



**Internationalisation constraints: a South African information
and communication technologies entrepreneur's perspective.**

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ABSTRACT

There are constraints hindering South Africa's ICT entrepreneurs from being internationally competitive. The purpose of this research was to explore them through experiential surveying of South African ICT experts who have successfully internationalised. The outcome of the research was an understanding of both internal organisational constraints and external environmental constraints. Six constraints were explored in detail: human resource, strategy and finance from within the enterprise and political/regulatory, economic and socio-cultural within the environment. It was established that internal constraints exert more influence than external constraints. Human resource was the critical constraint followed by financing which could be influenced both externally and internally. Other constraints are also explored including technology constraints and lack of national planning and collaboration. Recommendations are made to stakeholders.

KEYWORDS

Entrepreneurship, internationalisation, constraints, ICT

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.

Setotolwane Johannes Phago

10 November 2010

Date

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CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM

1.1 INTRODUCTION

The World Economic Forum's Global Competitiveness Report for 2009/10 ranks South Africa in position 45 out of 133 countries (Schwab, Sala-i-Martin & Greenhill, 2009). The Economist's IT Industry Competitiveness Report for 2009 ranks South Africa's Information Technology (IT) industry in position 43 out of 66 participating countries (Morris & McCauley, 2009). Clearly South Africa is not among the world's leading ICT countries. Yet IT expenditure alone excluding the Communications component is projected by Gartner to reach 8.6% of Gross Domestic Product (GDP) in 2013 (Harris, 2010). This means South Africa is an ICT consumer of note and yet judging by the Economist's ranking, South Africa's IT industry is not globally competitive.

South Africa as a free market economy, cannot be internationally competitive if its industries and by extension companies are not. Small, medium and micro enterprises (SMME enterprises) form 97.5% of all business activity in South Africa (Nieman & Niewenhuizen, 2009) and if South Africa's IT Industry is not internationally competitive, then the root cause is probably because the majority of ICT SMME enterprises are not internationally competitive. Most entrepreneurial activity takes place in SMME enterprises (Nieman & Niewenhuizen, 2009) as such the role of entrepreneurs in developing South Africa's international competitiveness cannot be overstated as they influence the competitiveness of their SMME enterprises as shown in table 1 below:

Figure 1: Global Competitiveness: Adapted from Nieman and Niewenhuizen,
(2009)



1.2 RESEARCH PROBLEM

Why is South Africa not counted amongst the world's leading Information and Communications Technologies (ICT) countries? What is the role of entrepreneurs in that? What is preventing South Africa from achieving that rating?

1.2.1 Problem description

Understanding the constraints is a requisite step in overcoming them. Albert Einstein is quoted by Zikmund (2003, p. 61) as saying "the formulation of a problem is more often more essential than its solution." Therefore understanding the constraints faced by small, medium and micro enterprises

in internationalising may be more important than knowing how they internationalised.

Internationalisation refers to a process wherein enterprises compete across borders for clients, economies of scale and other benefits (Annavarjula, Coombs and Sadrieh, 2009). Internationalisation is also important to enterprises since it increases their market size and revenue whilst driving down costs and reducing risk of depending solely on one country (Etemad, 2004). What are the constraints preventing South African ICT entrepreneurs from internationalising?

Different entities with different agendas are interested in resolving internationalisation constraints. Governments are interested in this topic because they would like to create an environment within which domestic enterprises would not be inhibited from internationalising and would therefore employ more citizens and earn foreign income (McAleese, 2004). Annavarjula *et al.* (2009) noted that the United States of America's government identified globalisation as a major force that would modify and mould the environment of small business and entrepreneurship. Entrepreneurs are interested in understanding internationalisation constraints so that they can internationalise and thus grow their enterprises and contribute significantly to their local environment (Elam and Terjesen, 2009). Academics are appealed by these constraints particularly within the ICT sector as it typifies a sector in constant flux (Martikainen and Palmberg, 2006) where today's strategic advantage

could be tomorrow's landmine. ICT sector is also one that impacts all other sectors (Scwab *et al.*, 2009).

Arbaugh, Camp & Cox, (2008) have stated the need to understand internationalisation constraints. They have also produced a paper on internationalisation constraints. However, their work was neither focused on the small medium and micro enterprises within the ICT sector nor on an emerging economy like South Africa. The ICT sector cannot be assumed to be like all the other sectors and an emerging economy's characteristics cannot be assumed to be like the advanced economies. Also, South Africa's economy is said to be having characteristics of developed and developing countries (Gartner, 2009). Hence this research study whose objective is to obtain insights into internationalisation constraints facing small, medium and micro enterprises less than eight years but after their start-up phase within the ICT sector of South Africa.

According to the Global Entrepreneurship Monitor (GEM), South Africa has lower than expected entrepreneurial activity rates, given its per capita income (Herrington, J. Kew & Kew, 2009). The GEM further states that the entrepreneurial activity rate of South Africa is below the average for efficiency driven economies and even for middle to low income economies (Herrington, *et al* 2009). It states that South Africa's entrepreneurial activity is actually half of what it is expected to be.

1.2.2 Rationale for Problem Selection

The 2009/10 Global Competitiveness Report notes that ICT enhances the productivity of other economic sectors or industries (Schwab, *et al.*, 2009). According to Herrington *et al.*, (2009) in the GEM Report, ICT is seen as an essential tool assisting businesses to be competitive domestically and globally. Thus from these reports it can be seen that ICT industry's importance transcends its own industry. ICT is known as an industry experiencing constant change and convergence of Information and Technology (IT) and Communication which had been two separate fields until around the 1980's (Martikainen and Palmberg, 2006).

Some enterprises have been able to internationalise whilst others remain domesticated (McDougall, Oviatt & Shrader, 2003). Enterprises which have overcome constraints and have successfully internationalised enjoy many benefits as tabulated by Etemad (2004):

Economics:

- better economies of scale and scope
- higher quality products at lower costs
- better product lifecycle management

Strategy and Competition

- Quicker response to client's needs around the world
- Quicker response to competition's activities around the world

- Set standards for clients and competition worldwide
- Avoid being limited by domestic market inertia

There are therefore some constraints preventing enterprises from successfully internationalising (Arbaugh, *et al.*, 2008). Whilst these constraints have been studied and documented by other researchers (McDougall *et al.*, 2003; Arbaugh *et al.*, 2008) it has not been established whether these constraints apply equally to the ICT field as stated above. Thus it is imperative that constraints preventing SMME enterprises be understood hence this study.

1.2.3 Relevance to South Africa

According to South Africa's National Information Society and Development (ISAD) Plan, the importance of ICT for socio-economic development was identified very early after 1994 as evidenced by the participation of its senior leadership in key world ICT events:

- a) In 1995 President Nelson Mandela addressed the ITU TELECOM-95 in Geneva in which he insisted on the value of information, on the necessity of linking technology to people and on the priority of education and training.
- b) Also in 1995, President Thabo Mbeki (then Deputy Executive President) addressed the G7 Summit on the Information Society and invited them to South Africa to discuss the matter within a development context.

- c) In May 1996 South Africa hosted the Information Society and Development Conference.
- d) South Africa hosted the Africa TELECOM-98 of the International Telecommunications Union.
- e) In 2001 President Mbeki established the Presidential International Advisory Council on ISAD and the Presidential National Commission on ISAD.
- f) In 2002 President Mbeki called for the establishment of the ICT University.
- g) In 2005 President Mbeki addressed the World Summit on the Information Society (WSIS) in Tunis.

Source: ISAD Plan (2007, p. 2)

Thus the South African government has recognised the importance of ICT in the international arena in resolving socio-economic issues within the country.

1.3 RESEARCH OBJECTIVE

The primary aim of the research is to:

- Identify constraints preventing small, medium and micro ICT enterprises in Gauteng, South Africa from internationalising.

1.4 RESEARCH SCOPE

This study is focused on Small, Micro and Medium Enterprises (SMME) within the ICT sector, whose domicile is Gauteng, South Africa. An SMME within the

ICT sector of South Africa is defined according to the National Small Business Act of 1996 as amended in 2004 on page three as

“a separate and distinct business entity, together with its branches or subsidiaries, if any, including co-operative enterprises [and non-governmental organisations], managed by one owner or more [which, including its branches or subsidiaries, if any, is] predominantly carried on in any sector or subsector of the economy mentioned in column 1 of the Schedule and [which can be] classified as a micro-, a very small, a small or a medium enterprise by satisfying the criteria mentioned in columns 3, 4 and 5 of the Schedule [opposite the smallest relevant size or class as mentioned in column 2 of the Schedule];”

According to this definition and the schedule, the SMME that this research would be focused on would be one with between five and 200 permanent employees with total turnover of less than R26 million and total gross assets (excluding fixed property) of R6 million.

1.5 CONCLUSION

This chapter indicated the need for the research and the research objectives. The rest of the chapters in this study will deal with the following:

Chapter two presents a literature review related to entrepreneurship, internationalisation and constraints facing ICT entrepreneurs within South Africa. This will create a theoretical platform for the primary research to follow.

Chapter three reports the research questions and the research objectives that will guide the research methodology.

Chapter four discusses the research methodology. It outlines the population, sampling method, research instrument and the data collection process.

Chapter five presents the research results based on the selected analytical method applied.

Chapter six convey the research findings relative to the research propositions.

Chapter seven presents the conclusion with recommendations for future studies.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

As explained in chapter one, this study investigated constraints preventing Information and Communications Technologies (ICT) entrepreneurs in South Africa (SA) from internationalising. Most entrepreneurial activity takes place in Small Medium and Micro Enterprises (SMME) (Nieman & Niewenhuizen, 2009), thus the SMME enterprises were used as a proxy for all entrepreneurial activity.

Chapter two records the secondary research undertaken through literature review. Secondary research was conducted for the following reasons:

- It prevents duplication – if this problem was already solved elsewhere those results could be used without having to expend resources trying to solve it again (Zikmund, 2003).
- Secondary research helps to focus and refine the investigation and it also helps with problem formulation and research design (Zikmund, 2003).
- Secondary research enriches the primary research by ensuring linkage between the available body of knowledge and the primary research.

The topic investigated lies within Entrepreneurship and International Entrepreneurship academic domains. This Chapter will provide a brief introduction to the Entrepreneurship literature and a more detailed introduction to the International Entrepreneurship (IE) literature. It will also

show from the IE scientific literature the nature of constraints on entrepreneurs attempting internationalisation. These will be applied to the South African and the Information and Communication Technologies (ICT) industry sector in particular and the chapter will conclude by showing the need for this research from the academic literature.

2.2 ENTREPRENEURSHIP

2.2.1 Definitions

The domain of entrepreneurship is a field of critical importance to the public and business sectors as well as the academic environment (Annavarjula *et al.*, 2009). This field can be studied from a variety of perspectives: economic, behavioural and strategic (Zahra, 2004). Entrepreneurship deals with the creation of new economic activity which have benefit for the firm, employees and the societies within which the firm resides (Arbaugh *et al.*, 2008). According to Freiling (2008); Annavarjula, *et al.*, (2008); Dimitratos and Jones (2009) entrepreneurship can also be seen as

- innovative, proactive behaviour and risk seeking action;
- opportunity seeking with determination,
- creating or seizing an opportunity regardless of resources currently controlled,
- creating new business in uncertain environment

At the centre of entrepreneurship, is an entrepreneur who according to Nieman and Nieuwenhuizen (2009) does the following:

- Identifies an opportunity
- Innovates and creates something new
- Acquires resources
- Takes risks
- Becomes rewarded

Research findings show that entrepreneurs have the following orientation: proactiveness, innovation and risk-taking (Kropp, Lindsay and Shoham, 2007). Nieman and Nieuwenhuizen (2009:9) formally define an entrepreneur as:

“An entrepreneur is a person who sees an opportunity in the market, gathers resources and creates and grows a business venture to meet these needs. He or she bears the risk of the venture and is rewarded with profit if it succeeds.”

Table 1 below shows the definition of the entrepreneur from the sixteenth century until the present day categorised by the two academic approaches to entrepreneurship: economics and behaviourist (Psychology and Sociology):

TABLE 1: Definitions of Entrepreneurship – Source: Nieman and Niewenhuizen (2009); Raposo, do Paco and Ferreira, (2008)

Field of Study	Definition of an Entrepreneur	Associated References
Economic Theory	<p>detector of business opportunity</p> <p>a person who assumes the risk associated with uncertainty – risk taker;</p> <p>person who seizes opportunities with a view to making profit</p> <p>person who provides the financial capital – their own money for their own venture;</p> <p>value adders (person who buys raw materials, add value and resell at an uncertain price)</p> <p>an innovator; change agent</p> <p>motor of the economic system</p> <p>person who creates a start-up firm - sometimes organizes and operates it</p> <p>person who transforms ideas and inventions in economically viable entities</p>	<p>Nieman and Niewenhuizen (2009); Raposo, M; do Paco, A; Ferreira, J (2008)</p> <p>Smith (1776); Say (1839); Mill (1848); Knight (1921); Schumpeter (1934); Collins <i>et al.</i> (1964); Baumol (1968); Schloss (1968); Leibstein (1978); Veciana (1980, 1988); Davidsson (1989)</p>

Behavioural Theory	an entrepreneur is a person with a high need for achievement	Nieman and Niewenhuizen (2009)
	a person who evaluate situations which involve specific tasks and functions and carry them out well	Raposo, M; do Paco, A; Ferreira, J (2008)
	a person who takes moderate risks	
	a person who assumes personal responsibility for their own performance	Webber (1930); McClelland's (1961);
	a person who pays attention to feedback of costs and profits	Davidsson (1989); Miner (1990);
	a person who finds new or innovative ways of developing a new product or providing a new service	Barkham <i>et al</i> (1996); Davidsson and Wiklund (1999);
	a person with a strong internal locus of control	Boydston <i>et al.</i> , (2000); Beverland and Lockshin (2001)
	a person with confidence and optimism	

From Table 1 above, it can be noted that as early as the eighteenth century, economists had been grappling with defining entrepreneurship. It can also be seen that economists and behaviourists have contributed to the field of entrepreneurship and that the definition of entrepreneurship is still being improved in the 21st century.

2.2.2 Key issues in entrepreneurship

Entrepreneurship has been studied by strategists, behaviourists and economists. Key issues include strategies applied by entrepreneurs, their personality traits, the effects of entrepreneurship on economies and countries. This, the entrepreneurial process and other key issues are listed in table two below:

TABLE 2: Key Issues in Entrepreneurship. Source: Nieman and Niewenhuizen (2009); Etemad (2004, p. 18);

Key issues in entrepreneurship	Associated References
<p><i>Entrepreneur's personality traits:</i></p> <p>High need for achievement, autonomy, dominance; Low need for conformity; Tolerance for ambiguity and uncertainty; high propensity for risk-taking, adaptability and flexibility; sense of self esteem, self confidence, self assurance; alertness</p>	<p>McClelland 1961; Brush 1992; Schein <i>et al</i>, 1996; Schwartz 1997; Hirsh and Brush 1987; Buttner and Moore 1997; Cuba <i>et al</i>, 1983; Rosa <i>et al</i> 1994; Kirzner 1973, 1979, 1997, 1999</p>
<p><i>Entrepreneurial learned and acquired attributes:</i></p> <p>Communication capabilities, interpersonal relations; resourcefulness;</p>	<p>Hirsh and Brush, 1983, 1986, 1987; Birley <i>et al</i>, 1987; Buttner and Rosen, 1988; Buttner and Moore, 1997; Esters 1997; Schwartz, 1979; Ireland <i>et al</i>, 2001</p>



<p><i>Entrepreneurial success factors:</i></p> <p>Creativity and innovation; Risk orientation; Leadership; good human relations; positive attitude; perseverance, commitment</p>	<p>McClelland 1986; Brady 1995; Zeelie 1998; Barrier 1995; Eggers and Leahy 1995; Vega 1996; Pendley 1995; Kinni 1995; Bird 1989; Osborne 1995; Boeyens 1989; Glynn 1996; Amabile 1996; Schein 1977; Bird 1989</p>
<p><i>Entrepreneurial behaviour</i></p> <p>Commitment; pro-activity and planning; sense of observation</p>	<p>Kropp, Lindsay and Shoham, 2007; Andersson <i>et al</i>, 2004; Aldrich and Martinez, 2003; Bell <i>et al</i>, 1992; de Bono, 1985; Pinchot, 1985; Shaver and Scott 1992; Shapero 1985</p>

<p><i>Entrepreneurial orientation</i></p> <p>Pro-activeness, innovation and risk-taking; international orientation and global mindset (a construct based on experience, education and exposure); culture (low on power distance, low on uncertainty avoidance, high on individualism, high on masculinity) education, competitive aggressiveness (achievement oriented)</p>	<p>Kropp, Lindsay and Shoham, 2007; Gifford, 1998; Knight 2001, 2002; Harveston <i>et al</i>, 2000; Kedia <i>et al</i>, 2001; Zahra <i>et al</i>, 2000; Kedia and Mukherji, 1999; Kuivalainen <i>et al</i>, 2004; Nemmula <i>et al</i> 2004; Themba, Chamme, Phambuka and Makgosa, 1999;</p>
<p><i>Entrepreneurial process</i></p> <p>Identify and evaluate opportunities, create a vision and direction; acquire finance for the enterprise, provide and apply the necessary resources; planning for competing in the market; planning for expansion and growth; build networks and networking: social networks, ethnic networks and international networks; start and manage enterprise, being rewarded, harvest venture.</p>	<p>Nieman and Niewenhuizen, 2009; Ibrahim and Goodwin, 1986; Buttner and Moore, 1997; Carsrud and Kruger, 1996; Coviello and Munro, 1995; Dana <i>et al.</i>, 2000; Etemad <i>et al.</i>, 2001; Johanson and Mattson, 1998.</p>

<p><i>Entrepreneurial supportive and cooperative environment</i></p> <p>Culture (entrepreneurship being recognised and celebrated, no stigma attached to business failure, entrepreneurs being role models, entrepreneurship being a desirable career choice); Financing being available; training and development programmes encouraging entrepreneurship; infrastructure; large firms, entrepreneurship developmental institutions, non-governmental organisations, academic and educational institutes.</p>	<p>Nieman and Niewenhuizen, 2009;</p>
<p><i>Entrepreneurial outcomes:</i></p> <p>Wealth creation, employment creation, socio-economic dynamism, regional growth and development, technological development, living standards improve, economic growth, tax base increases</p>	<p>Nieman and Niewenhuizen, 2009; Aldrich and Martinez, 2003; Bellman, 1992; Bygrave, 1989; de Bono, 1985; Gifford, 1998; Pinchot, 1985; Shapero, 1985; Shaver and Scott, 1992; Zapalska, 197.</p>

2.2.3 Constraints

According to Nieman and Nieuwenhuizen (2009) for entrepreneurship to thrive, there must be a supportive or enabling environment which includes infrastructure, finance, training and development programmes and a cooperative environment. Therefore the absence of a cooperative environment which includes societal approval, supportive governmental legislation and large firms and non-governmental organisations may inhibit entrepreneurship.

According to the Global Entrepreneurship Monitor (GEM), South Africa has lower than expected entrepreneurial activity rates, given its per capita income (Herrington *et al.*, 2008). The GEM further states that the entrepreneurial activity rate of South Africa is below the average for efficiency driven economies and even for middle to low income economies (Herrington, *et al* 2008). It states that South Africa's entrepreneurial activity is actually half of what it is expected to be.

2.3 INTERNATIONAL ENTREPRENEURSHIP

2.3.1 Introduction and definitions

International Entrepreneurship (IE) is an important field of study at the intersection of international business and entrepreneurship theory with much implications for international management, entrepreneurship, and strategic management (Keupp & Guessman, 2009) but is more of a subset of entrepreneurship rather than of international business (Annavarjula *et al.*, 2009).

According to Jane Knight (2004, p. 8):

The term *international* emphasizes the notion of nation and refers to the relationship between and among different nations and countries. *Transnational* is used in the sense of across nations and does not specifically address the notion of relationships. *Transnational* is often used interchangeably and in the same way as *cross-border*. *Global*, on the other hand, refers to worldwide in scope and substance and does not highlight the concept of nation.

Globalization is defined as “the flow of technology, economy, knowledge, people, values, [and] ideas . . . across borders. Globalization affects each country in a different way due to a nation’s individual history, traditions, culture and priorities” (Knight & deWit, 1997, p. 6).

According to Amal and Filo (2009, p. 609):

The concept of internationalization tends to be used, in a wider conception, to describe “the process of increasing involvement in international operations” (Welch and Luostarinen, 1999, p. 84).

Table 3 below lists in chronological order several suggested definitions for IE like for example the one suggested by McDougall and Oviatt (2005, p. 7):

“International Entrepreneurship is the discovery, enactment, evaluation, and exploitation of opportunities—across national borders—to create future goods and services”

TABLE 3: Chronological definitions of International Entrepreneurship

Year	Definition	Citation
1989	"international entrepreneurship is defined in this study as the development of international new ventures or start-ups that, from their inception, engage in international business, thus viewing their operating domain as international from the initial stages of the firm's operation."	McDougall (1989)
1993	"the study of the nature and consequences of a firm's risk-taking behavior as it ventures into international markets."	Zahra, 1993
1994	"...a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and sale of outputs in multiple countries."	Oviatt and McDougal, 1994
1996	"new and innovative activities that have the goal of value creation and growth in business organization across national borders."	McDougall and Oviatt, 2000

2000	"A combination of innovative, proactive, and risk-seeking behavior that crosses or is compared across national borders and is intended to create value in business organizations." They note that firm size and age are defining characteristics here. But they exclude nonprofit and governmental agencies."	McDougall and Oviatt (2000)
2005	"the discovery, enactment, evaluation, and exploitation of opportunities—across national borders—to create future goods and services"	McDougall and Oviatt (2005)
2009	"International entrepreneurship may be defined as the process by which international markets are used in the discovery, creation and/or exploitation of future goods or services."	.Annavarjula, Coombs and Sadrieh (2009)
2009	"creation of new international enterprises"	Annavarjula, Coombs and Sadrieh (2009)

2.3.2 Key issues in International Entrepreneurship

Why internationalise?

There are many diverse reasons pushing and pulling enterprises into internationalising at a faster pace. Others internationalise in order to reduce cost, to be closer to the customer, to ensure survival and to be more aware of

technology trends (Annavarjula *et al.*, 2009). Other start-ups treat internationalisation as a vehicle for profit or growth (Han, 2006).

Etemad (2004) states that enterprises are either pushed into internationalisation, pulled into it or both. The author lists the following as reasons pulling enterprises into internationalising Etemad (2004, p. 8)

- Liberalisation of international Markets
 - Facilitates exporting and presence in international markets
 - Provides much expanded opportunities
 - Permits easier achievement of economies of scale
- Advances in Information, Communication and Transportation Technologies
 - Facilitates international markets operations
 - Override the impact of time and distance
 - Reduces costs
 - Mitigate against limited resources
- Attraction and resources of partners
 - Mitigates against limitations of size
 - Shorten internationalisation process –increases the speed of internationalisation

- Allow for survival in international markets
- Attraction of serving current buyers' and suppliers' international needs
 - Respond to needs of previous domestic customers
 - Preempt competitors from acquiring previously domestic customers and suppliers
 - Preserve established relations with internationalizing buyers and suppliers

Etemad (2004, p. 7) also lists the following as factors pushing enterprises into internationalising:

- Founder/Manager characteristics
 - International vision
 - International experience, exposure and education
- Economics of operations
 - Achieving economies of scale and scope
 - Achieving lower costs and prices
 - Attaining added economies of higher quality at lower prices
 - Avoiding dis-economies of small domestic markets

- Characteristics of competition and strategy
 - Rapid response to competitors' initiatives worldwide
 - Rapid response to customers' needs worldwide
 - Avoid domestic market inertia and intense competition
- Economics of research and development (R&D), innovation and technological change
 - Higher R&D costs require large international markets
 - Continuous innovation requires larger international markets
- Characteristics of high technology products and markets
 - Shorter product lifecycle requires internationalization
 - Faster pace of change requires faster returns from international markets
- Strategic logic of international operations
 - Constrained resources at home forces SME's to access others' resources
 - International partners provide additional resources
 - Interdependent operations leverage networks' strengths against others

International Entrepreneurship Organising Framework

Keupp and Gassmann (2009) present a framework based on over 117 research articles on IE. It shows three areas: the antecedents of IE, the elements of IE and the outcomes of IE. These show the antecedents of IE at

- the personal level,
- enterprise level,
- industry level and
- country level,

It also shows the elements of IE

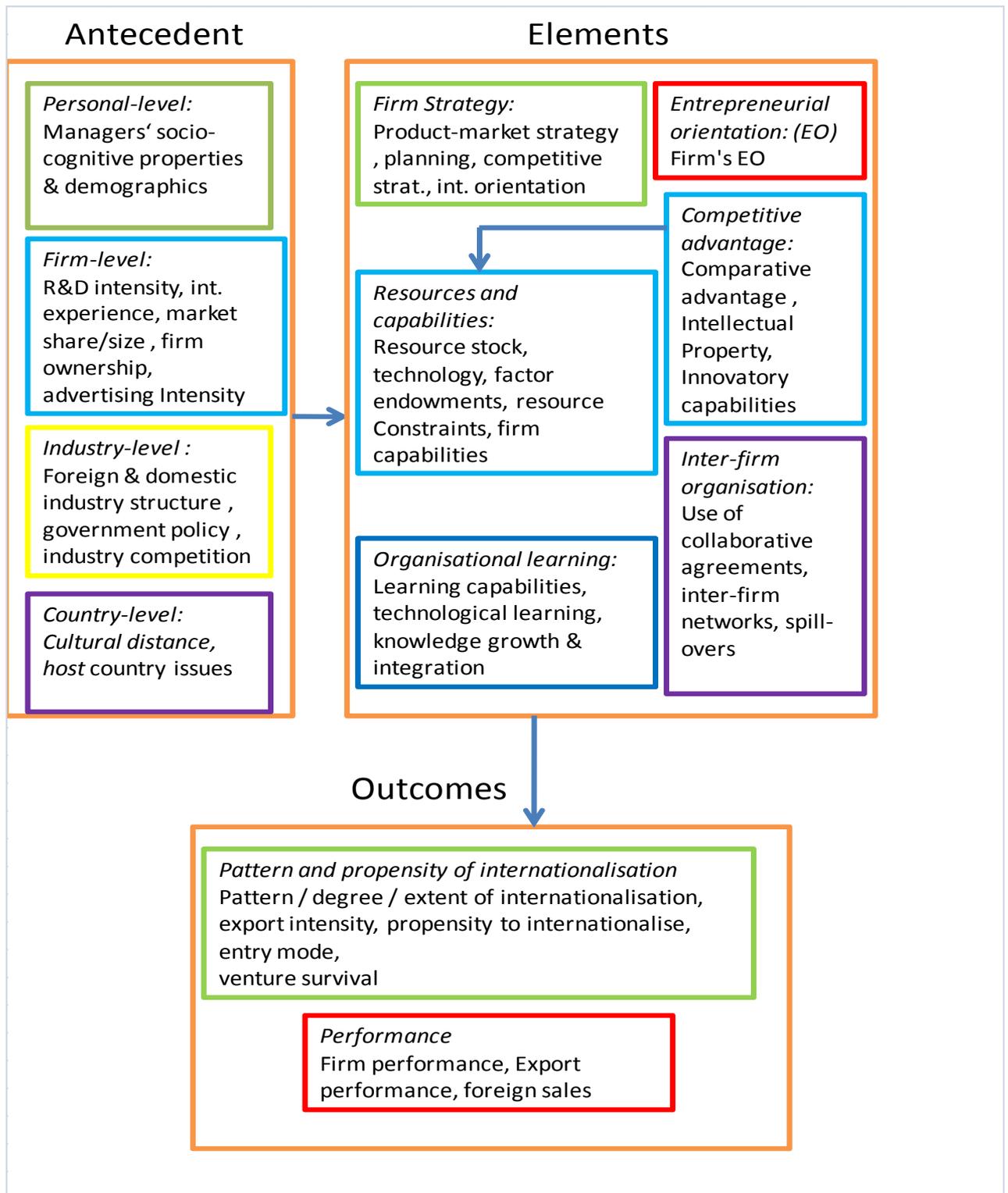
- strategy
- resources
- entrepreneurial orientation
- partnerships
- organizational learning

and the results of IE

- propensity of the firm to internationalization
- firm's performance in internationalisation

Table four below details these three areas:

TABLE 4: International Entrepreneur Organising Framework. Source: Keupp and Gassmann (2009, p. 605)



Theories of International Entrepreneurship

There are several theories which seek to explain internationalisation. Table four below lists the major ones and their shortcomings, only two are being explained in more detail below:

- The Uppsala Theory of Internationalisation or Stage Theory of Internationalisation
 - The major tenet of this theory is that enterprises would dominate their local markets first and then expand into foreign markets similar to their home markets and gradually obtain international status (Etemad, 2004; Oviatt and McDougall, 1994). These enterprises leverage heavily on their age and size (. They use the large resources they possess to internationalise. This school was the dominant one in the 1970's and 1980's as it could explain the Multi-National Enterprise (MNE's) which began by dominating their domestic markets before internationalising. It best explains companies like IBM and how they became global players. It has however been superseded by the school below.
- The Born Globals or International New Venture.
 - This theory was popularised by Oviatt and McDougall in their 1994 paper. It is about enterprises which internationalise soon after start-up phase –within seven years (Zahra, 2003). These enterprises show resourcefulness in internationalising early and providing value for their owners (Zahra, 2003). It best explains

companies like Google, Cisco and MTN which became international players within seven years of their inception. They are also characterised by leveraging partnerships in foreign countries to achieve what they could not achieve by themselves.

TABLE 5: International Entrepreneurship Theories.

Source: Adapted from Hessels (2008, p. 4-8)

Theory	Core tenets	Shortcoming
Monopolistic advantage theory	Having unique sources of superiority that cannot be acquired by foreign firms allows multinational enterprises to compete in these foreign markets (Hymer, 1976).	McDougall <i>et al.</i> (1994) argue that this explanation is too simplistic. They point out that monopolistic theory cannot explain why entrepreneurs perceive opportunities to use their monopolistic advantage in foreign markets while others do not.

<p>Product cycle theory</p>	<p>Firms make foreign direct investments only after competition becomes cost-based and the firm can no longer serve the market efficiently through exports. By producing in foreign countries firms are able to compete with entrepreneurs who enjoy low production costs (Vernon, 1966).</p>	<p>McDougall <i>et al.</i> (1994) suggest two shortcomings of this theory: First, new firms may make foreign investments to sell products before competition has become standardized and cost-based. Second, entrepreneurs sometimes make foreign investments prior to exporting to the market.</p>
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<p>Stages theory of internationalization</p>	<p>The stages theory of internationalization is based on the premise that progress in identifiable stages from exporting to multinational enterprise as they gain international experience (Johanson & Vahlne, 1977).</p>	<p>However, a number of researchers have found contradictory evidence suggesting that firms may skip important stages (Welch & Loustarinen, 1988), may serve foreign markets from inception (Ganitsky, 1989), and may internationalize far sooner than the stages theory would suggest (Brush, 1992).</p>
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<p>Oligopolistic reaction theory</p>	<p>Oligopolistic reaction theory is based on the premise that firms imitate the actions of competitors to reduce the risk of being different from other members of an oligopoly (Knickerbocker (1973).</p>	<p>However, Oligopolistic reaction theory is not quite applicable to international new ventures first because the new venture is quite often the first firm to internationalize in a given industry, and second the theory fails to explain the initial foreign investment decision (McDougall, <i>et al.</i>, 1994).</p>
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<p>Internalisation theory</p>	<p>The concept that multinational firms exist due to their ability to generate higher economic rents by internalizing the transfer of goods and services across national boundaries, thus reducing costs, is the basis of internalization theory (Buckley & Casson, 1976; Hennart, 1982; Magee, 1977).</p>	<p>Some international new ventures internationalize for other reasons than reducing costs such as being close to the customer, being aware of technology trends, or to ensure survival (McDougall, <i>et al.</i>, 1994). Also, distributed intelligence has led organizations to externalize activities by tapping into innovations produced by end-user consumers and external entities (von Hippel, 2005). Externalization has changed the face of innovation and provides unprecedented opportunities for innovative consumers to act as international entrepreneurs.</p>
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<p>Innovation-related theory</p>	<p>The term “innovation-related” is derived from the work of Rogers (1962, cited in Gankema <i>et al.</i>, 2000), in which each subsequent stage of internationalization is considered as an innovation for the firm (Gankema <i>et al.</i>, 2000). (Bilkey and Tesar, 1977; Cavusgil, 1980; Reid,1981) noted that the models are a number of fixed, sequential stages, although the number of stages varies considerably between models, ranging from as few as three to as many as six. They also identified three generic stages: the pre-export stage; the initial export stage,³⁴ and the advanced export stage.</p>	<p>Some feel that the proposed stage models (innovation-related) are quite vague in theoretical terms. The demarcation criteria for distinguishing between stages are problematic (Miesenbock, 1988; Andersen, 1993) and too little attention is paid to the time of the different stages as well as to the operationalisation of the stages. Ahokangas (1998) noted that, from a process point of view, these models fall short in that they only describe the process of change but not its dimensions nor the different approaches used by firms in developing their activities.</p>
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<p>International new venture and networks</p>	<p>This organizational form is argued to be unique for a number of reasons, including its foreign location advantage, minimal use of internalization and greater use of networks (Oviatt & McDougall, 1994). The international new venture's active use of inter-organizational and social networks to mobilize and leverage resources (Coviello & Cox, 2006) and facilitate internationalization (Coviello, 2006). The internationalization strategy of a firm can be characterized by the need to:</p> <ul style="list-style-type: none"> . minimize the need for knowledge development; . minimize the need for adjustment; . exploit established network positions (Johanson and Mattsson, 1993). 	<p>Theoretical issues raised with regard to networks include the different types of relationships and their properties, trust, control, resources, and interdependency within and between firms (Andersen and Buvik, 2002; Welch and Welch, 1996; Meyer and Skak, 2002);</p>
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2.3.3 Constraints

Annavarjula *et al.*, (2009) mention the need to research the nature of the constraints facing international entrepreneurs and their relation with strategy and performance. Initially it was believed that lack of age and size were constraints inhibiting internationalisation – according to the Uppsala Theory of Internationalisation. It has however been shown that this is no longer the case since some small enterprises are able to internationalise within seven years of their existence (Etemad, 2004; McDougall, *et al*, 2003). According to Arbaugh *et al.*, 2008, perceptual and experiential factors may be constraints limiting internationalisation. Perceptual factors like how financial and political risks are perceived by the decision makers, experiential factors like managers' lack of international experience and exposure (Arbaugh *et al.*, 2008). The same risks may be perceived differently by different managers. Thus the constraint may be in the eyes of the beholder. Oviatt and McDougall (1994) show that founders of INV see their markets differently from DNVs and another work by Zahra (2005) show that founders of INVs quickly see opportunities in international markets and develop new ways of exploiting them. Zahra (2005) further states that these INV leaders/founders have cognitive and psychological dispositions which allow them to calculate risk in significantly different ways. Thus Human Resource may be a constraint.

Fleck, Hutchinson and Lloyd-Reason (2009) have found that management aversion and attitudinal barriers are the greatest internal barriers to small firm internationalization as the decision maker forms the key influence upon the

strategic agenda of the firm. They also note that SMME enterprises may not have the human and financial resources to correctly decipher internationalisation opportunities. Thus this barrier may lead to uncertainty in terms of market selection and entry strategy resulting in an increased perception of risk. Thus Finance and Strategy may be constraints in successfully internationalising. Finance-related issues like credit access problems, cash flow and delays in payment have been highlighted as the most significant barrier, which can ultimately dissuade an SMME owner from internationalisation (Fleck *et al.*, 2009).

Firms may fail to internationalise because of differences in knowledge and culture between their home and foreign markets (Arbaugh *et al.*, 2008). Thus cultural differences may be constraints in internationalisation.

Fleck *et al.*, (2009) state that DNVs considered lack of knowledge, limited foreign market contacts and personal deficiencies as significant barriers to foreign market expansion, whereas INVs were more concerned about market-related factors (e.g. red tape, payments or declining economic conditions).

Domestic success is also a barrier as enterprises will only pursue international markets once their local market is mature (Arbaugh *et al.*, 2008). Firms will not internationalise if there is abundant opportunity in their home markets. Thus success at home proves to be internationalisation barrier. Other external

barriers to internationalisation may be financial market imperfections, exchange rates, and differences in legal systems, culture and languages (Fleck *et al.*, 2009).

2.4 INTERNATIONAL ENTREPRENEURSHIP IN SOUTH AFRICA'S ICT INDUSTRY

This is the core industry focus for this area.

2.4.1 Introduction

According to Ahmed, Quibria, Reyes-Macasaquit and Tschang (2003), ICT refers to applications and technologies which enable:

- Computing
- Communication

South Africa is the leader of the ICT sector in the African continent (South Africa Info, 2010). However, South Africa ranks 62 out of 133 on a global basis (Global Information Technology Report, 2009/10). According to Mait (2009), South Africa accounts for 0.6% of the world's ICT revenues while the ICT sector contributes 6.4% of South Africa's GDP (GEDA, 2010).

ICT is recognised by the World Summit on Information Society (WSIS) in both its Geneva 2003 and Tunis 2005 summits as having “an immense impact on virtually all aspects of our lives” (WSIS, 2003, p. 04). The WSIS further states that ICT has the potential to promote the development goals of the Millennium Declaration, being:

- the eradication of extreme poverty and hunger,

- the achievement of universal primary education
- the promotion of gender equality and empowerment of women
- reduction of child mortality
- improvement of maternal health
- combat HIV/AIDS,
- malaria and other diseases
- ensuring environmental sustainability
- and development of global partnerships for development, for the attainment of a more peaceful, just and prosperous world.

[World Summit on the Information Society (2003, p. 2)]

2.4.2 ICT within South Africa

Recent ICT developments within South Africa include:

- The promulgation of the Electronic Communications Act (36/2005). SMME's planning to conduct business in South Africa's ICT sector, need to comply with this legislation.
- The launching and scheduled launching of undersea fibre cables linking South Africa to other parts of the world through both its East Coast and West Coast. This together with the State Owned Enterprise –Broadband Infraco could ensure SMME's get access to high speed internet access.

- South Africa has an Information Society Vision being “To establish South Africa as an advanced Information Society in which Information and ICT tools are key drivers of economic and societal development” (ISAD Plan, 2007, p. 2)

2.4.3 Constraints

There are two major categories of constraints preventing enterprises from internationalising:

- Internal constraints or the Organisational Environment
- External constraints or the International Environment

The Organisational Constraints

These are factors largely under the control of the enterprise and include finance, managerial competency of the decision makers (Olawale and Garwe, 2010), human resource and strategies applied by managers in internationalising.

- Human Resource’s education and training in South Africa (Olawale and Garwe, 2010).
- Finance
 - According to Olawale and Garwe, (2010) access to finance is a critical problem for SMME enterprises in South Africa such that it is the second most reported

contributor to low new firm creation and failure, after education and training in South Africa. FinMark Trust (2006) as cited by Olawale and Garwe (2010), finds that only 2% of new SMEs in South Africa are able to access bank loans. Olawale and Garwe further state that 75% of applications for bank credit by new SMEs in South Africa are rejected.

According to South Africa's ISAD plan and the Broadband Policy, constraints facing SMME's are:

- Lack of access to the internet. In rural areas and townships, there is no high speed internet access.
- Limited ICT skills.
- Lack of access to finances. SMME's do not have access to the finances they need to grow their enterprises.
- Regulation policy compliance. The cost of compliance and administrative burden are constraints to SMME's.

The constraint of lack of access to high speed internet could keep SMME's from successfully internationalising. This is really lack of access to technology needed for competing. The same argument holds for limited ICT skills. If South African SMME's have limited ICT skills, they cannot be internationally competitive in the ICT sector. The cost of compliance and administrative

burden escalate per additional country that the SMME would like to compete in.

South Africa's private sector, government entities, academia and civil society came together to improve the ICT industry in the country under a banner called SAITIS. They produced a document in 2002 which identified the following constraints as hindering progress in the sector:

- Structural:
 - Issues of Telecommunications infrastructure accessibility, efficiency and cost.
 - Turf War within and between government departments due to conflicting and overlapping roles and responsibilities. Little relief is experienced by referring to legislation and policy, since in some cases, these compounds the problem.
 - Ineffectiveness in delivery capability of State funding mechanisms to SMME enterprises.
 - Inadequate National spending on R&D.
- Planning:
 - No clear National Framework agreed, and no agreed operational plan with clear goals for action. Hence pragmatic and program driven partnerships between government and private sector, and within private sector, cannot yet occur.

- Collaboration :
 - No collaboration on product R&D within the private sector.
 - No collaboration for access to international markets.
 - Inadequate levels of commitment from the multinationals as well as the mid range firms to the growth of the sector overall.
 - Inward focus of the ICT industry in South Africa.

**[South African Information Technology Industry Strategy Project (2002,
p. 3)]**

2.5 CONCLUSION

In this International and South African Literature review, it has been shown that entrepreneurs and SMME enterprises are the building blocks of global competitiveness. It has also been shown that there are benefits in internationalising including increased revenue, economies of scale and global competitiveness. However, it has also been shown that there are internal and external constraints in internationalising.

There are discrepancies between South African and International literature. South African literature cites technology availability and affordability as a

constraint. This is not the case with international literature. South African literature also cites lack of collaboration, lack of planning, politics (turf war, ineffective state) and inward focus of SA ICT industry as constraints. These are not mentioned in the reviewed International literature. Hence the question:

What are the real constraints preventing South African ICT SMME enterprises from internationalising?

To what extent are the constraints listed in international literature relevant to the ICT SMME enterprises in Gauteng, South Africa? The next chapters detail the process undertaken in investigating this problem and recommendations made.

CHAPTER 3: RESEARCH QUESTIONS

3.1 INTRODUCTION

The previous two chapters showed that there are strategic, economic and financial benefits for enterprises which internationalise. However the majority of ICT SMME enterprises in South Africa do not internationalise and thus fail to reap those benefits. The research problem being investigated is focused on what keeps these SMME enterprises from internationalising.

3.2 RESEARCH OBJECTIVE

The purpose of this study is to understand the constraints preventing ICT SMME enterprises in Gauteng from internationalising. A secondary investigation has been undertaken in chapter two which has led the research to focus on two broad categories:

- Internal Organisational Environment and its constraints towards internationalisation
- External International Environment and its constraints towards internationalisation

From the above categories, the following six research questions are posed:

3.3 RESEARCH QUESTIONS

3.3.1 Research question 1:

Are there any human resource constraints preventing ICT enterprises from inter-nationalising? The human resource constraint construct is investigated together with its variables including international experience or the lack thereof, international qualification and organisational design.

3.3.2 Research question 2:

Are there any strategy constraints preventing ICT enterprises from internationalising? The strategy constraint construct is investigated together with its variables including knowing an enterprise's strengths and weaknesses, utilising mergers and acquisitions prudently and exploiting partnerships and patents.

3.3.3 Research question 3:

Are there financial constraints preventing ICT enterprises from internationalising?

3.3.4 Research question 4:

Are there political or regulatory constraints preventing ICT enterprises from inter-nationalising? The political constraint construct is investigated with its variables including trade pacts and corruption.

3.3.5 Research question 5:

Are there economic constraints preventing ICT enterprises from internationalising?

3.3.6 Research question 6:

Are there socio-cultural constraints preventing ICT enterprises from internationalising? The socio-cultural constraint construct is investigated with its variables of language and religion and their impact on the success of companies internationalising.

3.4 CONCLUSION

This chapter indicated the core research questions that will guide the primary research process. The following chapter shows the research methodology applied to answer the research questions.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

The purpose of this chapter is to outline the research methodology, design and the research process followed in conducting this study. The primary research design was qualitative exploratory. The research technique was Experience Survey wherein individuals who are knowledgeable about a particular problem are surveyed (Zikmund, 2003).

4.2 RESEARCH DESIGN

The research was conducted in two stages:

- Secondary research (literature review)
- Primary Research: Qualitative Exploratory Research

4.2.1 Secondary Research

The secondary research phase entailed investigating academic research journals and other information sources for information on internationalisation constraints. According to Zikmund (2003), secondary research is performed before the primary research as it prevents duplication; helps focus and refine the investigation. This assessment also helps with problem formulation and research design (Zikmund, 2003). The results of the secondary research are outlined in chapter two of this study. The rest of this chapter deals with the primary research.

4.2.2 Research Method Selected: Qualitative Exploratory

A qualitative exploratory research was conducted. Zikmund (2003, p54) states that exploratory research is conducted 'when general problems have been identified but research is needed to gain better understanding of the problems.' That is the problem is neither absolutely ambiguous nor completely certain (Zikmund, 2003). In this study, qualitative exploratory research was used to describe the constraints facing ICT SMME enterprises in Gauteng which seek to internationalise. The author further states that the purpose of exploratory research is not to uncover conclusive evidence; it is rather to guide subsequent research which will provide conclusive evidence.

4.2.3 Research Method Selected: Rationale

Zikmund (2003) states that exploratory research is a necessary step that helps ensure that a more conclusive future study does not begin with an inadequate understanding of the nature of the management problem. It has been shown in Chapter 2 that there are discrepancies between what international literature and South African literature recognise as constraints to internationalisation. For example technology access and the role of the State are not recognised as constraints by international literature whereas they were noted as major constraints in South Africa. There is therefore an ambiguity and uncertainty preventing a more conclusive research on internationalisation constraints facing ICT SMME enterprises in Gauteng, from being conducted.

Internationalisation constraints have been studied and documented by other researchers (Arbaugh *et al.*, 2008; McDougall *et al.*, 2003). The limitation of their researches was that their theory was not proved to be accurate for all enterprises, for all economies and in particular for ICT SMME enterprises in a developing economy. They had also called for more research to be done in this area. This study is a response to that call and it offers the advantages of exploring the internationalisation constraints in a developing economy within an ICT industry.

Zikmund (2003) lists at least two purposes for exploratory research which are applicable to this study:

- Diagnosing a situation
 - When the purpose of an exploratory research is to provide dimensions of the problem and set priorities for further investigation. The study aimed to set dimensions for the constraints facing ICT SMME enterprises in internationalising to affect better understanding of the problem.
- Screening alternatives
 - International literature present different constraints to South African literature. This study aimed to present more relevant and applicable constraints to SA ICT SMME enterprises grounded in theory.

4.2.4 Primary Research Design

Experience Surveys were conducted with ICT experts involved with ICT SMME enterprises in Gauteng. This is further explained in 4.6 below.

4.3 POPULATION

A research population is defined by Zikmund (2003) as a group of entities sharing a common set of characteristics. The population targeted by this study was ICT experts involved with SMME enterprises in South Africa, and geographically limited to Gauteng. An ICT SMME in South Africa is defined by the National Small Business Act of 2006 as an enterprise having between five and 200 permanent employees, with total turnover of less than R26 million and total gross assets (excluding fixed property) of R6 million. ICT has been defined in chapter one and two as an industry involved in enabling computing and communication (Ahmed, *et al*, 2003).

4.4 UNIT OF ANALYSIS

The unit of analysis is the perceptions of one ICT SMME expert involved with an SMME located in Gauteng such that:

- The number of its permanent employees is between five and 200
- Its annual revenue is less than R26 million
- Its total gross assets (excluding fixed property) are R6 million or less
- Its primary sector is ICT

4.5 SAMPLE

Fourteen experts participated in this study. They were not remunerated in any manner for their contributions. The sampling was purposive – only qualifying experts were targeted as described above (experts who had experience in starting and managing ICT SMME). Due to time and monetary constraints, the sample was not truly random and probability principles based. That is, not every expert in South Africa had an equal probability of being selected to participate in this study. Random experts within a convenience sample were selected. It was also a proportional quota sampling wherein seven experts that had internationalisation experience and seven other ICT SMME experts that had not been involved in internationalisation were surveyed. The common denominator the experts was their experience in starting and managing ICT SMME enterprises in South Africa.

4.6 EXPERIENCE SURVEY

One hour interviews were scheduled with the 14 experts between September and October 2010. The interviews were informal and allowed the experts to expound on the internationalisation constraint without any restrictions. Their perceptions and observations were recorded by the researcher. The researcher also used a research instrument to guide and prompt further comments from the experts. The experts were given an opportunity at the end of the interview to state any other pertinent information not covered during the discussion. At the end of the interview, the experts were asked to populate a five point Likert Scale questionnaire.

4.7 RESEARCH INSTRUMENT

The research instrument used was a questionnaire. A pilot test was conducted on a group of three respondents and this led to some minor modifications and phrasing of certain questions. The research instrument was used in two different ways: in the first phase as method of prodding the experts to solicit their perceptions and in the second phase as a Likert Scale questionnaire.

The research instrument used a five point Likert Scale. Respondents were presented with specific sentences and they were asked to rate their perceptions as Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree with the sentences. Thus the attitudes of the respondents to constraints facing ICT SMME enterprises in internationalising were captured.

The Research instrument (attached as appendix 1) was designed to have seven sections:

Section A: Biographical Data

Section B: Human Resource Construct

Section C: Financial Constraint Construct

Section D: Strategy Constraint Construct

Section E: Political and Regulatory Constraints Construct

Section F: Economic Constraint Construct

Section G: Socio-Cultural Constraint Construct

4.8 RELIABILITY AND VALIDITY

Reliability is defined by Zikmund (2003, p. 300) as “the degree to which measures are free from error and therefore yield consistent results.” The research results were tested for reliability using Cronbach’s Alpha which according to Gliem and Gliem (2003) is a reliable instrument to test reliability. Validity is defined by Zikmund (2003, p. 302) as “the ability of a scale or measuring instrument to measure what it is intended to measure.” A pre-test conducted on a group of respondents established the validity of the instrument.

4.9 DATA COLLECTION

The experts were surveyed during a scheduled one hour interview session. The experts were given opportunity to comment in an unrestricted and informal manner about their perceptions of constraints facing ICT SMME enterprises in Gauteng when internationalising. The researcher recorded their contributions and their ratings on the questionnaire. Their ratings were coded such that Strongly Agree was 1, Agree = 2, Neither Agree nor Disagree = 3, Disagree =4 and Strongly Disagree = 5. This information was converted into electronic format so that analysis could be performed.

4.10 DATA ANALYSIS

The Data Analysis was done as follows:

- To answer the research questions posed in chapter 3.

- To contrast the views of experts that had internationalisation experience to experts that only had domestic experience using statistical analysis.

Descriptive statistical analysis was done on the data and the report captured in chapter five and six. The analysis of the different perceptions of experts includes

- measures of dispersion - inter-quartile, range and standard deviation
- measures of centrality – median and mode

4.11 RESEARCH LIMITATIONS

The research was limited to SMME enterprises in the ICT sector less than eight years old. Other industries, large enterprises and older SMME enterprises were excluded. The research was focused on South African enterprises, thus not enabling global research derivatives. The research was only qualitative exploratory and thus a need for exhaustive conclusive research is warranted.

4.12 CONCLUSION

This chapter covered the research methodology and design as well as the process to be followed to answer the research questions. A report of the data is populated in chapter five with analysis of such in chapter six.

CHAPTER 5: RESULTS

5.1 INTRODUCTION

This chapter presents the results of the primary research as outlined in chapter four. It is divided into the following sections:

- Research instrument
- Reliability and validity of the data
- Demographics of the respondents
- Research questions
 - The research constructs
 - The variables of the constructs
 - Statistical analysis of the responses
- Conclusion

5.2 RESEARCH INSTRUMENT

The research instrument used was a questionnaire populated during September and October 2010 by the 14 experts surveyed for this study. The general outline of the instrument was as follows:

- External Environmental Constraints
 - Economic constraint construct with its variables
 - Socio-Cultural constraint construct with its variables
 - Political and regulatory environment constraint construct with its variables

- Internal Organisational Constraints.
 - Human Resource constraint construct with its variables
 - Strategy constraint construct with its variables
 - Financial constraint construct with its variables.

The research instrument used a five point Likert Scale. Respondents were presented with specific sentences and were asked to rate their perceptions as Strongly Agree, Agree, Neither Agree nor Disagree, Disagree or Strongly Disagree with the sentences presented. Thus the attitudes of the respondents to constraints facing ICT SMME enterprises in internationalising were captured.

McIver and Carmines (1981) as cited by Gliem & Gliem (2003, p82) describe the Likert scale as follows:

A set of items, composed of approximately an equal number of favourable and unfavourable statements concerning the attitude object, is given to a group of subjects. They are asked to respond to each statement in terms of their own degree of agreement or disagreement. Typically, they are instructed to select one of five responses: strongly agree, agree, undecided, disagree, or strongly disagree. The specific responses to the items are combined so that individuals with the most favorable attitudes will have the highest scores while individuals with the least favorable (or unfavorable) attitudes will have the lowest scores.

The Likert Scale used for this study captured the rank order of the attitudes of the respondents to internationalisation. They either agreed that a specific construct had a bearing on internationalisation or they disagreed. It was apparent that they could either agree or strongly agree and that strongly agree was a higher rank order than just agree. It was also apparent that there was an interval between the five points.

5.3 RELIABILITY AND VALIDITY

Reliability is defined by Zikmund (2003, p. 300) as ‘the degree to which measures are free from error and therefore yield consistent results.’ The research results were tested both for reliability using Cronbach’s Alpha which according to Gliem and Gliem (2003) is a reliable instrument to test reliability. Cronbach’s Alpha value was 0.63. Validity is defined by Zikmund (2003, p. 302) as the ability of a scale or measuring instrument to measure what it is intended to measure.’ A pre-test conducted on a group of respondents established the validity of the instrument.

5.4 PROFILE OF RESPONDENTS

The population targeted by this study is ICT SMME enterprises experts in South Africa, and geographically limited to Gauteng. An ICT SMME in South Africa is defined by the National Small Business Act of 2006 as an enterprise having between five and 200 permanent employees, with total turnover of less than R26 million and total gross assets (excluding fixed property) of R6 million. ICT has been defined in chapter one and two as an industry involved in enabling computing and communication (Ahmed, *et al*, 2003).

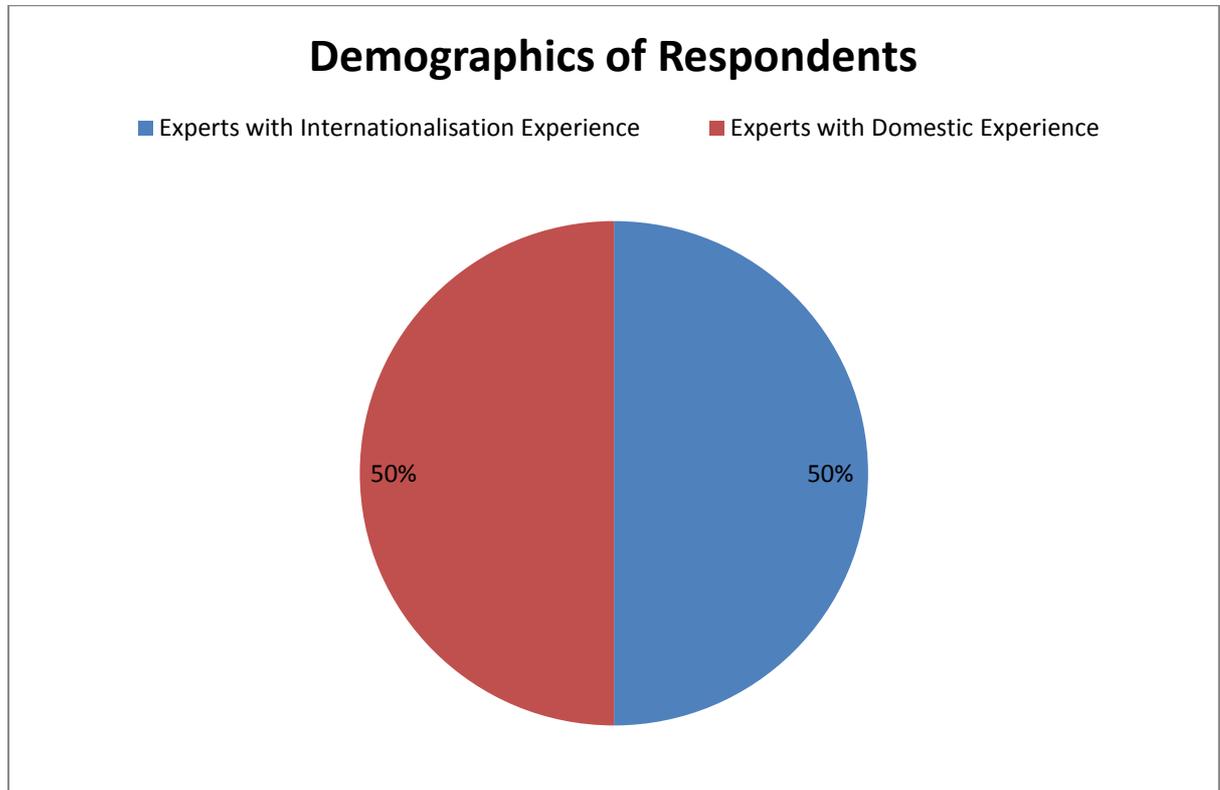
Section A of the instrument confirmed that the respondents were suitable and they had experience with an ICT SMME enterprise which satisfied the criteria outlined in table 1 below:

TABLE 6: Demographics of Respondents

Section A: Biographical Data
Number of permanent employees per enterprise
Annual revenue of enterprise
Location or base of enterprise
The sector the enterprise was involved in
Whether the enterprise had attempted internationalisation or not

The respondents were further classified into those that had attempted internationalisation and those that had not. Seven responses came from experts with ICT SMME internationalisation experience and 7 responses from experts with SMME enterprises that had not yet internationalised.

TABLE 7: International Orientation of Respondents



5.5 RESEARCH QUESTIONS

5.5.1 Research Question 1:

Are there any human resource constraints preventing ICT enterprises from inter-nationalising?

The human resource construct had four variables:

- International Experience
- International Qualification
- Organisational Design

- Employment of Indigenous Citizens

The distribution, central tendency and dispersion of the responses are listed in table 8 below:

TABLE 8: HR Constructs' Variables and the dispersion and central tendency of the responses

Human Resource Constraints Construct had the following Variables						
		Median	Mode	Range	IQR	SD
Variable 1	International experience	2	2	3	0.75	1.07
Variable 2	International qualification/training	2.5	4	3	2	1.19
Variable 3	Organisational Design	2	2	3	0.75	0.97
Variable 4	Employment of indigenous citizens	2	4	3	3	1.34

The range is 3 because none of the experts selected option 5 of Strongly Disagree. Mode was 2 and 4 showing that most responses were mostly Agree or Disagree. The inter-quartile range for the Human Resource (HR) construct was 0.75, 2 and 3. The Mode for the last variable which tested whether employment of indigenous citizens could assist in successful

internationalisation was 4. This showed that most respondents believed that there was no correlation between indigenous employees and success in internationalising.

Table 9 below shows the HR variables in terms of enterprises that had internationalised and enterprises that had not attempted internationalisation – called domesticated enterprises. The table shows the percentage distribution of all responses given per variable.

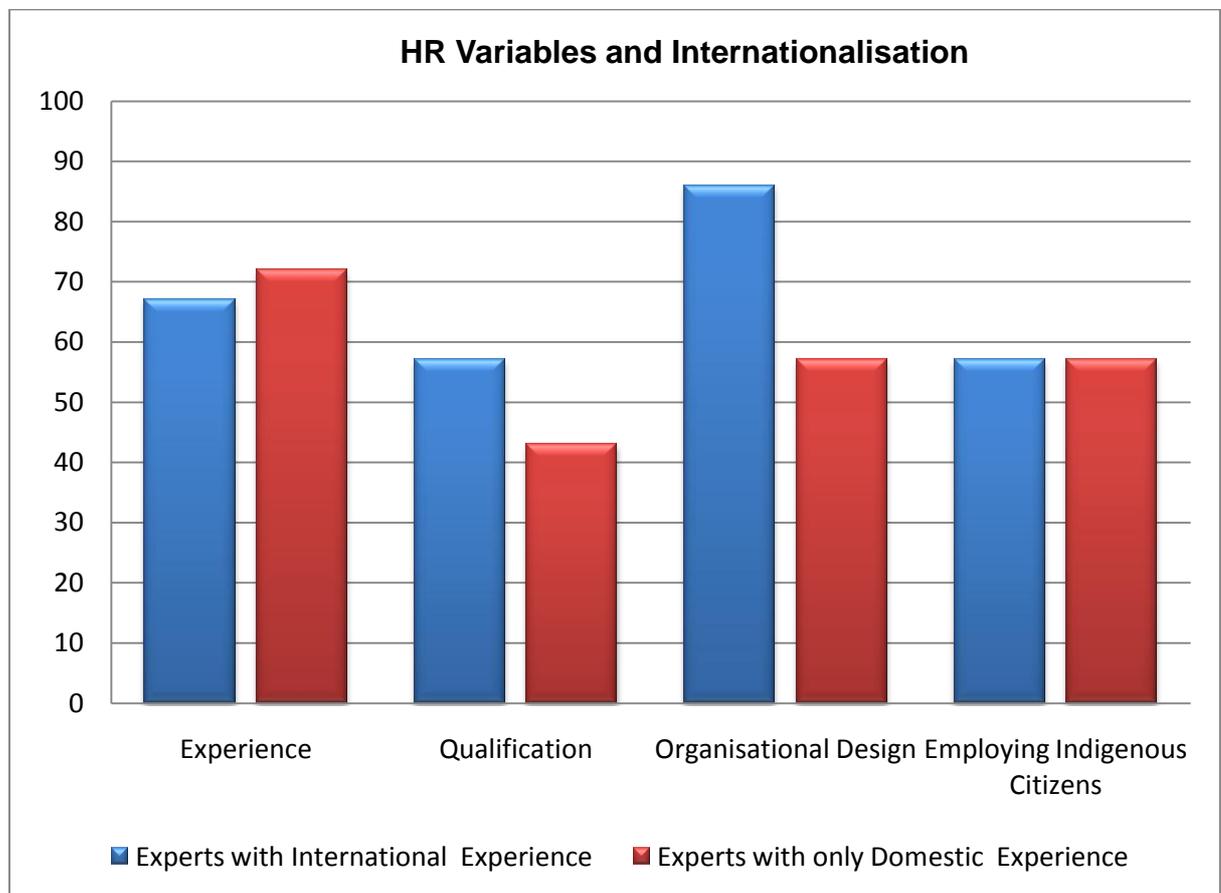
TABLE 9: Percentage of Responses Selected

Human Resource Constraints Construct had the following Variables:										
Variable	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
	Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
Variable 1	17%	29%	50%	43%	0%	14%	33%	14%	0%	0%
Variable 2	14%	14%	43%	29%	0%	14%	43%	43%	0%	0%
Variable 3	29%	14%	57%	43%	14%	14%	0%	29%	0%	0%
Variable 4	28%	43%	29%	14%	14%	0%	29%	43%	0%	0%

The table shows selection 5 of Strongly Disagree was not chosen at all on this construct.

Graph 1 below shows the percentage of respondents who believed that the HR constructs listed impacted on the success of internationalisation. The graph was composed of respondents from two groups – the experts that had internationalisation experience (shown in blue) and those that had only domestic experience (shown in red).

GRAPH 1: Percentage of respondents agreeing that the constructs impacted internationalisation success



The graph shows that international qualification was rated the lowest by both groups of experts. International qualification or training was not seen as an important determinant of successful internationalisation.

Organisational Design more suited to internationalisation was rated the highest experts with international experience at over 80%. Most experts (57%) with domestic experience also perceived it to be crucial. Employing indigenous citizens as an important part of internationalisation received a tie with both groups giving it 57%.

5.5.2 Research Question 2:

There are strategy constraints preventing ICT enterprises from internationalising.

There were five Strategy variables that were investigated:

- Knowledge of strengths and weaknesses
- Partnership with local player
- Serving internationalising clients
- Acquisition or merger of a local player
- Strong brand or patent

Table 10 below shows the dispersion and central tendency of the responses:

TABLE 10: Strategy Variables: The dispersion and central tendency of the responses

Strategy Constraints Construct had the following Variables						
		Median	Mode	Range	IQR	SD
Variable 1	Knowledge of strengths and weaknesses	2	2	3	1	0.82
Variable 2	Partnership with local player	2	2	3	0.75	0.88
Variable 3	Serving internationalising clients	3	4	3	2	1.14
Variable 4	Acquisition or merger of a local player	2	2	3	1	1.08
Variable 5	Strong brand or patent	2	2	4	2.75	1.50

The table shows that the mode for variable 3 was 4 meaning that the respondents disagreed with the strategy of internationalising by following domestic clients who are also internationalising. All other responses received a mode of 2 showing that the most of the experts agreed with all these

strategies. Variable 5 of having a strong brand or international patent as a key component of successful internationalisation received all responses from strongly agree to strongly disagree.

Table 11 below shows a summary of all responses received for the Strategy construct in percentages:

TABLE 11: Percentage of Responses Selected

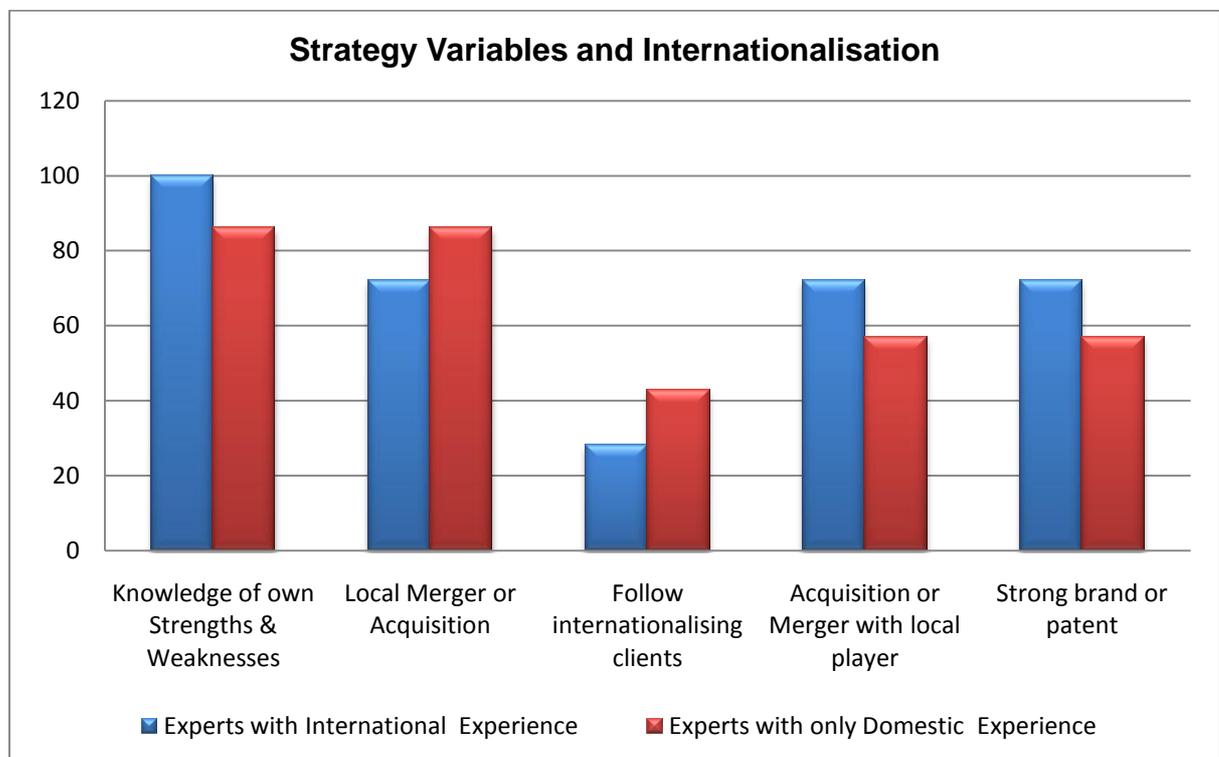
Strategy Constraints Construct had the following Variables										
Variable	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree	
	Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
Variable 1	43%	43%	57%	43%	0%	0%	0%	14%	0%	0%
Variable 2	29%	29%	43%	57%	14%	14%	14%	0%	0%	0%
Variable 3	14%	14%	14%	2%	29%	14%	43%	45%	0%	6%
Variable 4	29%	14%	43%	43%	14%	14%	14%	29%	0%	0%
Variable 5	43%	14%	29%	43%	0%	0%	14%	29%	14%	14%

There was no recorded Strongly Disagree vote for the first three strategy variables of

- Knowledge of strengths and weaknesses
- Partnership with local player
- Acquisition or merger of a local player

The first and the last strategy variables of knowledge of strengths and weaknesses and having a strong brand did not receive any Neutral (neither agree nor disagree) vote showing that the experts were all opinionated on this issue. The Percentage of responses agreeing or strongly agreeing that the following variables were good strategies for internationalisation are shown in graph 2 below:

GRAPH 2: Percentage of respondents agreeing that the constructs impacted internationalisation success



Following internationalising clients was perceived to be the worst strategy by both groups giving it less than fifty percent of the votes. Knowledge of own strengths and weaknesses was viewed as very important by both groups with the experts with international experience giving it almost 100% of their votes.

5.5.3 Research Question 3:

There are financial constraints preventing ICT enterprises from internationalising.

The financial constraint construct was analysed with its three variables of:

- Huge Capital Required
- International Finance Complexities require maturity
- Domestic Success

Table 12 below shows the dispersion and central tendency of the responses received on the three variables:

TABLE 12: Financial Constructs' Variables: The dispersion and central tendency of the responses

Financial Constraints Construct had the following Variables						
		Median	Mode	Range	IQR	SD
Variable 1	Huge Capital Required	2.5	2	4	2	1.17
Variable 2	International Finance Complexities require maturity	2.5	4	4	2.75	1.40
Variable 3	Domestic Success	2	2	3	1.75	1.09

Most experts disagreed with variable two which stated that the complexities of international finance required a more mature company since table 12 shows that the mode was 4. For variables one and two which spoke of huge capital being required for internationalisation and maturity being required for the management of international complexities respectively, had ranges of 4 each. This meant that they received responses ranging from strongly agree to strongly disagree.

Table 13 below shows all the received responses in percentages:

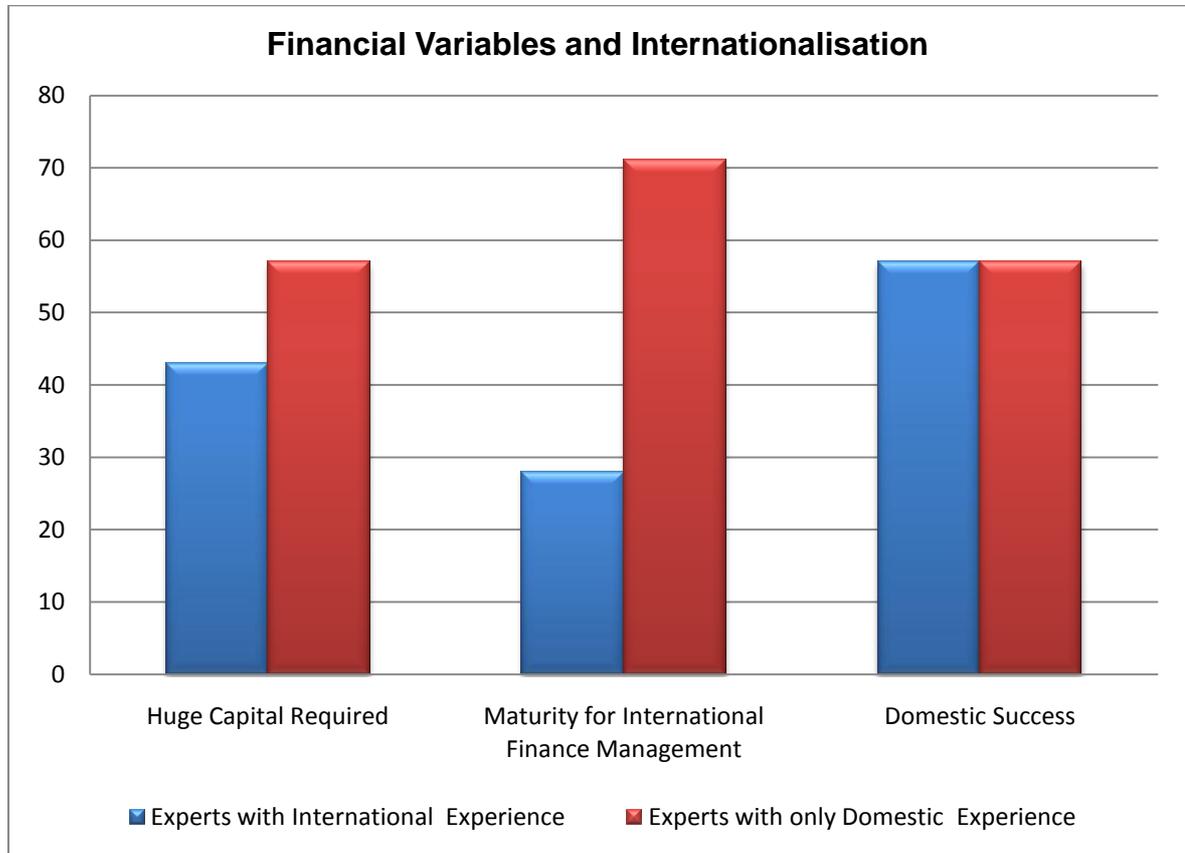
TABLE 13: Percentage of Responses Selected

Financial Constraints Construct had the following Variables										
Variable	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
	Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
Variable 1	0%	14%	43%	43%	14%	14%	29%	29%	14%	0%
Variable 2	28%	28%	0%	43%	29%	0%	29%	29%	14%	0%
Variable 3	14%	14%	43%	43%	0%	29%	43%	14%	0%	0%

Experts in domestic experience only did not strongly disagree any of the variables. Experts with international experience did not strongly agree with variable 1 about the huge capital requirement for internationalisation and some (14%) strongly disagreed with it. Very little neutrality (neither agree nor disagree) is shown as most experts preferred to support or oppose the variables proposed.

Graph 3 below shows the 'agree' and 'strongly agree' responses per expert group:

GRAPH 3: Percentage of respondents agreeing that the constructs impacted internationalisation success



The two expert groups differed sharply on variable 2 which stated that maturity is required for international finance management. Less than 30% of the experts with internationalisation group agreed with the statement to over 70% of the experts with only domestic experience group who agreed with the statement. Both groups however believed that domestic success was necessary for international success with 57% of them agreeing or strongly agreeing with the statement.

5.5.4 Research Question 4:

Are there political or regulatory constraints preventing ICT enterprises from internationalising?

The Political and regulatory constraint was investigated with its four variables:

- Trade pacts like SADC assists in internationalisation
- Differing legislation hinders internationalisation
- Tax incentives facilitates internationalisation
- Support of domestic government enables internationalisation

Table 14 below shows the dispersion and central tendency of the responses to the four Political/Regulatory variables:

TABLE 14: Political Variables: The dispersion and central tendency of the responses

Political/Regulatory Constraints Construct had the following Variables						
		Median	Mode	Range	IQR	SD
Variable 1	Trade pacts like SADC	2.5	1	4	2.5	1.34
Variable 2	Differing legislation	2	2	4	0.75	1.08
Variable 3	Tax incentives	2	2	4	1	1.09
Variable 4	Support of domestic government	2	2	3	1	0.93

Most experts in both groups agreed with the sentences presented that trade pacts assisted internationalisation; differing legislation hindered it; tax incentives facilitated it and support of domestic government was needed in internationalising judging by the mode being either 1 (strongly agree) or 2 (agree). There were still some experts who disagreed and evenly strongly disagreed with the first three assertions since the range of answers is 4 meaning all five possible responses were selected.

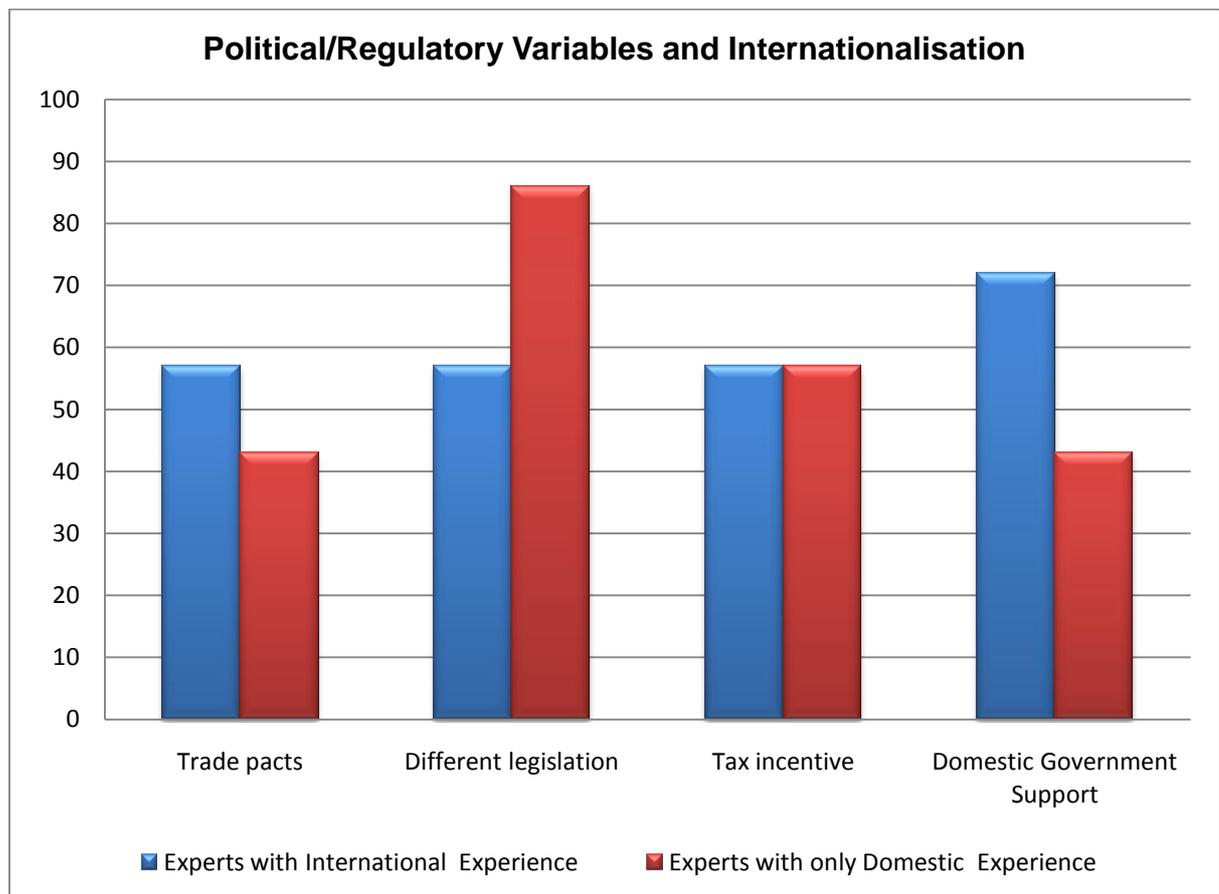
Table 15 below shows all the responses received and their selected option in percentages:

TABLE 15: Percentage of Responses Selected

Political/Regulatory Constraints Construct had the following Variables										
Variable	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
	Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
Variable 1	28%	29%	29%	14%	29%	14%	0%	43%	14%	0%
Variable 2	0%	29%	57%	57%	15%	14%	14%	0%	14%	0%
Variable 3	28%	0%	29%	57%	29%	29%	0%	14%	14%	0%
Variable 4	15%	0%	57%	43%	14%	28%	14%	29%	0%	0%

From the above table, it is clear that within the domestic only expert groups, there was absolutely no ‘strongly disagree’ selection made; whilst in the international expert group 14% consistently selected it. Most of the responses were clearly in the ‘agree’ group for all the assertions for all the expert groups. There was absolutely no neutrality (neither agree nor disagree) as both groups caused their opinions to be felt. Graph 4 below shows the percentage responses of experts who selected either ‘agree’ or ‘strongly agree’:

GRAPH 4: Percentage of respondents agreeing that the constructs impacted internationalisation success



Both groups agreed that tax incentives were an important part of internationalisation with their majority selection of over 50%. Whilst the

international expert group felt that Trade pacts were important –with over 50% selecting agree or strongly agree; the domestic only experts disagreed with only slightly over 40% selecting it as important. The other major difference between the expert groups was on the role played by differing legislation per country – over 30% difference between the two groups’ selection.

5.5.5 Research Question 5:

Are there economic constraints preventing ICT enterprises from internationalising?

The economic construct was investigated in depth with the following variables being discussed:

- Similar economies
- Corruption/Effective Institutions
- Bigger economies
- Education

Table 16 below shows the dispersion and central tendency of the responses given to the economic variable:

TABLE 16: Economic Variables: The dispersion and central tendency of the responses.

Economic Constraints Construct had the following Variables						
		Median	Mode	Range	IQR	SD
Variable 1	Similar economies	3	2	2	1	0.80
Variable 2	Corruption/Effective Institutions	2	2	4	1	1.16
Variable 3	Bigger economies	2	2	4	1.75	1.07
Variable 4	Education	3	3	3	1	0.85

The median for variable 1 - similar economy, is 3 showing that there is an equal split of selections between experts who agree that similar economies is a factor and those who disagree. The mode for variable 2 is 2 showing that most experts agree that effective institutions are required for successful internationalisation.

Table 17 below shows all the responses given with their percentages:

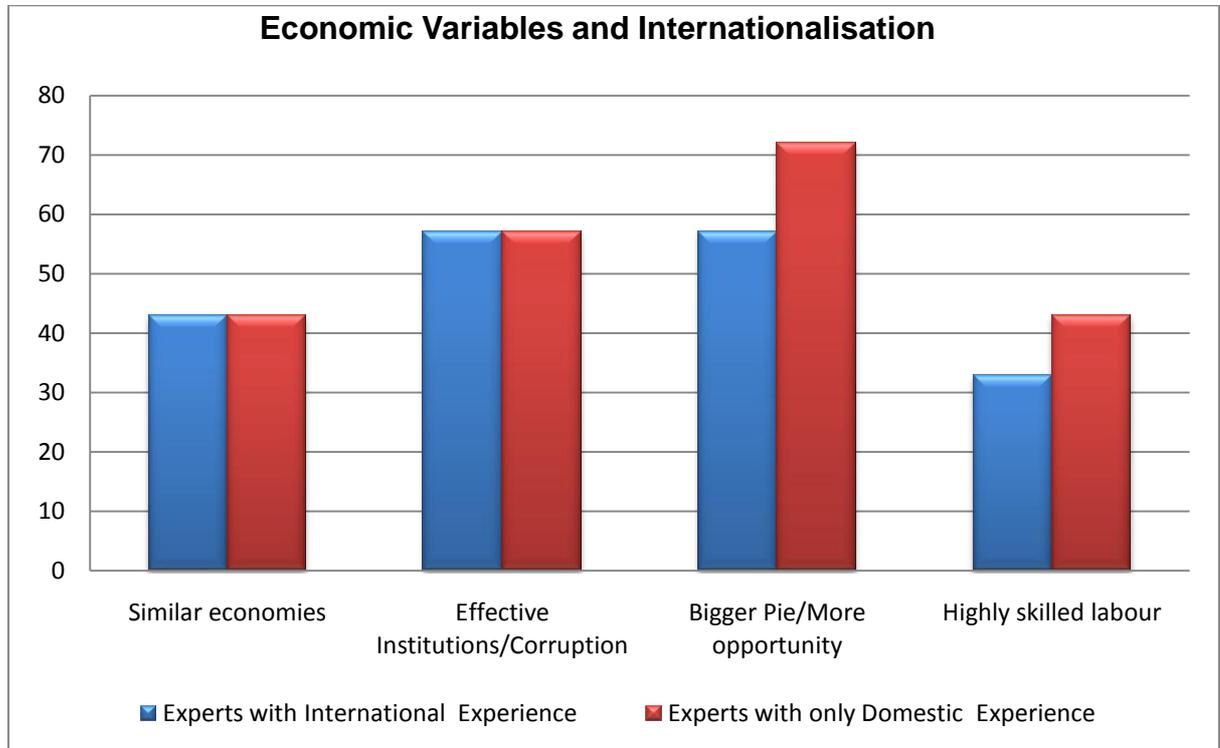
TABLE 17: Percentage of Responses Selected

Economic Constraints Construct had the following Variables										
Variable	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
	Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
Variable 1	0%	0%	43%	43%	14%	57%	43%	0%	0%	0%
Variable 2	14%	14%	43%	43%	0%	43%	29%	0%	14%	0%
Variable 3	0%	0%	57%	72%	0%	14%	29%	14%	14%	0%
Variable 4	14%	14%	29%	29%	43%	57%	14%	0%	0%	0%

None of the domestic experts strongly disagreed any of the variables and they only disagreed with variable 3 (14%) which stated that on average bigger markets are more attractive than smaller ones. The international expert group did not select 'strongly agree' with variable 3 and variable 1- which states that entering similar economies is more desirable than entering a dissimilar economy.

Graph 5 below shows responses that agreed or 'strongly agreed' with the statements presented about the links between internationalisation success and the variables:

GRAPH 5: Percentage of respondents agreeing that the constructs impacted internationalisation success.



From graph 5 above, it can be seen that just over 40% of experts agree that it is essential to target economies similar to the domestic economy. Even fewer experts believe that the education level of a target country has any bearing on the success of enterprises entering it. Corruption, as evidence of ineffective institutions received almost 60% support from experts as determining the success of enterprises entering specific markets. Both groups of experts believe that it is better to target a bigger economy than a smaller one with the domestic only expert group giving it over 70% support.

5.5.6 Research Question 6:

Are there are socio-cultural constraints preventing ICT enterprises from internationalising?

Socio-cultural constraints construct was investigated with the following variables:

- Similar culture
- Similar language
- Religion and its influence on internationalism

Table 18 below show the dispersion and central tendency of the responses from the experts:

TABLE 18: Socio-Cultural Variables: The dispersion and central tendency of the responses

Socio-cultural Constraints Construct had the following Variables						
		Median	Mode	Range	IQR	SD
Variable 1	Similar culture	2	2	3	1	1.02
Variable 2	Similar language	2	3	3	1	0.91
Variable 3	Religion and internationalism	3	2	2	1.75	0.86

Variable 3 has a mode of 2 meaning most experts believed that religion has a role it plays for enterprises entering markets. Variable 3 also has a median of

3 showing that equal numbers of experts were on either side of 3 –agreeing and disagreeing with the importance of the variable.

Table 19 below shows the percentage spread of the responses received:

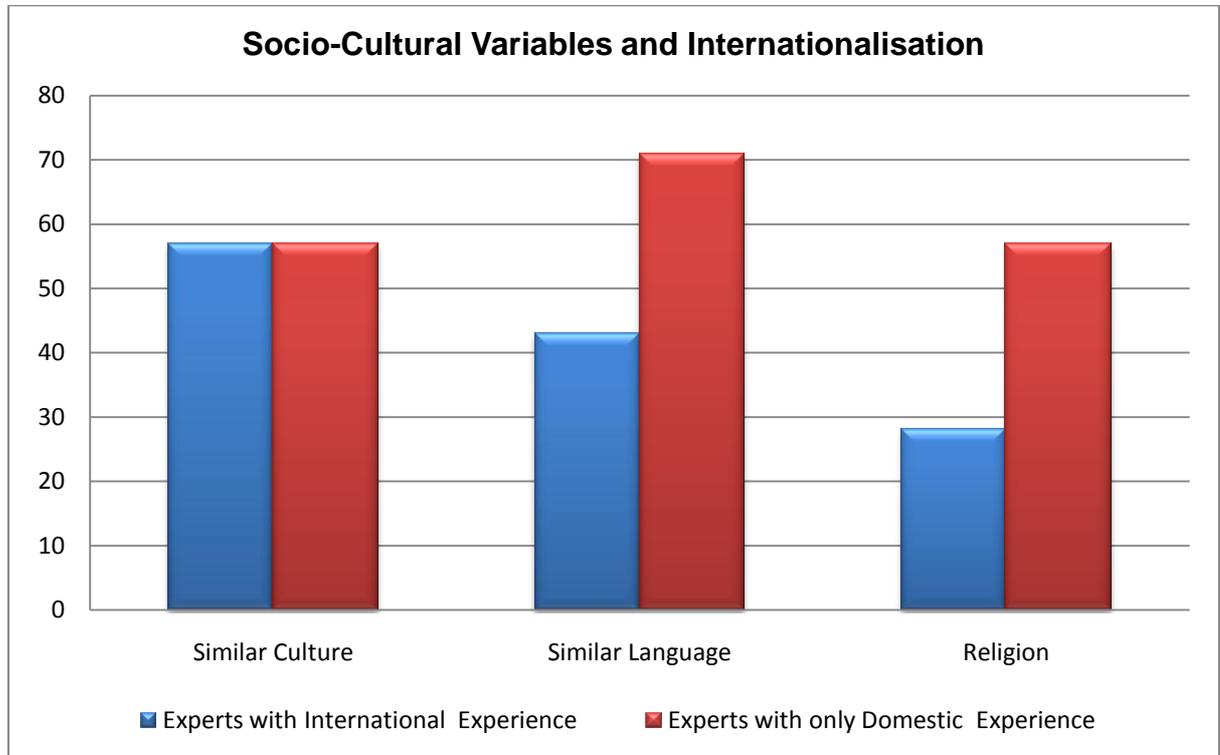
TABLE 19: Percentage of Responses Selected

Socio-cultural Constraints Construct had the following Variables										
Variable	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
	Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
Variable 1	28%	0%	29%	57%	14%	29%	29%	14%	0%	0%
Variable 2	29%	14%	14%	57%	43%	29%	14%	0%	0%	0%
Variable 3	0%	0%	28%	57%	29%	29%	43%	14%	0%	0%

Neither expert group strongly disagreed with the three variables as factors that could influence internationalisation, as shown on table 14 above. They also did not strongly agree that religion was a factor.

Graph 6 below shows the percentage number of experts that either agreed or ‘strongly agree’ that the three variables could influence internationalisation:

GRAPH 6: Percentage of respondents agreeing that the constructs impacted internationalisation success.



From graph 6 above, it can be seen that experts with only domestic experience believe that similar languages between target and domestic country, are a key factor. Less than fifty percent of experts with international experience agreed. Similar culture was highlighted by both groups as being important.

5.6 CONCLUSION

This chapter summarised and presented the results of the study. The next Chapter, being chapter 6 will contrast these findings to the chapter 2 literature summary finding. The researcher will also provide analysis of the findings in chapter 6.

CHAPTER 6: ANALYSIS OF RESULTS

6.1 INTRODUCTION

This chapter discusses the results presented in the previous chapter. It contrasts them to the literature summary findings. It has the following outline:

Research Question 1: Are there any human resource constraints preventing ICT enterprises from inter-nationalising?

Research Question 2: Are there any strategy constraints preventing ICT enterprises from internationalising?

Research Question 3: Are there financial constraints preventing ICT enterprises from internationalising?

Research Question 4: Are there political or regulatory constraints preventing ICT enterprises from inter-nationalising?

Research Question 5: Are there socio-cultural constraints preventing ICT enterprises from inter-nationalising?

Research Question 6: Are there economic constraints preventing ICT enterprises from internationalising?

6.2 RESEARCH QUESTION 1:

Are there any human resource constraints preventing ICT enterprises from internationalising?

This construct was investigated with emphasis on its four variables:

- International experience
- International training or qualification
- Employment of indigenous people
- Organisational design suited to internationalization

The research findings and analysis will be done per variable with concluding remarks per construct integrating pertinent points from literature summary.

6.2.1 International Experience

The experts were presented with the following statement and asked to select one option which describes their perceptions best from the five presented below:

Senior management need to have international experience for the company to succeed in internationalisation.

Table 20: Likert Scale used throughout the questionnaire

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

The selections made are shown in table 21 below:

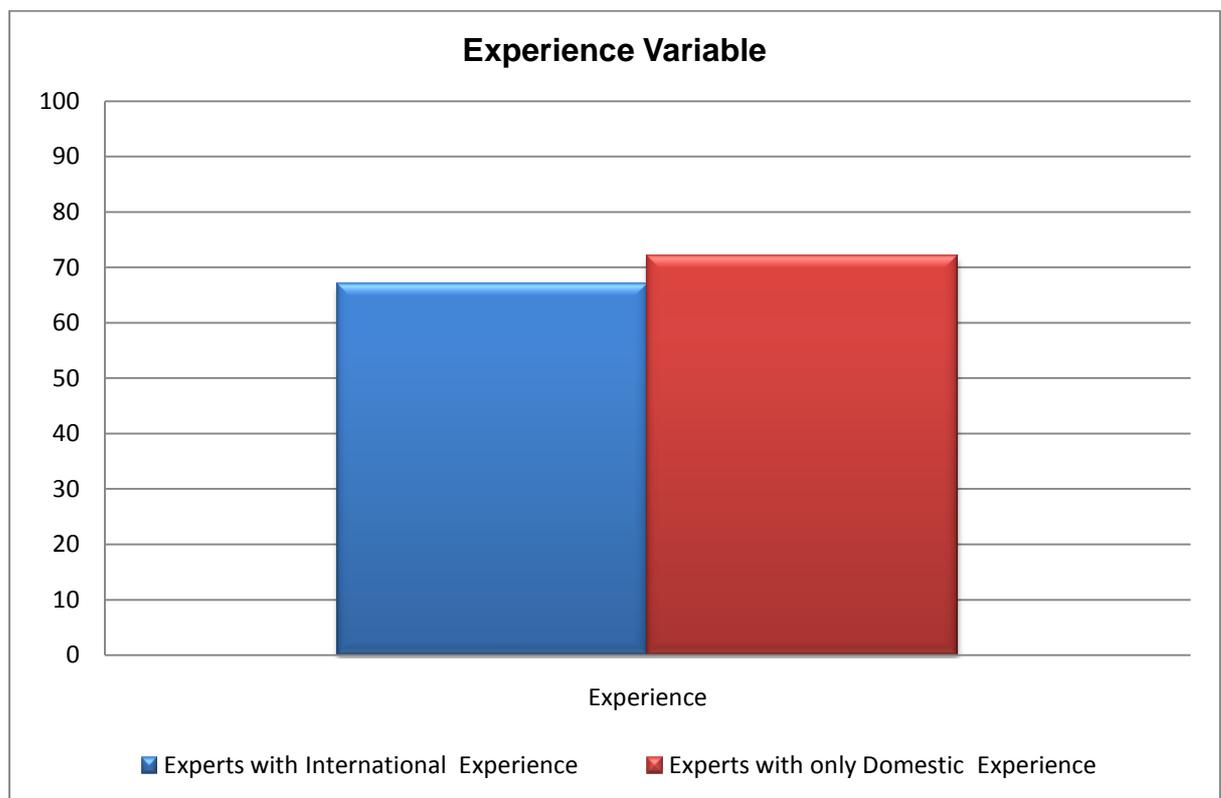
Table 21: Selections for International Experience

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
17%	29%	50%	43%	0%	14%	33%	14%	0%	0%

The selections have a Median of 2, a Mode of 2, Range of 3 and IQR of 0.75 and Standard Deviation (SD) of 1.07.

67% of the experts with international experience and 72% of experts with only domestic experience either agreed or strongly agreed with the above sentence as depicted in Figure 2 below:

Figure 2: International Experience Variable



Thus international experience was seen as an important determinant of success in internationalisation. Literature also supported that view as detailed in chapter two highlighting that both international experience and exposure assisted entrepreneurs in discovering internationalisation opportunities and innovating to exploit them.

6.2.2 International Qualification

The experts were asked to select an answer from the Likert Scale if they agreed or disagreed with the following sentence:

Senior management need to have international training or qualification for the company to succeed in internationalisation.

They answered as indicated in table 22 below:

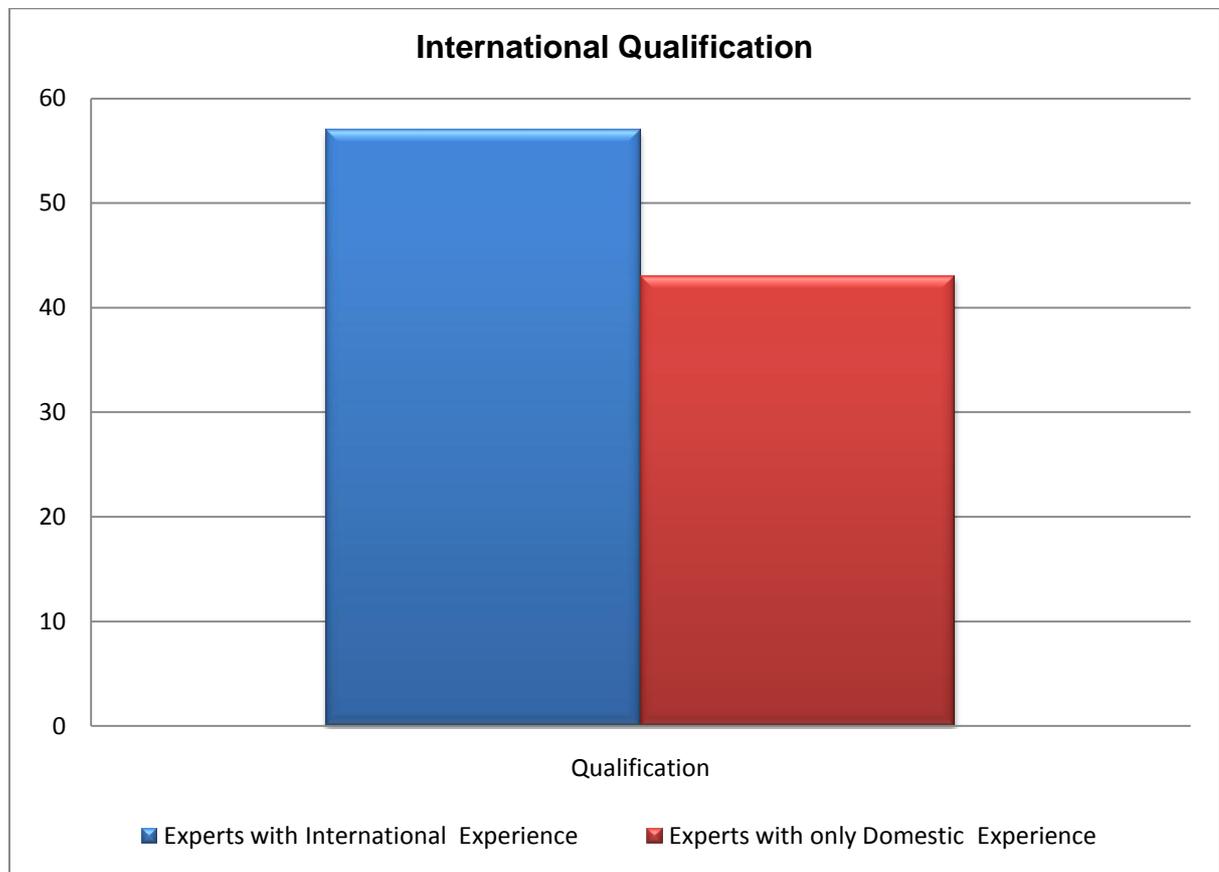
Table 22: Selections to question 2

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
14%	14%	43%	29%	0%	14%	43%	43%	0%	0%

The selections had a Median of 2.5, a Mode of 4, a Range of 3, an IQR of 2 and an SD of 1.19

57% of the experts with international experience and 43% of experts with only domestic experience either agreed or strongly agreed with the above sentence as depicted in Figure 3 below:

Figure 3: International Qualification and Internationalisation



Thus less than 50% of experts with only domestic experience thought that international qualification or training could assist internationalisation. Literature seems to suggest however that internationalisation exposure – either through networks, experience, training or even interaction would assist companies in internationalising.

6.2.3 Organisational Design

On Organisational Design, selections were as follows in Table 23:

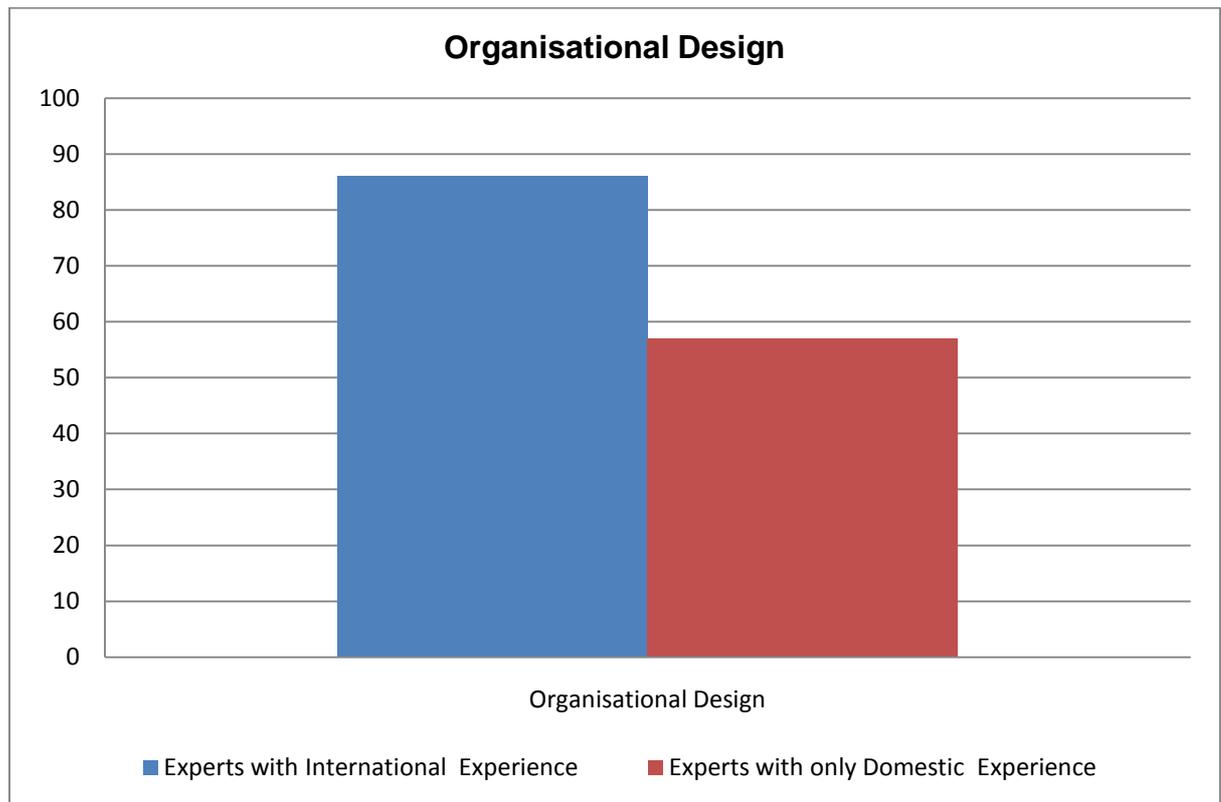
Table 23: Organisational Design Selections

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
29%	14%	57%	43%	14%	14%	0%	29%	0%	0%

The Median was 2, the Mode 2, the Range 3, the IQR 0.75 and the SD 0.97.

86% of the experts with international experience and 57% of experts with only domestic experience either agreed or strongly agreed with the above sentence as depicted in Figure 4 below:

Figure 4: Organisational Design and Internationalisation



6.2.4 Employment of indigenous citizens

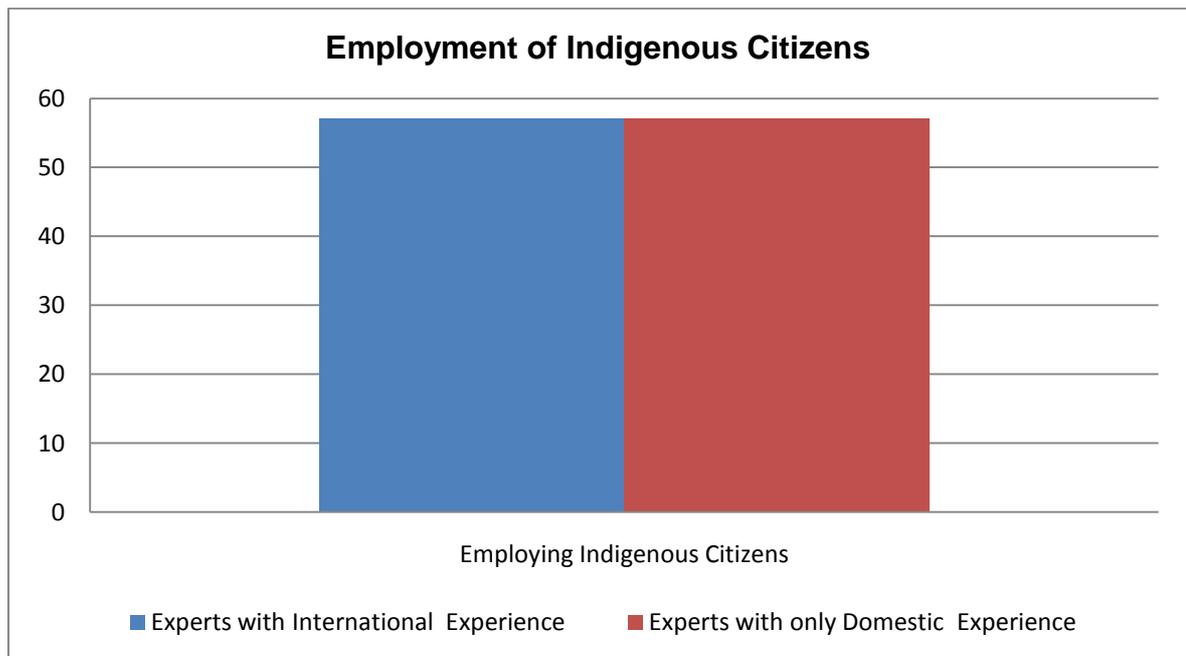
When asked about the employment of indigenous citizens the experts selected as depicted in Table 24 below:

Table 24: Employment of Indigenous Citizens Selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
28%	43%	29%	14%	14%	0%	29%	43%	0%	0%

The selection had a Median of 2, Mode of 4, Range of 3, IQR of 3 and SD of 1.34. 57% of both groups of experts either agreed or strongly agreed with the above sentence as depicted in Figure 5 below:

Figure 5: Employment of Indigenous Citizens



One of the experts surveyed stated that the *‘indigenous employees may sometimes be the only sustainable competitive advantage because of their contacts and intimate knowledge of the target country’s culture’*.

6.3 RESEARCH QUESTION 2:

Are there any strategy constraints preventing ICT enterprises from internationalising?

This construct was investigated with emphasis on its five variables:

- Knowledge of strengths and weaknesses
- Partnership with local player
- Serving internationalising clients
- Acquisition or merger of a local player
- Strong brand or patent

6.3.1 Knowledge of own strengths and weaknesses

Selections made for this variable are depicted in table 25 below:

Table 25: Selections for knowledge of strengths and weaknesses

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
43%	43%	57%	43%	0%	0%	0%	14%	0%	0%

This is one variable that received universal support from both groups. The surveyed literature did not emphasise its importance. The Median was 2 , the Mode 2, the IQR 3, the Range 1 and the SD 0.82.

6.3.2 Partnership with local players

The experts made the following selections on this variable depicted in table 26 below:

Table 26: Partnership with local players selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
29%	29%	43%	57%	14%	14%	14%	0%	0%	0%

This statement was also heavily supported by both groups. It is the crux of the International New Ventures Theory, which speak about companies which internationalise very quickly because of network support. One expert mentioned the need to manage the relationship well and collaborate well so that no party should feel that their intellectual property was abused in the partnership. The Median was 2, the Mode was 2, the Range was 3, the IQR was 0.75 and the SD was 0.88.

6.3.3 *Serving internationalising clients*

Experts were asked about following clients who were internationalising as a strategy and they made the selections depicted below in table 27:

Table 27: Serving internationalising clients strategy

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
14%	14%	14%	2%	29%	14%	43%	45%	0%	6%

This strategy was not well supported by the surveyed experts with less than 30% of one group agreeing or strongly agreeing with the concept. It was felt that this could be used as a supporting reason but not the major reason. The Median was 3, the Mode was 4, the Range was 3, the IQR was 2 and the SD was 1.14.

6.3.4 Acquisition or merger with a local player

The experts made the following selections depicted below in table 28:

Table 28: Acquisition or Merger with local player

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
29%	14%	43%	43%	14%	14%	14%	29%	0%	0%

This strategy variable was well supported by both groups as shown by the percentages of agree and strongly agree in table 28 above. The Median was 2, the Mode 2, the Range 3, the IQR 1 and the SD was 1.08.

6.3.5 Strong brand or patented technology

The experts made the following selections for this variable depicted in table 29 below:

Table 29: Strong brand or patented technology selections

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
43%	14%	29%	43%	0%	0%	14%	29%	14%	14%

72% of internationalised experts and 57% domestic only group of experts agreed with the sentence which has very strong literature support including Michael Porter’s theories on strategies. The Median was 2, the Mode 2, the Range 4, the IQR 2.75 and the SD was 1.50.

6.4 RESEARCH QUESTION 3:

Are there any financial constraints preventing ICT enterprises from internationalising?

This construct was investigated with emphasis on its five variables:

- Huge Capital Requirement
- International Finance Complexities and maturity
- Domestic Success as a precursor to internationalisation

6.4.1 Huge capital requirement in internationalising

The experts made the following selections depicted in table 30 below:

Table 30: Capital requirements selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
0%	14%	43%	43%	14%	14%	29%	29%	14%	0%

The experts with internationalisation experience felt it did not require a lot of capital to internationalise whereas the other group felt differently. Finance is always a factor in entrepreneurship and internationalisation. The Median was 2.5, the Mode 2, the Range 4, the IQR 2 and the SD was 1.17.

6.4.2 International finance complexity and enterprise maturity

The experts made the following selection on table 31 below:

Table 31: International Finance Complexity

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
28%	28%	0%	43%	29%	0%	29%	29%	14%	0%

The question really had two factors to it – maturity of enterprises attempting internationalisation and complexities of international finance. The experts felt that South African enterprises could handle both showing the strong banking sector in the country. The Median was 2.5, the Mode 4, The Range 4, The IQR 2.75 and the SD was 1.40.

6.4.3 Domestic success as a precursor to internationalisation

The experts made the following selections depicted in table 32 below:

Table 32: Domestic success as a precursor to internationalisation selections

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
14%	14%	43%	43%	0%	29%	43%	14%	0%	0%

This is the crux of the stage theory of internationalisation which was popular in the 1970's and eighties. Whilst this theory has been proven incapable of explaining 21st Century internationalisation successes; most of the experts surveyed still agreed with it. The Median was 2, the Mode was 2, the Range was 3, the IQR was 1.75 and the SD was 1.09.

6.5 RESEARCH QUESTION 4:

Are there political or regulatory constraints preventing ICT enterprises from internationalising?

This construct was investigated with emphasis on its five variables:

- Trade pacts like SADC assists in internationalisation
- Differing legislation hinders internationalisation
- Tax incentives facilitates internationalisation
- Support of domestic government enables internationalisation

6.5.1 Trade pacts like SADC assists in internationalisation

The experts made the following selections in depicted in table 33 below:

Table 33: Trade pacts selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
28%	29%	29%	14%	29%	14%	0%	43%	14%	0%

57% of the experts with internationalisation experience agreed with the sentence. They noted that trade pacts made it cheaper through tax concessions and ensured that regulations were respected by both sides. The Median was 2.5, the Mode was 1, the Range was 4, the IQR was 2.5 and the SD was 1.34.

6.5.2 Differing legislation hinders internationalisation

The experts made the following selections depicted in table 34 below:

Table 34: Differing legislation

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
0%	29%	57%	57%	15%	14%	14%	0%	14%	0%

The experts noted that whilst regulation is good, compliance always imposed monetary pressures and compliance to different countries meant increase in costs. The Median was 2, the Mode was 2, the Range 4, the IQR 0.75, the SD was 1.08.

6.5.3 Tax incentives facilitates internationalisation

The experts made the following selections depicted in table 35 below:

Table 35: Tax incentive selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
28%	0%	29%	57%	29%	29%	0%	14%	14%	0%

The Median was 2, the Mode 2, the Range 4, the IQR 1 and the SD was 1.09.

The surveyed experts agreed that tax incentives played a role but were not necessarily the main decision factors considered.

6.5.4 Support of domestic government enables internationalisation

The experts made the following selections depicted in table 36 below:

Table 36: Support of domestic government selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
15%	0%	57%	43%	14%	28%	14%	29%	0%	0%

One expert who had internationalisation experience had stories to tell about the role played by his domestic government in resolving some of the problems he had. In the developing world it seems companies require their state's support. The Median was 2, the Mode 2, the Range 3, the IQR 1 and the SD was 0.93.

6.6 RESEARCH QUESTION 5:

Are there economic constraints preventing ICT enterprises from internationalising?

This construct was investigated with emphasis on its five variables:

- Similar economies
- Effective Institutions or corruption
- Bigger economies
- Education

6.6.1 Targeting similar economies assists in internationalisation- for example developing economy enterprise targeting developing economy enterprise.

The experts made the following selections depicted in table 37 below::

Table 37: Targeting similar economies selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
0%	0%	43%	43%	14%	57%	43%	0%	0%	0%

The experts noted that in ICT it seemed easier in some instances for companies from developed countries to enter developing markets than the other way round. The Median was 3, the Mode 2, the Range 2, the IQR 1, and the SD was 0.80.

6.6.2 *Ineffective institutions as represented by corruption hinders internationalisation*

The experts made the following selections depicted in table 38 below:

Table 38: Ineffective institutions selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
14%	14%	43%	43%	0%	43%	29%	0%	14%	0%

The variable explored was corruption as a proxy for all other necessary institutions like Banking, Tax authorities, Judicial and Criminal Systems. There were stories of goods failing to enter countries because of unpaid bribes. The general consensus was that it was easier to do business in an environment of effective institutions. The Median was 2 , the Mode 2, the Range 4, the IQR 1, and the SD was 1.16.

6.6.3 *Bigger opportunities or economies facilitate internationalisation*

The experts made the following selections as depicted in table 39 below:

Table 39: Bigger opportunities or economies Selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
0%	0%	57%	72%	0%	14%	29%	14%	14%	0%

It was pointed out that Nigeria was more interesting than Swaziland even with its challenges of ineffective institutions. Bigger markets always have a pull factor that smaller markets do not have. The Median was 2, the Mode was 2, the Range was 4, the IQR was 1.75 and the SD was 1.07.

6.6.4 Education level of a target country affects the success of an enterprise's internationalisation effort.

The experts made the following selections depicted in table 40 below:

Table 40: Education level of target country selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
14%	14%	29%	29%	43%	57%	14%	0%	0%	0%

Whilst it was desirable to enter markets with abundance of potential employees, it was not a determining factor of success. It was felt that expertise could always be imported into the target country. The Median was 3, the Mode was 3, the Range was 3, the IQR was 1 and the SD was 0.85.

6.7 RESEARCH QUESTION 6:

Are there socio-cultural constraints preventing ICT enterprises from internationalising?

This construct was investigated with emphasis on its five variables:

- Similar culture
- Similar language
- Religion and its influence on internationalism

6.7.1 Targeting countries with similar culture assists in internationalisation

The experts made the following selections as depicted in table 41 below:

Table 41: Similar Culture Selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
28%	0%	29%	57%	14%	29%	29%	14%	0%	0%

Similar culture was always preferred to the opposite. It was felt that less research needed to be executed and most things (packaging, advertisements) could be exported raw. Thus it was cheaper. The Median was 2, the Mode was 2, the Range 3, the IQR was 1 and the SD was 1.02.

6.7.2 Targeting countries with similar language assists in internationalisation

The experts made the following selections depicted in table 42 below:

Table 42: Similar language selection

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
29%	14%	14%	57%	43%	29%	14%	0%	0%	0%

Similar language was preferred to the opposite. It was felt that it reduced duplication and costs. The Median was 2, the Mode was 3, the Range 3, the IQR 1 and the SD was 0.91.

6.7.3 Religion and its influence on internationalism

The experts made the following selections depicted in table 43 below:

Table 43: Religion and Internationalisation selections

Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly disagree	
Int	Do	Int	Do	Int	Do	Int	Do	Int	Do
0%	0%	28%	57%	29%	29%	43%	14%	0%	0%

It was felt that religion had no part to play in ICT enterprises internationalising. The Median was 3, the Mode was 2, the Range was 2, the IQR was 1.75 and the SD was 0.86.

6.8 CONCLUSION

Internal and external constraints were investigated. Internal constraints always carry more weight since there are some enterprises which are succeeding in the same environment within which others are failing. Whilst as one expert sated *‘India is dominating software development and China is dominating hardware development. It is difficult for South African companies to find a niche they could dominate’*, other experts felt that some South African enterprises had done well in internationalising. The constraint is mostly in the ‘eye of the beholder’.

CHAPTER 7: CONCLUSION

7.1 INTRODUCTION

This study investigated constraints facing South African ICT SMME enterprises internationalising. The problem was explored through a qualitative experience survey of experts who had experience in starting and running ICT enterprises and half of the experts surveyed had experience in successful internationalisation. This chapter details the findings and recommendations together with the journey undertaken in identifying, planning, investigating, reporting and analysing the problem.

7.2 PROBLEM DISCOVERY AND EXPLORATION

The rise of India – a developing economy as an International ICT powerhouse {according to Harvard Business Review article by Cappelli, H. Singh, Singh & Useem (2010)} begs the question ‘Why not South Africa?’ According to Gartner, South Africa has some of the most sophisticated consumers of ICT services and software in Financial Institutions (Gartner, 2010). This according to Michael Porter’s cluster theories (Porter, 2008) is one of the four determinants of international competitiveness. The other three factors being

- the ICT industry’s rivalry and sustained investment and upgrading
- world class suppliers, supporters and related industries to ICT
- ICT infrastructure, human and capital resources

If South Africa excels in the first factor, how is it performing in other factors and what is the role that entrepreneurs should be playing in driving its international competitiveness? What is hindering them from playing that role?

The role of entrepreneurs is not inconsequential since it has been shown that they influence the competitiveness of the country as in figure 6 below:

Figure 6: Global Competitiveness: Adapted from Nieman and Niewenhuizen, (2009)



This study then set to explore the constraints hindering entrepreneurs from being internationally competitive. Since according to Nieman and Niewenhuizen (2009) most entrepreneurial activity takes place within SMME enterprises, ICT SMMEs were selected as proxies for entrepreneurial activity. The study was then labelled 'Internationalisation constraints: an ICT entrepreneur's perspective'.

7.3 SECONDARY RESEARCH

Secondary research was then undertaken to explore the problem further. The first constraint unearthed was the dearth of entrepreneurs in South Africa! According to the Global Entrepreneurship Monitor (GEM), South Africa has lower than expected entrepreneurial activity rates, given its per capita income (Herrington *et al.*, 2008). The GEM further states that the entrepreneurial activity rate of South Africa is below the average for efficiency driven economies and even for middle to low income economies (Herrington, *et al* 2008). It states that South Africa's entrepreneurial activity is actually half of what it is expected to be. If there are no entrepreneurs there can be no international entrepreneurs.

International academic literature reinstated the need for this study (Annavarjula *et al.*, 2009; Etemad, 2004; McDougall, *et al*, 2003). Upon investigation, it was realised that there are two major categories of constraints preventing enterprises from internationalising:

- Internal constraints or the Organisational Environment
- External constraints or the International Environment

The Organisational Constraints

These are factors largely under the control of the enterprise and include finance and managerial competency of the decision makers (Olawale and Garwe, 2010), human resource and strategies applied by managers in

internationalising. According to Olawale and Garwe, (2010) access to finance is a critical problem for SMME enterprises in South Africa such that it is the second most reported contributor to low new firm creation and failure, after education and training in South Africa. Olawale and Garwe further state that 75% of applications for bank credit by new SMEs in South Africa are rejected.

According to South Africa's ISAD Plan (2006) lack of access to technology, including the internet and the costs of regulation policy compliance were major constraints. South Africa's private sector, government entities, academia and civil society as represented by SAITIS (2003), found the following constraints:

- Ineffectiveness in delivery capability of the State funding mechanisms to SMME enterprises and infrastructure development.
- No clear National Plan or Framework on ICT development.
- No collaboration or co-opetition on product Research and Development within the private sector and no collaboration on access to international markets.
- Inward focus of the ICT industry in South Africa.

Despite the litany of constraints listed in academic literature in South Africa, there were still entrepreneurs who have been able to internationalise. Thus an experience survey was required to understand their perception of the constraints hindering internationalisation.

7.4 PRIMARY RESEARCH

A qualitative exploratory experience survey was launched to investigate internationalisation constraints. Whilst the survey was open and informal providing opportunity to the 14 randomly selected experts within a convenience sample to volunteer new knowledge the survey was mainly to diagnose the situation and screen alternatives. The research objective was to understand internal and external constraints hindering ICT SMME geographically located in Gauteng. It was addressed by means of six research questions:

Research question 1:

Are there any human resource constraints preventing ICT enterprises from inter-nationalising? The human resource constraint construct was investigated together with its variables including international experience or the lack thereof, international qualification and organisational design.

RESEARCH QUESTION 2:

Are there any strategy constraints preventing ICT enterprises from internationalising? The strategy constraint construct was investigated together with its variables including knowing an enterprise's strengths and weaknesses, utilising mergers and acquisitions prudently and exploiting partnerships and patents.

RESEARCH QUESTION 3:

Are there financial constraints preventing ICT enterprises from internationalising?

RESEARCH QUESTION 4:

Are there political or regulatory constraints preventing ICT enterprises from inter-nationalising? The political constraint construct was investigated with its variables including trade pacts and corruption.

RESEARCH QUESTION 5:

Are there socio-cultural constraints preventing ICT enterprises from inter-nationalising? The socio-cultural constraint construct was investigated with its variables of language and religion and their impact on the success of companies internationalising.

7.5 FINDINGS

7.5.1 Importance of internal organisational constraints

It was found that internal constraints are the determining factors of success or failure in internationalising. External factors should be understood and managed but they were not the determining factor of success.

7.5.2 Importance of human resource constraints

In entrepreneurship, the entrepreneur is at the centre of the enterprise. It is the entrepreneur who has to prospect for internationalisation opportunities, discover them, innovate and take the opportunity to the market. The

entrepreneur has to obtain resources, partner and exploit her network to ensure success of the enterprise. Thus it all rises and falls with the entrepreneur – her experiences, her exposure and possibly training and networks determine the success of the enterprise.

7.5.3 Importance of context

The environment is always in constant flux. Constraints are not necessarily constant. Some constraints are only applicable to developing markets. Some constraints have a disproportional impact depending upon the environment.

7.5.4 Entrepreneur's proactive orientation

The entrepreneurs surveyed were not extremely concerned about coming up with theories that supported their behaviours. They were more concerned with identifying opportunities, innovating and prototyping –‘getting in,’ ‘failing fast’ and ‘testing the market’.

7.5.5 Importance of internationalisation

It became apparent during the study that it is not every person in South Africa who has a global mindset or are concerned about being internationally competitive. Not all entrepreneurs are concerned about developing world class solutions and even world leading solutions, international experiences and exposure and international network of contacts.

7.5.6 Constraint as an opportunity

Access to technology is very often a constraint in South Africa. Constraints are very often opportunities for innovation. Enterprises are forced to innovate

or die by constraints. Constraints are pain points, markets exist for entrepreneurs who can innovate around constraints.

7.6 RECOMMENDATIONS

7.6.1 Further quantitative research

Further research to draw causality is required to take this topic further. This study highlighted the external and internal constraints and their impact on enterprises and countries. More conclusive research showing the quantitative impact of constraints is warranted. More studies are needed to understand and improve South Africa's global competitiveness.

7.6.2 More global and internationalist mindsets are needed

South Africa cannot be an island forever. It cannot afford to focus solely on its challenge and forget about the larger world outside. International experience and exposure are valuable commodities.

7.6.3 More training needed

South Africa has to address its shortage of entrepreneurs and international entrepreneurs in particular. Education that supports this is needed at Schools, Universities and Private enterprises.

7.6.4 Better financing for entrepreneurs is required

South Africa needs to have venture capitalists that will fund entrepreneurs throughout the lifecycle of ventures. Financing was a constraint and it has to be resolved.

7.3 CONCLUSION

It was found that internal constraints are the determining factors of success or failure in internationalising. External factors should be understood and managed but they are not the determining factors of success. It was also found that human resources are the most important internal determining factor of success in internationalisation. Entrepreneurs should strive to have global mindsets through international experiences and exposure. This will increase the probability of their indentifying international opportunities and producing international innovations which lead to international enterprises.

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APPENDIX A: RESEARCH INSTRUMENT

4.4.1 Respondent's Profile

1. My company has attempted internationalisation and it succeeded.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

2. My company has not attempted internationalisation at all.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

3. My company has attempted internationalisation and it failed.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

4. My company employs about:

200 or less employees	500 or less employees	1000 or less employees	5000 or less employees	5001 or more employees
1	2	3	4	5

4.4.2 Constraints in Internationalising: The Organisational Environment

- Human Resource (HR)

5. Senior management need to have international experience for the company to succeed in internationalisation.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

6. Senior management need to have international training or education for the company to succeed in internationalisation.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

--	--	--	--	--

7. A company will succeed in internationalising if its organisational structure is optimised for internationalisation.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

8. When entering a foreign country, companies need to employ local/indigenous citizens if they are to succeed in that foreign market.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

- Finance

9. It requires substantial amounts of capital to successfully internationalise.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

10. Companies will be able to internationalise after they have achieved success in their domestic market.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

11. It requires mature companies to be able to manage the complexities of international finance.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

Strategy

12. A company will succeed in a foreign market if it understands its strengths and weaknesses.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

13. A company will succeed in a foreign market if it partners with local players.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

14. A company will succeed in a foreign market if it internationalises mainly to serve its home clients who have internationalised.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

15. A company will succeed in a foreign market if it acquires or merges with a local player.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

16. A company will succeed in internationalising if it possesses a patent, strong brand or technology which cannot be duplicated by competitors.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

4.4.2 International Environmental constraints in internationalising:

Regulatory and political environment

17. Trade pacts like SADC, assist companies to successfully internationalise.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

18. Differing country legislation and policies make it difficult for companies to succeed in internationalising.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

19. Companies will be more successful in internationalisation if they have a formal internationalisation strategy than if they just search for opportunities.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

20. Tax incentives assist enterprises in internationalisation successfully.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

21. The home government and its support are very crucial to the success or failure of a company that internationalises.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

Economic realities

22. Enterprises are more likely to succeed if they target economies similar to their home countries - for example, a company from a developing economy targeting developing countries.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

23. Level of corruption in a target market determines the success of companies which enter that market.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

24. A company will be more successful if it internationalises in big markets than if it entered smaller markets – size matters.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

25. Differences in culture of target countries impede the success of enterprises in internationalisation.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

26. A company will succeed if it internationalises in markets which speak its home language.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

27. ICT Enterprises are more likely to succeed in expanding to markets which have highly skilled labour.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

28. A target country's dominant religion will not influence the success of ICT enterprises entering that market.



Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5