the born-global enterprise IHS to ascertain:

- Whether the conventional distinction between ‘personal’ and ‘professional’ networks is actually maintained in the working practice of professionals in a born-global SME.

The research question is whether barriers between personal and professional networks do exist, how permeable they are, and how significant is any overlap between types of network. Has some kind of assimilation of both types of network into a single complex of network activity been a factor supporting IHS in its effective and innovative practice as a born-global SME?

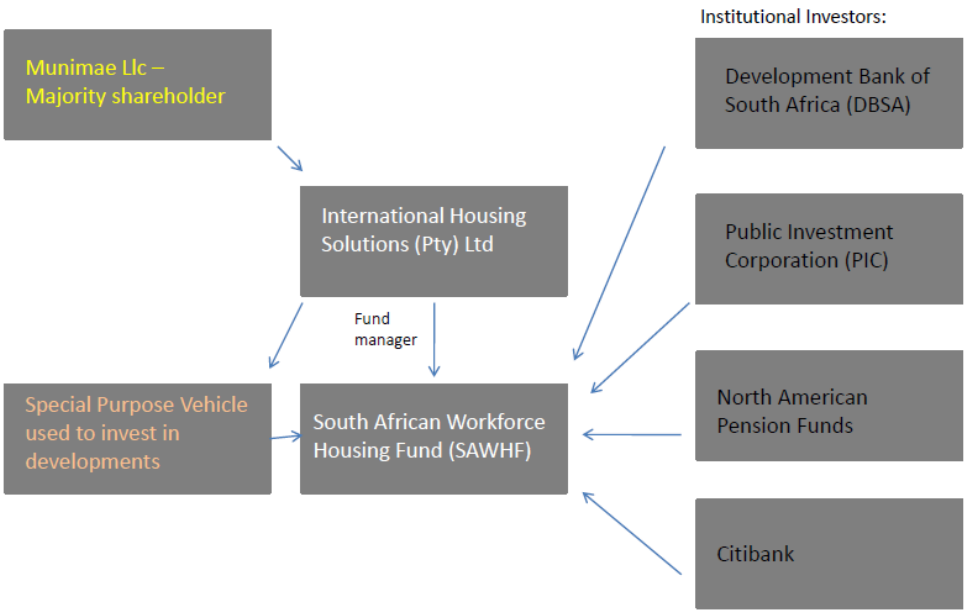
1.4 Research Scope

This research is limited to a single company case study of the company IHS. Some background is necessary to elaborate why this enterprise is an appropriate focus for the study.

IHS successfully launched a 10-year private equity fund and has raised approximately R1.9 billion from investors around the world to invest in South African residential real estate for low- and moderate-income households. The company was established in 2007 in Johannesburg with Munimae Llc based in Baltimore, USA as a majority shareholder. IHS is effectively the fund manager of the South African Workforce Housing Fund ("SAWHF").

Most of the equity investors are North American (including Canada) with the Development Bank of South Africa ("DBSA"), Public Investment Corporation ("PIC") and Citibank SA as local South African investors. Overseas Private Investment Corporation ("OPIC") based in Washington has contributed about 38% of the fund as debt.

Figure 1: IHS organisational structure



To date IHS has invested in excess of R1.6 billion in equity participation with approximately 30 deals in total after assessing in excess of 300 deals. The IHS investment will equate to approximately 27,000 housing units in the affordable housing space.

IHS, as a broker connecting both a regional and global network, achieves connectivity through the geography of its various bases: the IHS office in the city of Johannesburg; some senior management in Berlin, Baltimore, Washington and Tampa; and institutional investors of both North American and South African origins.

However, effective networks need to exist between people as well as offices, so that stakeholders based on different continents can be actively involved in the day-to-day operations of the company. IHS as a case study demonstrates how such networks operate.

The South African office has 23 staff members and a number of subsidiary shelf companies that are used to structure the various transactions. One key area of focus for IHS has been purchasing completed affordable housing developments from developers, leasing them out for a number of years, and thereafter selling them to end-user purchasers once the market is more conducive to a sale of this nature. IHS as a case study thus also demonstrates how innovation is fostered and disseminated through social networks.

A 10-month study by the University of Cape Town (UCT) led by Professor Francois Viruly of the Department of Construction Economics and Management, audited the social and economic impact of IHS (Viruly, 2012) and spotlighted the innovative characteristics and impact of the enterprise. (To provide additional evidence for this research, interviews were also conducted with other relevant role-players, who are detailed in the methodology section.)

Viruly's team conducted interviews amongst tenants and developers of the 27,000 units in which IHS has invested, or which it owns, to date (Viruly, 2012). The results demonstrated the impact of IHS activities. It takes 13 weeks to build a typical house and through IHS, 2.45 people are employed in the process, which means that the fund has the potential to create 100,000 jobs in the South African economy through this fund's lifespan (Viruly, 2012).

Job-creation and the provision of affordable housing on such a scale (with their associated large-scale social benefits) during a period of deep depression, coupled

with profitability, are rare achievements for companies in either the developed or developing world. Networking has played a key role in the innovative approaches underpinning this success.

A network footprint that is both regional and global has been an integral part of the IHS business strategy from its inception. These firm dynamics have enabled cross-national communication and interaction, allowing business activities to flourish that might have been unworkable in earlier decades. IHS as a case study demonstrates the role of networking in facilitating such activities.

Because of the distinctive nature of IHS as an enterprise described above, the scope of a single-firm study is adequate to provide the evidence sought. It speaks to context (a born-global SME), to the uses and perceptions of networking, and to the relationship between networking and this company's innovative achievments.

1.5 Research Motivation

Business in South Africa and other emerging markets has a pressing need for increased sustainable growth in entrepreneurship. Because it examines a South Africa-based company with a born-global context, the study provides information useful to other companies in South Africa (and other emerging markets) about how to better apply international network theory in becoming more locally and internationally competitive. It also provides information potentially useful to IHS itself, which is examining other opportunities within Africa and may even expand further internationally with subsequent funds that are raised.

Because the IHS enterprise is so distinctive, the story of its genesis provides useful insights into the social dynamics of network creation and will advance existing theory on social networks.

Finally, the research contributes to a currently very thin body of scholarship on how professional and personal networks are intertwined e.g. Freeman and Sandwell (2008), who touched on some of the intertwined effects, as well as Marouf (2005), who found that the strength of business interactions added more to knowledge than the strength of personal interactions.

Chapter 2: Literature Review

2.1 The Context of Networks

2.1.1 Born-global Theory

Current research has increasingly focused on the emergence of the phenomenon of "born-global firms". Born-global firms have been defined as young entrepreneurial firms that take on internationalisation at birth or very early in their evolution (Freeman & Cavusgil, 2007) rather than following a conventional 'staged' expansion. Born-global theory looks at how these firms use networks to enable rapid internationalisation.

From case studies in Australia, Freeman and Cavusgil (2007) established four distinct states of commitment to accelerated globalisation by top managers in born-global firms. The study found managers fell into one of four categories: the responder, the opportunist, the experimentalist and the strategist. The last-named was the most desirable for firms seeking to internationalise quicker. In these born-global firms it was thus the mind-set of management that helped a firm internationalise more efficiently.

Previously, Freeman, Edwards and Schroder (2006) had looked at the constraints faced by smaller born-global SME's, and how networks were used to overcome these and enable the rapid globalisation of the firm. Both these studies contributed to an understanding that in the modern economy, being born-global may give a firm an early advantage over bigger multinational corporations ("MNCs"), and other potential rivals.

Both studies supported the notion that firms developing a born-global strategy early in life were able to achieve globalisation more swiftly and easily. What the studies did not provide was any deep explanation of how the networks that aided internationalisation were created and sustained, although the implication of their findings was that understanding this process could helpfully inform the early-stage practice of firms.

The importance of the born-global strategy of firms was re-iterated by Freeman and Sandwell (2008), when they examined how professional service firms entered an emerging market. Freeman and Sandwell (2008) found that there were key inhibitors to entering such a market. These included communication, language, culture, work practices and government regulations. Without social networks, the firms they studied would not have been able to overcome these barriers.

Only limited research, however, was conducted on how born-global SME's actually went about operating in emerging markets (Zhou et al., 2009). Those studies that touched on this topic reiterated the importance of globalisation initiatives by the firm, but did not detail or illuminate the dynamics of network creation or how an SME could use these dynamics to gain a competitive advantage and keep itself sustainable for the future.

Zhou et al. (2009) did, however, provide additional explanation of born-global theory. They emphasised that for the past three decades, international business scholars had sought to understand the relationship between internationalisation and performance, but that the literature had produced conflicting conclusions because it had focused on the direct relationship between these constructs, rather than the indirect, mediated effects of network creation. It is precisely those networks and their effects that this study aims to elucidate.

2.1.2 Global Innovation Networks

Innovation is defined as the creation and sharing of knowledge through continued interaction between firms and other organisations (Barnard & Chaminade, 2011). Recent scholarship has not only presented, in born-global studies, alternative approaches to a firm's timing of internationalisation, but it has also examined alternative geographies of innovation systems under the category Global Innovation Networks (GINs) (Ernst, 2002; Ernst, 2006). Innovation has long been considered as a product of the operation of networks. GIN studies suggested that those networks could be global as well as local or regional (Barnard & Chaminade, 2011).

Tyrell and Mitchell (2007) demonstrated how firms could gain economical advantage by distributing the innovation process across a network of external associates and offshore sites, based on the strengths of particular localities.

GIN theory at this time made significant use of studies derived from the information and communications technology (ICT) industry, where large firms were demonstrably able to use their networks to enhance competitiveness in the global environment. Studies focused on the location of the research & development ("R&D") departments of these MNCs and how this aided innovation (Sachwald, 2008). These innovative initiatives could be quantified relatively directly: a firm's expenditure on R&D could be calculated simply by assessing what the relevant innovation achieved as an end-product in the

marketplace. When a well known ICT firm spent $200 million on R&D, and subsequently employed its global network to develop and disseminate the product across various continents, the sales margins of the new product provided direct, quantitative information about the effectiveness of both innovation and network mechanism.

For this reason, far more research focused on (predominantly ICT-based) MNCs, and far less on smaller firms. Only a small – and relatively more recent – body of research exists focusing on standalone firms (Barnard, Kalvet & Tiits, 2011) or firms in other industries (De Fuentes & Chaminade, 2011). This has created an imbalance in the literature, and a distinct bias towards information drawn from the R&D departments of big MNCs. For that reason, this paper seeks to redress the imbalance by investigating a standalone SME in the housing industry.

Such a choice of firm type and industry is not unproblematic. Quantitative information is rather less directly accessible, and even the definition of innovation is less clear-cut: creating 100 000 jobs in an emerging economy by utilising both regional and global networks, as against designing, for example, a novel smart-phone user interface. However, in the light of the extended networking space made possible by globalisation, this research paper seeks to explore the precise role of these newer, wider network interactions in engendering innovation.

2.1.3 Knowledge sharing in networks

Another relevant area of research is that labelled knowledge sharing in networks. This is defined as research into how employees gain more knowledge from the networks to which they are connected. Reinholt, Pederson and Foss (2011) explained how employee knowledge-sharing provided opportunities for mutual learning, which in turn could result in improved organisational performance. The study surveyed 705 employees in a consultancy firm and found that employees' knowledge acquisition and provision were highest when three factors – network centrality, autonomous motivation and ability – were all high: evidence, the researchers proposed, for the operation of a three-way interaction.

The study conceded that because of the use of cross-sectional data, there might be other causal explanations, such as that high knowledge-sharing could lead to increased network growth (Reinholt et al., 2011). The study therefore called for further

research into experimental data to ascertain the direction of causality, and for research into small strongly- tied networks (Reinholt et al., 2011). There has been no consensus in research to date about how network characteristics are related to knowledge-sharing (Reinholt et al., 2011). The literature on knowledge-sharing in networks has thus provided research questions (direction of causality), typology (the small, strongly-tied network) and a framework of network characteristics and their interactions that could usefully be applied in studying a small, born-global SME such as IHS.

2.2 Social Network Theory

Social network literature is the foundation of understanding network interaction. The literature around the born-global firm, global innovation networks and knowledge sharing provided a range of perspectives on the contexts in which networks operate, and affirmed that networks are relevant and important to innovative practice. However, it did not illuminate the ways in which networks can be defined, or how they actually operate.

2.2.1 Definitions and typologies of networks

Early social network theory looked at the transformation of knowledge or useful information through interpersonal ties and social contacts with individuals (Weimann, 1989 in Zhou et al., 2009). Social networks have conventionally been divided into professional (business) networks and personal networks, and the literature on the born-global SME and GINs has focused most strongly on professional interactions. Besides the business literature on network interaction, literature has emerged examining the cause and effect of different types of network interaction, e.g. De Fuentes and Chaminade (2011), Barnard et al. (2011) and Sachwald (2008). But research to date has tended to emphasise the specific outcomes of network interaction (e.g Ellis (2000), Marouf (2005) and Van Laere (2003)) as opposed to the actual collective dynamics of network creation.

2.2.2 Professional/Business Networks

Professional or business networks have been defined as consisting of network relationships conducted through business interactions rather than interactions in social settings. Marouf (2005) has defined this type of interaction best, as interpersonal linkages that are business like in nature and operate irrespective of whether these people personally like each other or not.

2.2.3 Personal/Social ("Informal") Networks

Personal networks have been defined as those that develop through informal or social contact, in settings such as sports clubs or religious communities. This definition has led to a predominance of research on the dynamics of network creation using student examples (Marmaros & Sacerdote, 2006) rather than a business example like that of IHS.

However, in a business context, personal network theory was researched by Ellis, (2000) who found that foreign market opportunities occurred more as a result of existing interpersonal links than from any other factor. Further, Ellis (2002) found that in the case of expansion into Hong Kong, social ties forged through networks contributed most significantly to firms' ability to identify potential joint venture partners.

That was one of few, but significant, examples in the literature of social (informal) networks resulting in significant organisational advantages for the firm (Lin, 2001, in Zhou et al., 2009). Another was the finding that organisations with certain social network structures were more efficient than those which lacked these in times of crisis (Krackhardt & Stern, 1988).

Because of findings such as these, and the fact that the structural theory of social networks emphasised the information value of social interactions, social network theory has been growing in significance in various areas of business study (Zhou et al., 2009; Van Laere & Heene, 2003). This study aims to contribute to that growing body of research.

Methodologically, the existing literature has predominantly divided personal networks according to their various by-products (Marmaros & Sacerdote, 2006; Sarker et al., 2011; Krackhardt & Stern, 1988; McGrath & Krackhardt, 2003), as opposed to

considering personal networks as a cluster. This paper aims to offer a combined approach, although it will examine network by-products before a collective approach synthesises the findings.

2.2.3.1 Trust networks

These have been defined as networks existing because of trust between people. Sarker et al. (2011) defined 'trust' as the willingness of one party to be susceptible to the actions of another, on the expectation that the other will perform a specific action, irrespective of the ability to supervise that other party.

Krackhardt and Stern (1988) proposed that trust enhanced cooperation. This was an important factor in explaining or predicting the performance of an individual team member. This was a study of a group of student respondents; nevertheless, its findings could be tested against role-players in a born-global SME such as IHS and perhaps provide further insights into personal networking in the firm. Additionally, Sarker et al. (2011) found that trust had a major effect on an individual's performance. One aspect of this study is assessing the place of trust in effective personal networking.

2.2.3.2 Friendship networks

These have been defined as network interactions existing because of friendships between people. They are not an exclusive category: Krackhardt and Stern (1988), above, also proposed that trust was one element of strong friendship. Friendship networks have been viewed as a key type of personal network, and a significant proportion of the literature has been dedicated to its study. One example was the study by McGrath and Krackhardt (2003) who found that friendship ties helped generate positive responses to change: an important result of networking, and a set of findings linking networking to innovation.

In addition, Gibbons (2003) found that friendships rested on intimacy and trust rather than on existing task organisations, and so could facilitate the expansion of new professional values without negatively affecting the friendship network.

Kilduff et al. (2008) explained that people needed to make sense of and be able to track social network connections even in relatively small organisations (such as IHS, the subject of this study). Even when it could be cognitively challenging, the accurate mapping of relationships was often of critical importance to individuals trying to form project teams or build alliances across groups (Kilduff et al., 2008).

Kilduff et al. (2008) also found, after analysing 116 perceived friendship networks from four different organisations, that these networks also perceived greater small world properties (the power to link to unknown others via mutual acquaintances) than they actually had (Kilduff et al., 2008). People additionally perceived more friendship clustering than actually existed and attributed more popularity and brokerage to the perceived-popular than to the actually popular (Kilduff et al., 2008).

The interest of this research is in how network alliances can aid a born-global SME in establishing itself in other markets. It will thus be relevant to discover to what extent friendship is of importance in the personal networks of IHS and what the perceptions of the power of those friendship networks are.

However, the Kilduff et al. (2008) research suggested that ‘small worlds’ might be more prevalent in perception than in reality. This is controversial, and to some extent challenges the born-global argument. Comparison of this finding to the IHS results could provide insight into the importance of networking at a regional and global level.

Brueckner (2006) found that the analysis, which was couched in the context of friendship networks, showed that individual investment in friendship formation was too low in a context in which friendship was an important attribute for growing social networks.

Some findings from friendship network studies pose particularly pertinent questions for South Africa, with its history of racial and community divisions. Marmaros and Sacerdote (2006) found, from a study of email interactions between students and alumni at Dartmouth College, that geographic proximity and race were more significant determinants of social interaction than common interests, shared courses, or family background.

They also found that physical proximity was not the most influential policy tool for increasing interracial interactions on a given campus, because the proximity effect was only important over diminutive distances (i.e., within building) (Marmaros & Sacerdote, 2006). They found that geographic closeness, racial similarity, family background, and

common interests such as academic subjects, fraternities, and sports all had positive effects on the likelihood that two students would interact, although inter-race interactions were much less likely than intra-race interactions (Marmaros & Sacerdote, 2006).

These were and remain controversial findings, and it will be interesting to see if they hold true in the South African context. They have not been tested at the business level, and the IHS case will provide evidence from which case inferences can be drawn about personal friendship networking at a business level and – because the enterprise operates across wide geographical distances – the role of proximity.

2.2.3.3 Communication networks

Communication has been viewed as a key personal networking attribute, and essential for network interactions including friendship, trust and knowledge (Sarker et al., 2011). The focus of existing research has been on the role of communication in enhancing such qualities.

However, no research exists on the use of modern communication tools such as email, videoconference and even the telephone (some of which did not exist even decades ago) for network interaction. This report plans to investigate whether the prevalence of such tools today has any influence on network interaction, and explore the uses people make of them to contribute or gain from networking.

2.2.3.4 Advice networks

Advice networks allow actors to access opinions and information from other participants when they require such support. Gibbons (2003) found that advice networks sustained existing values in organizations and were less likely to transmit new values, because advice relations reflected current practice and could be negatively affected by changing values.

This study, however, looked at teaching information from four public schools, rather than in a firm context. This study, via analysis of the quantitative responses to Likert-

type questions, has the capacity to assess whether these findings have relevance to an enterprise such as IHS, or whether the relationships involved, and the categories and impact of transactions, are very different.

2.2.4 Social Networks and Globalisation

Existing theory on born-global and GINs intertwines with social network theory and research on social network interaction at the point where they all share a focus on the firm's use of networks in its globalisation strategies.

Van Laere and Heene (2003) found that globalisation was transforming the competitive environment of SMEs. Because these firms were often competing with MNCs, they needed to use social networks to gain competitive advantage.

Early research on social networks was developed in the context of entrepreneurship research, but in the current changing global context it has gained popularity among scholars as relevant to internationalisation research (Vasilcheko & Morrish, 2011). Internationalisation research was advanced by Madhavan and Iriyama (2009) and Vasilcheko and Morrish (2011) who showed in their respective studies that established and newly formed social networks were instrumental in exploring globalisation opportunities.

Vasilchenko and Morrish (2011) conducted their research in the narrowly defined developed economy of New Zealand and among ICT firms, which used social networks to internationalise faster. They found that newly formed and established social networks are paramount for helping the born-global SME internationalise faster (Vasilchenko & Morrish, 2011).

Van Laere and Heene (2003) and Madhavan and Iriyama (2009) additionally demonstrated the importance of globalisation for SMEs and the ways in which inter-firm networks were critical for competitive advantage in the global marketplace. Competitive advantage was often achieved through giving advice and support, helping with team culture and creating strategic alliances for the firm (Abell & Nisar, 2007).

The role of networks in competitive advantage was further illuminated by Zhou et al. (2009) who looked at the information benefits derived from the existence of social networks. The study used survey data from SMEs in China to look at how home-based social networks played a mediating role in the relationship between inward and outward

globalisation and firm performance (Zhou et al., 2009). While the focus on SMEs in China made this study one of the few derived from an emerging market, its wider applicability was limited because of the distinctive nature of China's communist command economy environment.

Marouf (2007) investigated the association between the strength of different types of ties with the sharing of different types of knowledge and proposed a measurement of these ties, an approach that could be helpful in network mapping for a firm such as IHS.

Although all these studies, from very different contexts, provided evidence that firms gained information benefits from social networks, Van Laere and Heene (2003) emphasised how much further research was needed to explore these dynamic network relationships in detail. While there is substantial research showing the importance of social network theory, how networks are defined and their impact, there remains a need for a more nuanced understanding of how social dynamics potentially lead to network creation (Van Laere & Heene, 2003; Marouf, 2005; Madhavan & Iriyama, 2009).

To better understand network dynamics, case studies are needed: something this research provides. Additionally, the research emphasis on social networks within a firm such as IHS promises to enhance understanding of born-global SMEs worldwide (Zhou et al., 2009) and to examine how much of the research is fully applicable to SMEs with born-global attributes operating in an emerging market (Vasilchenko & Morrish, 2011).

At the core of all these questions is a gap in our understanding of how people in this specific context actually behave, when investigated holistically across all the networks to which they are connected, to enable cross-national business. This research makes a contribution to filling that gap.

2.3 Diaspora Theory

Diaspora theory has developed as a tool for studying the impact of migrations and the nature of the links between migrants and their original home countries/communities and in this sense fills in context to any study of a born-global company operating in both regional and global networks.

The term itself was first used about the Jewish people, the subject of repeated forced migrations across several historical eras The term 'diaspora' was initially applied to the Jewish settlements and networks that grew up as a result around the world.

However, recently the term's use has been expanded to include various communities living away from the country of their birth in a variety of host countries: for example, the large Chinese and Taiwanese diasporic communities in countries like the US.

Diaspora theory has three aspects that can be summarised as follows:

- People can come from country X but live in country Y (diaspora).
- People can be from country X, live in country X, but previously lived in Y ("returnee entrepreneurs" – see below).
- People can constantly commute between country of origin X and new home Y ("New Argonauts" – see below).

This theory has been included in the literature review because it adds context on how communities participate in and affect the networking process. Most relevantly, it offers insight into what have been termed TTC's ("Transnational Technical Communities", Saxenian, 2002): defined as immigrants active in both home and host country technical networks (Madhavan & Iriyama, 2009).

The majority of diaspora research has focused on US-educated engineers whose activities spanned national borders and essentially transformed the situation of the relevant countries from one of "brain drain" to "brain circulation". These actors have also become known as the "New Argonauts" (Saxenian, 2002; Saxenian, 2006) after the Greeks who sailed with Jason in search of the Golden Fleece.

They undertake the risky but economically rewarding project of starting companies far from established centres of skill and technology. Areas of focus for "New Argonaut" activity include the transfer of knowledge between Silicon Valley and countries such as India, Taiwan, China and Israel (Saxenian, 2002; Saxenian, 2006).

TTCs can significantly improve a region's position in the global hierarchy by providing world-class skill through the movements of the Argonauts (Saxenian 2002). Cross-border venture capital flows have been associated with the creation of TTC's and this has highlighted the role of human networks as a mechanism of globalisation (Madhavan & Iriyama, 2009).

One key actor in diaspora theory is the "returnee entrepreneur" (Liu et al., 2010). By returning to their countries of origin, these actors in the network chain aid innovation in high tech firms in emerging economies. They provide a new channel for international technology transfer – both direct and indirect – to local firms. Returnee entrepreneurship is a relatively recent phenomenon, made pertinent by increasing cross-border human mobility and analysed via international knowledge spill-over theory.

The research is not comprehensive. Far less is known about networking outside the well-studied TTCs. Further investigation is needed of these trans-national communities in other countries or markets, and in different industries (Saxenian, 2002; Saxenian, 2006). The research of Liu et al. (2009), for example, was limited to TTCs in China – and in fact limited to a single Chinese science park.

Diaspora theory is not a main plank of this research, but does provide useful context. This research aims to create better understanding of the nature of the social networks that enable cross-national business; diasporic communities with their returnee entrepreneurs and 'Argonauts' are one such network. Born-global SMEs could leverage better understanding of such communities for competitive advantage, by employing it in expansion strategies, or incorporating it into business plans and management programmes.

2.4 Research implications: networks matter

This chapter's survey of the literature on the born-global firm and GIN has affirmed that professional networks matter and can enhance both growth and change. Bringing these theories to bear on a network broker such as IHS can generate illuminating research findings. This is particularly true since IHS does not fall within the most-studied categories of MNC or ICT-based company. IHS is essentially a born-global standalone firm that uses networks to enable cross-national business.

The literature emphasises the need for more understanding of how professional social networks could be better utilised and understood in an emerging market (Zhou et al., 2009). This study seeks to assess what part professional interactions play in networking, and whether there is justification for isolating – as most of the literature does – professional from personal network interactions. It explores this issue in the context of the social networks of business actors, rather than of students, who have previously been the main focus of personal network research.

The literature is clear in explaining that the use of networks helps the born-global SME, but there is minimal literature covering the actual dynamics of network creation and even less on these in emerging markets (Madhavan & Iriyama, 2009). This study seeks to provide evidence on these aspects, as well as additional ones, such as the human factors in these networks.

The global perspectives of research to date have been limited due to the lack of a case study in which both regional and global networks are at play. This study, using IHS as its case study, offers insight into such a context.

Finally, there has been considerable study of the impacts of different types of network, but none to date of the multiple effects of networking overall for the modern SME. This research seeks to redress that imbalance by adopting an integrated approach.

This study has combined insights from existing literature to take a holistic view of networking to discover what the network of the born-global SME looks like; what human factors play a role in networking (and how); and what the relative importance is of personal and professional drivers in networking for innovation.

Chapter 3: Research Questions

Based on the literature to date and the discussion of its implications in Chapter 2, it is evident that this research is highly novel, in that there has been no research to date into a standalone firm, successful in an emerging market, that operates simultaneously in a global and regional network.

On this basis, this study will answer the following key questions to provide a better understanding of the dynamics of networking for further social network analysis.

I) What do the networks of the born-global SME look like?

II) What human factors play a role in these networks?

a. What do people contribute to these networks?

b. What do people gain from these networks?

III) How important are the personal and professional drivers of networking?

a. What part do personal networks play?

b. What part do professional networks play?

c. Can these networks be integrated?

Chapter 4: Research Methodology and Design

There are risks inherent in undertaking research that is novel in approach, as this is. In particular, approaching the topic in a novel way, and questioning the assumption (of a separation between personal and professional networks) on which the majority of previous research has been founded, risks producing findings whose validity is questionable.

For this reason, a research methodology was constructed that built on all relevant elements of previous research, and used tools whose efficacy was well established.

4.1 Research design

4.1.1 The choice of case study

IHS was selected for case research because it encompassed a complete, working, global, regional and inter-firm network and thus addressed the lacunae in previous research.

IHS is a private equity fund that has raised substantial capital to invest in housing creation in Africa from both local investors and their counterparts around the world. Reflecting a globalised investment climate, IHS achieved effective and innovative connectivity between key role players (staff members, investors and developers) located in various parts of the world.

The enterprise achieved this by connecting, broking and acting in several social networks. There has been effective interplay between these networks and case research provided a method of accessing these interactions and the perceptions that guided them in detail (Leedy & Ormond, 2001).

4.1.2 The research design

A mixed methods research design was chosen. Creswell, Clark, Gutmann, and Hanson (2003) defined this as follows: “A mixed methods study involves the collection or analysis of both quantitative and qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research”.

Several authors have pointed out the effectiveness of combining qualitative and quantitative methods (Adcock & Collier, 2001; Brewer & Hunter, 1989; Erzberger & Kelle, 2003; Maxwell & Loomis, 2003; Morse, 1991; Polit & Beck, 2004; Sandelowski, 1996, 2000; Tashakkori & Teddlie, 1998 in Lund, 2012), and Lund (2012) has summarised the research to date on mixed methods. The four general advantages found were as follows (adapted from Lund, 2012):

(1) Mixed methods research was more able to answer certain complex research questions than qualitative or quantitative research in isolation. As one example, given that qualitative methods were more appropriate for hypothesis generation and quantitative methods for hypothesis testing, mixed methods enabled the researcher better to simultaneously answer a combination of exploratory and confirmatory questions. Theory could be generated and verified in the same investigation. As another example, in an intervention study, a randomized experimental design could be used for describing causal effects, and a qualitative interview for explaining how these effects were generated. But in a single mixed methods study, quantitative plus qualitative methods could answer complex research questions related to both causal description and causal explanation.

(2) Even where qualitative and quantitative results related to different objects or phenomena, the two could be complementary to each other in mixed methods research. Hence the combination of the different perspectives provided by qualitative and quantitative methods was able to produce a more complete picture of the domain under study. This allowed greater depth even when only a single domain (such as IHS) was investigated.

(3) Mixed methods research was capable of providing more valid inferences. If the results from different strategies such as qualitative and quantitative approaches converged, then the validity of the corresponding inferences and

conclusions were likely to increase more than if convergence was only sought within each separate strategy.

(4) Where qualitative and quantitative results in mixed methods research were divergent or contradictory, this could lead to extra reflection, revised hypotheses, and further research. So long as data had been collected accurately and analyzed correctly, such divergence could generate new theoretical insights.

A case study approach was selected because of the research focus on understanding the dynamics present within single settings such as IHS enterprise (Eisenhardt, 1989). Qualitative case research was commended by Saunders and Lewis (2012) who defined a case study as a strategy that investigated a contemporary topic in a real-life context using multiple sources of evidence.

These researchers additionally pointed out (Saunders & Lewis, 2012) that case studies gave the researcher a good understanding of the context of research and were the best approach for answering the kinds of research questions this study tackles. Case study interviews additionally provided a mechanism through which the author could access persuasive qualitative information, as opposed to relying solely on the interpretation of quantitative data (Siggelkow, 2007).

A second reason for selecting the IHS case was access: the researcher had unique access to the enterprise, so that in this work a single-case design gave the writer the opportunity to observe and analyse a phenomenon that might have been inaccessible to other researchers, as discussed by Yin (2003).

Single-case design in this case provided what is referred to as an embedded design where there were multiple units of analysis accessible within the single case (Yin, 2003). This was certainly the case with IHS. These subunits of examination added significant opportunities for extensive analysis, enhancing the insights provided by the overall case of IHS (Yin, 2003).

All these findings reinforced the choice of a mixed-method research design with a single case study (IHS) as its primary setting.

The study employed a combination of three approaches: an analysis of qualitative findings; quantitative statistical analysis (using IBM SPSS software 2012 version), and graphical network mapping (Borgatti, Everett & Freeman, 2002). This combination was designed to retain, reinforce and merge the strengths of each individual approach. The research design and analysis was detailed as follows

Table 1: Research design and analysis

Order		Method	Reference
1	Network Mapping	UCINET Software	Borgatti, S.P., Everett, M.G. and Freeman, L.C. (2002)
2	Qualitative Findings	Spiral Analysis	Stake (1995), Creswell (1998)
3	Quantitative Findings	IBM SPSS Software	IBM 2012

The research design used software to map the relevant network, and thereafter graphically depicted the various cliques, brokers and sub-groups that existed within the overall network through analysis of the various descriptors at work.

This design also enhanced understanding of the detailed internal and external factors that made these relationships work in the network and was able to depict how these networks were created, how they appeared to participants, and how they functioned. The writer set up this research design to capture both the detail and the broader picture of the look, formation, and interaction of full networks.

4.2 Research Process

A semi-structured interview and questionnaire was the process method of choice (Yin, 2003). A semi-structured interview was defined by Saunders and Lewis (2012) as an interview in which the researcher worked from a list of questions that had to be asked, but with sufficient flexibility to restructure aspects of the interaction based on the respondent's answers.

Using a semi-structured interview format allowed the researcher to obtain from the respondent both specific answers and detailed follow-up analysis where necessary. It also helped the researcher to put understanding of the network interactions in context, as a basis for the research findings. The 'user-friendly', personal format of the interviews additionally resulted in a high response rate and very full responses.

The interview population consisted of individual employees of IHS, institutional investors into the fund and developer partners of the fund (those who actually develop the housing units). This population was also able to provide a more rounded picture of the impact and innovative character of the enterprise itself, to reinforce the findings of Viruly (2012) on IHS's activities.

4.2.1 Details of respondents

I. **IHS staff** (network broker)

The staff subset consists of both locally and internationally based IHS employees. To be eligible for interview, IHS staff members needed to have been employed for a minimum of 3 months in the company, to have received a salary from IHS and have been defined as an employee on the payroll.

II. **Investors** (global network extra-firm partners)

Each institutional investor firm had a number of representatives handling the IHS relationship. To be eligible for interview, the representative needed to be the contact point for the IHS relationship. The relevant representatives of the four institutions which made themselves available for interview were DBSA (local), PIC (local), Citibank (Africa) and OPIC (USA). A minimum of one representative was interviewed from each institution.

III. **Developers** (regional network extra-firm partners)

The developers were the individuals who benefited from IHS funding and developed the houses for end-users. To be eligible for interview, developer partners of IHS had to have been involved in a development with IHS, to be at a director level of the development company and to be the representative of that company that IHS would have dealt with on a day-to-day basis.

This selection of interviewees allowed the writer to obtain perspectives from the entire network, starting at those investing in the fund, thereafter with those working at the company acting as the broker (IHS) and ending with the developers who build the housing units (the end-user product).

Table 2: Participants

	Name	Designation
1	Joel Rosen	IHS Staff
2	Yankho Chitsime	IHS Staff
3	Willem Odendaal	IHS Staff
4	Hennie Erasmus	IHS Staff
5	Maureen Komakech	IHS Staff
6	Etienne Posthumus	IHS Staff
7	Rupal Desai	IHS Staff
8	David Rikhotso	IHS Staff
9	Tania Pinto Correia	IHS Staff
10	Bianca Gumede	IHS Staff
11	Zakhira Noor	IHS Staff
12	Vuyani Msibi	IHS Staff
13	Jeff Muller	IHS Staff
14	Karey Daniel	IHS Staff
15	Claudette Kelly	IHS Staff
16	Faheema Cupido	IHS Staff
17	Virginia Messenger	IHS Staff
18	Fikile Zulu	IHS Staff
19	Nkhensani Zitha	IHS Staff
20	Pamela Lamoreaux	IHS Staff
21	Vanessa Perfect	IHS Staff
22	Alistiar Langson	IHS Staff
23	Azwifanele Nafale	Institutional Investor
24	Mohla Matsaba	Institutional Investor
25	Marna Du Plessis	Institutional Investor
26	Donna Oosthuyse	Institutional Investor
27	Steven Liska	Institutional Investor
28	Chris Renecle	Developer Partner
29	Nick Buck	Developer Partner

30	Chris Horn	Developer Partner
31	Jock Seeliger	Developer Partner
32	Suzanne Coetzee	Developer Partner
33	Jaco Pienaar	Developer Partner
34	Albert Swanepoel	Developer Partner
35	Adrian Coetzee	Developer Partner

The interviews were conducted either in person in 30-minute time slots or over the telephone. However, the time used for the interviews was flexible around this broad guideline, to ensure critical information was not missed.

Permission was requested from respondents in advance. Meeting requests were used to secure the time slots and respondents were asked to select a time when they would be most relaxed and have the necessary time to answer all the questions required.

4.2.2 Process

The same process was followed consistently for all respondents where possible. Prior to the beginning of the meeting or telephone call, the interviewer provided a personal introduction in detail via telephone, in person or email. Thereafter, the concept of social networks in business, and the reason for this research were explained so that the respondent saw the need for the interview. Before anything further was explained, respondents were required to produce the signed consent form (See Appendix 1).

Thereafter, respondents were given an option to either fill out the questionnaire themselves, or have it filled out by the interviewer on their behalf. The majority preferred the latter option although some due to time constraints preferred the former. However, it did became apparent after the initial interviews that some respondents were actually able to answer more candidly and confidently if they filled out the questionnaire themselves in their own time. Those who chose to do this were asked to send a scanned, signed copy of the questionnaire back to the researcher immediately.

What was required under parts A, B and C of the questionnaire was explained to respondents where possible. The explanation covered, in detail, the type (not content) of response required under each section and subsection, and the criteria for whether a section was applicable or not (if, for example, the respondent was not part of the

institutional investor subset, certain questions did not apply). All respondents received the same explanation where possible, but with space for questions to provide further clarity where necessary.

All respondents seemed comfortable with the process and there were no instances where a respondent refused to answer a question, indicated they felt the questions were intrusive, or asked to stop the interview. Any subsequent changes to the questionnaire format were communicated to respondents who had already been interviewed at the stage and the ability to make any changes to the original responses was provided.

4.2.3 Dealing with potential bias in the 'closest tie' questions

After filling out the extensive or limited interaction table, the respondent was then asked to list the people they deemed as their "closest ties". These were defined as the people with whom the respondents felt they had had even more than extensive interaction.

From this list of closest ties, the respondent was then asked to choose the single closest tie. This was explained to the respondent as the person they felt was their number one choice based on social and professional interaction. A number of multiple-choice questions were then answered based on the respondent's relationship to this person.

To eliminate bias in the process, if there were more than the minimum of two choices, a random list of numbers was generated via Microsoft Excel and was used in each interview to determine which closet tie was to be used as the second choice by the respondent when answering the multiple-choice questions.

The interviewer carried this random number list to every interview and progressed down the list in order. This eliminated the possibility of any bias on the respondent's part when answering the questions, since the respondent only made one choice for the multiple-choice questions, the other being selected randomly on the basis of the list generated by Microsoft Excel.

To further mitigate any potential problem of bias, the interviewer also alternated between using the closest tie or the random choice as a starting point for the multiple-choice questions i.e. for interview one, the respondent was asked to answer the

questions on the closest tie first and then on the random choice; on interview two this process was reversed and so on. This process of alternation was adhered to diligently throughout the interviews.

Challenges

The main challenge proved not to be conducting the interviews, but rather getting busy respondents to make time for them.

However, during the interview it was sometimes challenging to get respondents to feel comfortable with certain questions, especially those such as: “Do you trust this person and expect them to look after your interests?” Such a question risks being deemed “too personal” in a business setting, so the interviewer made efforts to put respondents at their ease at all stages, to facilitate a candid response. This effort bore fruit, as there was a high answer rate on all questions.

4.3 Universe

The universe of this study consisted of new firms active in the modern economy that have a truly global network footprint. The reason for choosing this population was to be able to map an entire network that crossed national boundaries, so that the research had the potential to add to the body of knowledge in this evolving field of research.

4.4 Unit of Analysis

Yin’s (2003) work explained that the unit of analysis was the fundamental problem in defining what the case “is”. The unit of analysis was social ties in network formation and function for the born-global SME. This unit of analysis was selected as most appropriate for providing findings that could help answer the research questions as proposed.

4.5 Population (response rate)

Given that IHS is relatively young (established 2007) and small (25 employees), it was possible to achieve a high response rate (88%) from the entire firm, and from the majority of the relevant representatives of the institutional investors as well from the developer partners who together formed the population of the study. The study earmarked 42 respondents to be interviewed and achieved 35 responses: a response rate of 83%.

A response rate this high limits the possible negative effects of missing data in social network analysis, and has been deemed to be an acceptable response rate for a whole-network approach (Wasserman & Faust, 1994 and Kossinets, 2006 in Grosser, Lopez-Kidwell, & Labianca, 2011).

Table 3: Respondent Breakdown

		Entire Network	Achieved
IHS	Senior and Middle Level Staff	15	12
	Staff	10	10
Investors	Entities	4	4
	Representatives	8	5
Developers	Directors	9	8
	Total	42	35
	Response Rate		**83.33%**

This comprises 12 senior staff members dealing directly with investors and developers; 10 other staff members of IHS; 5 representatives of the institutional investors; and 8 developer partners of IHS. (Qualifying criteria for these categories are stated at 4.2.1)

4.6 Research Instrument/Measurement

4.6.1 Questionnaire Design

Appendix 1 contains the questionnaire in full. The questionnaire combined open-ended and multiple-choice questions, with one type of question designed to complement and provide additional reinforcement for responses to the other type. Respondents were asked to map their network interactions via questions probing who they had ties with – but the graphical network map integrated responses to display those ties 'from both ends': indicating where two-way networking was real, and where it was only the perception of one party.

Multiple-choice questions elicited zero-sum choices about perceptions of, gains from and contributions to networking; open-ended questions allowed for modification and nuance to be added to these choices and translated into thematic categories.

Thus the interview format and the individual questions were designed to speak directly to the research question, able to uncover both perceptions about networking and how it operated in practice in IHS. The combination of question types was structured to optimise the results from all aspects of the mixed methods, three-part (qualitative, network mapping and quantitative research) analysis.

Questions were created to probe both the personal and professional networks at play, and to provide material for three different types of analysis.

Thus the questionnaire was broken down into the three distinct sections as follows:

- Part 1 – questions aimed at populating a matrix for the network mapping software.
- Part 2 – open-ended questions aimed at providing qualitative data.
- Part 3 – Likert scale-type questions (Wakita, Ueshima & Noguchi 2012) aimed at populating a matrix for the IBM SPSS software.

Three key areas of focus, based on the findings, needs and objectives discussed in Chapters 1 to 3, were employed as guidelines to structuring the questionnaire.

1. How do these networks look?

To elicit responses about how these networks were perceived by respondents (adapted from Vasilchenko & Morrish, 2011), questions such as these were used:

- What do you get/receive from these networks?
- What do you give/contribute from these networks?

Likert questions were also used to obtain a better understanding of how the networks (specifically at IHS) actually looked:

- Where are you located and how do you communicate with IHS?
- What is your job role?
- Is your network regionally or globally based?

2. How are these networks formed?

The purpose of this section was to get a better understanding of the existence and role of network cliques or brokers. So questions asked:

- Who are your closest ties?
- Do you extensively interact with that person?

Thereafter, the interview focused on personal network factors such as:

- What made this relationship work?
- Specifically, what were the internal factors that made this relationship work?

Some questions used to elicit responses on this included (adapted from Krackhardt & Stern, 1988; Krackhardt & Hanson, 1993 and Reinholdt, Pederson & Foss, 2011):

- Who do you depend on to solve problems? (advice network)
- If there was a crisis who could you depend on? (trust network)
- Who could you go to solve technical problems? (communication network)
- Who do you consider as a friend? (friendship network)
- Who do you go to for information on work-related topics?(knowledge network)

Finally, what were the external factors that made this relationship work?

- What similar hobbies do you have to people in your network?
- What similar interests do you have to people in your network? (such as being members of the same sports clubs…)
- What similar religious or ethnic communities or groups do you belong to?

3. **What function do a) different network participants fulfil and b) the overall network fulfil?**

- Who have you met through IHS who would have been otherwise hard or impossible to meet?
- How in your view has IHS been able to achieve this?

4.7 Reliability and Validity

To avoid researcher or interviewer bias in the interview techniques or in the writing of this paper, it was peer reviewed by an expert in mixed-method analysis (the supervisor of this paper).

The interview questions and answers were anchored in specifics to minimise mis-remembering as spoken answers were transcribed. Responses were verified with actual data where possible, with the inclusion of the network maps and additional quantitative analysis. Furthermore, more than one representative was interviewed whenever possible to permit the triangulation of findings.

However, another risk to reliability exists. An interview may yield results of low reliability which the researcher is predisposed to 'spin' to chime with research aims. Thus it was essential that the researcher aimed for objectivity when analysing the data. (Gillham, 2005). The researcher endeavoured to remain guided by the precise objectives during the interview process, and to transcribe and use in analysis only what was explicitly said (Gillham, 2005).

The researcher was also part of this study, as a member of the IHS staff component during the interviewing stage. However, his responses were subjected to exactly the same controls in terms of randomised tie choices as every other respondent, and was part of a diverse, representative and adequately-sized sample. By the time of writing up the study, the researcher had left employment of IHS, and this reduced the potential for bias in the analysis of results.

4.8 Data analysis: mixed method approach

Data collection was based on an innovative mixed methods approach, and the method of analysis reflects this, also employing a mixed methods approach, with the case study as its primary setting. Analysis was split into the three key areas that are the basis of this study, with the results compared, contrasted and synthesised, for discussion in Chapter Six and to draw conclusions in Chapter Seven.

4.8.1 Network Mapping

To assist with proper network analysis, Ucinet software was utilised for this research (Borgatti et al., 2002). (Ucinet works by drawing graphs based on a matrix that displays the findings of the interviews.) The Ucinet software allowed for ease of analysis by using Netdraw to graphically depict the networks at play as webs of connection.

This visual presentation helped the researcher see and separate out key network interactions from the networking of the organisation. These key patterns were analysed on the basis of the various forms of interaction and perceived closest ties in the IHS network.

4.8.2 Qualitative findings

Various approaches to qualitative analysis were available. Two were of most use. Firstly, Leedy and Ormrod (2001) recommended the use of the data spiral analysis developed by Creswell (1998) for data examination in qualitative research. Secondly, Leedy and Ormrod (2001) also explained that in case research the analysis typically follows a pattern based on Stake (1995). This can be summarised as follows:

Table 4: Qualitative Analysis

Cresswell (1998)	Stake (1995)
Organise the data.	Organisation of details about the case.
Peruse the data and get a sense of what it contains as a whole.	Categorisation of data.
Identify general categories or themes.	Interpretation of single instances.
Integrate and summarise the data for your readers.	Identification of patterns.
	Synthesis and generalisation.

Both methods are similar, except that Stake (1995) called for additional synthesis and generalisation. An integration of the methods above was used by the researcher to gain the best from both techniques. This followed Merriam (1998) who explained that when doing case research there was no 'best' method for data collection or analysis, but rather that those approaches should be used that best captured the qualitative essence of the questions being pursued.

In practical terms, the integrated approach simply involved writing respondents' answers on Post-its, using a different colour for each respondent subset: i.e. green for investors; red for IHS staff and blue for the developers. Then all the Post-its were put together on a single large chart from which the researcher identified general categories or themes. This was facilitated by the majority of respondents answering along similar lines.

Subsequently, each Post-it was moved onto a page representing one substantial theme that had emerged. The process was followed consistently until five major themes had emerged, following which the data was transcribed into a Microsoft Excel spreadsheet based on the answers. The key themes were:

- Knowledge
- Referrals
- Professional interaction
- Social interaction
- The use of modern communication

4.8.4 Quantitative findings

The IBM software SPSS allowed the researcher to set the parameters for statistical research. For the purposes of this research this included T-test analysis, tests for statistical significance at a 95% confidence interval, and a comparison of means.

The purpose of this work was to analyse the difference in means in the Likert-type questions. This enabled a comparison to be drawn between the random tie as chosen by the random number generator in Microsoft Excel and the closest tie as chosen by the respondent.

4.9 Research limitations

The research had limitations of scope and a potential limitation because of methodology. Firstly, only IHS network participants were interviewed and form the basis of the findings. Because IHS has such a distinctive character as an enterprise, this limitation of scope could limit the general applicability of the findings, particularly in combination with the selection of a single case study design.

Secondly, limitations in the power of qualitative interviewing have been noted by Roulston (2011). He alerted researchers to the fact that that much methodological writing on qualitative interviewing indicates that interviews often do not advance as planned, and that researchers must continuously deal with challenges as they arise

during interviews. The interviews for this research endeavoured to counteract potential problems (particularly by the introduction of the 'random tie' element) but the risk remains.

Thirdly, although acknowledging the relevance of TTCs, this research was not able to examine them in any detail.

None of these limitations detracts from the validity of the findings. In a sense, they are the obverse of its strengths in adopting a novel approach to a novel and innovative enterprise. This paper serves as an early contribution to an emerging field of study, but alone, it cannot be more than a contribution. Section 7.3 of this report contains suggestions for future research directions which will test, reinforce and broaden the applicability of these findings.

This chapter has described and defended the various facets of the mixed method research conducted on a single firm case. The next chapter will deal with the findings of the research.

Chapter 5: Results

This chapter will provide the results of the research analysis and indicate how these results relate to the research question.

5.1 Network Mapping

Network maps are provided to give the reader a graphical representation of the networks at play. For all the network maps in this study, the following colours and symbols have been used consistently:

Table 5: Network map symbols

Subset	**Symbol**	**Colour**
IHS staff	Square	Red
Investors	Triangle	Green
Developers	Circle	Blue

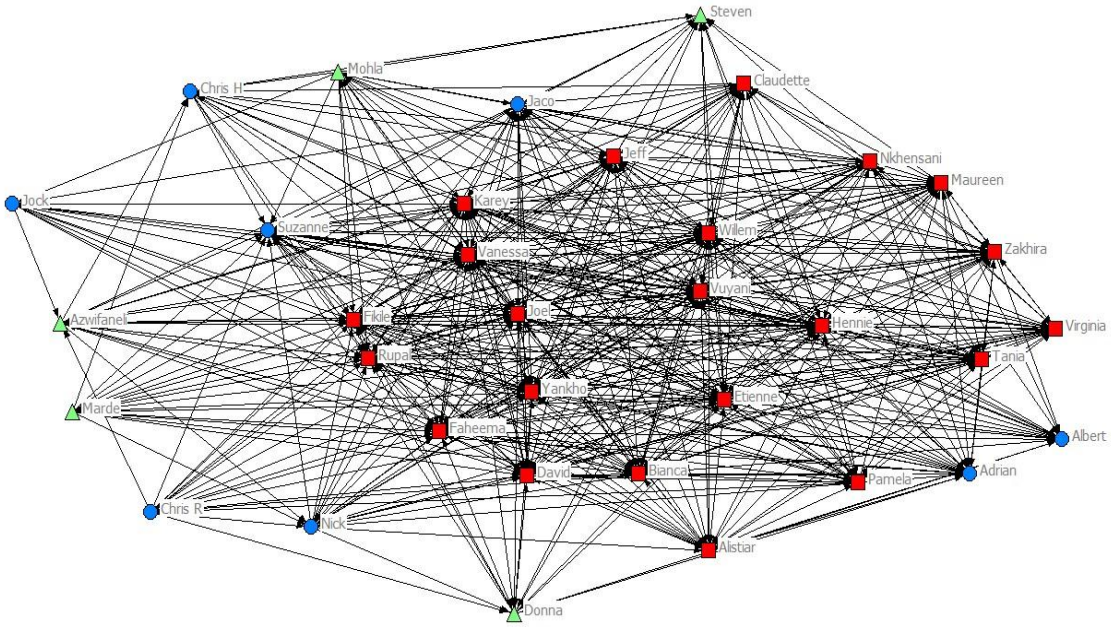
5.1.2 Professional networks

i. Any form of interaction

In this section of the questionnaire, respondents were required to detail whether they had none, limited or extensive interaction with all the other members of the professional network. Both limited and extensive interaction were mapped to show the entire network at play.

Where a map contains both double-ended and single-ended arrows, the single-ended arrow indicates that a respondent has chosen a particular person during the interview process, but that person has not reciprocated the choice.

Figure 2: Entire IHS Network based on any form of interaction



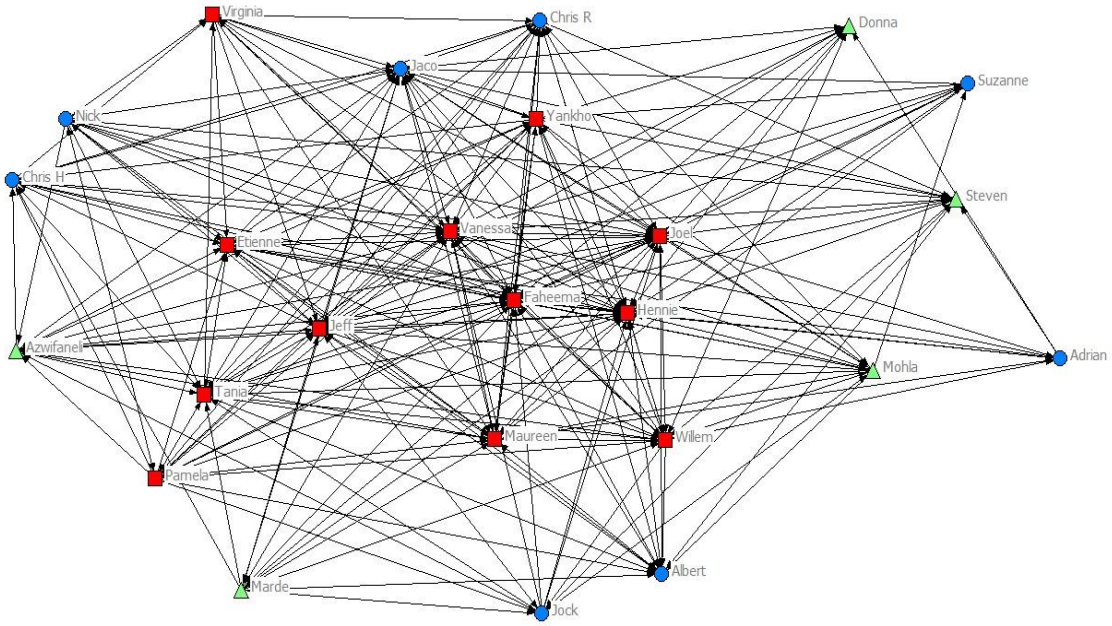
The majority of IHS employees were available for interview and this has resulted in an over-representation of the IHS role as network broker in this map. However, it does not detract from the key findings; subsequent examination of the role of a more limited IHS population reveals the same underlying role.

IHS staff and external developers and investors include people of both sexes and all race groups. Though this is not marked on the data, an awareness of these categories did inform the analysis, and in particular underpins later assertions about the nature of certain friendship networks.

IHS staff are densely enmeshed in the network, with significant crossover of interactions, while external partners are mainly on the perimeters. Some IHS staffers such as Karey, Joel, Yankho and Tania feature more predominantly than others, indicated by the number of arrows linked to these actors. These network actors seem to hold the network together.

Some of the developers and investors interact more than others; this may be based on geographical proximity and/or job role. However, geography is not always a determinant of activity: some of those the map represents as playing active roles in this network such as Jeff are based in the USA.

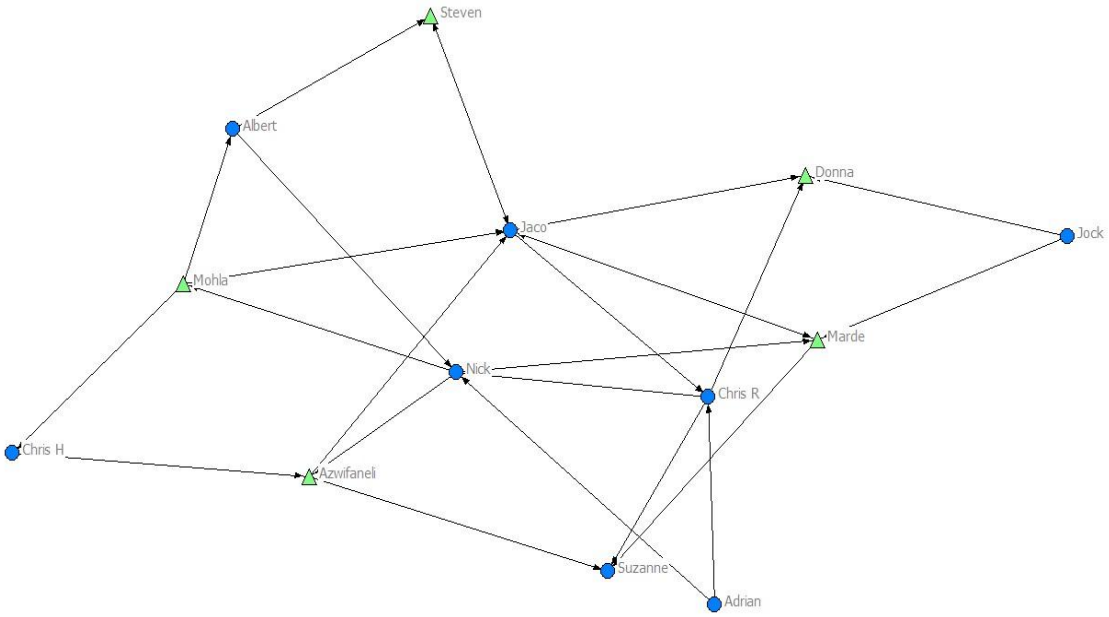
Figure 3*: Any interaction including only middle and senior level IHS staff*



The IHS staff, at 22, is larger than any other subset. So to present a clearer view of the interactions at play, this map depicts only middle and senior staff at IHS. As IHS has a flat organisational structure, the equivalent of middle and senior staff was applied. These people generally interact more with external partners because of their job role. This breakdown therefore provides a more proportionate view of this dense network and makes visible some significant network interactions.

Firstly, a significant number of these IHS staff and the developers have mutual interaction, as indicated by the double-ended arrows. Secondly, both the predominance of IHS staff interactions in the network and the very limited direct (un-mediated) interactions between external partners make it clear that IHS remains the network broker in this picture.

Figure 4: Any interaction between only external partners



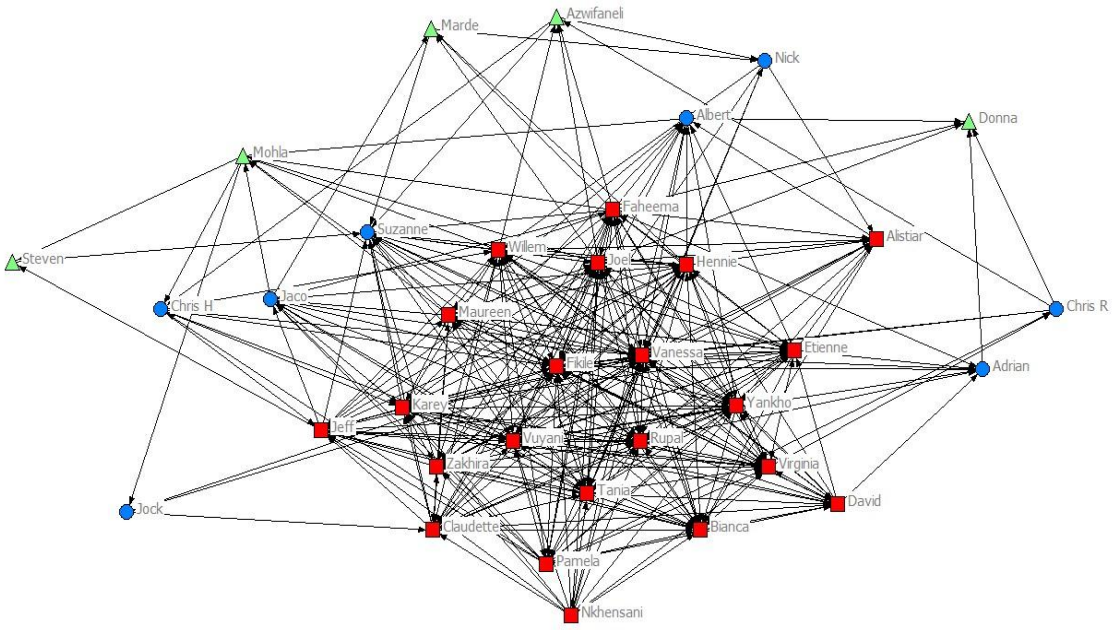
When IHS middle and senior staff are removed from the network map, the lack of interaction without IHS brokering is a lot more apparent. Although there are some direct interactions such as Steven, Jaco and Donna it is evident that when the IHS staff are removed, the network is a lot thinner and more dispersed.

It is also very disjointed, without any actors who broker the network or cause it to cluster in places. Without IHS, the key network broker at the centre of clusters in previous maps, this is a largely inactive network.

ii. Extensive Interaction

Extensive interaction was defined as including all interaction of a professional nature that was 'more than limited' in nature. Mapping extensive interaction provides a closer look at the basis of professional networking.

Figure 5: Extensive interaction with entire network



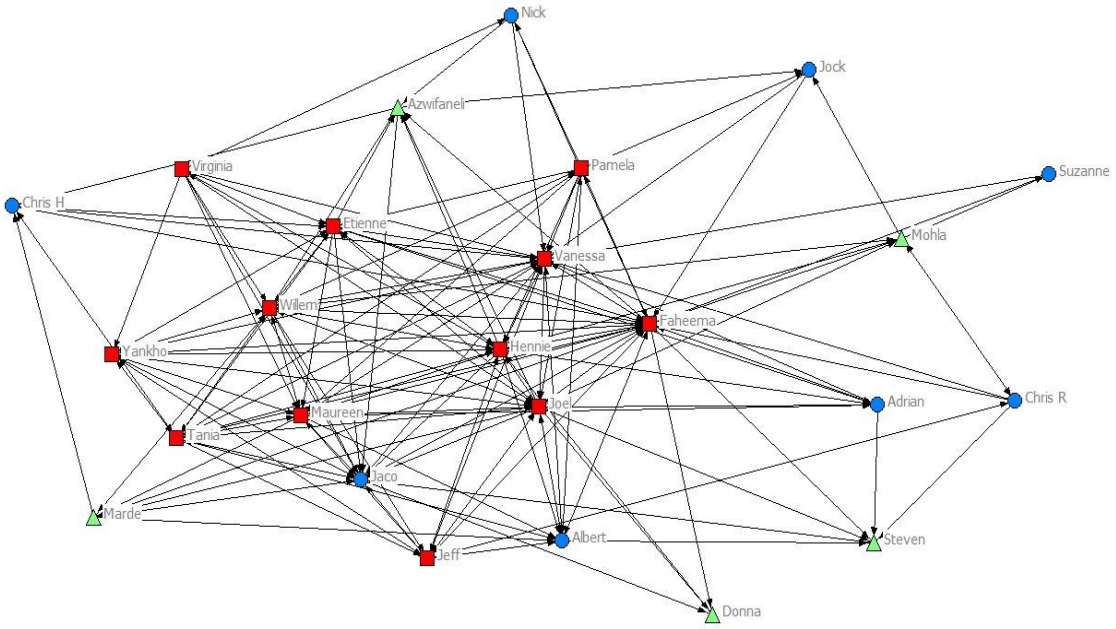
The patterns in this map demonstrate that the majority of extensive interaction at a professional level is – as with 'all interactions' – between IHS staff: in essence, IHS as broker holds this network together.

However it is striking that some investors and developers have moved further towards the periphery of the map when examining extensive interaction. The minimal clustering around the developers and investors may indicate that there are key individuals who manage these relationships, or individuals who are located in closer proximity.

Certain IHS staff, (e.g. Rupal, Vanessa, Yankho and Joel) are at the centre of extensive interactions; this is represented by the clustering of both single-ended and double-ended arrows around them.

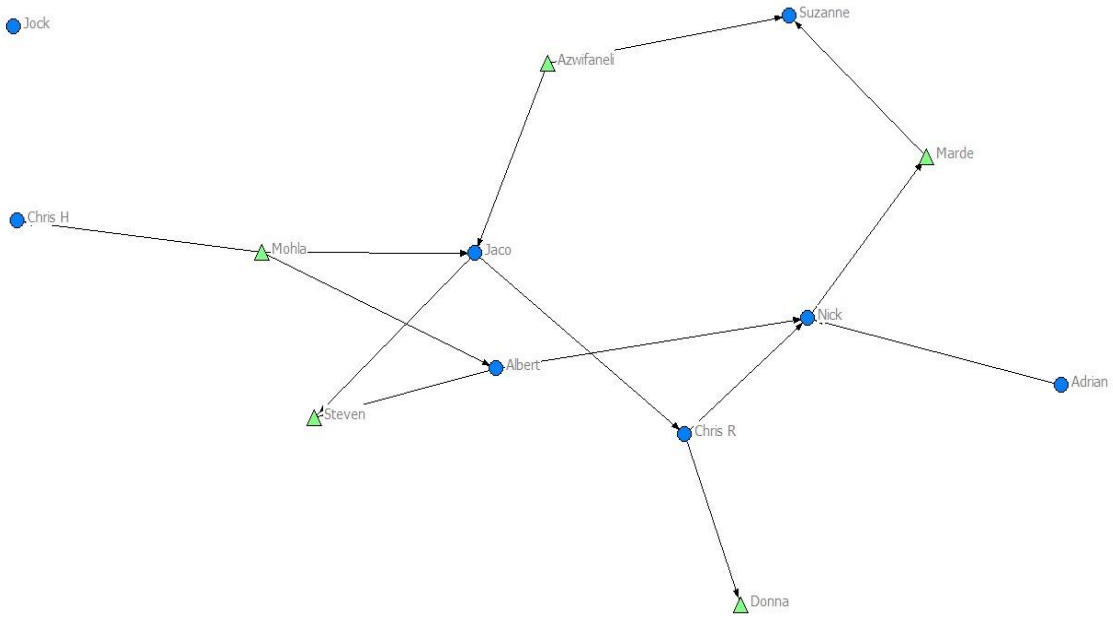
Finally, participants of all races and both sexes are broadly represented in all network roles.

Figure 6: Extensive interaction including IHS middle and senior level staff



As with Figure 3, this map 'clears the picture' by mapping extensive interaction but eliminating role-players other than IHS senior and middle staff and the external partners. It is apparent that a number of IHS staff have extensive professionally interaction with all three subsets. Due to job roles in the organisation, some IHS staff such as Pamela who is the Business Development Manager interact more extensively than others with the external partners.

Figure 7: Extensive interaction between only extra-firm partners



This striking map depicts only the extensive interaction between external partners. It reinforces the indication of Figure 4 that without IHS as broker this professional network of the born-global SME is disjointed and unlikely to function. On this map, some actors are almost excluded from the network, with minimal arrow activity. This shows that, for the most part, these actors do not extensively interact with any others at any level.

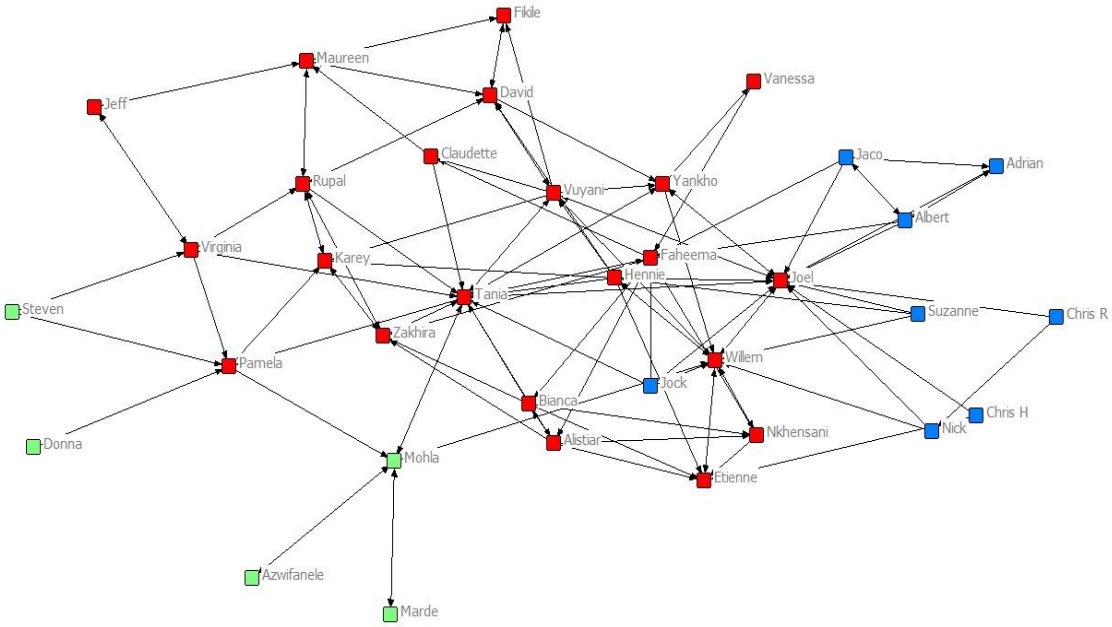
5.1.2 Personal Networks

iii. Closest Ties

Closest ties are defined as relationships deeper than extensive interaction. Respondents were asked to select at least two names from the list with whom their network relationship involved more than simply participating in extensive interaction.

Having a 'close tie' was explained as being close at both a personal and professional level, and respondents were allowed to list as many people as they liked (as long as they had a minimum of two), so as not to inhibit the choice of as many people as possible.

Figure 8: Closest ties with entire network



Previous maps only detail professional interaction; once personal networking is added the map changes completely.

Take the example of Pamela. She is the business development manager; hence the investor subset clustering around her name. This contrasts with Pamela's position in the any interaction map, which does not show any significant clustering. Within the investor subset, some investors have closest ties while other do not.

Some IHS staff (egg Willem, Joel and Tania) have a cluster of arrows around their names showing the importance of proactive individuals in the organisation.

One striking feature of this map is that there are only a minimal number of double-ended arrows, which begins to raise the issue that perceptions of closest ties may indeed be asymmetric.

Mapping was undertaken for all levels of personal, as for professional, networking. However, the sample presented here provides an adequate representation of the significant features revealed. The rest of the network maps are available as Appendix 2 of this report.

5.2 Network qualitative research

The qualitative research revolved around understanding what people see themselves as gaining from and giving to networks. Analysis was based on the key themes as detailed in the research methodology.

Table 6: Qualitative Findings

What have you contributed to this network? (Contribute/give)
Theme: By referring, connecting and promoting IHS professionally
Theme: By interacting at a social level (social interaction)
Theme: By using modern communication
Theme: Knowledge sharing

What have gained from this network? (Receive/gain/get)
Theme: Knowledge, learning and information
Theme: Growing social network
Theme: Growing professional network
Theme: Gaining future opportunities

The responses to these categories reflected the conventional breakdown of network interaction into professional and personal networks.

Table 7: Key themes that emerged

Professional Network	**Area**
Theme 1: By referring, connecting and promoting IHS professionally	Contribute/give
Theme 1: Growing professional network	Receive/gain/get
Theme 1: Gaining future opportunities	Receive/gain/get
Theme 2: Knowledge, learning and information	Receive/gain/get
Theme 2: Knowledge sharing	Contribute/give

Personal Network	**Area**
Theme 3: Growing social network	Receive/gain/get
Theme 3: By interacting at a social level (social interaction)	Contribute/give

The How	**Area**
Theme 3: By using modern communication	Contribute/give

5.2.1 Professional Networks

The detailed explanation provided below for the first response rates table applies to every response rates table presented subsequently. This detailed explanation is necessary to help the reader understand the breakdown that forms the basis of this section.

In the response rates table below (Table 8) the “Total number of answers received for this theme” means those who selected the theme “connecting, promoting and referring” IHS: 34 in this case.

The “Compared to total responses received for this question” figure refers to the overall responses received for contributing to the IHS network under any theme.

The percentage (44%) is the percentage of the total number of answers received for this theme.

The “Broken down as follows” section disaggregates the responses into the three population subsets: the developers, investors and IHS staff and thus the percentage 66% refers to the percentage of developers answering the entire question. This information is necessary to remove any bias because the proportions of answers received differed between population subsets.

The 35% in the far-right column of the same table refers to the percentage of developers who answered as a percentage of all who answered.

The same explanation of headings and columns applies to all tables in this section and should be read consistently.

Theme 1: Referrals

Respondents believe they contribute to networks by referring, connecting and promoting in a professional context, and by knowledge-sharing.

Table 8: Responses to theme “ connecting, promoting and referring (give)”

Total number of answers received for this theme	34	
Compared to total responses received for this question	77	
%	**44.16%**	

Broken down as follows:

Number of **developers** that answered in this theme	12	35.29%
Compared to total **developers** answers received to this question	18	
%	**66.67%**	

Number of **IHS staff** that answered in this theme	17	50.00%
Compared to total **IHS staff** answers received to this question	49	
%	**34.69%**	

Number of **investors** that answered in this theme	5	14.71%
Compared to total **investors** answers received to this question	10	
%	**50.00%**	

Proportionally, this answer received the most responses, at 44.16% of overall answers. Developers felt the most strongly about this form of professional interaction, at 66.67% of overall responses; for investors it scored 50.00% of overall responses, and for IHS staff 34.69%.

Table 9: Examples of actual responses

Responses	Response Group	Actual Response
1	Developer	Let fellow developers know about IHS
2	Investor	Referral of potential developers looking for equity
3	Developer	Talking about and promoting IHS to other developers
4	Developer	Connecting IHS to funding institutions
5	Developer	Interact with banks as an agent
6	IHS	Promoting the IHS brand to external partners
7	Developer	Let local government, corporates and council know about IHS investment
8	Developer	Connecting IHS to various professionals and contractors
9	IHS	Referrals of IHS to various stakeholders
10	IHS	Contacts with banks and investors - connecting them together
11	IHS	Explaining various products to stakeholders
12	IHS	Strong networks of contacts from previous work experience in global organisations
13	IHS	Interaction on due diligences with various stakeholders
14	Investor	Contribution from the government side
15	Developer	Marketing of the IHS brand when selling units
16	Investor	Point of contact for IHS in terms of institutional investor thinking
17	IHS	Bringing business referrals to IHS

18	IHS	Networking within property circles
19	IHS	Professional interaction with stakeholders
20	IHS	Increasing work relationships with various stakeholders
21	IHS	Interaction with developer partners and professionals
22	Developer	Find business opportunities in the marketplace
23	Developer	Attending functions

Table 10: Responses to the theme: "Professional Networks (get)"

Total number of answers received for this theme	14
Compared to total responses received for this question	82
%	**17.07%**

Broken down as follows:

Number of **developers** that answered in this theme	3	21.43%
Compared to total **developers** answers received to this question	17	
%	**17.65%**	

Number of **IHS staff** that answered in this theme	8	57.14%
Compared to total **IHS staff** answers received to this question	51	
%	**15.69%**	

Number of **investors** that answered in this theme	3	21.43%
Compared to total **investors** answers received to this question	13	
%	**23.08%**	

Table 11: Examples of actual responses

Responses	Response Group	Actual Response
1	IHS	Contacts/network of my own
2	IHS	Bigger network
3	IHS	Professional network
4	Investor	Making new contacts
5	IHS	Networking opportunities
6	Developer	An extended network
7	Investor	Contacts
8	IHS	A property circle network
9	IHS	Professional relationships
10	IHS	Further contacts
11	IHS	Contacts
12	Developer	More interaction with different stakeholders
13	Developer	Exposure to the press
14	Investor	Partnering with other investors

This area received 17% of overall responses to the question, with representation from all three subsets of respondents. This indicates the importance of professional interaction in network contribution.

Respondents further feel they gain knowledge, learning and information, grow professional networks and gain future opportunities from a network such as IHS, as the following response rates indicate:

Table 12: Responses to the theme: "Future opportunities"

Total number of answers received for this theme	11
Compared to total responses received for this question	82
%	**13.41%**

Broken down as follows:

Number of **developers** that answered in this theme	7	63.64%
Compared to total **developers** answers received to this question	17	
%	**41.18%**	

Number of **IHS staff** that answered in this theme	2	18.18%
Compared to total **IHS staff** answers received to this question	51	
%	**3.92%**	

Number of **investors** that answered in this theme	2	18.18%
Compared to total **investors** answers received to this question	13	
%	**15.38%**	

Table 13: Examples of actual responses

Responses	**Response Group**	**Actual Response**
1	Developer	Increased work opportunities
2	Developer	New business opportunities
3	IHS	Potential business opportunities
4	Investor	Future opportunities
5	Developer	Significant exposure for our product
6	Developer	Connections for future business
7	Developer	Possible other opportunities
8	IHS	Wider network of contacts for future roles

9	Developer	Credibility with investors for having such a significant partner
10	Developer	An exit opportunity for developers in a quiet market
11	Investor	Partnering with other investors

Theme 2: Knowledge

Table 14: Responses to the theme: "knowledge sharing (give)"

Total number of answers received for this theme	16
Compared to total responses received for this question	77
%	**20.78%**

Broken down as follows:

Number of **developers** that answered in this theme	6	37.50%
Compared to total **developers** answers received to this question	18	
%	**33.33%**	

Number of **IHS staff** that answered in this theme	6	37.50%
Compared to total **IHS staff** answers received to this question	49	
%	**12.24%**	

Number of **investors** that answered in this theme	4	25.00%
Compared to total **investors** answers received to this question	10	
%	**40.00%**	

This form of professional interaction received 20% of the overall responses as well as a majority of investor reaction at 40%, followed by developers at 33% and lastly IHS staff at 12%. The 16 answers received for this theme were almost evenly split between IHS staff (37%), developers (37%) and investors (25%).

Table 15: Examples of actual responses

Responses	Response Group	Actual Response
3	IHS	Knowledge sharing
4	Developer	Better understanding of the property market as a whole
5	IHS	Importance of market data
10	IHS	Increased business acumen
11	IHS	Learn about different cultures and lifestyles
12	IHS	Operational efficiencies
13	IHS	Market risk knowledge
14	IHS	Knowledge on subject matters
16	Investor	Knowledge of sector services, providers, competition
17	Developer	Industry lending trends
18	IHS	Learn to use email as a personal contact
19	Investor	Industry/sector fraud
20	Investor	Industry/sector standards
21	Investor	Better understanding of US investor priorities
22	Investor	More information about industry and emerging markets
24	Developer	Experience
25	IHS	Making own skills more marketable
26	Investor	Appreciation for social impact and measurement thereof
27	Developer	Business knowledge
28	IHS	Other cultures and business approaches
31	IHS	Assimilation of information
32	Developer	Insight into investment strategies
33	Developer	Compare funding structures

34	IHS	Exposure to other countries and other ways of problem solving
35	Investor	OPIC funding and how it functions
38	IHS	Strategic Planning
39	Investor	Experience in the affordable housing sector

Table 16: Responses to the theme: "knowledge sharing (get)"

Total number of answers received for this theme	39	
Compared to total responses received for this question	82	
%	**47.56%**	

Broken down as follows:

Number of **developers** that answered in this theme	5	12.82%
Compared to total **developers** answers received to this question	17	
%	**29.41%**	

Number of **IHS staff** that answered in this theme	25	64.10%
Compared to total **IHS staff** answers received to this question	51	
%	**49.02%**	

Number of **investors** that answered in this theme	8	20.51%
Compared to total **investors** answers received to this question	13	
%	**61.54%**	

Respondents felt that besides contributing to network knowledge-sharing ('giving') it was also important to receive this from a network such as IHS. This option received a substantial 47% of overall responses to this question. A large number of IHS staff and investors both felt this was important. There is dissonance between this response and that reflected in the previous tables, which may indicate a difference between what people give and get.

Table 17: Examples of actual responses

Responses	Response Group	Actual Response
1	IHS	Information gathering
2	IHS	Knowledge of local market and politics
3	IHS	Speciality skillset
4	IHS	Demographically
5	IHS	Providing strategic input
6	IHS	Involved in capital raising for second fund
7	Developer	By actively participating
8	Developer	Share expertise
9	Developer	Knowledge
10	Developer	Ownership
11	Developer	Discussing projects
12	Developer	Common goals
13	Investor	Share experience from other investments
14	Investor	Hold workshops for investors once or twice a year for investors to meet and learn from each other
15	Investor	Balanced insights
16	Investor	Global investor credibility

5.2.2 Personal Networks

Theme 3: Social Interaction

Table 18: Responses to the theme: "growing a social network"

Total number of answers received for this theme	18
Compared to total responses received for this question	82
%	**21.95%**

Broken down as follows:

Number of **developers** that answered in this theme	2	11.11%
Compared to total **developers** answers received to this question	17	
%	**11.76%**	

Number of **IHS staff** that answered in this theme	16	88.89%
Compared to total **IHS staff** answers received to this question	51	
%	**31.37%**	

Number of **investors** that answered in this theme	0	0.00%
Compared to total **investors** answers received to this question	13	
%	**0.00%**	

As with knowledge-sharing, there is dissonance between the responses relating to giving social interaction to a network and getting it from one, although the results do not diverge as widely as with knowledge-sharing. The largest proportion of answers came from IHS staff (31%) with only 11% coming from the developer extra-firm network.

Table 19: Examples of actual responses

Responses	Response Group	Actual Response
1	IHS	Relationship building
2	IHS	Friendship
5	IHS	Personal relationships
8	IHS	Relationship building
9	IHS	Solidifying existing relationships
10	IHS	Interacting with different cultures
11	IHS	Exposure to different cultures
12	IHS	Getting to know different people
13	IHS	Meet new people
16	Developer	Meet new people
17	IHS	Able to compare lifestyles
18	IHS	Respect for different cultures

Table 20: Responses to the theme: "interacting at a social level"

Total number of answers received for this theme	13
Compared to total responses received for this question	77
%	**16,88%**

Broken down as follows:

Number of **developers** that answered in this theme	0	0,00%
Compared to total **developers** answers received to this question	18	
%	**0,00%**	

Number of **IHS staff** that answered in this theme	13	100,00%
Compared to total **IHS staff** answers received to this question	49	
%	**26,53%**	

Number of **investors** that answered in this theme	0	0,00%
Compared to total **investors** answers received to this question	10	
%	**0,00%**	

Table 21: Examples of actual responses

Responses	**Response Group**	**Actual Response**
1	IHS	Social interaction
2	IHS	Accommodating people
3	IHS	Social interaction
4	IHS	Social interaction
6	IHS	Increasing my social circle
7	IHS	Interacting socially
8	IHS	Personal interaction in SA
12	IHS	International social interaction
13	IHS	Social interaction with international staff and investors

These results once more demonstrate the perceived importance of social interaction as a personal networking mechanism, with a 16.88% response rate. All the answers came from the IHS network broker subset.

Additional theme: the 'how' of networking

A further theme that emerged in the responses was the mechanisms employed by respondents to network, whether they saw themselves as gaining or giving. Responses emphasised modern (phone, cellphone, email etc.) communications, with response rates as follows

Table 22: Use of modern communication

Total number of answers received for this theme	14	
Compared to total responses received for this question	77	
%	**18.18%**	

Broken down as follows:

Number of **developers** that answered in this theme	0	0.00%
Compared to total **developers** answers received to this question	18	
%	**0.00%**	

Number of **IHS staff** that answered in this theme	13	92.86%
Compared to total **IHS staff** answers received to this question	49	
%	**26.53%**	

Number of **investors** that answered in this theme	1	7.14%
Compared to total **investors** answers received to this question	10	
%	**10.00%**	

Existing literature has rarely examined the use of modern communication. Particularly among network brokers (IHS staff) there was overwhelming preference for modern communication as 'the way you network'.

Table 23: Examples of actual responses

Response Group	Actual Response
IHS	Communicate with Property Manager, tenants and university with modern methods.
IHS	Use of modern communication
IHS	Communication through the internet and teleconferencing
IHS	Use of modern technology
IHS	Regular phone calls with staff
IHS	By setting up and linking people around the world by setting up meetings by email
IHS	Regular senior management calls internationally
IHS	Interaction with investment committee members on global conference calls
IHS	Communication via the internet
IHS	Communication via telephone and email
IHS	Communication regarding work
IHS	Involved in press and media on behalf of company
IHS	Communicating with various network actors via email
Investor	Newspaper articles and forwarding them electronically to other professionals

5.3 Quantitative findings

5.3.1 Results of first meeting and for major decisions

This section examines in what setting network members first encountered one another and in what settings they interact on major decisions.

Table 24: Results

		First Meeting				Major Decisions			
		Mean	Std Dev	T-Value	Significance	Mean	Std Dev	T-Value	Significance
Small Meeting	Random Tie	0,5143	0,5071	6,0000	0.000	0,5143	0,5071	6,0000	0.000
	Closest Tie	0,5714	0,5021	6,7330	0.000	0,6857	0,4710	8,6129	0.000
Large Meeting	Random Tie	0,3429	0,4816	4,2118	0.000	0,1714	0,3824	2,6523	0,0121
	Closest Tie	0,3429	0,4816	4,2118	0.000	0,0857	0,2840	1,7854	0,0831
Video Conference	Random Tie	0,0000	0,0000	0,0000	0.000	0,0000	0,0000	0,0000	0.000
	Closest Tie	0,0000	0,0000	0,0000	0.000	0,0000	0,0000	0,0000	0.000
Phonecall	Random Tie	0,1143	0,3228	2,0945	0,0437	0,1429	0,3550	2,3805	0,0230
	Closest Tie	0,0571	0,2355	1,4355	0,1603	0,1143	0,3228	2,0945	0,0437
Email	Random Tie	0,0286	0,1690	1,0000	0,3244	0,1714	0,3824	2,6523	0,0121
	Closest Tie	0,0286	0,1690	1,0000	0,3244	0,1143	0,3228	2,0945	0,0437

The IBM programme SPSS (2012) was used to compare the difference in the means between the random and closest tie to draw an inference on the population. The aim was to explore respondents' perceptions of the random and the closest tie, and how responses concerning each of these ties were similar or different. Using two distinct groups – 'closest' and 'random' – allowed the study to draw inferences on the population while removing a source of potential bias from the data.

The findings are broken down into four key areas for this research: the mean, the standard deviation, the t-test and the significance or confidence interval. In each case the mean represents the average response rate for the random and the closest tie to that specific question. The standard deviation shows the variation of the answers from the mean. A low standard deviation indicates that the data points tend to be very close to the mean, whereas a high standard deviation indicates that the data points are spread out over a large range of values.

For purposes of this research we are interested in the mean difference between the two conditions: random and closest tie. The significance test used in this kind of investigation is called the t-test. A t-test is used to resolve whether the observed mean variance is within the range that would be expected if the null hypothesis were true (UIC, 2012).

When t is large, the mean variance observed is large relative to the size of the difference that might be anticipated in the observation if the null hypothesis is true (UIC, 2012). If t is small, then the mean difference observed is roughly what we might expect to observe if the null is false (UIC, 2012).

Importantly, the t-statistic has a p-value connected with it. The p-value quantifies the likelihood of observing a value of t or higher, given that the null hypothesis is true. Like all significance tests, when $p < .05$, we reject the null hypothesis. When $p > .05$, we do not reject the null hypothesis (UIC, 2012).

Therefore, for purposes of this research if the t-value is greater than approximately 1.96, the corresponding p-value is less than 5% meaning the data is statistically significant and the null hypothesis is rejected (UIC, 2012). The significance column in the data based on the IBM results verifies this.

We see from the means in the first set of statistics (Table 25) that for the majority of respondents the first type of interaction with those they identified as ties was professional, with means of 0.9714 and 0.9429 for the random tie and the closest tie

respectively. There is a marked difference in group's responses between the random and closest tie: being 0.0285 or 2.85%. The T-values are substantial (34 and 23.6) and the significance rate is high: a clear indication that this information is significant.

A small meeting was most selected as the form of first meeting, with a large meeting being ranked a close second. Both are meaningful, with t-values above the norm of 2 and high significance levels. There are some instances of phone call and email use, but video conference was not selected (even when the technology is available) in the case of either random or closest tie.

Random and closest ties share the same mean data for video conference and the choice of a large meeting as the means of first meeting in a network. In other respects there are no marked differences between selections for each of the ties.

The table also displays the statistics relating to interactions on major decisions in a network. The small meeting, followed by the large meeting, are the most selected options for interaction on major decisions within the network. The small meeting has a t-value in excess of 2 as well as a high significance level of 0.000, supporting this finding. Again, selections differed for the random and the closest ties concerning interactions on major decisions except in the case of video conferencing, which was selected for neither in any circumstances.

5.3.2 Professional network interaction results

Table 25: Results from questions concerning professional interaction

Professional network interaction

Options on questionnaire						
	Professional	1				
	Personal	0				
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Type of first interaction	Random Tie	0,9714	Professional	0,1690	34,0000	0.000
	Closest Tie	0,9429	Professional	0,2355	23,6854	0.000

Options on questionnaire						
	Not at all	0				
	Partly	1				
	Quite a bit	2				
	Very important	3				
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Importance of professional interaction	Random Tie	2,4286	Quite a bit	0,9167	15,6732	0.000
	Closest Tie	2,6286	Very important	0,6897	22,5486	0.000

Options on questionnaire						
	Never	0				
	Hardly ever	1				
	Sometimes	2				
	All the time	3				
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Freely share valuable information	Random Tie	2,3143	Sometimes	0,5827	23,4982	0.000
	Closest Tie	2,4571	Sometimes	0,6108	23,7983	0.000
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Business referral or opportunity	Random Tie	1,0286	Hardly ever	0,8907	6,8321	0.000
	Closest Tie	1,1429	Hardly ever	1,0331	6,5448	0.000

This table provides a breakdown of professional network interaction. In this network the type of first interaction is professional in nature, with a substantial t-value, mean and significance level. Professional interaction has importance in the case of both the random and the closest tie as a factor in solidifying the relationship, but the importance is greater for the closest tie.

When discussing the content of professional interactions, freely sharing valuable information has a high value for both closest and random ties with a mean of 2.4 and 2.3 respectively indicating little variance between these groups. In contrast, a low mean and high standard deviation when discussing business referrals as a content element in professional interactions indicates the vast array of answers to this question

5.3.3 Personal network interaction results

Table 26: Results from questions relating to personal interaction

Personal network interaction

Options on questionnaire	Not at all	0				
	Partly	1				
	Quite a bit	2				
	Very important	3				
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Importance of social interaction	Random Tie	1,4286	Partly	1,1450	7,3815	0.000
	Closest Tie	1,6000	Quite a bit	1,1428	8,2833	0.000

Options on questionnaire	Never	0				
	Hardly ever	1				
	Sometimes	2				
	All the time	3				
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Go to this person for advice	Random Tie	1,7714	Sometimes	0,6897	15,1958	0.000
	Closest Tie	2,1143	Sometimes	0,7960	15,7140	0.000
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Talk to this person about non-work issues	Random Tie	1,7714	Sometimes	0,1690	11,5131	0.000
	Closest Tie	1,9429	Sometimes	0,2355	13,1730	0.000
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Any social contact out the office	Random Tie	1,1143	Hardly ever	0,9322	7,0720	0.000
	Closest Tie	1,2857	Hardly ever	0,8599	8,8453	0.000
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Consider this person a friend	Random Tie	2,1143	Sometimes	0,9322	13,4187	0.000
	Closest Tie	2,2571	Sometimes	0,7413	18,0127	0.000
		Mean	**Majority of Result**	**Std Dev**	**T-Value**	**Significance**
Trust this person and look after your interests	Random Tie	2,4000	Sometimes	0,6945	20,4439	0.000
	Closest Tie	2,6571	All the time	0,4816	32,6413	0.000

Respondents perceive social interaction as less significant than professional interaction, with a low result for both the random tie and the closest tie. Predictably, though, it is more important for the closest tie than for the random tie.

In terms of the content of social interactions, the t-values are substantial for both the random and closest ties in the case of seeking advice. The results for both are similar, but high standard deviations indicate the results covered a wide range of answers.

Similar results emerged in the case of discussing non-work issues. Respondents said this happened “sometimes” in the case of both closest and random ties, although the standard deviation was rather lower than for the previous question.

Considering a person a friend again produced a similar mean between the two groups but a high standard deviation. Both had high t-values and were statistically significant.

Finally, when considering trust, the highest results in means were achieved. However, there was a marked difference between responses about each of the two groups concerning looking after one another’s interests, with respondents opting for “sometimes” about the random tie, but “all the time” about the closest. Both had

substantial t-value but there was a marked difference in t-value between the groups, as well as in the standard deviation. This suggests that while personal networks (in which care for the other is an important aspect) may be as important as professional network interactions, they are not always perceived as such.

The next chapter will provide an in-depth analysis of the findings presented in this chapter in the context of the conclusions of earlier chapters.

Chapter 6: Analysis of results

This chapter provides a detailed analysis and discussion on the results presented in Chapter Five. The section headings of the chapter detail different elements of the key research question, and the analytical insights relating to each element are explained through reference to the findings set in the context of relevant aspects of the literature.

6.1 What do networks of the born-global SME look like?

The network maps presented in chapter 5 provide for the first time an exciting insight into what the network of a born-global SME operating in an emerging market actually looks like. This is especially exciting because a regional network is at play as well as one that is global in nature.

The study by Freeman and Cavusgil (2007) proposed that it was the mind-set of management that helped these born-global firms to internationalise. However, the map of the entire IHS network (Figure 2) suggests strongly that being global entails more than a mind-set. The map provides a visual representation of an active regional and global network, and shows staff members who are not managers such as Rupal, Vuyani and Bianca playing a critical role in bringing this network together.

The same map shows that in such global networks there is a key broker who is necessary to pull the network together. IHS clearly plays this role through staff members who engage at both regional and global levels. The extra-firm partners are also key components of this network as some are globally- and some locally-based.

The study by Freeman et al. (2006) is relevant for this research, as it discusses how born-global firms can use networks to overcome constraints on their globalisation strategies. These network maps, taken in the context of IHS success in operating across continents, reinforce Freeman et al.'s findings (2006). They reveal that where a network broker such as IHS has staff members playing this role, the networks can aid the firm to overcome constraints on its evolution.

Key support is contained in the map of the external partners without any IHS intervention (Figure 4). The network becomes disjointed. It is apparent that these very

important external partner subgroups would have had few of the interactions displayed by the earlier maps without the creation of an enterprise such as IHS.

Freeman and Sandwell (2008) named the key inhibitors for firms entering emerging markets. These included communication, language, culture, work practices and government regulations. The sequence of maps (Figures 3-5) implies that the presence of effective actors in the middle of the network, such as IHS – even if the interaction is minimal – will still go a long way towards helping firms overcome such constraints and enter emerging markets more speedily (Freeman & Cavusgil, 2007 and Freeman et al., 2006).

The role IHS has chosen to play has allowed it to link globally-based institutional investors with locally-based developers, combining these groups into an integrated network infrastructure. No previous literature has described what such a network looks like. If this IHS study has begun to provide an accurate description, it will go far towards helping other born-global SMEs structure their networks optimally.

Further, only a small and recent body of the existing literature on GINs has focused on standalone firms (Barnard, Kalvet & Tiits, 2011) or on any industries outside ITC (De Fuentes & Chaminade, 2011). GIN theory has essentially focused on the location of the Research & Development ("R&D") departments of these MNCs and how their networking has aided innovation (Sachwald, 2008).

Creating a detailed map of a different type of standalone firm, IHS, this paper can add to the existing research on GINs and add value to the debate that there is more to innovation than the activities of the ICT industry. The networks maps in this research display graphically that something fascinating is happening: people are innovating in different industries by creating an intertwined regional and global network that crosses both professional and personal networks.

Analysis of the maps is broken down into three key areas: 'any interaction' and 'extensive interaction' (both professional); and 'the closest tie' (a combination of both personal and professional networks).

6.1.1 Any interaction (professional interaction)

The network maps demonstrate that any form of interaction, whether extensive or limited, contributes to holding a network together, or forms the basis of a network.

When the dense network of IHS was examined *in toto*, the network was densely meshed. However what was apparent was that even though IHS was the glue that held the network together, there were specific staff members who were key network actors and interacted more deeply than others such as Joel, Yankho and Tania. If these members were removed, the shape of the network would be vastly different and significantly less coherent.

This finding provides evidence to support the adoption of a born-global SME network strategy emphasising key members with roles focused on holding the networks together. These roles may be titled “business development manager” or similar (the title will vary from company to company). What is critical for the born-global SME is that these actors are identified, supported in developing the relevant skills and retained as part of the internationalisation strategy of the firm.

No literature to date explains whether these skills are learnt or acquired, but it is clear that without them the network would not hold together. Such IHS-type interaction is professional in nature, and for this role there is validity in maintaining, as the literature conventionally does, a distinct category of ‘the professional network’.

6.1.2 Extensive (professional) interaction

In addition, we can draw inferences about the extent and type of this interaction from the IHS maps. Extensive interaction is the critical professional network attribute here: participants need the freedom to interact extensively. Evidence for this is provided by the contrast between the maps for ‘any interaction’ and ‘extensive interaction’. If any form of action was sufficient, then the maps would closely resemble each other, In fact, they differ significantly: the extensive interaction map shows a tighter network.

These findings illuminate the network activities required from a network broker such as IHS. It is not enough to interact on a limited basis; interaction needs to be extensive to build an effective, tightly-linked network.

However, there was limited reciprocity (double-pointed arrows) in the extensive interaction displayed by the maps. Often, one respondent indicated he/she interacted extensively with another, but that perception was not reciprocated by its subject. Looking at specific arrow clusters and their directions, it becomes clear that (as this paper asserts) it is a limited number of key actors who hold the IHS network together.

6.1.3 Closest tie (combination of professional and personal interaction)

The 'closest tie' map differed significantly from the maps displaying both any interaction and limited interaction. The closest tie map was a lot more compacted, demonstrating the tightness of these interactions. A role-player's network of closest ties is very different from the other two and this map is the first to present evidence for this paper's key focus: the integration of personal and professional networking evidenced in a graphical display.

When the term 'closest tie' was explained to respondents, they were told that the closest tie was from both a personal and professional perspective. Once this question was explicitly put – other questions and answers having implicitly accepted the conventional personal/professional divide – respondents indicated many individuals in the IHS network to whom they believed they had simultaneous personal and professional ties.

These findings are important. The study of IHS indicates that professional and personal networking both play a key role in a global and regional network of this SME but also strongly suggests that the integration of both types of networks, as map displays, plays a key role in networking for the born-global SME.

Again, reciprocity was limited, as demonstrated by the lack of double-ended arrows in the map. This was even true between individuals in IHS itself. The 'commonsense' assumption might be that there would be substantial reciprocation between individuals at the highest level of close interaction; this was not so. This may suggest a 'perception gap' (Kilduff et al., 2008) which could fruitfully become the subject of further research. However, it also provides strong reinforcement for the finding that in personal as in

professional networking and in networks combining elements of both, much depends on the proactive role of certain key figures.

6.1.4 Conclusion

The study provides not only a picture of how the networks of one enterprise, IHS, developed and function, but also strategic insights for the born-global SME.

IHS network relationships, as represented by the network maps, clearly divide into three distinct subsets with different research implications: professional network relationships entailing any form of interaction; professional network relationships entailing extensive interaction; and the closest form of interaction which is a combination of both professional and personal networking. Interactions were only reciprocal to a limited extent: it needed 'movers and shakers' in key networking roles to make the relationships happen.

Three different areas of relationship were examined: within and between the network broker (IHS) and two kinds of external partner, investors and developers, and these stretched across the southern African emerging market region, and to the US. The track-record of IHS (Viruly 2012) indicates that this company has developed an innovative and successful practice across these category and geographical boundaries.

This indicates that fostering individuals in the organisation who are good at stimulating extensive interaction and accumulating closest ties across the personal/professional divide, may provide an SME with a strong strategy for overcoming constraints and internationalising even more swiftly than proposed in previous studies (Freeman & Cavusgil, 2007 and Freeman et al., 2006) and, intuitively, that it has played a role in this company's innovative practice.

The study adds to the previous research on GINs (Sachwald, 2008; Barnard, Kalvet & Tiits, 2011; De Fuentes & Chaminade, 2011) by indicating that if the born-global SME has more closest ties (combining professional and personal networks) this will contribute to the more effective operation of these GINs. IHS, for example, has aided in the creation of 100,000 jobs in an emerging market.

It is the IHS network map displaying the closest ties of the entire network which contributes the most novel and valuable findings about what the network of the born-global SME looks like: an integration of professional and personal networking.

However, before these findings from the graphical mapping can be confirmed, it is necessary to assess whether they are supported by the findings from the other elements of the analysis (qualitative and quantitative) used in IHS study.

6.2 What human factors play a role in these networks?

Over the past decade a number of studies have emerged focusing on the human (personal) factors in network relationships – such as communication, advice, trust and friendship – as well as professional factors. However there has been no integrated study of what people actually contribute and receive in networks.

The previous section demonstrated graphically both the importance of professional networking and the importance of combining personal and professional networking. The open-ended questions in the interview probed respondents' perceptions of human factors, and shed further light on their role in personal and professional networking. This information is particularly necessary for the born-global single-firm SME, where research has consistently highlighted the need for further case research (Van Laere & Heene, 2003; Marouf, 2005; Madhavan & Iriyama, 2009).

This section is qualitative in nature and will assess what people in the IHS network felt they contributed or gained ('give' or 'get') from the network. Using the data analysis tools discussed in Chapter 5, two key areas of networking initially emerged: the personal and the professional, and this is in line with previous findings.

6.2.1 What do people contribute to networks ('give')?

6.2.1.1 Professional Contribution

Analysis of the responses to the questionnaire produced two main 'give' themes. The first was 'referring, connecting and promoting IHS': a professional contribution to the network.

This is not surprising; it is a reasonable expectation that people contribute professionally to grow a network. However, these findings indicate that on a proportionate basis this option received the most responses with 44% of the overall answers received to this question. This strongly underlines the importance of professional networking in contributing to this type of network.

In addition, at 66% of responses, it was the developer population that felt most strongly about this form of professional interaction. Investors made the option 50% of their overall responses and IHS staff made it 34%.

The nuance of answers included "referring IHS to other partners", "connecting IHS with other investors" and "talking about IHS at professional networking events". These words indicate that external partners believe the most significant contribution they make to a network is professional in nature. This reinforces the finding in current theory that professional interaction does matter for network growth.

The second 'give' theme emerging from the open-ended questions was knowledge. Knowledge-sharing received 20% of overall responses, as well as a majority of investor reaction at 40%, followed by developers at 33% and IHS staff at 12%.

Existing literature (Reinholt et al., 2011) has looked at employee knowledge-sharing in networking as the ability to use knowledge for organisational performance between employees. (However, the Reinholt et al., 2011 research explains that because of the cross-sectional data used there may be other causal explanations for this, such as increased network growth.) The IHS case findings make it clear that knowledge is a key attribute for the whole born-global SME network, and not only for those defined as employees (Reinholt et al., 2011).

However, with this modification, Reinholt's et al. (2011) finding certainly holds for this research. Respondents believe that they contribute knowledge to a network and this is what helps the network grow. This suggests that perhaps more emphasis should be

placed on knowledge-sharing especially within newer born-global SMEs and their extended networks.

Similar to 'referrals' above, knowledge-sharing is also a professional contribution that is key to the network.

6.2.1.1 Personal Contribution

When it came to personal contribution, the key theme that emerged was contributing to the network by interacting at a social level. Some of the responses included "talking about IHS in social circles", "social interaction" and "making friends through IHS".

All (100%) of the responses were from the network broker (IHS) participants, who stressed that this was an important attribute they added to the network. These responses show the importance of social interaction for the born-global SME and extend existing research beyond social ties being key when growing a network (Ellis, 2000), to demonstrating that they are equally important within the born-global SME. However, the nuance of some of the answers (for example 'talking about IHS in social circles') implicitly blurs the hard line between personal and professional interaction.

6.2.2 What do people gain from these networks ('get)?

6.2.2.1 Professional gain

Three important themes emerge from analysis of the data. These are: growing professional network; gaining future opportunities; and knowledge. These were selected as the most important professional aspects that an individual gained from the network of a born-global SME.

Growing a professional network received 17% of the overall responses, with responses from both the network broker and external partners. This reinforced the findings of existing research on the importance of professional networking for doing business in an emerging market.

Gaining future opportunities also emerged as a key attribute, with an overwhelming response (41%) from the developer external group subset. This suggests that for external partners, seeking this may be a key goal of network participation.

Finally, knowledge emerged as something not only contributed to but also gained from a network (20%). This demonstrates the importance of this attribute for network participants. Knowledge is a key and often undervalued driver of network growth at a business level.

6.2.2.2 Personal gain

Social interaction is equally important as a gain from networks as a contribution. The option achieved a high response rate (21%) and answers included phrases like “friendship”, “meeting new people”, and “interacting socially”.

However, whereas as a contribution it was selected only by IHS staff, as a gain it also received some developer responses (11%), indicating that personal interaction may not only be necessary for the network broker but within the network overall and for some of the external partners.

6.2.2.3 The how

The additional theme that emerged was the use of modern communication as a means of contributing to the network. This is a key observation, demonstrating how, with the emergence of globalisation and modern communication tools, people now see these tools as central to network growth.

The implications for the born-global SME that all staff members need access to these tools and the skills of employing them most effectively to enable rapid internationalisation. This element has not been discussed in previous literature discussing the globalisation strategies of the born-global SME. This evidence therefore adds to research in this field.

6.2.2.4 Conclusion

Drawing the findings of this section together provides further support for the importance of both personal and professional networking for the SME. The findings can be summarised as follows:

- What people contribute to networks:
  - Professional contribution: referring, connecting and promoting IHS and knowledge-sharing.
  - Personal contribution: social interaction

- What people gain from networks:
  - Professional contribution: growing professional network, gaining future opportunities and knowledge
  - Personal contribution: social interaction.

- The how: modern communication

The findings indicate clearly what human factors play a role in these networks, by uncovering what people gain from and contribute to them. As in the network maps, it is clear that both professional and personal networking are at play in the network of a born-global SME with both a regional and a global network. It is further evident that both are equally important to the network broker and some extra-firm partners, and together they 'glue' the IHS network together.

They also demonstrate that there is reciprocity between what is contributed to a network and what is gained. Although the results were not equal between contributing and gaining, the finding emphasises the importance of encouraging employees to contribute to the network so they may gain personally and professionally. For the born-global SME, this channel of personal and professional growth may help with quicker overall network growth.

6.3 What is the relative importance of personal and professional drivers of networking?

Both the graphical and qualitative analysis present a consistent emergence of the key themes (personal and professional networking patterns) but also suggest the possible integration of the two.

This sections takes the argument a step further by analysing the drivers of these personal and professional networks through the results of the quantitative analysis, based on responses to the Likert-type questions in the questionnaire. This will provide data to help measure relative importance and thus assess whether personal or professional networking is more important or whether they are of equal importance.

Mapping and qualitative responses thus far suggest equal importance but the quantitative data is likely to provide a more definitive answer due to its numerical basis.

The initial data demonstrates clearly that for first interaction, the majority of respondents preferred a small meeting, and the same was true of the setting for major decisions.

Even when effective and widely used modern communication technology is available, people still prefer small meetings when making decisions or meeting each other for the first time. This suggests that it is not enough for the born-global SME merely to provide this technology for staff members. Additionally facilitating travel and opportunities to meet external partners in person will assist with speedy, effective network growth. And this expressed preference for small, face-to-face forums carries an implicit suggestion that ‘social’ considerations may be at play even on first meeting in professional settings.

6.3.1 What role do professional networks play?

The first question gives an insight directly into the importance of professional networking. The results were overwhelming, (mean of above 2.4): the vast majority of respondents, whether answering in relation to a random or a closest tie, felt that professional networking was important. This is consistent with previous findings.

However, this finding also adds to the existing research, indicating that professional interaction is just as important for the participants of a small stand-alone firm in an emerging market as for a big MNC.

A further finding demonstrates the process of network growth, and the maturation from first professional meeting to the development of a personal/professional close tie. Often, the first type of interaction is professional in nature, before a closer tie can emerge. The overwhelming majority (above 94%) of first interactions recounted by respondents were professional. This suggests that an SME should give management attention to the first interaction between key participants, rather than merely using professional networks to solve organisational crises (Krackhardt & Stern, 1988).

Another key area of the research findings is the ability of network participants to share valuable information freely. With a low standard deviation, high t-test, high mean and significance, there was little difference between the random and closest tie, indicating that both groups felt it is important to freely share information: an aspect of knowledge-sharing in the professional network. This finding suggests that, to encourage networking, the SME should facilitate easier access to information between staff members.

This parallels the findings of Reinholt et al. (2011), who found knowledge-sharing provided opportunities for mutual learning. However, this research extends the scope findings, which were derived from study of a consultancy firm (Reinholt et al., 2011). Based on the quantitative and qualitative findings of this research, it is possible to say that knowledge-sharing provides opportunity for mutual learning in another type of enterprise: the born-global SME. There is an understandable fear of threats from competitors when knowledge is made freely available. However, particularly in an emerging market, documented experience is scarce. In this context, without relatively free learning and knowledge-sharing activity, network growth is constrained.

The findings of this study are consistent with the causal explanation of Reinholt et al. (2011) that knowledge sharing is linked to network growth. This also reinforces the

findings of the qualitative analysis in the previous section emphasising the importance of knowledge in networking.

One surprising contrast in the research is that between qualitative descriptions of what people gain and get from a network in the previous section, and the quantitative findings about business referrals or opportunities from the IHS network. In relation to both the random tie and the closest tie, such opportunities were accessed 'hardly ever'.

For IHS staff, this low result may well imply reluctance to discuss access to job opportunities in a research interview whose results would be published. Based on the qualitative research and existing literature, referrals may still confidently be described as an important attribute or driver of professional network growth.

However, in all respects but this, there is consonance between the findings of maps, qualitative and quantitative research and reinforcement (and extension) of existing research. Professional networking is just as important for the global-SME as for the bigger MNCs, and the sharing of information, the ability of employees to share knowledge between themselves and the ability to access and provide referrals drives professional networking and thus the growth of the born-global SME.

6.3.2 What role do personal networks play?

The importance of social interaction in driving networks elicited responses varying between "partly" and "quite a bit," but the standard deviation was the greatest compared to all other answers. This indicates that social networking is important to some role-players but not as important to others.

This may again be an issue of perception. Different personalities (for example, the broad and division into 'introverts' and 'extroverts', which the researcher is aware ignores many important nuances) mean that some individuals perceive social interaction higher or lower in their hierarchy of needs. The existing literature in studies by Ellis (2000), Reinholt, Pederson and Foss (2011), Zhou et al. (2009) and Van Laere and Heene (2003) has focused on individual responses to personal networks. This analysis considers the role that personal networks play for respondents in their working lives at and in relation to IHS.

6.3.2.1 Advice

Existing research has argued that the ability of participants to access advice from others allows organisations to transmit values (Gibbons, 2003). The findings of this study make it evident, predictably, that people go to their closest tie more for advice than to the random tie. However, with a mean of 2.1 and 1.7 respectively, the frequency is only “sometimes”.

There was a high standard deviation indicating variance in responses but the means were not high enough to indicate conclusively that advice-seeking and accessing would function as a mechanism for transmitting values. The research did not interrogate advice needs, so it is possible that in an emerging market there are more pressing needs for advice networks than merely communicating an organisation’s value proposition.

However, context is also very significant here. The Gibbons (2003) study was conducted in a public school, while this study was conducted in and around a born-global SME, with both a global and regional network at play. Given these very different contexts, this study may safely continue to portray advice networks as key drivers of personal networking.

6.3.2.2 Communication

Communication has been found to be a central function in relation to friendship, trust and knowledge (Sarker et al., 2011). To explore this aspect, respondents were asked how often they would talk to the close tie and the random tie about non-work issues.

With a low standard deviation, high mean and similar t-test value there was little difference between the two groups. However, the mean fell into the “sometimes” range indicating communication may not be as important in this context as the study by Sarket et al. (2011) found.

However, one relevant factor may have been that the interview question did not probe the quality or content of non-work conversations. A trivial chat about the weather was not differentiated from a deep conversation about beliefs or relationships. Thus the

possibility exists that if this aspect had been pursued, results would have emerged in which some conversations were rated as far more important.

6.3.2.3 Friendship

The next section examined the frequency of social contact outside the office: a direct personal network attribute of friendship. Little major social contact outside the office, was found, however at a high standard deviation. This is consistent with a conclusion that this attribute is important to some in the organisation and not to others, and may relate to 'personality' factors discussed above, but also – particularly in a network spread regionally and globally – it may be a result of location and job title.

Existing literature highlighted three key findings concerning friendship as a network attribute: people tended to feel there was more friendship clustering than actually existed (Kilduff et al., 2008); individual investment in friendship was low (Brueckner, 2006); and geographic proximity and race were the greatest determinants of friendship networks (Marmaros & Sacerdote, 2006).

However, this research has produced findings that contrast significantly with the existing literature:

1. The results indicate that people do not think there is more friendship clustering than actually exists. The Kilduff et al. (2008) findings do not seem to not hold true for a born-global SME such as IHS.
2. Individual investment in friendship is not low. A high mean of 2.1 and 2.2 for the random and close tie, substantial t values and low standard deviation all demonstrate that friendship is important across all participant populations. The findings of the Brueckner (2006) study do not seem to hold true for a born-global SME.
3. While distance may hamper contacts outside work (see above), neither geographic proximity nor race were the greatest determinants of friendship networks. Responses reinforced by the network maps clearly show that many ties defined as 'closest' cross racial boundaries and geographic proximities. The Marmaros and Sacerdote (2006) study does not seem to hold true for a born-global SME.

These findings are ground-breaking because they contrast sharply with the findings of three well known studies into friendship networks. In the examination of personal ties in a new context – the born-global SME and its regional and global networks – evidence has been generated indicating that earlier findings are not universally applicable.

6.2.3.4 Trust

Existing literature on has found that trust enhanced co-operation (Krackhardt & Stern, 1988) and enhanced individual performance (Sarker et al., 2011). However, none of this earlier research examined a case such as IHS.

When asked to what extent respondents trusted a tie and expected that person to look after their interests, the closest tie had the highest mean compared to all other answers. This question was the only one to receive a majority answer of “all the time”. In addition, the standard deviation was low indicating there was little variance in answers. From this overwhelming response rate we can establish the importance of the closest tie and trust networks in contributing to vibrant organisational networks.

When it came to the random tie the element of trust was also high. This is a result of the random tie being chosen from among those whom respondents extensively interacted with in the network. This result is consonant with the existing literature, whose findings thus remain applicable to the born-global SME: trust does increase individual performance and is an important attribute in network growth.

In summary, the quantitative data contributes useful evidence to the perspective of this study that the personal attributes of networking cannot be viewed in isolation from professional factors: all are needed to make a born-global SME such as IHS successful.

6.3.3 Can these networks be integrated?

This final section integrates the results of the mixed-method research. It considers to what extent the conventional division in existing research between personal and professional networks is sustained in the working practice of a born-global SME such as IHS and whether one of these aspects is more important than the other.

This paper concludes that personal and professional networks are equally important in this context, based on the following findings:

1. **Network maps:** Clear overlap between professional and personal networking is demonstrated in the graphical representation of responses. Limited interaction, extensive interaction and being the closest tie are all essential components of a regional and global network. Of these, the closest tie represents a combination of professional and personal networking attributes, underlining this joint importance.

2. **Qualitative findings:** The key themes emerging from responses related to what one contributes to a network and what one gains from it. Once these were disaggregated, it emerged that though the main themes were split into personal and professional networking, these were not mutually exclusive. Rather, both contributed equally to the creation of the network in and around IHS.

3. **Quantitative findings:** Though there were variations, personal and professional network attributes and activities broadly shared importance for respondents. The two exhibited overlap and synergy in creating and sustaining the IHS network. This was especially evident in the high response rates for both professional interaction-related questions (indicating the importance of this form of networking) and for questions regarding friendship and trust (key personal network contributors).

In conclusion it is apparent that the IHS global and regional network as a case study has added to the body knowledge this field. A picture has been developed of both professional and personal networking, which are not mutually exclusive but work together through various attributes to give the overall network of IHS coherence. The 'closest tie' network map is the clearest demonstration of this convergence.

This has exciting implications for doing business in emerging markets through the use of networking, and these are considered in Chapter 7 below. This analysis has answered the research questions as proposed. Simultaneously it has generated findings that are relevant to SME practice, interrogate an established networking assumption and open up vistas for future innovation research.

Chapter 7: Conclusions

This chapter highlights the main findings of the research integrated into a cohesive set of findings. It also includes recommendations based directly on these findings and other gives recommendations for future research, and draws out the implications for managers of the answers to the research questions.

7.1 Main findings

Table 27: Summary of key findings

Research Questions	Results	Type of Networking
What do networks of the born global SME look like?	Importance of the closest tie and types of interaction	Combination of professional and personal networking
What human factors play a role in these networks?		
a) What do people contribute to networks?	Referrals, knowledge and social contribution	Both professionally and personally
b) What do people gain from these networks?	Professional network and social interaction	Both professionally and personally
How important are the professional and personal drivers of networking?		
a) What part do personal networks play?	Advice, communication, trust & friendship	Personal networking
b) What part do professional networks play?	Knowledge	Professional networking
c) Can these networks be integrated?	Definitely	Combination of professional and personal networking

Firstly, a clear picture has been presented of what the networks of a born-global SME actually look like, thanks to the Ucinet software (Borgatti et al., 2011). This graphical representation shows clearly the importance of the born-global positioning itself as a network broker between its external partners. For this to happen effectively a number of key relationships must be present as enablers. The closest tie has been identified as one such in the way it bridges both professional and personal networking within the organisation.

If an organisation such as IHS can identify people who are able to manage these relationships early in the firm's evolution, this will allow the born-global to internationalise more swiftly and efficiently and overcome barriers in its way. For this reason the born-global SME needs to put in place programmes to identify such individuals earlier and make sure their organisational roles relate to this function.

Secondly, when considering the human factors that play a role in these networks, it is evident that there is reciprocity between what people contribute and what they gain. There were strong points of similarity between the two and both personal and professional attributes were present in responses. Thus the born-global SME needs to ensure that employees are encouraged to contribute further to these networks, spreading understanding that employees themselves are likely to gain both professionally and personally from participation.

Finally, when looking at the professional and personal drivers of networking a number of key themes emerged, some of which extended or interrogated aspects of previous research.

The existing literature looked at the individual effects of personal networking. This paper has exposed a multifaceted approach in which advice, communication, trust and friendship are all key attributes of personal networking. All contribute equally to the success of a born-global SME such as IHS, working together to glue the network together.

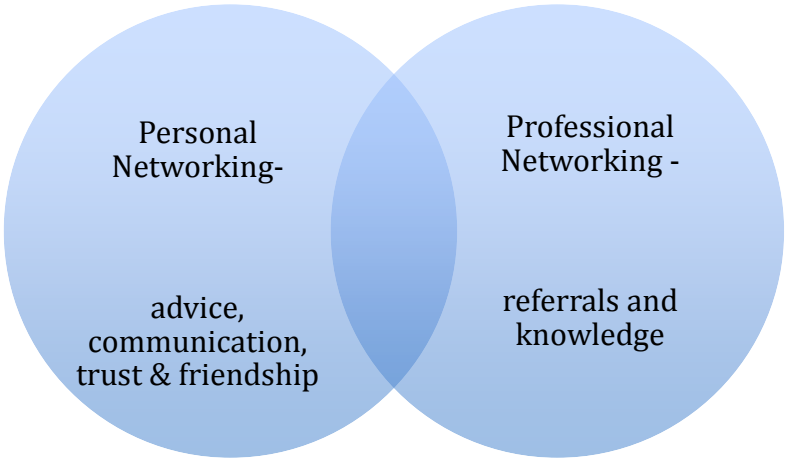
In terms of professional networking, the quantitative data showed the strong significance of this type of networking for the organisation. High response rates demonstrated that this had a key role in the success of IHS. The data also showed the importance of knowledge-sharing augmenting the findings of existing literature on this aspect.

However, the paper found extremely robust evidence that in fact professional and personal networking are often enacted as one integrated networking complex. Although both personal and professional networks serve different purposes for the born-global SME, neither can be isolated or deemed more or less important than the other.

Existing literature has argued the case for an either/or approach; this is the first instance this researcher has encountered of a case study proposing the use and assimilation of both forms of networking to aid the success of an SME.

This paper proposes a model for network growth for the born-global SME when entering an emerging market based on this proposal:

Figure 9: A new model of networking for the born-global SME



7.2 Recommendations and managerial implications

The recommendations are based on the findings of this study and are aimed at helping the born-global SME internationalise more quickly as well as ensuring sustainability when doing business in turbulent emerging markets. The recommendations are:

1. The born-global SME needs to establish itself firmly at the epicentre of its network and be the glue that holds and links the external partners to the network.
2. Organisations need to identify and develop people with the skills to maintain closest tie relationships to aid in growing both the personal and professional network.
3. The born-global SME need to ensure these key people are incentivised to target network-fostering activities.
4. Organisations need to be aware that professional networking and personal networking are equally important to their growth (although they entail distinct activities) and enable the success of each activity.
5. Born-global SMEs need to encourage a culture focusing on the following personal network attributes: advice, communication, trust and friendship.
6. Friendship is a key attribute for network growth which can bridge the race and proximity barrier and is thus a key driver of network growth.
7. The culture of the organisation should also encourage knowledge-sharing as this aids in professional network growth.
8. The organisation should make modern communication technology available to employees and encourage and facilitate its use as this supports network growth.
9. The organisation should understand that in daily working practice professional and personal networking activities are assimilated into a single complex of network activity. This combined activity enables the born-global SME to grow networks, increase innovation and enter markets that may have been otherwise out of reach.
10. Regional and global networks have equal importance in ensuring organisational effectiveness and success. Both should be grown wherever possible.
11. The existence of various diasporas has given rise to communities with the capacity to aid in network growth if the members of staff subsets are also members of these communities.

Managers should make efforts to incorporate these conclusions into their strategic thinking when dealing with employees. If employees are encouraged to realise and live these recommendations, the born-global SME can significantly enhance its ability to operate successfully in new territories and markets.

7.3 Future research and dealing with research limitations

The mutual reinforcement provided by the results of a mixed-methods approach mean that the findings of this research provide a reasonably robust set of answers to the research questions. However, there were limitations as listed in Chapter 4. What is positive is that the additional research required to deal with these is also additional research that has value in its own right, to further strengthen a new area of focus within networking research.

Because only IHS network participants were interviewed for this study, future research should be extended to other organisations in different fields and different countries. The research would be especially useful if a single firm with both a regional and global network footprint that has been innovative in another BRIC country were studied and compared to the findings of this study.

Because of the potential pitfalls in qualitative research Roulston (2011), it would be useful for further research if additional methods of conducting interviews were explored to compare results to IHS study.

Because this research has not examined TTCs in great detail, a further emphasis on these communities would likely yield further exciting results.

Because the study has only focused on a single case study design, a comparative case study approach could result both in additional relevant insights and/or serve as the basis of comparative research alongside this study.

Finally, because this research provides circumstantial rather than directly causal evidence for a link between the IHS enterprise's effective personal/professional networking practices and the innovative nature of its operation and achievements, this link requires additional investigation in this and other enterprises.

Appendix 1 - Interview Schedule

Universiteit van Pretoria
University of Pretoria

GORDON INSTITUTE OF BUSINESS SCIENCE

Informed consent letter

Dear Sir / Madam

I am conducting research on an investigation into the *social dynamics of network creation.* The purpose of IHS research is to use a case study approach to gain an understanding of how these networks are created. IHS will be achieved by incorporating key theories of network research into the body of work on globalisation that has emerged over the past decade.

The research will be based on the answers to IHS interview. Please interact to the best of your ability. If you have any concerns, please contact my supervisor or myself. Our details are provided below.

Your participation is voluntary and you can withdraw at any time without penalty.

Researcher name: Joel Rosen

Email: jrosen@ihsinvestments.co.za

Phone: 082 901 4296

Research Supervisor Name: Prof H. Barnard

Email: hbarnard@gibs.co.za

Phone: +27 11 7714000

Signature of participant: _____

Date: _____

Signature of researcher: _____

Date: _____

Universiteit van Pretoria
University of Pretoria

GORDON INSTITUTE OF BUSINESS SCIENCE

DYNAMICS OF NETWORK CREATION RESEARCH PROJECT

INTERVIEW GUIDE

PURPOSE

The aim of IHS project is to obtain insights and data into the dynamics of social interaction. The survey will be utilised as part of case research. International Housing Solutions (Pty) Ltd ("IHS") is the company being studied. The respondents will be asked to please answer all questions to the best of their ability and in a candid manner.

The consent form will be signed prior to the start of the interview.

PART A – IHS

Please identify the name of the people you know on the list. The list will be numbered on the following basis:

1. Have had some but limited interaction
2. Have had extensive interaction

The block will be left blank if the respondent has had no interaction with that person.

Options:

	Name	
1	Joel Rosen	
2	Yankho Chitsime	
3	Willem Odendaal	
4	Hennie Erasmus	
5	Maureen Komakech	
6	Etienne Posthumus	
7	Rupal Desai	
8	David Rikhotso	
9	Tania Pinto Correia	
10	Bianca Gumede	
11	Zakhira Noor	
12	Vuyani Msibi	
13	Jeff Muller	
14	Karey Daniel	
15	Claudette Kelly	
16	Faheema Cupido	
17	Virginia Messenger	
18	Fikile Zulu	
19	Nkhensani Zitha	
20	Pamela Lamoreaux	
21	Vanessa Perfect	
22	Alistiar Langson	
23	Azwifanele Nafale	
24	Mohla Matsaba	
25	Marna Du Plessis	
26	Donna Oosthuyse	

27	Steven Liska	
28	Chris Renecle	
29	Nick Buck	
30	Chris Horn	
31	Jock Seeliger	
32	Suzanne Coetzee	
33	Jaco Pienaar	
34	Albert Swanepoel	
35	Adrian Coetzee	

From the list above who are you really close to?

Closest Ties:

1.	14.
2.	15.
3.	16.
4.	17.
5.	18.
6.	19.
7.	20.
8.	21.
9.	22.
10.	23.
11.	24.
12.	25.
13.	26.

The respondent will be asked to identify their single closest tie from the table.

Person identified:

1. How did you first meet?

Before interacting with IHS
After interacting with IHS

2. What type of interaction was your first contact?

Professional
Personal

3. How did your first contact take place?

One on one meeting
Large meeting
Video Conference (or skype)
Phonecall
Email

4. How do you currently interact on major decisions?

One on one meeting
Large meeting
Video Conference (or skype)

Phonecall
Email

5. How important was social interaction in solidifying IHS relationship?

Not at all
Partly
Quite a bit
Very important

6. How important was professional interaction in solidifying IHS relationship?

Not at all
Partly
Quite a bit
Very important

7. To what extent do you go to IHS person for advice?

Never
Hardly ever
Sometimes
All the time

8. To what extent do you freely share valuable information with each other?

Never
Hardly ever
Sometimes
All the time

9. To what extent have you received a referral from IHS person for a potential business opportunity?

Never
Hardly ever
Sometimes
All the time

10. To what extent do you talk to IHS person about non-work issues?

Never
Hardly ever
Sometimes
All the time

11. To what extent do you have any social contact (out the office) with IHS person?

Never
Hardly ever
Sometimes
All the time

12. To what extent do you consider IHS person a friend?

Never
Hardly ever
Sometimes
All the time

13. To what extent do you trust IHS person and expect them to look after your interests?

Never
Hardly ever
Sometimes
All the time

A single random choice from the closest ties table will be utilised based on the findings of a number generator to ensure the next choice is totally arbitrary.

Person identified:

1. How did you first meet?

Before interacting with IHS
After interacting with IHS

2. What type of interaction was your first contact?

Professional
Personal

3. How did your first contact take place?

One on one meeting
Large meeting
Video Conference (or Skype)

Phonecall
Email

4. How do you currently interact on major decisions?

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Large meeting
Video Conference (or Skype)
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Hardly ever
Sometimes
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Sometimes
All the time

9. To what extent have you received a referral from IHS person for a potential business opportunity?

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Hardly ever
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All the time

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Hardly ever
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11. To what extent do you have any social contact (out the office) with IHS person?

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Hardly ever
Sometimes
All the time

12. To what extent do you consider IHS person a friend?

Never
Hardly ever
Sometimes
All the time

13. To what extent do you trust IHS person and expect them to look after your interests?

Never
Hardly ever
Sometimes
All the time

If the respondent is an institutional investor the following additional questions will be asked:

1. Who were the people who first told you about the IHS opportunity?

2. What made you feel that IHS was a feasible project?

The business case
The people involved
Both

3. Who were the people who convinced you that the IHS opportunity was feasible?

4. Are you involved with any other single firms that are globally located? If yes, what makes them work?

PART B – Interaction

1. We can think of IHS as a well networked organisation. In itself it is quite small but it connects all types of networks. How do you contribute to that network? Please list 3 things:

1.
2.
3.

2. What have you gained from the network? Please list 3 things:

1.
2.
3.

PART C – The Respondent

1. What is your nationality of birth?

2. Where do you currently have citizenship?

3. Where are you currently working?

4. How long have you lived in IHS country?

5. Which country is your salary paid from?

6. How old are you?

7. What is your highest qualification?

8. How many years' experience do you have in your industry?

9. What is your current job level?

10. What languages are you fluent in?

11. What is your home language?

12. What language do you communicate with at work?

13. What is your religious affiliation?

14. What community and/or social clubs to you belong to?

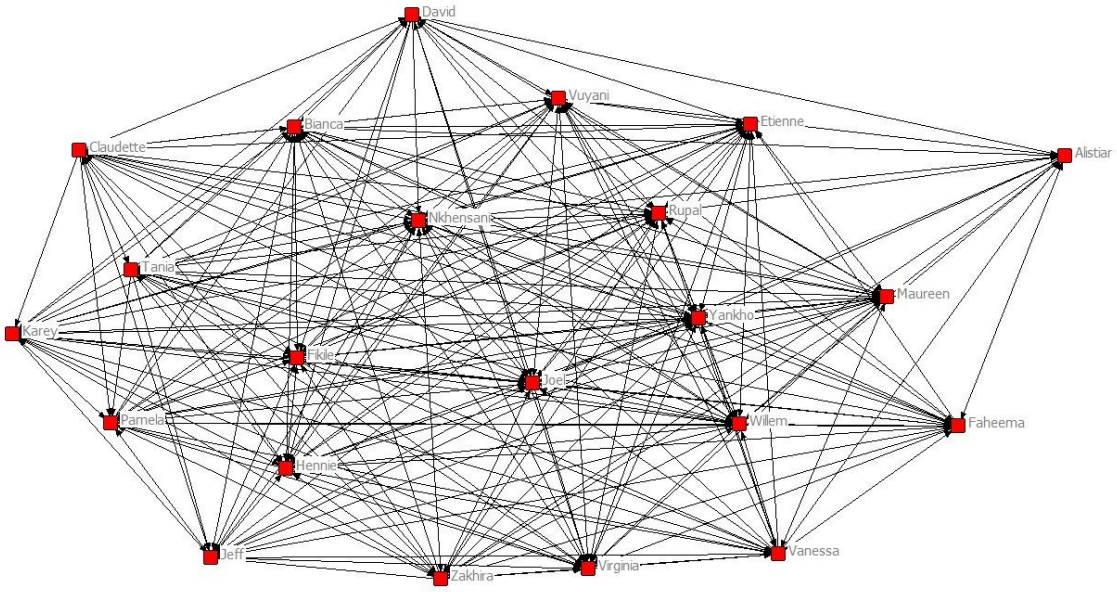
15. How has IHS membership helped you in the workplace?

[END]

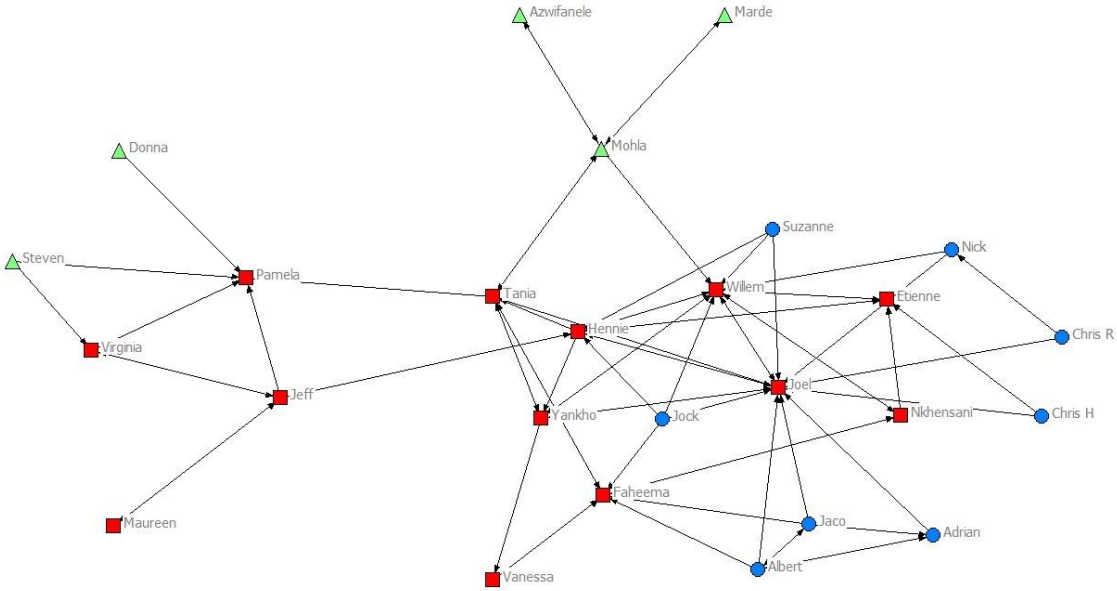
Thank you for taking the time to be part of IHS exciting research.

Appendix 2 – Additional Network Maps

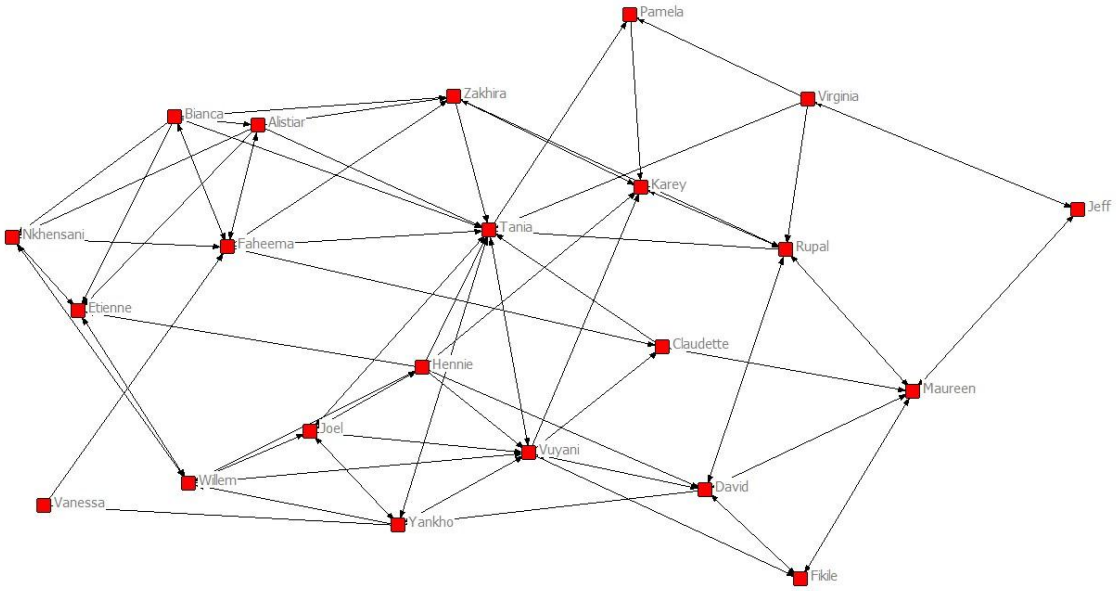
Extensive interaction with only IHS



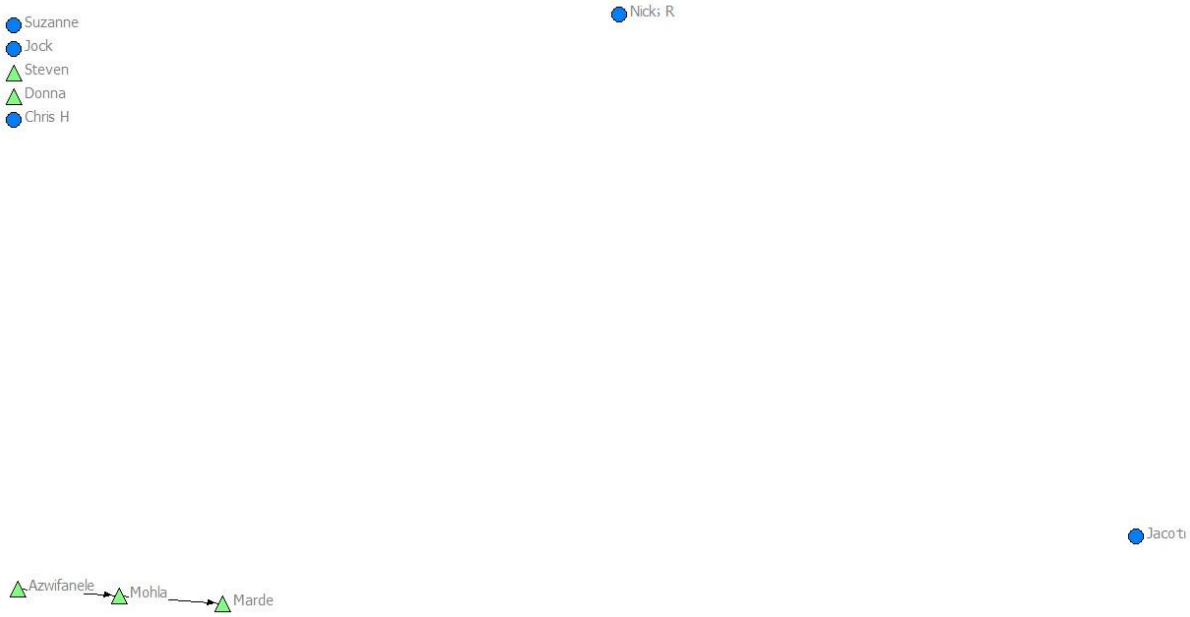
Closest ties with IHS middle and senior staff



Closest ties with only IHS



Closest ties with only extra-firm partners



Appendix 3 - Detailed quantitative analysis

1

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Type_of_first_interaction	35	,9714	,16903	,02857
Closest tie	Type_of_first_interaction	35	,9429	,23550	,03981

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Type_of_first_interaction	34,000	34	,000	,97143	,9134	1,0295
Closest tie	Type_of_first_interaction	23,685	34	,000	,94286	,8620	1,0238

2

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Type_of_first_meeting_small_meeting	35	,5143	,50709	,08571
Closest tie	Type_of_first_meeting_small_meeting	35	,5714	,50210	,08487

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Type_of_first_meeting_small_meeting	6,000	34	,000	,51429	,3401	,6885
Closest tie	Type_of_first_meeting_small_meeting	6,733	34	,000	,57143	,3990	,7439

3

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Type_of_first_meeting_large_meeting	35	,3429	,48159	,08140
Closest tie	Type_of_first_meeting_large_meeting	35	,3429	,48159	,08140

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Type_of_first_meeting_large_meeting	4,212	34	,000	,34286	,1774	,5083
Closest tie	Type_of_first_meeting_large_meeting	4,212	34	,000	,34286	,1774	,5083

4

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Type_of_first_meeting_video_conference	35	0,0000	.00000[c]	0,00000
Closest tie	Type_of_first_meeting_video_conference	35	0,0000	.00000[c]	0,00000

5

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Type_of_first_meeting_phonecall	35	,1143	,32280	,05456
Closest tie	Type_of_first_meeting_phonecall	35	,0571	,23550	,03981

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Type_of_first_meeting_phonecall	2,095	34	,044	,11429	,0034	,2252
Closest tie	Type_of_first_meeting_phonecall	1,435	34	,160	,05714	-,0238	,1380

6

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Type_of_first_meeting_email	35	,0286	,16903	,02857
Closest tie	Type_of_first_meeting_email	35	,0286	,16903	,02857

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Type_of_first_meeting_email	1,000	34	,324	,02857	-,0295	,0866
Closest tie	Type_of_first_meeting_email	1,000	34	,324	,02857	-,0295	,0866

7

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Interaction_on_major_decisions_small_meeting	35	,5143	,50709	,08571
Closest tie	Interaction_on_major_decisions_small_meeting	35	,6857	,47101	,07961

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Interaction_on_major_decisions_small_meeting	6,000	34	,000	,51429	,3401	,6885
Closest tie	Interaction_on_major_decisions_small_meeting	8,613	34	,000	,68571	,5239	,8475

8

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Interaction_on_major_decisions_large_meeting	35	,1714	,38239	,06463
Closest tie	Interaction_on_major_decisions_large_meeting	35	,0857	,28403	,04801

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Interaction_on_major_decisions_large_meeting	2,652	34	,012	,17143	,0401	,3028
Closest tie	Interaction_on_major_decisions_large_meeting	1,785	34	,083	,08571	-,0119	,1833

9

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Interaction_on_major_decisions_video_conference	35	0,0000	.00000[c]	0,00000
Closest tie	Interaction_on_major_decisions_video_conference	35	0,0000	.00000[c]	0,00000

10

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Interaction_on_major_decisions_phonecall	35	,1429	,35504	,06001
Closest tie	Interaction_on_major_decisions_phonecall	35	,1143	,32280	,05456

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Interaction_on_major_decisions_phonecall	2,380	34	,023	,14286	,0209	,2648
Closest tie	Interaction_on_major_decisions_phonecall	2,095	34	,044	,11429	,0034	,2252

11

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Interaction_on_major_decisions_email	35	,1714	,38239	,06463
Closest tie	Interaction_on_major_decisions_email	35	,1143	,32280	,05456

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Interaction_on_major_decisions_email	2,652	34	,012	,17143	,0401	,3028
Closest tie	Interaction_on_major_decisions_email	2,095	34	,044	,11429	,0034	,2252

12

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Importance_of_social_interaction_in_relationship	35	1,4286	1,14496	,19353
Closest tie	Importance_of_social_interaction_in_relationship	35	1,6000	1,14275	,19316

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Importance_of_social_interaction_in_relationship	7,382	34	,000	1,42857	1,0353	1,8219
Closest tie	Importance_of_social_interaction_in_relationship	8,283	34	,000	1,60000	1,2075	1,9925

13

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Importance_of_professional_interaction_in_relationship	35	2,4286	,91670	,15495
Closest tie	Importance_of_professional_interaction_in_relationship	35	2,6286	,68966	,11657

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Importance_of_professional_interaction_in_relationship	15,673	34	,000	2,42857	2,1137	2,7435
Closest tie	Importance_of_professional_interaction_in_relationship	22,549	34	,000	2,62857	2,3917	2,8655

14

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Extent_you_go_to_this_person_for_advice	35	1,7714	,68966	,11657
Closest tie	Extent_you_go_to_this_person_for_advice	35	2,1143	,79600	,13455

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Extent_you_go_to_this_person_for_advice	15,196	34	,000	1,77143	1,5345	2,0083
Closest tie	Extent_you_go_to_this_person_for_advice	15,714	34	,000	2,11429	1,8409	2,3877

15

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Extent_you_freely_share_valuable_information_with_eachother	35	2,3143	,58266	,09849
Closest tie	Extent_you_freely_share_valuable_information_with_eachother	35	2,4571	,61083	,10325

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Extent_you_freely_share_valuable_information_with_eachother	23,498	34	,000	2,31429	2,1141	2,5144
Closest tie	Extent_you_freely_share_valuable_information_with_eachother	23,798	34	,000	2,45714	2,2473	2,6670

16

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Extent_to_which_you_have_received_a_potential_business_opportuni	35	1,0286	,89066	,15055
Closest tie	Extent_to_which_you_have_received_a_potential_business_opportuni	35	1,1429	1,03307	,17462

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Extent_to_which_you_have_received_a_potential_business_opportuni	6,832	34	,000	1,02857	,7226	1,3345
Closest tie	Extent_to_which_you_have_received_a_potential_business_opportuni	6,545	34	,000	1,14286	,7880	1,4977

17

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Extent_that_you_talk_to_this_person_about_nonwork_issues	35	1,7714	,91026	,15386
Closest tie	Extent_that_you_talk_to_this_person_about_nonwork_issues	35	1,9429	,87255	,14749

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Extent_that_you_talk_to_this_person_about_nonwork_issues	11,513	34	,000	1,77143	1,4587	2,0841
Closest tie	Extent_that_you_talk_to_this_person_about_nonwork_issues	13,173	34	,000	1,94286	1,6431	2,2426

18

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Extent_of_contact_out_the_office	35	1,1143	,93215	,15756
Closest tie	Extent_of_contact_out_the_office	35	1,2857	,85994	,14536

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Extent_of_contact_out_the_office	7,072	34	,000	1,11429	,7941	1,4345
Closest tie	Extent_of_contact_out_the_office	8,845	34	,000	1,28571	,9903	1,5811

19

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Consider_this_person_a_friend	35	2,1143	,93215	,15756
Closest tie	Consider_this_person_a_friend	35	2,2571	,74134	,12531

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Consider_this_person_a_friend	13,419	34	,000	2,11429	1,7941	2,4345
Closest tie	Consider_this_person_a_friend	18,013	34	,000	2,25714	2,0025	2,5118

20

		N	Mean	Std. Deviation	Std. Error Mean
Random tie	Level_of_trust_and_looking_after_your_interests	35	2,4000	,69452	,11739
Closest tie	Level_of_trust_and_looking_after_your_interests	35	2,6571	,48159	,08140

		Test Value = 0					
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Lower	95% Confidence Upper
Random tie	Level_of_trust_and_looking_after_your_interests	20,444	34	,000	2,40000	2,1614	2,6386
Closest tie	Level_of_trust_and_looking_after_your_interests	32,641	34	,000	2,65714	2,4917	2,8226

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