A comparison of the characteristics of internationalising SMEs in South Africa and the BRIC countries

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ABSTRACT

SMEs are important for a country's economy, since they provide benefits such as entrepreneurship, employment, exports and productivity to an economy. An economy that shows substantial growth is usually characterised by a strong and growing SME sector. South African SMEs need to grow to create jobs and benefit the South African economy. One way that SMEs can become strong and grow is through internationalisation. Firms are internationalising faster than ever before (because of advances in telecommunications and transportation) and internationalisation theories that can provide practical guidance to firms are more important today than in the past.

The motivation of the study was to identify the areas that the South African government can develop in order to transform the economy into an emerging economy that can be on par with the BRIC countries. SMEs make up a large part of the BRICS economies and they grow through exports. In order to be on par with the BRIC countries, it is necessary to compare South African exporting and non-exporting SMEs with those in the BRIC countries. This will help to identify areas where South African SMEs' competitiveness can improve, especially in South-South trade. The competitiveness of SMEs involved in exporting also tends to improve. Therefore, if SMEs' competitiveness improves, it may be less risky for them to internationalise, which can lead to them being able to export more successfully, grow as a result of exporting and so contribute to employment.

The primary objective of the study was to make a comparison between the characteristics of internationalising SMEs in South Africa and the BRICS countries. Data was obtained from the World Bank Enterprise surveys to conduct an empirical analysis on firms in the BRICS countries. The empirical analysis provided descriptive statistics on internationalising firms and SMEs in the BRICS countries. The descriptive statistics was used to make a comparison between the characteristics of internationalising SMEs in the BRICS countries (primary objective). South Africa has the highest percentage of

exporting SMEs, followed by India, Brazil, Russia and China. China had the most exporting SMEs with an internationally recognised certification. The top managers of Chinese exporting SMEs are higher educated than those in India and South Africa. SMEs in Russia internationalise at by far the youngest age and thus are likely to follow the rapid international theories. South African SMEs had the highest average age, meaning that SMEs first are established in the domestic market before they internationalise through exports.

Internationalisation has become an important strategy for firms that want to achieve further growth, but it is also very tough to survive in the international market. An interesting finding of this study was that the two obstacles South Africa had in the top 5 namely, crime, theft and disorder, and electricity were not a top 5 obstacle for any of the other BRIC countries.

Another objective of the study was to empirically determine the characteristics of internationalising SMEs in South Africa. SMEs in South Africa are more likely to internationalise through exports if they are, amongst others, older (longer established in the domestic market), have a larger market share in the South African domestic market, have a top manager with experience and a higher education level (some university training minimum) and have less competitors in the South African domestic market.

The comparison between the characteristics of internationalising SMEs of the BRICS countries provided several lessons for the South African government and exporting SMEs. The areas or aspects that the South African government need to develop in order to transform the economy into an emerging economy that can compete with the BRIC countries, include assisting SMEs in exporting at an earlier age, improving the education levels of top managers in SMEs, increasing the national market share of SMEs and lessening, or even eliminating, obstacles like crime, theft and disorder as well as electricity. These aspects, together with the characteristics of internationalising SMEs in South Africa, are vital to improve SME competitiveness. Therefore, if SMEs' competitiveness improves, then it may be less risky for them to internationalise, which

can lead to them being able to export more successfully, grow as a result of exporting and so contribute to employment.

Keywords: Internationalisation, SME, employment, export, growth, obstacle, BRICS, South Africa.

OPSOMMING

Klein en medium-grootte ondernemings (KMO's) is belangrik vir 'n land se ekonomie aangesien dit voordele soos entrepreneurskap, werksgeleenthede, produktiwiteit en uitvoere meebring. 'n Ekonomie wat beduidend groei, word gewoonlik gekenmerk deur 'n sterk, groeiende KMO sektor. Suid-Afrikaanse KMO's moet groei om werk te skep en om Suid-Afrika se ekonomie te bevoordeel. Een wyse waarop KMO's sterk kan word en groei, is deur internasionalisasie. Ondernemings internasionaliseer deesdae vinniger (weens vooruitgang in telekommunikasie en vervoer) en internasionalisasie-teorieë wat praktiese riglyne aan ondernemings verskaf, is vandag belangriker as ooit.

Die rasionaal agter hierdie studie was om die gebiede te identifiseer waarop die Suid-Afrikaanse regering kan ontwikkel om die ekonomie in 'n opkomende ekonomie te omskep wat op dieselfde vlak as die BRIC lande kan wees. KMO's vorm 'n groot deel van die BRICS ekonomieë en groei deur uitvoere. Om op die vlak van die BRIC lande te kom, is dit nodig om Suid-Afrikaanse KMO's wat uitvoer, en die wat nié uitvoer nie, met KMO's van die BRIC lande te vergelyk. Dit sal help om gebiede waarop Suid-Afrikaanse KMO's se mededingendheid kan verbeter, te identifiseer – veral ten opsigte van Suid-Suid handel. Die mededingendheid van KMO's wat uitvoer, blyk ook te verbeter. Dus: indien KMO's se mededingendheid verbeter, mag internasionalisering dalk vir hulle minder riskant wees. Dit kan daartoe lei dat hulle met groter sukses kan uitvoer, groei as gevolg daarvan en tot werkskepping bydra.

Die primêre doel van die studie was om 'n vergelyking te tref tussen die karaktereienskappe van Suid-Afrikaanse KMO's wat internasionaliseer en die van BRIC lande. Data is van die *World Bank Enterprise* opnames verkry om 'n empiriese analise van ondernemings van die BRICS lande uit te voer. Die empiriese analise het beskrywende statistiek verskaf van ondernemings en KMO's in die BRICS lande wat internasionaliseer. Die beskrywende statistiek is gebruik om 'n vergelyking te tref tussen die karaktereienskappe van KMO's in die BRICS lande wat internasionaliseer (primêre

doel). Suid-Afrika het die hoogste persentasie KMO's wat uitvoer, gevolg deur Indië, Brasilië, Rusland en China. China het die meeste KMO's met internasionaal erkende sertifisering. Topbestuurders van Chinese KMO's wat uitvoer, is hoër opgelei as die van Indië en Suid-Afrika. KMO's in Rusland internasionaliseer baie vroeër en is dus meer geneig om snelle internasionale teorieë na te volg. Suid-Afrikaanse KMO's het 'n hoër gemiddelde ouderdom, dus: KMO's vestig hulleself eers in die plaaslike mark voordat hulle deur uitvoere internasionaliseer.

Internasionalisering het 'n belangrike strategie geword vir ondernemings wat wil groei, maar om op die internasionale mark te oorleef, is baie moeilik. 'n Interessante bevinding uit dié studie is dat Suid-Afrikaanse ondernemings twee hindernisse onder die top vyf ervaar het, nl. misdaad, diefstal en wanorde, en elektrisiteit wat nie onder die top vyf hindernisse by enige van die BRIC lande was nie.

'n Verdere doel met hierdie studie was om die karaktereienskappe van Suid-Afrikaanse KMO's wat internasionaliseer, empiries vas te stel. Suid-Afrikaanse KMO's is meer geneig om deur uitvoere te internasionaliseer as hulle, onder andere, ouer is (langer gevestig in die plaaslike mark), 'n groter plaaslike markaandeel het, 'n topbestuurder met ervaring en 'n hoër vlak van opleiding het (universitêre opleiding minimum) en minder kompetisie in die plaaslike mark het.

Die Suid-Afrikaanse regering en KMO's wat uitvoer, kan talle lesse uit die vergelyking van die karaktereienskappe van KMO's van die BRICS lande wat geïnternasionaliseer het, leer. Gebiede waarop of aspekte waarin die Suid-Afrikaanse regering en KMO's wat uitvoer moet ontwikkel om die ekonomie in 'n opkomende ekonomie te omskep wat met die BRIC lande kan meeding, sluit die volgende in: hulp aan KMO's om op 'n jonger ouderdom te begin uitvoer, die verbetering van topbestuurders van KMO's se opleidingsvlak, die verhoging van die nasionale markaandeel van KMO's en die vermindering, of selfs die uitskakeling, van hindernisse soos, misdaad, diefstal en wanorde, en elektrisiteit. Hierdie aspekte, sowel as die karaktereienskappe van Suid-Afrikaanse KMO's wat internasionaliseer, is van kardinale belang om mededingendheid

van KMO’s te verseker. Dus: indien KMO’s se mededingendheid verbeter, mag internasionalisering dalk vir hulle minder riskant wees. Dit kan daartoe lei dat hulle met groter sukses kan uitvoer, groei as gevolg daarvan en tot werkskepping bydra.

Sleutelwoorde: Internasionalisering, KMO, werkskepping, uitvoere, groei, hindernis, BRICS, Suid-Afrika.

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LIST OF ABBREVIATIONS

APEC	Asia-Pacific Economic Cooperation
BRIC	Brazil, Russia, India, China
BRICS	Brazil, Russia, India, China, South Africa
ENSR	European Network for SME Research
FDI	Foreign Direct Investment
IBSA	India, Brazil, South Africa
ISO	International Organisation for Standardisation
IT	Information technology
GDP	Gross Domestic Product
OECD	Organisation for Economic Co-operation and Development
OLI	Ownership, Location and Internalisation
SME	Small and Medium Enterprise
USA	United States of America

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1.1 Introduction

1.1.1 The importance of Small and Medium Enterprises (SMEs)

SMEs[1] are the core part of an economy and it will continue to be so in the future (Wattanapruttipaisan, 2002:57). Senturk and Erdem (2008:171) state that SMEs are very important for a country's economy. Reasons include that they provide benefits such as productivity (economic growth and development), entrepreneurship, employment and exports to an economy (Das, Shil & Pramanik, 2007:55).

SMEs encourage economic development through the supply of sought-after innovation and sustainability in the economy and the creation of numerous jobs for rural and urban job seekers (Fida, 2008). SMEs improve competition and entrepreneurship and ensure that the economy receives external benefits such as innovation and growth in productivity levels (Beck, Demirguc-Kunt & Levine, 2005:200). Economic development and growth are driven by entrepreneurship, which is the core of SMEs (Lu & Beamish, 2001). High-growth firms usually achieve their success from outstanding entrepreneurs (OECD, 2002:29). In the last few decades, more significance has been given to entrepreneurs, especially by policy-makers and economists (De Klerk & Havenga, 2004:2). A country that shows significant and effective activity by its entrepreneurs will possibly create new products and services on a continuous basis to substitute older ones (OECD, 2002:15). SMEs, assisted by entrepreneur activity growth, create a swell in micro enterprises, which helps an economy whereas large firms tend to retrench its employees during crisis periods (Venesaar & Loomets, 2006:7). Thus, SMEs create jobs through the internal operations of entrepreneurs that stimulate economic growth (De Lange, 2011).

[1]SMEs can be defined according to the scale of operation of the enterprise and the number of employees working at the enterprise (Castel-Branco, 2003:2).

Numerous country-specific studies provide evidence to explain the importance of SMEs (Okpara, 2009:2). For example, the development of entrepreneurship by means of SME development has helped a country such as Estonia to develop economically and reduce unemployment (Venesaar & Loomets, 2006:15). De Kok, De Wit and Suddle (2006:37) studied the Dutch SME sector and revealed that between 1993 and 1998, SMEs were the major source of employment growth. In the past, a country such as Indonesia has shown that if SMEs are very active in a domestic market, they are also likely to create many jobs (Tambunan, 2008:112). SMEs are considered the cornerstone of developing countries' economies, particularly in Africa, since they create jobs in small and informal business. Therefore, SMEs add value to an economy and subsequently contribute to economic growth (De Klerk & Havenga, 2004:1).

An economy that shows substantial growth is usually characterised by a strong and growing SME sector (Fida, 2008). To enter foreign markets is one of the best ways for SMEs to become strong and grow (Lu & Beamish, 2001:566; Sampath, 2006:4). SMEs mainly use exporting as the manner in which they enter foreign markets (Wolff & Pett, 2000:34; Stoian, 2006:2). Exporting is a big source of economic growth for an economy since it is part of domestic production (Gylfason, 1999:1031; Katsikeas, Leonidou & Morgan, 2000).

The main reasons for SMEs to engage in exports are that the SME has a unique product with a technological advantage over its competitors, to achieve scale economies and to capitalise on an opportunity to expand to broader markets (Pope, 2002:20; Sampath, 2006:4). Ibeh and Young (2001:566) show that SMEs with a higher level of entrepreneurship are more likely to have an advanced export performance. Rangarajan (2011) explains that SMEs will export if the domestic market has no more demand, low productivity and competition.

Van der Walt (2007:41) found that 38% of manufacturing SMEs in South Africa engage in exports. The next section provides background on South African SMEs.

1.1.2 The case of South Africa

SMEs in South Africa are defined by the National Small Business Act 102 of 1996. This definition uses the number of employees as a base and divides the business sector of the economy between survivalist enterprises, micro enterprises, very small enterprises, small enterprises and medium enterprises (Abor & Quartey, 2010:221).

It is important for SMEs in South Africa to grow in order to create jobs and ultimately benefit the economy. In 1997, SMEs were responsible for 50% of total employment and approximately 33% of output of the manufacturing sector (Gumede & Rasmussen, 2002:163). The SME sector in South Africa has historically played a big part in the economy resulting in increases in GDP/Production and employment. SMEs contributed 78% to GDP/production and 42% to employment in 2003 (Kauffmann, 2005: 4).

South Africa had an economic growth rate of 5% from 2005 to 2007. The global financial crisis impacted negatively on the growth rate as well as the unemployment rate. This implies that unemployment should be tackled (De Lange, 2011). South Africa has a high unemployment figure estimated in the region of 25.3% (Statistics South Africa, Quarterly Labour Force Survey, 2010). One of the ways to tackle unemployment in South Africa can be to export because manufacturing SMEs in South Africa that export, create more jobs than non-exporter SMEs (Van der Walt, 2007:75).

The export market in South Africa is dominated by a small number of SMEs. Exporting SMEs compared to non-exporting SMEs in South Africa are mature, more capital intensive, bigger and show a higher level of productivity. Only 20% of output is exported and participation of SMEs in export is low. The reasons for the low participation rate in exports are that South Africa has a large domestic market, is situated far from developed countries and has small neighbouring countries. In addition to these reasons, products might have a limited market overseas or exports occur on an ad hoc basis (Edwards, Rankin & Schoër, 2008).

1.2 Problem statement

SMEs need to be able to create jobs and benefit the South African economy. For SMEs to be able to create jobs and benefit an economy, they need to grow. One way to encourage SME growth is through internationalisation (Lu & Beamish, 2001).

Internationalisation for SMEs implies numerous risks and many fail in their international endeavours. Constraints that might hinder an SME from performing include a shortage of necessary skills, technology, business information and capital (Tambunan, 2008:115). It cannot be overstressed how important a role SMEs play in economic development, but hindering factors such as bad infrastructure, low levels of access to capital and ineffective government policies can inherently negatively affect SME sector growth (Okere, 2010:1). The major problems that SMEs in South Africa experience are a lack of management skills and finance, access to bank credit and markets, proper technology, low levels of production capacity, large companies not recognising them, lack of interest, long bureaucracy processes, and a lack of government assistance to help economic development (Kongolo, 2010:2288). Apart from the internal factors challenging South African SMEs, there are also external factors that should be considered such as economic variables and markets, infrastructure, labour and regulations. Economic variables include inflation, foreign exchange rates, interest rates and competition (Olawale & Garwe, 2010:732).

1.3 Motivation

Global competition for SMEs is increasing with many producers competing for old and new markets. China, for example, is one of the countries that show increasingly good competitive power (Wattanapruttipaisan, 2002:59). SMEs need to have some sort of assistance to help them grow in order for them to survive the fierce competition (Wattanapruttipaisan, 2002:61). SMEs are destined to come across certain obstacles or problems whichever path is chosen. A government should enforce policies that promote growth and remove or minimise problems (OECD, 2002:53). Government policies

should be spread on an even basis between small, micro and medium-sized enterprises (OECD, 2002:54).

A new characteristic that is increasingly given more importance by African nations and specifically South Africa is doing business with countries situated in the southern hemisphere, or between emerging economies. This stands directly in contrast with the phenomenon where products were mainly exported to European countries and the United States (Anon., 2009). Battersby (2010) provides the slow-moving growth in Europe and the United States as the reasons why South African firms are switching their export destinations. South-South trade or trade between developing countries has increased significantly over the last few years because of lower tariff barriers (Fugazza & Vanzetti, 2006:3). Half of the global trade stemming from developing countries is South-South trade (Prinsloo, 2011).

Trading allies between emerging economies are being settled between the four biggest emerging markets (Anon., 2009). The four major emerging economies of the world are known as the BRIC countries, which stand for Brazil, Russia, India and China. Out of all the emerging economies globally, the BRIC countries were the most vital contributors to GDP growth between 2005 and 2007 (Georgieva, 2006:4; Hawksworth & Cookson, 2008:2). South Africa formally became part of the leading emerging economies on 24 December 2010 and the “S” was added to BRIC to form BRICS (Smith, 2011:1).

There are many concerns raised because of the inclusion of the South African economy into this grouping, because of its much smaller size compared to the rest of the BRIC countries (De Lange, 2011). A big challenge for the South African government will be to develop the economy into an emerging economy that can compare to the BRIC countries (Conway-Smith, 2011). The minister of economic development, Ebrahim Patel introduced a new plan for economic growth in which 5 million new and better jobs will be created by 2020 if the plan succeeds (Ensor, 2011). With an eye on the new economic growth path, South Africa must learn from successful emerging markets like India and Brazil (Tim, 2011:10).

This study makes a comparison between the characteristics of internationalising SMEs in the BRICS countries. It is necessary to compare South African exporting and non-exporting SMEs with those in the BRIC countries. This will help to identify areas where South African SMEs' competitiveness can improve, especially in South-South trade. Katsikeas, Bell and Morgan (1998) find that the competitiveness of SMEs involved in exporting also tends to improve. Therefore, if SMEs' competitiveness improves, it may be less risky for them to internationalise, which can lead to them being able to export more successfully, grow as a result of exporting and so contribute to employment.

1.4 Objectives

The primary objective is to make a comparison between the characteristics of internationalising SMEs in the BRICS countries.

The specific sub-objectives are to:

- Provide an overview on the theories of internationalisation.
- Discuss the motivations for and barriers to internationalisation.
- Provide an overview of the economies and SMEs of Brazil, Russia, India, China and South Africa.
- Provide descriptive statistics on internationalising firms and SMEs in the BRICS countries.
- Empirically determine the characteristics of internationalising SMEs in South Africa.
- Make policy recommendations.

1.5 Method and data

The method has two sections, namely a literature study and an empirical study.

1.5.1 Literature study

The literature study aims to achieve the first three specific objectives. The first two specific objectives, which are to provide an overview on the theories of internationalisation (which includes among others the Uppsala model, innovation model and born global theory) and the motivations and barriers involved in internationalisation. The third specific objective, which is to provide an overview of the economies and SMEs of Brazil, Russia, India and China, is done through a survey on reports and articles written on the subject.

1.5.2 Empirical study

The empirical study consists of descriptive statistics and a regression model section. The empirical results are obtained using SPSS v.18.0.

In the descriptive statistics section, exporting and non-exporting firms and SMEs of the BRICS countries are compared. The comparison helps to identify areas that can be improved on to make South African exporting SMEs more successful in their international endeavours (thus achieving the fourth sub-objective). The regression model section achieves the fifth sub-objective. This section involves the use of a limited probability model (or logistic regression model) to determine the characteristics of internationalising SMEs in South Africa. A logistic regression model is specifically suited when the dependent variable is binary (in other words, when its value is either 0 or 1). In this study, SMEs that are exporters have a value of 1 and non-exporting SMEs have a value of 0. The model identifies factors (through a range of independent variables) that may make South African SMEs more likely to export. Or put differently, factors that may

increase or decrease the probability of exporting. From the overall empirical results, it is possible to make policy recommendations (this is the sixth sub-objective).

The data used to obtain the empirical results is from the World Bank Enterprise Survey. Table 1.2 shows the number of firms for each country and year in which they were surveyed.

Table 1.1: Firm data

Country	Number of firms	Year
Brazil	1802	2009
Russia	1004	2009
India	1827	2002
China	2400	2003
South Africa	1057	2007

Source: World Bank Enterprise Survey, 2011

1.6 Outline of the study

Chapter 1 serves as the introduction.

Chapter 2 provides an overview on the theories of internationalisation, the motivations for internationalisation and barriers to internationalisation.

Chapter 3 provides background on firstly the macroeconomic environment and secondly on SMEs in each of Brazil, Russia, India and China.

Chapter 4 serves as the empirical chapter. This chapter is divided into two main sections, a descriptive statistics section and logistic regression analysis section.

Chapter 5 concludes and makes recommendations.

Chapter 2
Literature study

2.1 Introduction

Numerous theories exist that serve to capture the internationalisation process of firms (Gankema, Snuif, & Zwart, 2000:15; Hansson, Sundell & Öhman, 2004:8). All of these theories provide a specific approach that a firm should follow in order to be successful when entering foreign markets (Gankema *et al*., 2000:16; Senik, 2010:43). The majority of theories on firm internationalisation originated within the period 1960 to 1990 (Laanti, McDougall & Baume, 2009:123). The first two theories, the Uppsala model and Innovation-related model, reviewed in this study are generally described as the incremental or traditional models of internationalisation (Knight, Bell & McNaughton, 2001:1) and originated between 1976 and 1981.

Extensive research conducted on rapid internationalising firms over the last few decades has prompted scholars to question the traditional internationalisation theories where firms internationalise incrementally (Rasmussen & Madsen, 2002:3; Pajunen & Maunula, 2008:248). This research showed that rapid internationalising firms are becoming a more frequent occurrence (Knight & Cavusgil, 2004:124; Zhang, Tansuhaj & McCullough, 2009:293) and these type of firms are functioning in almost all of the biggest trading nations (Knight & Cavusgil, 2004:125). As a result, a completely new field of internationalisation, namely rapid internationalisation, emerged (Senik, 2010:50). The most significant concepts in rapid internationalisation theory are born global firms and international new ventures (Senik, 2010:51). Another important theory, namely international entrepreneurship, started with interest in international new ventures (Oviatt & McDougall, 2005b:537-538).

In comparison with the traditional internationalisation models, which are built on a slow internationalisation process undertaken by large firms, the new venture model is built on rapid internationalisation undertaken by smaller firms in international entrepreneurship

theory (Autio, 2005:16; Mtigwe, 2006:16). The transaction cost theory, the resource-based theory and Dunning's eclectic approach are other theories that are discussed in this chapter.

Apart from all the internationalisation theories, there is also a vast literature on the motivations and barriers to internationalisation. The objectives of the chapter are to provide an overview of the theories on internationalisation, the motivations for internationalisation and the barriers to internationalisation.

The outline of this section is as follows. Section 2.2 contains the theories of internationalisation. Section 2.3 explains the motivations for internationalisation. Section 2.4 discusses the barriers towards internationalisation and section 2.5 contains the empirical findings of studies on internationalisation. Section 2.6 explains the significance of SMEs and SME internationalisation. Section 2.7 summarises and concludes.

2.2 The theories of internationalisation

This study focuses on seven theories in internationalisation literature. Firstly, the incremental or traditional theories of Uppsala and innovation are discussed. This is followed by a discussion on the rapid internationalising theories. The latter includes the born global or international new venture theory and theory of international entrepreneurship. Lastly, the transaction cost theory, the resource-based theory and Dunning's eclectic approach are discussed.

2.2.1 The incremental internationalisation models

The two major incremental models that describe internationalisation are the Uppsala model and the Innovation model (Morgan & Katsikeas, 1997:73; Ruzzier, Hisrich & Antoncic, 2006:482; Senik, 2010:44). Although the former was found in Sweden (Senik, 2010:44) and the latter in the North-America (Knight *et al*., 2001:2; Senik, 2010:44), both have a similar approach to internationalisation in that internationalisation occurs in incremental steps and through different stages (Senik, 2010:44). These incremental models are discussed in further detail below.

2.2.1.1 The Uppsala model

The Uppsala model is the most noted theory of firm internationalisation (Andersson & Wictor, 2003:250; Saarenketo, Puumalainen, Kuivalainen & Kylaheiko, 2004:365; Chetty & Campbell-Hunt, 2004:59; Forsgren & Hagström, 2007:292; Brennan & Garvey, 2009:121). Lommelen (2004:116) states that all studies on internationalisation should start with the Uppsala model.

By far the biggest contributors to the Uppsala model literature are Johanson and Vahlne (1977). The Uppsala model was derived from empirical observations on Swedish pharmaceutical firms that were in the process of internationalising. Through their observations it became clear that firms internationalised in small incremental steps (Johanson & Vahlne, 1977:24). Accordingly, a model was developed to explain the four-step internationalisation process (Johanson & Wiedersheim-Paul, 1975:307).

The basic mechanism of the Uppsala model consists of state and change aspects, which in turn are divided into four important concepts. These concepts are experiential market knowledge, market commitment, current activities and commitment decisions (Forsgren & Hagström, 2007:293; Senik, 2010:45). The state aspects are experiential market knowledge and the firm's resource commitment. The change aspects are commitment decisions and current activities. The state aspects affect the change

aspects (Ruzzier *et al*., 2006:482). Market commitment decisions are linked to market knowledge and current commitments in the market. The model assumes sequential internationalisation because firms are uncertain about internationalising due to the lack of knowledge, information and experience about foreign market (Senik, 2010:45). The change aspects make that market knowledge is increased and more resources are committed to foreign markets (Ruzzier *et al*., 2006:482).

Table 2.1: The Uppsala model

Stage	Description
1	Firm exports not on fixed basis.
2	The firm exports by means of a free agent acting as a representative of the firm.
3	A sales subsidiary is launched in the foreign market.
4	Production/manufacturing starts in the foreign market.

Source: Johanson and Wiedersheim-Paul (1975:307)

Table 2.1 illustrates the four stages of the Uppsala model. As illustrated by table 2.1, firms do not export on a fixed basis at stage one. The first move towards internationalisation by the firm is to begin exporting through an agent or a representative of the firm at stage two (Johanson & Vahlne, 1977:24). At this stage, firms will use a simple low risk and low commitment strategy, such as direct exporting (Senik, 2010:46). As time goes by, and stage three is reached, the firm will move towards a high risk and high commitment strategy (Senik, 2010:46) by launching a sales subsidiary in the particular foreign market. At stage four, production or manufacturing in the foreign country will start (Johanson & Vahlne, 1977:24).

Johanson and Vahlne (1977) identified two aspects inherent to the Uppsala model, namely knowledge and psychic distance. Knowledge about the internationalisation process and foreign markets improves progressively through the stages (Törnroos, 2000:8). Market knowledge is the information available about markets as seen by individuals involved in market operations (Johanson & Vahlne, 1977:26). As firms gather knowledge, the risks and indecision regarding internationalisation will eventually decrease as they progress into foreign markets (Madsen & Servais, 1997:561). Firms

will commit more resources in a market abroad if they have a deeper knowledge of that market since it would make the perceived market risk lower than usual (Forsgren & Hagström, 2007:293; Ruzzier *et al*., 2006:482). Experiential market knowledge is important because it is the motivating power behind internationalisation (Johanson & Vahlne, 1977:29) and it facilitates resource commitments (Erramilli & Rao, 1990:138). Experiential market knowledge is the knowledge a firm obtains when operating in a foreign market (Erramilli & Rao, 1990:138). If experiential knowledge is applied correctly, it can help to minimise risk in the internationalisation process, as that the firm is able to acquire relevant information and create opportunities in the foreign market. The Uppsala model explains that commitment to internationalisation occurs in little incremental levels where firms increase their experiential knowledge progressively as they advance through the stages (Brennan & Garvey, 2009:121).

This said, one of the biggest barriers to internationalisation is the lack of knowledge (Johanson & Wiedersheim-Paul, 1975:306; Törnroos, 2000:3; Brennan & Garvey, 2009:117). The lack of foreign market knowledge occurs when there are dissimilarities between the home and foreign market in factors such as culture and language (Johanson & Vahlne, 1977:26). The knowledge barrier forces firms to first export to countries which they are familiar with and identical in business functions. The effect of these barriers can however be reduced by learning about markets abroad and business functions (Johanson & Wiedersheim-Paul, 1975:306).

The second factor inherent to the Uppsala model is psychological distance (Johanson & Vahlne, 1977). Usually, in internationalisation, firm operations start at home and it expand first to markets closest to home (i.e. markets that are in psychically close proximity to the home market) (Baronchelli & Cassia, 2008:3). As time passes, managers will gain more knowledge, which will make it possible for the firm to expand in to markets that are geographically and culturally distant from the home market (Fillipesci, 2007:12). Thus, psychological distance when entering foreign markets, has to be considered (Johanson & Wiedersheim-Paul, 1975:307). Psychological distance is associated with aspects such as culture, politics, language, education and industrial

development levels (Johanson & Wiedersheim-Paul, 1975:308). If firms are able to overcome psychological distance obstacles, then they will be more likely to succeed in other markets in the future (Forsgren, 2000:2). Oviatt and McDougall (1997:88) provide an example of psychological distance. Irish firms would first export to Scotland and England, which are considered psychically close. Thereafter would they consider exporting to countries such as China or Paraguay.

The Uppsala model however, is criticised because it cannot fully explain the internationalisation process of the firm (Hansson *et al*., 2004:9). It is hard to get a full grasp of the different stages of the model (Forsman, Hinttu & Kock, 2002:2) and it makes a complex process look simple (Chetty & Campbell-Hunt, 2004:60).

A further concern of the Uppsala model is that firm investment will decline if the risk is too high to invest overseas (Forsgren & Hagström, 2007:302). The rapid internationalisation models overcome this shortcoming because they believe that functioning internationally provides opportunities (Madsen & Servais, 1997). In the International entrepreneurship theory, discussed in section 2.2.2, entrepreneurs in new venture firms are not afraid to take risk and are willing to make strategic choices related to an aggressive internationalisation approach (Autio, 2005:12).

Another stage and incremental model is the innovation-related model which differs from the Uppsala model in that it focuses on innovation (Senik, 2010:48) and it illustrates the internationalisation process as a step-by-step development instead of a dynamic process in the Uppsala model (Andersen, 1993:216).

The Uppsala model is considered a broader internationalisation model (Oviatt & McDougall, 1997:88; Forsgren & Hagström, 2007:292) than the innovation related model, since it is not strictly applicable to SMEs, which in turn can be an explanation for it being in such popular demand (Andersen, 1993:224; Oviatt & McDougall, 1997:88). The innovation-related model is discussed in the next section.

2.2.1.2 The innovation-related model

Internationalisation is seen here as an innovative strategy for firms, as they often come to a point where innovative strategies are needed to be able to perform abroad (Madsen & Servais, 1997:561). The innovative capability of a firm refers to a firm's talent to develop new, creative ideas and products as well as processes to operate within foreign markets (Zhang *et al*., 2009:297). In other words, innovation means to think creative and operating in all areas (Gabrielsson & Kirpalani, 2004:559).

Various innovation stage models exist to explain the internationalisation process from an innovation-related perspective (Knight *et al*., 2001:2). Bilkey and Tesar (1977) and Reid (1981) developed two of the leading innovation-related models (Andersen, 1993:213). Other models include those by Cavusgil (1980), Wortzel and Wortzel (1981) and Czinkota (1982). These models regard the internationalisation process as a series of management innovations within the firm (Knight *et al*., 2001:2). The main difference between the models is in the number of stages (Morgan & Katsikeas, 1997:72; Olejárová, 2007:22). Nonetheless, each model conceptualises exporting as an innovation adoption process that takes place through a number of stages (Lim, Sharkey & Kim, 1991:52).

Bilkey and Tesar (1977) based their study on a randomly drawn sample of Wisconsin manufacturing SMEs (Andersen, 1993:224). The model was created to explain the export development process (Lee & Brasch, 1978:85).

According to Bilkey and Tesar (1977:1), internationalisation takes place through innovation in six levels or stages. Table 2.2 illustrates the steps, from one to six, as internationalisation takes place through innovation.

Table 2.2: The innovation-related model of Bilkey and Tesar

Level	Description
1	The management does not want to export under any circumstance. Export orders are also ignored.
2	The management completes an order, but no attempt to investigate the export opportunity is made.
3	The management investigates the export opportunity and determines if the process will be profitable.
4	The management consider investigations as successful and decides to export its goods as an experiment to a country with a relatively close psychological distance.
5	The firm is now familiar with exporting and adjusts exports to exchange rates and tariffs.
6	The management explore opportunities of countries with further psychological distance.

Source: Bilkey and Tesar (1977:1)

According to table 2.2, the firm is not attracted to exports at the first level. However, in the second level the firm gets somewhat attracted to the export idea and completes an unsolicited export order. This suggests that some stimuli must be present to make the firm somewhat attracted to the export idea (Andersen, 1993:212). The stimuli can be internal or external. Internal stimuli can be network relationships and managers that have suitable experience of the firm and management. External stimuli that motivate a firm to internationalise can be competitive pressures domestically, government support and orders or inquiries from abroad (Tan, Brewer & Liesch, 2007:298). Stage 4 is the vital stage because the firm starts to export and it is assumed that innovation should have worked since the firm has made a commitment to exports (Lee & Brasch, 1978:85-86). As can be seen in stage six, the model of Bilkey and Tesar (1977) shows how the firm is increasingly involved in exporting to psychologically more distant markets (Morgan & Katsikeas, 1997:72).

The innovation-related model of Reid differs from Bilkey and Tesar's model in that it has one less stage. Reid (1981:102) explains the export decision-making process by using innovation. Export development occurs in five successive stages. These stages may also occur simultaneously.

Table 2.3: The innovation-related model of Reid

Stage	Name of stage
1	Export Awareness
2	Export Intention
3	Export Trail
4	Export Evaluation
5	Export Acceptance

Source: *Reid (1981:103)*

In stage one, the firm realises there is a foreign opportunity. The firm can also be attracted to the foreign market in search of needs such as growth and expansion. Stage 2 occurs together with stage one and includes factors that influence the expectations in terms of the outcome of foreign expansion. Managerial factors likely to play a role here include expectations, attitudes and beliefs regarding exports. The attitudes must support the export process, resource commitment, foreign customers and countries. At stage three the firm only exports for a limited period, which leads to stage four where the results from stage three are evaluated. If the results are satisfactory, exports to the particular foreign market will become permanent (Reid, 1981:102). A permanent move will lead to added expansion and likely add to the firm using exporting as a strategy for firm growth. At the final stage, the firm adopts or rejects exporting (Reid, 1981:104). The firm will adopt exporting if management demonstrates an encouraging attitude directed towards exporting, there are opportunities abroad and if the firm has reserve resources required for the export process (Morgan & Katsikeas, 1997:73).

It is assumed that the innovative acts of the manager or entrepreneur enable the firm to internationalise in the innovation related model (Reid, 1981:103). Innovation is regarded as a characteristic of entrepreneurs and therefore entrepreneurs must think and act innovatively (Gabrielsson & Kirpalani, 2004:559) by conducting research and development in their organisations (Mytelka, 2000:27). The entrepreneur is the decision-maker in the export process and entrepreneur's knowledge, attitude and preference in relation to foreign markets play a significant role in the innovation related model. The above-mentioned aspects are determined by an entrepreneur's foreign

language skills, type and level of education and the extent of foreign travel. If the firm has these determinants, it will have a higher level of innovation (Reid, 1981:105).

Kotabe, Srinivasan and Aulakh (2002:83) confirm that firms that possess a higher level of innovation will be better positioned to exploit the benefits of internationalisation fully. Conventionally, innovation has been viewed as a vital "*driver*" of economic growth and development (Rios-Morales & Brennan, 2009:157). By using knowledge in creating "*innovations and competencies*", the firm can improve performance. Production cost can be cut by using more efficient processes (Kafouros *et al*., 2008:64). Larger firms are designated to reap the benefits from innovation because of aspects such as technical proficiency, economies of scale and the characteristics of the managers (Kafouros *et al*., 2008:64).

Innovation is also important in the rapid internationalisation theory discussed in section 2.2. Rapid internationalising firms do not possess proper organisational capabilities since they are not a long established firm that boast settled routines, practices and structures (Nordman & Melen, 2008:172). Firms that have the ability to sustain innovation will consequently generate new knowledge that will ultimately lead to the creation of organisation capabilities. In a competitive environment, organisation capabilities will enable the firms' resources to perform efficiently (Knight & Cavusgil, 2004:126).

Not all firms follow the traditional route to internationalisation and have found a useful alternative in rapid internationalisation (Knight *et al*., 2001:2). In view of the fact that incremental models function better with smaller firms that are less experienced and have fewer resources, it is required that rapid internationalisation models are included when the internationalisation process is explained (Senik, 2010:50). Rapid internationalisation is discussed in the next section.

2.2.2 Theories on rapid internationalisation

Firms that operate internationally from their inception are becoming a more frequent occurrence (Knight & Cavusgil, 2004:124; Zhang *et al*., 2009:293). These firms are called early adopters of internationalisation (Knight & Cavusgil, 2004:124) and are functioning in almost all of the biggest trading nations (Knight & Cavusgil, 2004:125).

Extensive research produced on rapid internationalising firms over the last few decades has prompted scholars to question the traditional internationalisation models (discussed in section 2.2.1), where firms internationalise incrementally (Rasmussen & Madsen, 2002:3; Pajunen & Maunula, 2008:248). In the traditional internationalisation models of Uppsala (Johanson & Vahlne, 1977) and innovation (Bilkey & Tesar, 1977), firms steadily construct a stable position in their domestic market before going international (Rasmussen & Madsen, 2002:3). In contrast to the traditional theories, born global firms ignore an established domestic market (Rennie, 1993:46). Instead, they aspire to access new markets abroad from its inception (Rennie, 1993:45) in search of a competitive advantage in the way it uses its resources abroad (Rennie, 1993:45; Oviatt & McDougall, 1994:49; Rasmussen & Madsen, 2002:3; Knight & Cavusgil, 2004:124).

The term "*born global*" was first used in a study of Australian manufacturing firms (McKinsey & Co., 1993). Since then, many researchers have given related terms for born global type firms (Rasmussen & Madsen, 2002:4). Oviatt and McDougal (1994, 1997), Zahra, Ireland and Hitt (2000), Bloodgood, Sapienza and Almeida (1996) for example, all use the term international new ventures in their studies, while Jolly, Alahuhta and Jeannet (1992) use high technology start-ups and Ganitsky (1989) innate exporters. Authors that have used the term "*born global*" include Rennie (1993), Madsen and Servais (1997), Moen (2002), Knight and Cavusgil (2004) and Gabrielsson (2005). Born global firms are also known as international new ventures, global start-ups or early internationalising firms (Dib, Da Rocha & Da Silva, 2010:235).

Despite the fact that born global firms lack a sufficient domestic market, they aspire to access new markets abroad from the outset (Rennie, 1993:45; Rasmussen & Madsen, 2002:3; Knight & Cavusgil, 2004:124). Born global firms do not find the domestic market as important, because from the outset the world is considered a market on its own. In contrast to the traditional internationalisation models, which believe the world market is related to indecision and danger, born global firms believe that functioning internationally provide opportunities (Madsen & Servais, 1997).

Born global firms internationalise at a rapid pace - usually within 3 or less years or less between the initial domestic establishment of the firm and its first entry overseas (Knight & Cavusgil, 2004:125; Senik, 2010:51). Born global firms initially surfaced in countries with small domestic markets (Moen, 2002; Knight & Cavusgil, 2004:125), but is now present in large numbers worldwide (Knight & Cavusgil, 2004:125).

Several firms that chose to internationalise from the beginning has done it with success (Andersson & Wictor, 2003:249; Saarenketo *et al*., 2004:366). Rennie (1993:47) provides two aspects of born global firms that make them perform well in today's global environment. The first is that born global firms are remarkably competitive when they start to export, which give them a significant advantage over bigger, well-known firms. Secondly, global firms grow fast in today's world because they are able to manage an international business much better than one or two decades ago. The world today is not what it was 20 years ago because of the globalisation phenomenon, which is making the world a more integrated place (Jackson, 2008:349).

Besides globalisation, the emergence of born global firms has been spurred on by global networks, which are facilitated by a borderless marketplace, global outsourcing, an increase in demand for globally customised products and advances in technology. Despite these factors spurring on internationalisation, born global firms still lack experience and resources (Senik, 2010:54-55).

Gabrielsson and Kirpalani (2004:564) find that although born global firms may be short on resources, these early adopters of internationalisation are able to strengthen their financial position through innovation, knowledge and capabilities which enable them to be successful from early on (Knight & Cavusgil, 2004:124). A born global firm that implements a strategy to borrow or build resources will be automatically on a slow growth path than can become excessive (Gabrielsson & Kirpalani, 2004:569). Traditionally it has taken years for global firms to enter and expand abroad partly because they lack sufficient resources (Crick & Spence, 2005:170). Knight and Cavusgil (2004:125-126) further add that the success of early internationalising firms are dependent on their internal capabilities. The firm must have a proper structure in place that complements its internal resources and competence. Such a structure will direct the firm to experiential knowledge about foreign markets (Autio, Sapienza & Almeida, 2000: 921).

The traditional view is that firms that have the ability to sustain innovation will consequently generate new knowledge that will ultimately lead to the creation of organisation capabilities. In a competitive environment, organisation capabilities will enable the firms' resources to perform efficiently (Knight & Cavusgil, 2004:126). The problem is that born global firms do not possess a proper organisational capability since they are not long established firms that boast settled routines, practices and structures. Therefore, the knowledge the firms have, is the knowledge that originates from the individual that founded the firm (Nordman & Melen, 2008:172).

The top management team, or founders, can be considered an important resource for a new venture. Bloodgood *et al*. (1996) use the example of management within American ventures. They find that management with earlier international experience employed at a new venture are more alert of any profitable opportunities in a particular market than those whose management do not possess international experience. Nordman and Melen (2008:173) concur that the founders and managers of born global firms who have significant international experience before the firm was established, especially in the specific industry, will be more successful internationally. The effectiveness of decisions

is reflected by the top management career experiences (Hambrick & Mason, 1984:199) and this is a source of competitive advantage for new ventures (Bloodgood *et al*., 1996:64). The earlier international experience of the founders and managers of the firm increases their experiential knowledge which is crucial for rapid firm decision-making in an always-changing environment. This ensures acceptable performance and even the continued existence of the firm (Oviatt & McDougall, 1997:89).

Furthermore, whether or not the founders of international new ventures are immigrants also affect international success. The reason is that the immigrants usually have family contacts or people that they have known prior to immigration (Bloodgood *et al*., 1996:64). In addition, if a manager of a new venture attended a school overseas or worked on a particular foreign market, he/she would be more accustomed with the market than those who do not have such international experience. Therefore, experienced and well-connected managers would be vital to recognise and seize opportunities in a foreign market (Bloodgood *et al*., 1996:65).

The most significant concepts in rapid internationalisation theory are born global firms and International New Ventures (Senik, 2010:51). These types of firms lack resources, function without a domestic market and enter foreign markets from their inception in search of a competitive advantage.

Another important theory, namely international entrepreneurship, started with interest in international new ventures (Oviatt & McDougall, 2005b:537-538). International entrepreneurship is defined as the process of discovering, enacting, evaluating, and exploiting of opportunities across national borders in pursuit of a competitive advantage (Senik, 2010:66). The entrepreneur is the actor and searches for a competitive advantage across national borders which in turn generate wealth for the firm owners' (Zahra & George, 2002:11). The next theory that is discussed centres on the entrepreneur and internationalisation.

2.2.3 International entrepreneurship perspective

The first time international entrepreneurship was mentioned in literature was in Morrow's (1988) article on new growth opportunities in international entrepreneurship (Zahra & George, 2002:6; Oviatt & McDougall, 2005b:537). A year after Morrow's article, the first ever definition of international entrepreneurship appeared in McDougall's (1989:388) article where she explained that international entrepreneurship is when international new ventures are developed that is internationally active right from their birth (Oviatt & McDougall, 2005a:4).

However, the 1989 definition was perceived as too strongly focused on the new venture internationalisation theory which limited its scope (Oviatt & McDougall, 2005a:7). Oviatt and McDougall are possibly the largest contributors to international entrepreneurship literature with articles in 1994, 1995, 1997, 2000, 2003 and 2005. They responded to the criticism on the 1989 definition and kept on redefining international entrepreneurship in search of the perfect definition that included the most relevant aspects. Zahra and George (2002:11) use opportunities in their definition of international entrepreneurship which probably lead to Oviatt and McDougall (2005b:540) altering their definition to focus more on opportunities, and specifically discovering, enacting, evaluating and exploiting them in pursuit of a competitive advantage, with the ultimate aim of generating goods and services in the future. Entrepreneurial opportunities are a prerequisite of international entrepreneurship (Shane & Venkataraman, 2000:220). The entrepreneur is the actor and searches for a competitive advantage across national borders which, in turn, generate wealth for the firm owners' (Zahra & George, 2002:11). As a result international entrepreneurship and the effect factors have on the enactment of opportunities is examined and compared across national borders (McDougall and Oviatt, 2003:7). Therefore international entrepreneurship is defined as the process of discovering, enacting, evaluating, and exploiting of opportunities across national borders in pursuit of a competitive advantage (Senik, 2010:66).

It became clear by the 1990s that the traditional internationalisation models discussed in section 2.2.1 could not explain the extent and speed of firm internationalisation (Naudé

& Rossouw, 2009:2). Oviatt and McDougall knew that the traditional internationalisation theories were to a certain extent applicable to most slow internationalising firms, but they noticed there were also firms that internationalised rapidly. This warranted a different theory and as a result, research in rapid and entrepreneurial internationalisation followed (Oviatt & McDougall, 2005a:5).

Research on international entrepreneurship started with an interest in the rapid international concept of new ventures discussed in section 2.2.2 (Oviatt & McDougall, 2005b:537-538). To date, most international entrepreneurship studies have focused on new ventures (Zahra & George, 2002:6). In comparison with the traditional internationalisation models, which are built on a slow internationalisation process undertaken by large firms, the new venture model is built on rapid internationalisation undertaken by smaller firms in international entrepreneurship theory (Autio, 2005:16; Mtigwe, 2006:16).

International entrepreneurship resides between international business and entrepreneurship theory (Acs, Dana & Jones, 2003:5; Etemad & Wright, 2003:1; Keupp & Gassman, 2009:600). The traditional theories are limited in explaining how entrepreneurs (Fletcher, 2004:292) that lack resources and experience and is in small firms (Etemad & Wright, 2003:1), react instinctively to international opportunities and learn from their experience overseas (Fletcher, 2004:292).

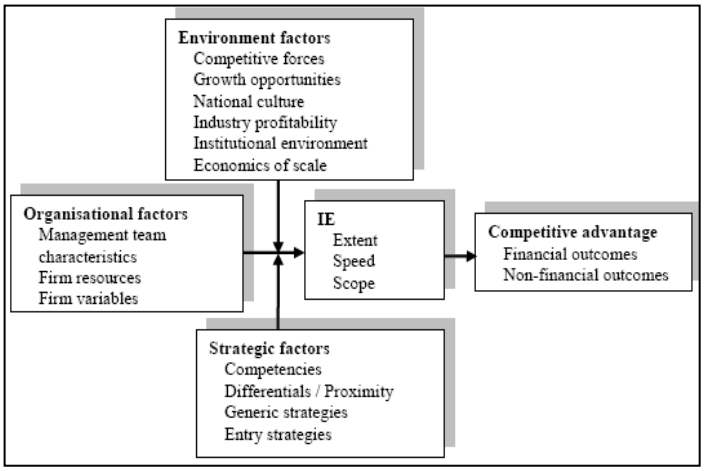
The problem with most international entrepreneurship studies is that too much focus is on the individualistic efforts of the entrepreneur (Shane & Venkataraman, 2000:218; Zahra & George, 2002:6). It pays no attention to the fact that activities of entrepreneurs are a constant process and these activities are the work of the entire top management, not only the entrepreneur (Zahra & George, 2002:6). Entrepreneurship consists of two aspects which are profitable opportunities and innovative individuals. Therefore, focus must not only be on the entrepreneur (Shane & Venkataraman, 2000:218).

Ventures moving rapidly abroad have the ability to apply themselves entrepreneurially by mixing resources in new ways to try and evaluate and exploit opportunities abroad (Dimitratos *et al*., 2010:590). If an entrepreneurial opportunity is present in the market

and a profit can be realised, it is still not a guaranteed profit since the entrepreneurs must first recognise that the opportunity is present and there is value to be gained (Shane & Venkataraman, 2000:221). Entrepreneurs will choose the best opportunity by taking into account the opportunity cost. The opportunity cost is the cost of the one best alternative (Shane & Venkataraman, 2000:223). Fletcher (2004:295) states that entrepreneurs are on a constant basis evaluating information, deciding which environmental signals to respond to and weighing up the gains, losses, risk and added value potentially generated by specific opportunities.

The traditional theories were characterised by a risk-averse management that considers information difficult to attain abroad. In contrast, entrepreneurs in new venture firms are not afraid to take risks and are willing to make strategic choices related to an aggressive internationalisation approach. An aggressive approach is due to the entrepreneurs that founded the firm having the vision, competences and awareness to recognise profit opportunities abroad (Autio, 2005:12). Confirmation in a study of Shrader, Oviatt and McDougall (2000) show that small firms are very aware of risks abroad and are well capable to manage these risks successfully.

Figure 2.1: Integrated model of international entrepreneurship



Source: Zahra and George (2002)

The above figure represents a model to explain international entrepreneurship with specific reference to the speed of internationalisation. The model is set-off by discovery of an opportunity and the entrepreneur consequently enacts on the opportunity. The speed at which a firm internationalises is caused by four types of forces. These four forces will be explained accordingly.

First is the enabling force. Enabling forces ensure that rapid internationalisation can be achieved. Such enabling forces include regulatory advances (Fletcher, 2004:289), digital technology, a faster flow of goods and services to foreign markets, and improved communication (Oviatt & McDougall, 2005b:542). The second force is the motivating force of competition. Competition motivates faster internationalisation since entrepreneurs have to take advantage of technological opportunities abroad or else competitors could react faster to a new product offering. The third force is the mediating force. The entrepreneur serves as the middleman and it is his/her responsibility to discover or enact the opportunity in order to achieve internationalisation. An entrepreneur's personal characteristics such as international experience and psychological traits (e.g. risk-taking propensity) help that he/she can recognise opportunities. If entrepreneurs recognise opportunities, they can use the potential of transportation, communication and computer technology to make internationalisation possible (Oviatt & McDougall, 2005b:542). The final and fourth force is the moderating force. The moderating forces come into existence after the first three forces have been completed. The moderating force is the knowledge that was used earlier and the characteristics of the entrepreneur's international network. In conjunction with the enacted opportunity and the enabling and motivating factors, the moderating force will determine how fast internationalisation occurs (Oviatt & McDougall, 2005b:543).

Since the traditional models could not explain the extent and speed of internationalisation, Zahra and George (2002) developed an integrated model of international entrepreneurship that shows how ventures are in pursuit of a competitive advantage. The model is centred on strategic, organisation and environment factors

which are divided into various concepts. The model illustrates how many of these interrelated factors influence ventures (Senik, 2010:66).

A problem of the integrated model of international entrepreneurship is that it neglects networking (Senik, 2010:66). Mtigwe (2006:16) argues that an entrepreneurial firm can achieve internationalisation through networks. Entrepreneurs should use networks to their advantage since networks can provide vital opportunities and probably strategic alliances abroad (Oviatt & McDougall, 2005b:544). Network relationships emerge through the informal and formal interaction of the firm's human capital (Senik, 2010:67). Such a relationship can help small entrepreneurial firms to acquire vital resources and foreign market knowledge. International entrepreneurship and the network theory should be observed as two interdependent theories (Mtigwe, 2006:16).

It should be remembered that the international entrepreneurship is a new perspective which is "*consolidated by various theories and models*" inside International business and entrepreneurship (Senik, 2010:69). The entrepreneur is also a vital actor in another theory called the transaction cost theory. The theory is built around economic tasks such as production. The firm has to choose where it will be more cost-effective to perform production outside of the firm or inside the firm. If cost can be saved by internalising, the entrepreneur is the actor that directs production inside the firm (Coase, 1937). The transaction cost theory is discussed in the next section**.**

2.2.4 Transaction cost theory

The idea of the transaction cost theory comes from the initial work of a British economist Ronald Coase in his article on the nature of the firm in 1937 (Hansson *et al*., 2004:31; Poole & De Frece, 2010:22). Coase (1937) provided a theoretical framework that illustrated which alternative should be chosen to perform economic tasks such as directing production. The firm must decide whether certain activities would be lodged within the firm or outsourced according to the price mechanism. The economy is co-ordinated by the price mechanism, which dictates the direction of production. Outside

the firm, the price mechanism is co-ordinated by a series of exchange transactions in the market. Inside the firm, these exchange transactions are ignored and the entrepreneur becomes the co-ordinator that directs production. However, there is a cost of using the price mechanism. It is better for a firm to enter into a long-term contract since the risk and cost of repeatedly entering into short-term contracts with partners is avoided. Therefore, a firm will emerge when a short-term contract with a partner is not satisfactory. The firm will internalise production and the entrepreneur directs production, which saves marketing cost. It is assumed that the entrepreneur can operate at a lower cost because he/she gets the factors of production at a lower price than a market transaction.

Many authors have built on Coase's work to develop the transaction cost theory with the most notable being Williamson (1985) (Poole & De Frece, 2010:22). Out of these articles, it has emerged that the basic principle of the transaction cost theory is that the firm will shift low cost activities to the firm itself. The firm will then rely upon the market to provide the other external activities where other firms carry an advantage in (Klein, Frazier & Roth, 1990:197).

The transaction cost theory is centred on cost and how cost influences decisions of a firms' market entry and mode of entry (Hansson, *et al*., 2004:31). The cost in the transaction cost theory is the cost that it takes to "*run or govern the system*" (Klein *et al*., 1990:197; Rindfleisch & Heide, 1997:31). This includes search and contraction cost (*ex ante* cost) as well as monitoring and enforcement cost (*ex post* costs) (Hill, 1990:501; Erramilli & Rao, 1993:21; Hollensen, 2001:53). According to Williamson (1985), *ex ante* cost occurs when negotiating the contract and *ex post* cost occurs when monitoring the performance of the contract and the parties involved.

The transaction cost model, when addressed through a general perspective has three issues. The first issue is known as the make-or-buy decision (Rugman & Verbeke, 2005:9). The make-or-buy decisions will show the firm's position related to vertical

integration. The decision the firm has to make is centred on the internalisation of activities or giving the contract out to a supplier (Walker & Weber, 1984:374).

The second issue is about management having the task to design multiple interfaces with the external environment. This is where the management has to decide whether the relationship that the firm has with customers and suppliers will be similar to what it is in the home country. The third issue is about the internal design of the organisation. This entails how the foreign subsidiaries network will be structured (Rugman & Verbeke, 2005:9).

The transaction cost theory has been extensively applied in foreign entry mode research (Anderson & Gatignon, 1986; Erramilli & Rao, 1993; Delios & Beamish, 1999). The reason for this trend is to determine why firms use different entry modes when they internationalise (Brouthers & Nako's, 2004:230). According to the transaction cost theory, firms will choose an entry mode with the intention of balancing the advantages that integration offers with the added costs of control (Anderson & Gatignon, 1986:7; Brouthers & Nako's, 2004:231).

The transaction cost theory is specifically beneficial when used in vertical integration (Erramilli & Rao, 1993:20: Whitelock, 2002:343). Vertical integration is how firms decide whether or not to set up a manufacturing subsidiary overseas. Erramilli and Roa (1993:20) state that a firm has to a make vertical integration choice, either outward or inward. Outward vertical integration takes place when external suppliers, agents and partners are contracted and is a low-control mode or a market-contracting arrangement. Inward vertical integration is when the firm's own employees are used in activities and is a full-control mode. If market failures occur, the transaction cost to use a low-control mode gets higher. This implies that the firm should reduce the transaction cost by switching from external suppliers, agents or partners to the firm's own employees. Therefore, inward vertical integration takes place since the firms internalise and has full-control over activities (Erramilli & Rao, 1993:21).

Uncertainty in the execution of the transaction also plays a role (Walker & Weber, 1984:373). It is unlikely that a firm can develop without the presence of uncertainty (Coase, 1937:392). Uncertainty is divided into external and internal uncertainty (Anderson & Gatignon, 1986:14). External uncertainty is defined as the volatility of the outside environment for the firm. The best way to combat volatility is for firms to turn away from ownership, be flexible and shift risk to external parties (Anderson & Gatignon, 1986:14). Internal uncertainty occurs when the firm cannot precisely evaluate the performance of its own agents. This could be due to unfit output measures or the misunderstanding of the input-output relationship, which makes it difficult to anticipate a certain level of performance (Anderson & Gatignon, 1986:15).

In the eclectic paradigm discussed in section 2.2.6, the firm has an internalisation advantage if it is better to move the applicable activities to the inside of the firm than to enter into a licensing agreement with a foreign firm (Madhok & Phene, 2001:244; König, 2003:486). In the eclectic approach, internalisation advantages, together with ownership and location advantages, influence the entry mode a firm selects to penetrate international markets (König, 2003:485). Thus, the eclectic theory, through internalisation advantages of the transaction cost theory, is useful since it can point to which internationalisation theory should be selected depending on the advantages that a firm possesses (Cleeve, 2009:236).

The transaction cost theory is also closely associated with another theory, the resource-based theory. Madhok and Tallman (1998:327) view the transaction cost and resource-based theories as two interdependent theories. The transaction cost induced when resources are exchanged are dependent on the type of resources used in the transaction and correspondingly the rents generated by the resources are dependent on the transaction specific expenditure induced and in effect merging them and keeping up the combination. The resource-based theory has its attention on aspects associated with production while the transaction cost theory has its attention on exchange aspects of the relationship. Both theories are linked by the endogenous factor of production and mechanism of governance with the common purpose of reaching value (Madhok &

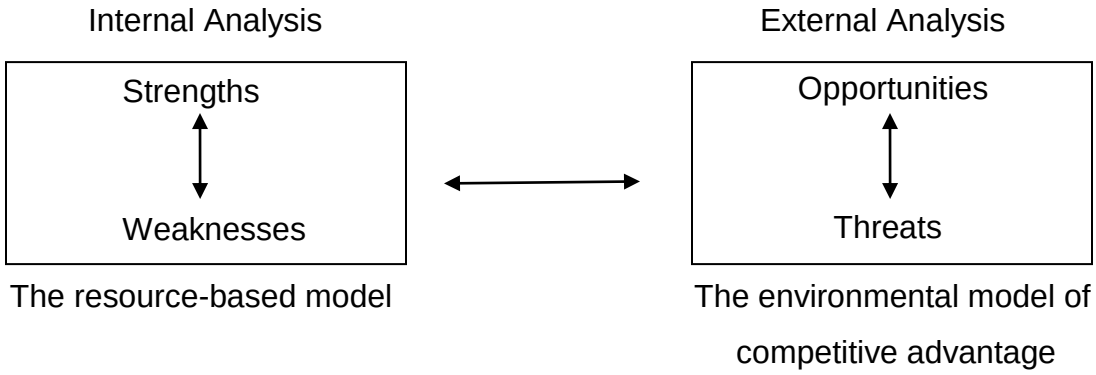
Tallman, 1998:336). The transaction cost theory and the resource-based theory are grouped together since they are the reason for alliances (Madhok & Tallman, 1998:327). Both theories are significant in explaining alliances because they view alliances from two different perspectives (Yasuda, 2005:763). The resource-based theory is discussed in the next section.

2.2.5 The resource-based theory

Possibly the biggest contributors to the resource-based theory literature is Wernerfelt (1984) and Barney (1991). Before discussing the theory, it is necessary to define a resource. A resource can be defined as any asset in a firm that can be considered a strength or weakness (Wernerfelt, 1984:172; Dhanaraj & Beamish, 2003:244). A more formal definition is to describe resources as any tangible or intangible assets (Wernerfelt, 1984:172; Collis, 1991:50; Eisenhardt & Schoonhoven, 1996:137; Madhok & Tallman, 1998:328) which are tied semi-permanently to the firm (Wernerfelt, 1984:172). Examples of tangible resources are financial strengths, employees and technology, while examples of intangible resources are reputation, work ethics, culture, the level of knowledge and learning in the firm and managerial skills (Eisenhardt & Schoonhoven, 1996:137; Senik, 2010:64). Wernerfelt (1984:172) provides an extensive list of resource examples, which include machinery, capital, brand names, internal knowledge or technology, employment of skilled personnel and efficient procedures.

In the resource-based theory, a firm is observed as a bundle of resources (Eisenhardt & Schoonhoven, 1996:137; Hoffmann & Schlosser, 2001:359; Saarenketo *et al*., 2004:368; Yasuda, 2005:763). Therefore, a firm has a resource capacity, which is the strengths and weaknesses of a firm. A firm's strategy is based on their resource capacity (Wernerfelt, 1984:171). Barney (1991:101) states that firm resources refer to the strengths of a firm and include assets, information, knowledge and firm attributes. Firms introduce strategies based on the resources that they control with the aim to enhance efficiency and effectiveness (Barney, 1991:101).

Figure 2.2: The relationship between traditional strengths-weaknesses-opportunities-threats analysis, the resource-based model, and models of industry attractiveness.



Source: Barney (1991:100)

Figure 2.2 above shows that firms should implement strategies that utilise their internal strengths, stay away from internal weaknesses and overcome threats in the external environment, while still acting in response to opportunities. If firms follow this sort of strategy, they will have a good chance of gaining a competitive advantage (Barney, 1991:100).

The resource-based theory has in particular become a leading academic theory for explaining firm performance (Newbert, 2007:121-122). A firm's resources are set to generate a competitive advantage, which in turn offsets performance (Crook, Ketchen, Combs & Todd, 2008:1142). Zhang *et al*. (2009:294) state that a competitive advantage is the result of a firm that was able to develop resource capabilities progressively and ensured that it was nested within the firm and hard to duplicate. Therefore, capabilities can be considered a significant driver of firm performance (Teece, Pisano & Shuen, 1997; Makadok, 2001; Zhang *et al*., 2009:294).

Barney (1991:101) identifies two assumptions when examining and determining the sources of competitive advantage. The first assumption is that firms in the same industry may be heterogeneous concerning the strategic resources they control. The second assumption is that the resources will not be totally mobile across firms, which

imply that they can be long-term. The resources of a firm must have certain attributes to serve as a sign of how heterogeneous and immobile firm resources are (Barney, 1991:106). Then it will be known how functional it will be for a firm to hold those resources since they must be able to provide a sustained competitive advantage. Crook *et al*. (2008:1142) name these resources strategic and state that it is the main focus of the resource-based theory since they also improve organisational performance (Crook *et al*., 2008:1144). Resources considered strategic can be unique knowledge, reputation and patents (Crook *et al*., 2008:1142).

A firm has a competitive advantage when it implements a strategy that produces value, which is not simultaneously implemented by any current or potential competitors (Barney, 1991:102). Firms must manage their resources in such a way that the competitive advantage and rents associated with their resources are increased (Madhok & Tallman, 1998:327). A firm can gain a sustained competitive advantage if the unique collection of resources at the core of the firm is applied correctly (Dhanaraj & Beamish, 2003:244).

A sustained competitive advantage implies that competitor firms are also incapable of duplicating the benefits of the strategy to them (Barney, 1991:102). It is a competitive advantage that is long lived and can only be known as a sustained competitive advantage after all attempts by current or potential competitors to duplicate the firm strategy have failed (Barney, 1991:102-103). In the whole, it is the firm's unique resources that allow them to achieve a sustainable competitive advantage (Saarenketo *et al*., 2004:368; Dhanaraj & Beamish, 2003:245). Priem and Butler (2001:25) list resources such as trust, top management and administrative skills, information technology, human resource management, organisational alignment and strategic planning than can help a firm to achieve a sustainable advantage. Competitors are not the only potential barrier for a sustained competitive advantage, but it can also be influenced by unexpected changes or shocks in an industry (Barney, 1991:103).

The criteria applicable to describe a resource as strategic are that the resource must be valuable, rare, imperfectly imitable and non-substitutable (Barney, 1991:106; Saarenketo *et al*., 2004:368; Crick & Spence, 2005:170; Dhanaraj & Beamish, 2003:244; Crook *et al*., 2008:1142).

The resources of a firm are considered valuable when they cause the firm to conceive or implement strategies that enhances its efficiency and effectiveness (Barney, 1991:106). A valuable resource is a resource that cuts cost and brings added value to customers (Crook *et al*., 2008:1142). If valuable resources are held by a large number of current or potential competitors, it will not give a firm a competitive or sustained competitive advantage. If a specific valuable resource were implemented by a lot of competitors in their strategies, then no firm would be able to gain. Therefore a resource must be rare and in a way unique to be of value to a firm (Barney, 1991:106). Resources are imperfectly imitable when other firms that do not have them, cannot obtain them (Barney, 1991:107). Chi (1994:271) explains that other firms are uncertain when they have to replicate the resource by themselves. A resource can be described as imperfectly mobile if competitor firms find it hard to get the specific resource from their current employer (Chi, 1994:271). Resources that are characterised as imperfectly imitable and mobile are the source of sustained competitive advantage (Chi, 1994:271; Crook *et al*., 2008:1144). Resources must also be non-substitutable. Two resources that are not identical, but are categorised as strategically equivalent, can be used to implement the same strategies that are substitutable and thus will not lead to a sustained competitive advantage.

In practice valuable and imperfect imitable resources will be more useful since resources that it is too complex to imitate are rare by definition (Crook *et al*., 2008:1144). In summary, a firm that has valuable and rare resources will potentially gain a competitive advantage and if the resource is imperfectly imitable and non-substitutable in addition, then the firm will potentially gain a sustained competitive advantage (Priem & Butler, 2001:27).

Modern firms see the development of strategic alliances as a vital strategy. Alliances or cooperative relationships can assist firms to keep resources and split risks (Eisenhardt & Schoonhoven, 1996:136). Alliances will emerge when firms seek supplementary resources that cannot be accessed through a market transaction (Madhok & Tallman, 1998:327; Yasuda, 2005:763). Firms seek resources because they cannot develop it on their own without bearing additional cost or risk and build it inside a satisfactory time frame (Madhok & Tallman, 1998:329; Hoffmann & Schlosser, 2001:359). Alliances assist firms to fill the gap between the resources the firm currently has and what it is anticipating (Hoffmann & Schlosser, 2001:357). SMEs generally have limited resources, which put them in a vulnerable position with regard to adapting to a globalised world that features for example fast changing technology. Therefore, alliances will serve as an effective solution by providing resources to overcome shortages and rough periods. SMEs that enter into collaborations have been considerably less than large firms have. This could be due to not knowing what aspects make alliances successful as well as the cultural and emotional barriers (Hoffmann & Schlosser, 2001:358).

Madhok and Tallman (1998:327) argue that alliances fail when firms do not understand the nature and extent of transaction-specific investments that is needed in a collaborative relationship to realise yields. Firms will enter into alliances because they expect better yields from alliances than other organisational firms do. Madhok and Tallman (1998:327) state that alliances will most likely offer firms collaborative / synergistic combinations of complementary resources and capabilities. Strategic alliances opt as a solution to a firm with a vulnerable strategic position bringing them vital resources. Firms in strong social positions can also benefit from their assets and create an alliance opportunity as other firms realise what they can gain (Eisenhardt & Schoonhoven, 1996:137). Alliances can prevent managers to develop valuable in-house capabilities and also be facilitators for the easy transfer of core competencies. Since several arguments exist for and against alliances, firms enter into alliances at different rates (Eisenhardt & Schoonhoven, 1996:136).

Crick and Spence (2005:170) argue that the resource-based theory can to a degree explain internationalisation since entrepreneurs improve their intellectual capital as they progressively learn which strategies to implement and resources to allocate the best for a foreign market. A vital criterion for competitive performance domestically and abroad is whether the firm has the ability to export a fraction of its sales (Westhead, Wright & Ucbasaran, 2001:334). Westhead *et al*. (2001:351) found that a firm that possesses more resources and management know-how, solid information and contact networks are more likely to be exporters than those who do not. Dunning's eclectic paradigm is discussed in the next section.

2.2.6 Dunning's eclectic paradigm

Early ground breaking work done by researchers such as Dunning (1958), Vernon (1966), Caves (1971), Hymer (1976), Buckley and Casson (1976), Dunning (1977, 1988), Rugman (1980) and Hennart (1989) lead the way to ultimately create a broad framework to help explain foreign direct investment. The expansive framework is today known as the Dunning's eclectic paradigm (Oxelheim, Randøy & Stonehill, 2001:384). Dunning's eclectic paradigm is also known as the OLI (ownership, location and internalisation) approach (Markusen, 1995:173; Brouthers, Brouthers & Werner, 1996:378; Cantwell & Narula, 2001:156; Oxelheim *et al*., 2001:384; König, 2003:484; Erdener & Shapiro, 2005:417; Pitelis, 2007:208; Stoian & Filippaios, 2008:351).

In 1976, the idea of the eclectic paradigm was presented for the first time by John Dunning at the Nobel Symposium in Stockholm. The purpose of the eclectic paradigm was to provide a holistic framework to discover and evaluate the significance of aspects that influence the firm production in foreign markets and the growth of such production (Dunning, 1988:1). The eclectic paradigm, in essence, determines the structure, pattern and degree of international production through the use of advantages in ownership, location and internalisation (Whitelock, 2002:343). This is very important since firms need a way to increase or continue profits under rising competitive pressure (Cleeve, 2009:236).

The eclectic paradigm of international production is a combination of several theories (Cantwell & Narula, 2001:156) such as trade theory, location theory, organisational theory and the theory of the firm (Cleeve, 2009:236). Cantwell and Narula (2001:156) state that it merges some of the transaction cost theory aspects with market power theory aspects for the individual firm. However, the initial purpose of the eclectic paradigm was not to merge a number of theories or address to a certain extent different questions. It was rather developed by Dunning as a theory that presented an analytical framework to assist analysts in choosing the most relevant theory for their empirical investigations (Cantwell & Narula, 2001:156). The eclectic paradigm has played and is still playing an important role in literature. This could be ascribed partly due to its paradigmatic nature, and the power of its supporters to incorporate and suggest new ideas and developments (Pitelis, 2007:209-210).

The eclectic theory has a general and specific form. In the general form, it is limited in a sense that it can only give an insight into international production and the individual behaviour of firms, although it is very valuable in explaining the motivation for international production and organisational matters associated with the activity of multinational enterprises (Dunning, 1988:1; Cleeve, 2009:236). In its specific form, the eclectic theory is useful since it can point to which internationalisation theory should be selected depending on the advantages that a firm possesses (Cleeve, 2009:236).

If the eclectic theory is applied in entry mode choice, the firm will select the most suitable entry mode according to three conditions, which are ownership advantages, the location advantages of the country involved and the internalisation advantages of the specific situation (Brouthers *et al*., 1996:379). Dunning (2000:163) states that a firm starting production in a foreign country is a result of the cooperation between the three interdependent OLI advantages.

Ownership advantages are the competitive (Madhok & Phene, 2001:243; Cleeve, 2009:237) or monopolistic advantages a firm possesses (Stoian & Filippaios, 2008:352). Ownership advantages are generated via firm-specific characteristics such as size,

market position (Cleeve, 2009:237), international experience, managerial and marketing expertise differentiated products and advanced technology originating from research (Brouthers *et al*., 1996:379; Oxelheim *et al*., 2001:384). The competitive advantage can be in the form of a patent, a recognised brand name (Markusen, 1995:173; König, 2003:484) or the human capital of employees (König, 2003:486). The firm-specific characteristics should enable internationalisation and it must also be able to compensate for the cost that the firm faces in the foreign market (Oxelheim *et al*., 2001:384). It is vital that a firm develops and look after their advantages since competitors may duplicate these advantages (Cleeve, 2009:237). A firm entering a foreign market for the first time has a competitive disadvantage compared to local firms (König, 2003:486). In such a situation, an ownership advantage is accepted as essential for foreign firms since it aims to counterbalance the disadvantage of not being a local firm (Madhok & Phene, 2001:244). The competitive disadvantage foreign firms experience in the host country is due to insufficient knowledge of the local environment and the cost stemming from engaging in activities from a distance. International involvement will only be decided on if the ownership advantage makes up for the original competitive disadvantage (König, 2003:486).

If it is assumed that the ownership advantage condition is fulfilled (Itaki, 1991:446) then it will be beneficial for the firm to internalise its ownership advantage instead of using an external mode (Itaki, 1991:446; Brouthers *et al*., 1996:379). An ownership advantage does not necessarily have to be used internally, but it can also be used externally by means of the sale of a patent or licensing agreement (König, 2003:486). It will make sense to give a licence to a foreign firm to produce the firm's product abroad if tariffs, transport costs, the setup cost of a foreign production facility (Markusen, 1995:174) and transaction costs are too high. The firm has an internalisation advantage if it is better to move the applicable activities to the inside of the firm than to enter into a licensing agreement with a foreign firm (Madhok & Phene, 2001:244; König, 2003: 486).

The third condition that has to be satisfied is location-specific advantages in the host country. This condition is needed since it otherwise would not be profitable to move

value-adding activity into a foreign market (König, 2003:486). Location advantages are country-specific factors associated with the market involved (Brouthers *et al*., 1996:379) and motivates a firm to invest in a particular market (Oxelheim *et al*., 2001:385; Erdener & Shapiro, 2005:417). This market is situated in the host country and the location advantage makes local production an attractive option (König, 2003:484). The major determinants that firms use to evaluate a foreign country are market size, education levels, political and physical infrastructure and income per capita (Erdener & Shapiro, 2005:418). The location advantages are at the disposal of all the firms in the applicable market. However, some firms are better off than others are, which in turn boost a firm's competitive advantage. The reason some firms outperform others can for instance be explained by firms having lower labour costs. Lower labour cost is likely to give the firm a cost advantage in a particular market and also improve the coordination of activities in a country (Brouthers *et al*., 1996:379). To completely benefit from the potential generated by ownership advantages, a firm must have some desire to merge them with location-specific advantages in the host country (Madhok & Phene, 2001:244). A firm that lacks location advantages can generate income by producing in the firm's home market and supplying the foreign market through exports instead of local production (König, 2003:486).

A start-off point in the theory is to examine the way firms engage in activities internationally. In essence, the firm has foreign direct investment, licensing and exporting as strategies to choose from. These three strategies are subject to the OLI advantages and will consequently influence the firm's ultimate decision (König, 2003:485). If a firm has ownership advantages, but lack location or internalisation advantages, the theory indicates that licensing will be the best way to handle international production. If in turn the firm possesses both ownership advantages and internalisation advantages, it would not be worthwhile to set up a new affiliate in a foreign market if no advantages are realised from being located in that specific country (Cleeve, 2009:236). The solution would be to export to the specific country (König, 2003:486; Cleeve, 2009:237). A firm can only implement foreign direct investment as strategy if the firm possesses all three OLI advantages simultaneously (Madhok &

Phene, 2001:243; König, 2003:484; Cleeve, 2009:237). Although ownership advantage is a necessary condition for both internalisation and internationalisation, it is not sufficient (Pitelis, 2007:209).

Table 2.4: The eclectic paradigm/OLI approach

Ownership	Location	Internalisation	Internationalising strategy
Yes	Yes	Yes	FDI
Yes	No	Yes	Exports
Yes	No	No	Licensing

Source: König (2003:486)

The above table shows that the only way a firm can choose foreign direct investment instead of other options is when all the OLI conditions are satisfied simultaneously. If a firm only has an ownership advantage, it will choose licensing as internationalising strategy. Table 2.4 reveals that the success of every internationalising strategy is dependent on ownership advantages (König, 2003:486).

In the next section, the motivations for internationalisation are discussed.

2.3 The motivations for internationalisation

Factors that cause a firm to internationalise are known as motivational factors (Williams, 1992:269; Senik, 2010:85). Motivational factors are classified as proactive and reactive reasons (Senik, 2010:85), or push and pull factors (Williams, 1992:271; Etemad, 2004:5). Proactive reasons refer to firms that are following an aggressive behaviour when they enter new markets. Reactive reasons refer to firms that are following a passive approach when they are in search of new markets to penetrate (Senik, 2010:85).

Table 2.5 lists several reactive and proactive motivational reasons for firms to internationalise. The reactive and proactive reasons are discussed below.

Table 2.5: Proactive and reactive reasons for internationalisation

Proactive reasons	**Reactive reasons**
Managerial urge	Saturated and small domestic market
Foreign market opportunities	Competitive pressures
Profit and growth goals	Unsolicited foreign orders
Advanced technology	Declining domestic sales
Economies of scale	Risk diversification
Unique product	Psychological distance
Exclusive market information	Proximity to international customers

Source: Senik (2010:86)

Burpitt and Rondinelli (2000:3) state that consistent export activities by small firms to a foreign market are often a product of the management's attitude. It will be sensible for firms to implement a proactive strategy characterised by a "*planned, disciplined and co-ordinated*" attitude concerning expanding abroad (Williams, 1992:279).

Wilson (2007:5) states that generally growth is the most important goal for firms that want to expand abroad. Restricted growth prospects in domestic markets and the globalisation of markets have motivated firms to increasingly engage in activities internationally (Muñiz-Martínez, 1998:30; OECD, 2009:12). Forsman *et al*. (2002:1) state that globalisation has necessitated firms to think more globally. Improvements in sectors such as technology and communication have facilitated business from anywhere in the world (Wilson, 2007:3). The globalised world economy has provided a lot of exporting opportunities for both multinational firms and for smaller firms that tend to have concentrated only on their domestic market (Burpitt & Rondinelli, 2000:2).

Firms are motivated to move abroad because there is not much room for growth opportunities in the domestic market. This is due to the market reaching maturity or

becoming saturated or because of an increase in competition (Williams, 1992:271). For example, research focusing on Spain found that firms in some regions had the tendency to export more if unfriendly local circumstances prevailed, a high-level of foreign investors existed in the domestic market and if good export infrastructure was in place to support the exporting SMEs (OECD, 2009:12). Smaller domestic markets will also force SMEs with specialised or large production to enter foreign markets (Wilson, 2007:4). Firms do not want to be dependent on the domestic market for opportunities, so they venture abroad because they associate the global market with growth opportunities (OECD, 2009:12). Alexander (1990:183) found that firms regard opportunities in a distinct segment of a market as one of the major reasons when considering internationalising their operations. Furthermore, Williams (1992:271) states that competitive pressures will ensure that firms are always alert to growth opportunities, which can positively affect their sales and profits. Burpitt and Rondinelli (2000:11) look further than the economic factors when assessing the barriers and motivations for exporting. Firms want higher profits, but they also "*seek*" a better competitive position through the improvement of "*their organisation capability, knowledge, and skills.*"

Firms that collaborate with other firms and enter into networking relationships can get valuable resources. For example, distributors and customers can provide firms with vital foreign market knowledge and experience, which can have a big effect on a firm's success (Chetty & Campbell-Hunt, 2003:802; Wilson, 2007:4). Knowledge-related motives were one of the primary objectives in the (OECD, 2009:12) study. Firms may also be dragged into the global market to access certain expertise in areas they do not have domestically, for example, the newest technology.

Firms tend to export more if they believe that international activities could provide the firm a valuable amount of learning experience (De Clercq, Sapienza & Crijns, 2005:409). Aspects such as the convergence of consumer tastes, increased global competition and rapid technological change, has resulted in firms being in pursuit of

learning and scale economies, which in turn have motivated firms to form larger international firms (Benito, Larimo, Narula & Pedersen, 2002:57).

Smaller retail firms can also benefit from networking relationships with foreign firms that could result in an opportunity to expand the firm, which in itself can bring about a lot of rapid activity (Chetty & Campbell-Hunt, 2003:802; Hutchinson, Quinn & Alexander, 2005:159). Immigrants and related linkages could provide SMEs the stimuli needed for the first step in the internationalisation process or broadening it (OECD, 2009:12). Andersen (1993:212) noted that some stimuli must be present to make the firm somewhat attracted to the export idea. For example, linkages to the country of origin that occur by way of managers who come from another country (OECD, 2009:12).

Although there are a lot of trends that are motivating firms to internationalise, there are still barriers that can impede with a firm's internationalisation efforts (Wilson, 2007:4). In the next section, the barriers to internationalisation are discussed.

2.4 Barriers to internationalisation

Barriers are constraints that hinder or prohibit the firm to start, expand or continue exports (Morgan, 1997:73). In other words, barriers can prohibit firms to start internationalisation activities and they can hinder firms that are already exporting (Morgan, 1997:73; Morgan & Katsikeas, 1998:163). Leonidou (1995:33) states that there is an "*increasing desire by academics and practitioners*" to have a better understanding of the difficulties faced by firms abroad "in view of the accelerating internationalisation of world economies".

Barriers to internationalisation can be classified as internal or external. External barriers include local or international administrative rules and formal and informal trade barriers. For example, in the European Commission's 2003 European Network for SME Research (ENSR) survey, the biggest barrier for most SMEs was found to be the high cost to internationalise (European Commission, 2004). This stems from undertaking a

market analysis overseas, travelling, the translation of documents, the adaptation of products to foreign markets and the acquisition of legal consulting services (Wilson, 2007:4).

Internal barriers include inadequate networks, language or cultural differences and the lack of access to necessary finance (Wilson, 2007:4). Internal barriers of small firms, such as the difficulty to get information, a weak formal planning system, limited resources and the lack of managerial experience with exporting, can result in them being less interested in becoming international (Burpitt & Rondinelli, 2000:2).

Limited information or knowledge was the barrier to be found the most in studies by the OECD (2009), which implies that information differences in SMEs continue to be a problem. Ali and Swiercz (1991:72) state that firms start losing interest in internationalisation if they cannot successfully acquire market information. The lack of knowledge about foreign markets along with the misjudgement of market conditions and the inability to target export sales are the main barriers facing SMEs that engage in exporting (Ali & Swiercz, 1991:72).

Forsgren and Hagström (2000:2) state that the first scholar that observed that firms that are going abroad lack knowledge about how to operate abroad was Carlson (1966). The biggest barrier for firms attempting to internationalise is the lack of knowledge about foreign markets and it can only be acquired by operating in foreign markets (Johanson & Vahlne, 1978:23). Ultimately, the person who decides to engage in internationalisation is the one who has to have the knowledge and this is a product of the person's level of education, if the person was born overseas and if the person can speak other languages (Chetty & Campbell-Hunt, 2003:801).

Rabino (1980:71) found that the top three barriers to exporting were minimal exposure to different cultures, a large domestic market and staff that do not have enough time to do aggressive marketing. If firms are ignorant of different cultures and languages, it will make it difficult to pursue foreign marketing opportunities. The large USA market makes

that a small firm will have the needed demand for its product, which imply that firms will be less interested to internationalise. Furthermore, small firms that do not have sufficient or enough resources and experience perceive exporting as a risky affair (Burpitt & Rondinelli, 2000:2; Fillis, 2002:913). The small firms that do after all decide to export tend to experience a decline in sales in the initial phase of their export operation, which could make things difficult. This could make that firms lose confidence and eventually move back to their home country (Burpitt & Rondinelli, 2000:11).

Despite globalisation that has made the world a more integrated place, barriers to find the suitable partner and entry to the right distribution channels in the foreign market are still arising (OECD, 2009:10). If policy makers know what barriers firms are facing, they would know better what specific agencies or organisation to target which could help firms overcome the barriers (Morgan, 1997:73).

The next section provides a brief overview of existing empirical evidence on the various aspects of internationalisation. The focus is on the theories of internationalisation, the motivation of internationalisation and the barriers to internationalization.

2.5 Empirical evidence

Section 2.2.6 provided a discussion of Dunning's eclectic paradigm, which consists of ownership, location and internalisation advantages. (König, 2003:485). König (2003) used data from a survey undertaken in 1997 on 297 Swedish firms in Eastern Europe. His empirical results show that ownership advantages have an influence on exports and foreign direct investment, which imply that it determines whether the firm will be operating abroad or not. The results from the location and internalisation advantages are unclear (König 2003:502). Location factors hardly influence the decision between exports and foreign direct investments, which is different from what is the case in literature (König, 2003:503).

Reuber and Fischer (1997) studied 49 Canadian software firms, using questionnaires that captured data for the first five months of 1994. They combined the resource and behaviour-based theories of internationalisation. They found that management with international experience is an important resource for an SME because it helps the SME to engage in behaviour that initiates an increased degree of internationalisation. Furthermore, firms that have a management with international experience use more foreign partners. As a result there are fewer interruptions in generating foreign sales after the firm is established overseas. This leads to a greater degree of internationalisation (Reuber & Fischer, 1997:820).

Burpitt and Rondinelli (1998:55) examined 65 consulting firms in the state of North Carolina. Out of the 65 firms, 11 firms had previous experience in exporting. The managers expressed that the four biggest motivations for export were increased revenues, moderating market cycles, serving as an alternative for sluggish demand in the USA. and maximising profits. The motivation for internationalisation determined by Burpitt and Rondinelli (1998) correlates with the motivations for internationalisation discussed in section 2.3.

Coviello and McAuley (1999) examined 16 empirical studies on SME internationalisation in various countries between 1989 and 1998. Each study was examined according to the incremental model, FDI and networks frameworks. The 16 empirical studies contained 13 studies that supported incremental model internationalisation.

Zahra *et al*. (2000) studied new ventures from 12 multiple high-technology industries in the USA in 1993. They found that firms must first build knowledge if they want to use innovation effectively. Thus, firms need organisational learning to increase their knowledge base. One of the best ways to learn is to enter a diverse range of foreign markets. Empirically, it was found that this was the case, especially for smaller and younger firms. New international markets give firms exposure to a diverse range of knowledge. However, a diverse range of markets being entered into might halt the speed of technological learning (Zahra *et al*., 2000:942). They also found that the

technological learning has a positive effect on a company's performance. Technological learning enables international new ventures to obtain vital knowledge that will help them to offer a range of different innovative products. Since products are reaching the market at a faster speed, financial performance is positively affected. It is also argued that true competitive advantage is gained when a venture can move faster to an international market (Zahra *et al.*, 2000:943).

Chetty and Campbell-Hunt (2004:65) studied 16 New Zealand firms that has internationalised successfully in the mid 1980s. They found that 6 of the firms displayed the same characteristics as described by the incremental models discussed in section 2.2.1. These 6 firms had a strong domestic market before they started to internationalise. In terms of market scope, the majority of the 6 firms' sales went to the physically and psychologically closest neighbouring market of Australia. The remaining 10 firms contained 6 born global firms (see section 2.2.2), and 4 characterised as global firms since they followed the incremental model approach. The global firms also have a strong domestic market, but the majority of their sales went to 60 countries that were mostly outside Australasia. Furthermore, these global firms take long to internationalise (between 26 and 65 years). The born global firms have either no domestic market or a small domestic market. Around 80% of the born global firms' sales were in international markets (Chetty & Campbell-Hunt, 2004:68).

Pla-Barber and Escribá-Esteve (2006) studied 271 Spanish exporting firms by using questionnaires. To be included in the study the firms had to derive at least a quarter of their sales from exporting in 1996. Pla-Barber and Escribá-Esteve (2006:273) found a positive relationship between being a rapid internationalising firm and having a network of relationships with customers and competitors.

A number of Brazilian software development firms were studied by Dib, Da Rocha and Da Silva (2010). They studied 79 firms of which 35 were born global firms and 44 firms internationalised in the traditional way. The born global firms were younger and smaller in comparison to the traditional internationalising firms (Dib *et al*., 2010:242). It was

found that firms that spent more on research and development were likely to be born global instead of being traditional internationalising firms. This implies that born global firms are more innovative which also suggest that there will be more opportunities to operate abroad. Born global firms have more opportunities because their products are more competitive than firms that have less innovation which imply that they will have a competitive advantage (Dib *et al*., 2010:245). Empirically, it was found that all firms had equally used networks locally and internationally. This probably is due to fact that the Brazilian culture favours the use of relationships. The entrepreneuric variable of technical knowledge also had a positive relationship with a firm being a born global (Dib *et al*., 2010:246). Dib *et al*. (2010:246) also found that entrepreneurs from born global firms, in comparison with traditional internationalisers, believed that the international markets are more risky than the domestic market. This is a contradicting result to the literature. However, it must be noted that traditional firms were much larger and older, which could have influenced the result. The results from experience and education did not show much difference between the born global firms and internationalising firms (Dib *et al*., 2010:247). It was also found that born global firms were more customer-oriented (Dib *et al*., 2010:248).

In the next section, the significance of SMEs and SME internationalisation are discussed.

2.6 SMEs and internationalisation

2.6.1 The significance of SMEs

Countries use various definitions when defining SMEs. No absolute agreement exists on what the precise definition of an SME should be (Jarvis, 2011:8). SMEs can be defined according to the scale of operation of the enterprise and the number of employees working at the enterprise (Castel-Branco, 2003:2). This study uses the World Bank definition for SMEs. SMEs are defined as firms with less than 100 employees (World Bank Enterprise Survey, 2011).

As discussed in section 1.1.1, SMEs form the core part of a country's economy. As a result, SMEs are a fundamental part of economic growth in all countries. It is estimated that SMEs contribute around 80% to economic growth globally (Singh, Garg & Deshmukh, 2010:54). Fida (2008) states that an economy that shows substantial growth is usually characterized by a strong SME sector.

SMEs improve competition and entrepreneurship and ensure that the economy receives external benefits such as innovation and growth in productivity levels (Beck *et al*., 2005:200). Of the firms in a country, SMEs provide the largest share of employment in many economies. SMEs are also a significant contributor to exports (Lall, 2000:2; Singh *et al*., 2010:54).

To summarize, SMEs are significant since they provide benefits such as entrepreneurship, employment, exports and productivity to an economy (Storey, 1994:1; Das *et al*., 2007:55). To enter foreign markets is one of the best ways for SMEs to achieve growth (Lu & Beamish, 2001:566). In the next section, SMEs and the internationalisation process are discussed.

2.6.2 SME Internationalisation

As stated in section 2.6.1, to enter foreign markets is one of the best ways for SMEs to achieve growth (Lu & Beamish, 2001:566). Internationalisation refers to a dynamic process wherein the firm shifts its operations (resources, strategy and structure) from the home market to the foreign market and adapts it in that environment (Calof & Beamish, 1995:116; Senik, 2010:43). The most widely used definition of internationalisation is the movement of firm operations outside national boundaries (Calof & Beamish, 1995:116; Morgan & Katsikeas, 1997:71; Zeng, Xie, Tam & Wan, 2009:311). Melo and Do Valle (2008:7) state that the movement of a firm's operations outside national borders can occur through trade.

SMEs tend to internationalise through exporting and/or foreign direct investment (Lu & Beamish, 2001:565; Majocchi & Zucchella, 2003:249). In terms of internationalisation, SMEs predominantly choose export as strategy (Majocchi & Zucchella, 2003:252). Exporting is considered the first significant step towards internationalisation (Jones, 2001:192; Lu & Beamish, 2001:568) and is the main way for SMEs to enter foreign markets (Wolff & Pett, 2000:34; Stoian, 2006:2). Exporting is considered a future platform for other internationalisation strategies. It is the preferred internationalisation strategy since SMEs generally lack resources and the financial capability for foreign direct investment. Exporting can provide firms with more sales and market power, which suggest that this strategy tends to improve a SMEs' financial performance (Lu & Beamish, 2001:568). SMEs can further choose between direct and indirect exporting. Direct exporting is a higher risk and commitment strategy that leads to higher profits while indirect exporting is lower risk and the profit is shared between intermediaries (Majocchi & Zucchella, 2003:253).

SMEs with a limited geographic scope enter foreign markets to expand geographically. If SMEs have an expanded geographic scope, they can achieve higher levels of growth. SMEs grow more because expansion into foreign markets offers SMEs a larger customer base and the production levels have to be increased (Lu & Beamish, 2001:565). Foreign markets can offer a vast number of opportunities for small firms, such as the possibility to '*exploit*' scale advantages, the spreading of risk and larger and new niche markets (Lukács, 2005:10). SMEs are playing an increasingly active role in internationalisation. The internationalisation of SMEs is likely to increase as motivational factors as discussed in section 2.4 influence firms to enter foreign markets (Lu & Beamish, 2001:565).

Internationalisation has become an important strategy for firms that want to achieve further growth, but it is also very tough to survive in the international market (Zeng *et al*., 2009:309). The internationalisation process for SMEs can be time consuming, expensive and drain firm resources. Therefore, it is important for an SME to make the best decision in terms of the time to enter a market, the market to enter and the mode to

enter a country by (Collinson & Houlden, 2005:414). The barriers for internationalisation discussed in section 2.4 should be useful to help a firm make the best decision.

The next section summarises chapter 2.

2.7 Summary

The objectives of the literature study were to provide an overview of the theory on internationalisation, to discuss the motivations for internationalisation and the barriers to internationalisation. The two objectives were reached in section 2.2 through to section 2.4.

Section 2.2 provided seven theories or models on firm internationalisation. The first two models are known as the traditional or incremental internationalisation models and are known as the Uppsala model and Innovation-related model. Firms in the above-mentioned models follow a certain number of stages in order to achieve internationalisation. In the Uppsala model, knowledge and psychological distance plays a significant role. As the firm goes through the stages, it gathers more knowledge that reduces the risk associated with the foreign market. The firm consequently commits more resources to the foreign market. Psychological distance implies that the firm first enter markets that they are more familiar with.

In the innovation-related model, the focus is on the adoption of innovation between the stages. Firms that possess a higher level of innovation will be better positioned to fully exploit the benefits of internationalisation. Larger firms are designated to reap the benefits from innovation as a result of aspects such as technical proficiency, economies of scale and the characteristics of the managers. Innovation is regarded as a characteristic of entrepreneurs and therefore entrepreneurs must think and act innovatively. Not all firms follow the traditional route to internationalisation and have found a useful alternative in rapid internationalisation.

The rapid internationalisation model was discussed through the theories on born global firms and international new ventures. In the traditional internationalisation theories of Uppsala and the innovation-associated model, firms steadily construct a stable position in their domestic market before going international. In contrast to the traditional theories, rapid internationalising firms ignore an established domestic market and instead aspire to access new markets abroad from its inception.

Another important theory, namely international entrepreneurship, started with interest in international new ventures. International entrepreneurship is defined as the process of discovering, enacting, evaluating, and exploiting of opportunities across national borders in pursuit of a competitive advantage. The entrepreneur is the actor and searches for a competitive advantage across national borders, which in turn generate wealth for the firm owners. The entrepreneur is also a vital actor in another theory called the transaction cost theory. The theory is built around economic tasks such as production. The firm has to choose where it will be more cost-effective to perform production outside of the firm or inside the firm. If cost can be saved by internalising, the entrepreneur manages production inside the firm. The basic principle of the transaction cost theory is that the firm will shift low cost activities to the firm itself and rely upon the market to provide the other external activities where other firms carry an advantage in.

The resource-based theory concentrates on the firm’s unique bundle of resources and on how advantages can be generated from these resources. A firm that has valuable and rare resources will potentially gain a competitive advantage and if the resource is imperfectly imitable and non-substitutable in addition, the firm will potentially gain a sustained competitive advantage. Firms introduce strategies based on the resources that they control with the aim to enhance efficiency. The criteria applicable to describe a resource as strategic are that the resource must be valuable, rare, imperfectly imitable and non-substitutable. The resource-based theory can to a degree explain internationalisation since entrepreneurs improve their intellectual capital as they progressively learn which strategies to implement and resources to allocate the best for a foreign market.

Dunning's eclectic approach is built on entry mode strategies and international production. In essence, the firm has foreign direct investment, licensing and exporting as internationalisation strategies to choose from. These three strategies are subject to the OLI advantages and will consequently influence the firm's ultimate decision. If a firm has ownership advantages, but lack location or internalisation advantages, the theory indicates that licensing will be the best way to handle international production. If in turn the firm possesses both ownership advantages and internalisation advantages, it would not be worthwhile to set up a new affiliate in a foreign market if no advantages are realised from being located in that specific country. The solution would be to export to the specific country. A firm can only implement foreign direct investment as strategy if the firm possesses all three OLI advantages simultaneously.

From the theories on the literature study, ensued the motivations and barriers towards internationalisation in section 2.3 and 2.4. These are important aspects as they hinder or motivate a firm to export and thus internationalise. Numerous motivating factors for internationalisation were identified in the literature. It was found that firms are motivated to internationalise because of a saturated and small domestic market, competitive pressure, opportunities in the foreign market and to achieve growth. Barriers include inadequate networks, language or cultural differences and the lack of access to necessary finance. The lack of knowledge of foreign markets was the barrier to be found the most.

Section 2.5 provided a brief overview of existing empirical evidence on the various aspects of internationalisation. Section 2.6 illustrated the significance of SMEs and internationalisation. SMEs are significant because they provide benefits such as entrepreneurship, employment, exports and productivity to an economy. SMEs that want to achieve growth should enter foreign markets and thus internationalise. The discussion on the BRICS countries in chapter 3 provides background for the discussion on the characteristics of SME internationalisation in the BRICS countries in chapter 4.
The next chapter provides an overview of the BRICS countries.

Chapter 3
Overview of the BRICS countries

3.1 Introduction

Chapter 2 provided vital background on factors that is important in the subject of internationalisation. In section 2.2, the theories of internationalisation were discussed and in sections 2.3 and 2.4 the motivational factors and barriers to internationalisation were outlined. Chapter 3 is concerned with the countries involved in this study. Chapter 4 brings the factors and countries together by evaluating how these factors perform in the country. The results of these specific factors are compared in section 4.1.6 in chapter 4, which is the main objective of the study.

The aim of this chapter is to provide background on firstly the macroeconomic environment and secondly on SMEs in each of the BRICS countries. The macroeconomic environment is mainly focused on the economies and trade of the BRICS countries. Other areas covered include inflation, the government and unemployment. The SME section follows the discussion of the macroeconomic environment. SMEs play a crucial role in reducing unemployment in each country. In the SME section of the BRICS countries, the contribution of SMEs to employment, economic growth and exports in each country is discussed in more detail. This section on SMEs provides a general background to the empirical analysis in chapter 4, where the characteristics of internationalising SMEs in the BRICS countries are compared.

The outline of the chapter is as follows. The countries of Brazil, Russia, India, China and South Africa are discussed in section 3.2. This is followed by a discussion of BRICS as a group in section 3.3. Lastly, there is a summary in section 3.4.

3.2 Overview of the BRICS countries

The objective of chapter 3 is to provide an overview of the BRICS countries. The focus in section 3.2 is specifically on the five countries Brazil, Russia, India, China and South Africa. The macroeconomic environment and SMEs will be discussed under each of the BRICS countries. The macroeconomic environment is mainly focused on the economies and trade of the BRICS countries. Other areas covered include inflation, the government and unemployment. The SME section follows the discussion of the macroeconomic environment. SMEs play a crucial role in reducing unemployment in each country. In the SME section of the BRICS countries, the contribution of SMEs to employment, economic growth and exports in each country is discussed in more detail. The first BRICS country that is discussed is Brazil.

3.2.1 Brazil

3.2.1.1 Macroeconomic environment

Brazil is located in South America where it is the biggest country, which also has the biggest population (Kershaw, 2009:1), and largest economy (Polaski *et al*., 2009:5). Globally, Brazil is in the fifth position in terms of country size (Rivera, 2007:146). In terms of economy size, Brazil is in the eighth position (Tim, 2011:11).

The path to high growth for Brazil has not been that straightforward. Although Brazil has achieved a positive economic growth for a constant period (Polaski *et al*., 2009:5) the country has battled with inflation in the 1990s and only recorded an average of 1.7% GDP growth between 1990 and 1999. From 2000 to 2008, Brazil's economic situation has improved and had a 3.7% average in GDP growth. Brazil survived the worst of the 2008 global recession and recorded GDP growth of 0.2% in 2009 (Tim, 2011:11). Last year (2010), the country achieved economic growth of 7.5% (Begany, 2011) which is the highest economic growth figure in 25 years for the country (Richardson, 2011).

The major contributors to economic growth in 2010 were manufacturing with 10.1% and agriculture with 6.5% (Richardson, 2011). Brazil has grown fast because the economy is dominated by exports (Domm, 2011a), domestic demand remained strong (Domm, 2011a; Liena, Yunfei & Qiaomei 2011:1) and there was heavy government investment (Liena *et al*., 2011:1).

Brazil's economy grows at an average of around 5% per year, but economists fear that the economy has already peaked and could weaken (Begany, 2011). Economists expect the GDP growth to shrink to about 4.5% or 5% in 2011 (Begany, 2011; Liena *et al*., 2011:1; Richardson, 2011). Although the economy is healthy it might also be overheated which implies that fuel prices and inflation could increase further (Richardson, 2011). Inflation has hurt Brazil for the past 100 years (Pyne & German, 2011) and it is now again peaking at 6.7%, which is worrisome (Begany, 2011; Pyne & German, 2011). Inflation can cause a downturn in growth when prices get too high and consumers do not want to spend anymore. Consumer spending is the main driver of growth and if it falls, economic growth can fall as well (Begany, 2011).

Despite current concerns regarding inflation and consumer spending, the Brazilian economy has had significant success. Martinez-Diaz and Brainard (2009:1) argue that Brazil's successful economic growth rate can be attributed to its sound economic policies (Polaski *et al*., 2009:5), the brilliant achievements internationally of Brazil's largest firms and a sturdy world demand for the country's major commodities.

Brazil is labelled a commodities powerhouse because it is the main exporter in soy, orange juice, coffee, sugar and other items. Brazil's main export commodities as a percentage of global market shares, are orange juice which leads the way with 80%, soy second with 40%, chicken and coffee with 30% and beef and tobacco with 20% (Martinez-Diaz & Brainard, 2009:4). The large global market share of these commodities most likely led to the success of the economic growth rate in Brazil. However, some economists are worried that Brazil might become too dependent on its bulk commodities and be weak in other areas such as industrial production (Begany,

2011). Liena *et al*. (2011:3) state that Brazil is attempting to concentrate primarily on the export of commodities and services with high added value.

Although the success of economic growth in Brazil has been reduced by the global economic crisis in 2008, various experts believe that the success of Brazil could support the world in continuing the recovery process out of the recession in the years to come (Martinez-Diaz & Brainard, 2009:1). The crisis badly influenced Brazil by means of a fluctuating currency, the removal of foreign investment and trade financing shortages, but good macroeconomic principles ensured that the effect was not as severe as it might have been (Polaski *et al.*, 2009:5). Brazil's economic growth slowed during the crisis and afterwards there was a remarkable rebound (Anon., 2010:14). The government is doing their share in accelerating industrial technological innovation, ensuring a more open market, improving infrastructure and supporting competition (Liena *et al*., 2011:3).

Before the 1990s the government tried to avoid international competition, but it has become more open to international trade and investment, although the function of the government in the economy is unclear (Melo & Do Valle, 2008:3). The Brazilian economy at present is more involved internationally than at any time since 1970 (Martinez-Diaz & Brainard, 2009:2). It is important that the government establish an environment with institutions and an economic framework for SMEs that aims to improve Brazil global competitiveness (Melo & Do Valle, 2008:13). It is a fact that in order to be competitive, a country must have well skilled human capital (Bound, 2009:119).

Brazil has brought its unemployment level down from 13% (in 2003) to 6% (Begany, 2011). Apart from unemployment, Brazil also has a large number of people living in absolute poverty. The number of people living in absolute poverty was 28.1% in 2003 (Domm, 2011b), but it is estimated that the figure has declined to about 15% recently (Domm, 2011a). Brazil still has problems regarding income inequality and crime

(Kershaw, 2009:1). Although the economy is very strong Brazil is still one of the countries in the world where the wealth is very unevenly distributed (Rivera, 2007:146).

3.2.1.2 SMEs in Brazil

Brazil produces largely for the domestic market, which means that higher domestic consumption supported economic growth when the demand for exports was less than optimal in the crisis period (Polaski *et al.,* 2009:5). SMEs in Brazil are devoted to selling their products in the domestic market. Only 34% SMEs have exported in their lifetime (Melo & Do Valle, 2008:10). The country has about 3,5 million SMEs. The SMEs are responsible for 43% of GDP and provide jobs for 60% of the population (Rivera, 2007:146).

The role of the government in Brazil's economy has always been significant as most of the firms in Brazil were present in the public sector before 1990. In the late 1990s, 40% of the largest firms were still the property of the government (Martinez-Diaz & Brainard, 2009:5). The Brazilian government is very important for the development and enhancement of internationalisation of SMEs, but recently it complicated the process for the firm, rather than to support them. This is probably due to the low efficiency rate of the government. The government is important because it needs to provide incentives for SMEs to export (Melo & Do Valle, 2008:10).

Melo and Do Valle (2008:2) found that the internationalisation of SMEs in Brazil is very low, which weakens Brazil's performance internationally. The reasons for this trend could be the number of large firms that control the export market. Melo and Do Valle (2008:3) state that 250 firms in Brazil are accountable for three quarters of total exports in Brazil. In the last few years, the number of firms that has gone through the process of internationalisation has tripled. More attention has to be given to the internationalisation of SMEs in Brazil in order to improve their international competitiveness (Melo & Do Valle, 2008:13). As described in section 1.3, if SMEs' competitiveness improves, it may

be less risky for them to internationalise, which can lead to them being able to export more successfully, grow as a result of exporting and so contribute to employment.

In the next section, Russia is discussed.

3.2.2 Russia

3.2.2.1 Macroeconomic environment

Russia is the largest country in the world (Aidis, Korosteleva & Mickiewicz, 2008:1) and possesses 2.2% of the world's population (De Almeida, 2009:1). Russia has come far from the country it was in the 1980s. In the 1980s it had a stagnant economy that was characterized by marginal entrepreneurship. The country's situation at that time was made worse by the ruling communist regime that could not solve the crisis that were getting worse at the time (Aidis *et al*., 2008:2). The Soviet Union did not have a good effect on Russia because it established an unstable economy that in the end caused a structural crisis for the state and ultimately led to its dramatic collapse (De Almeida, 2009:1).

In the 1990s when the Soviet Union collapsed, the Russian economy moved into a new direction. The country underwent a number of reforms, but unfortunately, it did not promote much needed macroeconomic stabilization. Since 2000, the picture has changed as macroeconomic stabilization was achieved (Aidis *et al*., 2008:2). The economy grew at an average of 7% between 1999 and 2008 (Abelsky & Arkhipov, 2011). The growth in that period was due to capital inflow and market growth (Novikova, Fedorova, & Harvey, 2011). The demand for Russian energy resources was high and it lead to rapid economic growth (Aidis *et al*., 2008:2). Russia's economy grew by 5.2% in 2008 (World Bank, 2011:5).

Russia has unsurpassed energy resources (Aidis *et al*., 2008:1) which enable the country to be the world's biggest energy exporter. Energy and metals together account

for approximately 84% of Russian exports (Abelsky & Arkhipov, 2011). Russia is very dependent on its energy and raw material exports that makes its economy susceptible to external risks (Liena *et al*., 2011:3). The latter is probably the reason the country is attempting to rely less on its oil and natural gas revenues and instead diversify its economy (Abelsky & Arkhipov, 2011). The Russian government is investing in areas such as medicine and aerospace in order to start new areas to generate economic growth from (Liena *et al*., 2011:3).

In 2008, when the global economic crisis struck Russia, the country suffered badly because they depended on the export of energy and the crisis made that world demand dropped for energy (Mankoff, 2010:4). Economic growth fell by 13% to ultimately reach -7.8% for 2009 (World Bank, 2011:5). The negative growth figure meant that Russia performed the worst of all the BRICS countries during the crisis and the subsequent recession (Mankoff, 2010:6). Russia's economy recovered well to reach GDP growth of 4% for 2010 (Abelsky & Arkhipov, 2011; Liena *et al*., 2011:1; World Bank, 2011:4). Russia has achieved stable growth levels in 2010 due to fiscal policy stimulus, a recovery in oil prices (Liena *et al*., 2011:1), an increase in investment demand and inventory restocking (World Bank, 2011:4). Economic growth is expected to increase to 4.2% for 2011 (Liena *et al*., 2011:1).

In the short term, high oil prices will help export and fiscal revenues (World Bank, 2011:1). The high oil prices furthermore provide Russia with an opportunity to focus on long-term issues (World Bank, 2011:3). Russia has the lowest debt-to-GDP ratio of all the large countries in the world which puts the country in a good position to borrow and increase public expenditure (Aris, 2011) on long-term projects such as infrastructure (World Bank, 2011:1), skills and energy efficiency (World Bank, 2011:16). Other long-term issues that need attention are making the private sector more favourable for investment (World Bank, 2011:1).

Although commodity prices increased, economic output in Russia slowed in 2011 due to capital flight and a decline in domestic demand. This is a reason for concern because oil

prices are high, but economic growth is on the decline. The capital flight could be due to political uncertainty surrounding the upcoming elections and has a bad effect on growth since profits are rather invested into assets outside Russia than into domestic production (Abelsky & Arkhipov, 2011).

The unemployment rate fluctuated between 6.1% and 8.2% between 2006 and 2010. Unemployment is a big problem in some regions (World Bank, 2011:5). Additional problems faced by Russia are a lack of competition in the domestic market for firms followed by the closed model of the economy, a declining population and the lack of long-term and direct investment (Novikova *et al*., 2011).

3.2.2.2 SMEs in Russia

In 2007, the total number of officially registered SMEs stood at 1.1 million. The growth in the number of SMEs has stayed around 5% for the last few years despite higher government predictions (Bolotinsky & Jiang, 2008). SMEs are estimated to contribute between 13% and 17% of Russia's GDP (Bolotinsky & Jiang, 2008) and provide employment to 45% of Russia's population (Fan, 2003:7).

Problems faced by Russian SMEs include higher rent prices, excessive bureaucracy, rising cost of entering the market and maintaining a business and higher accounting cost and average wages (Bolotinsky & Jiang, 2008). Russia will suffer longer after the crisis than most other industrialized countries since their economy is not flexible and the state still plays a big role (Mankoff, 2010:3). The SME sector was struck hard by the crisis and is on a slow recovery path. The banks perceive SMEs as high-risk borrowers, which is a further setback (World Bank, 2011:11).

In the next section, India is discussed.

3.2.3 India

3.2.3.1 Macroeconomic environment

The Indian economy is a lot better off than it was twenty years ago (Krueger, 2008:281). India's success over the last 20 years is due to a series of economic reforms in the beginning of the 1990s, which opened up the private sector (Denyer, 2011:1). The new government that was formed in 1991, viewed economic reform as a necessity to improve India's economic performance (Krueger, 2008:275). Since implementing the economic reforms and abolishing the infamous licensing regime that smothered entrepreneurialism, India has done much better economically (Sharma, 2000:2; Krueger, 2008:266; Tong, 2008:1; Tim, 2011:11).

In the last decade, India has registered an extraordinary GDP growth performance with growth now verging on 10% a year (Tong, 2008:1; Tim, 2011:11). Due to the economic reforms, India's GDP growth increased to about 7% in the latter period of the 1990s (Krueger, 2008:266). From 2003 to 2006, India's economy grew by more than 8% per year (Tong, 2008:4).

India has safely come out of the global economic recession and recorded GDP growth of 6.8% in 2009 (Tim, 2011:11). The Indian economy grew by 8.5% in 2010 (Munroe, 2011; Narasimhan, 2011) and projected growth is down from 9% to 8.2% for 2011. This is mainly due to investments becoming stagnant and high inflation (Narasimhan, 2011). The continuous high inflation measured at around 9% has forced India to implement 10 interest rate increases since March 2010 (Munroe, 2011). The higher interest rates have discouraged investment (Denyer, 2011:2) and disrupted the GDP growth rate. This is probably why growth is anticipated to be at approximately 8% for 2011 (Munroe, 2011).

Economists and business leaders believe the reason why the Indian economy has not grown as it is capable of could be ascribed to bad politics. It is felt that India came out of the global economic crisis quite safely (Denyer, 2011:1; Narasimhan, 2011) and the

government should have worked on physical infrastructure and improving public expenditure management (Narasimhan, 2011). On the whole, per capita income has increased, the number of people living in poverty has decreased, India has become more involved internationally (Krueger, 2008:266), the middleclass has enlarged (Denyer, 2011:1) and foreign trade has increased steadily as can be seen in table 3.1 (Todd & Javalgi, 2007:169; Tong, 2008:3). From 1978 to 2001, nominal export growth was 9.1% and nominal import growth 8.3%. From 2001 to 2005, nominal export growth increased to 28% and nominal import growth increased to 30.2%.

Table 3.1: Nominal growth in exports and imports for India between 1978 and 2005

Period	Nominal export growth	Nominal import growth
1978-2001	9.1%	8.3%
2001-2005	28%	30.2%

Source: Tong (2008:5)

A significant contributing factor to India's success in GDP growth is trade (Tong, 2008:4). The top export destinations in 2010 were the United States of America, China, and Singapore while the top importing nations were China, USA and Australia (Trademap, 2011). Although India's trade has expanded, the country still has registered a persistent trade deficit since 1978 (Tong, 2008).

Service trade has played a vital role in India's trade development (Panagariya, 2004:28; Tong, 2008). India's share in world exports of goods and service increased from 0.4% in 1978 to 1.2% in 2006 (Tong, 2008:2). India draws heavily on its successful IT and service sectors (Liena *et al*., 2011:3). Service exports more than doubled from 2005 to 2007 (Krueger, 2008:278). The effect of the increase in service trade has become evident in the decline in the share of commodities exported. The share of manufacturing goods in commodities exported also declined from 82% in 1996 to 69% in 2006 (Tong, 2008).

India's abundance of unskilled labour should give the country a comparative advantage in trade, but two interrelated issues have discouraged this advantage. Firstly, education has been poor and lack in quantity. Secondly, the regulatory framework governing employment has been ineffective. The development of unskilled labour-intensive manufacturing has been lacking. Furthermore, most employment is in the informal sector and once a firm is large enough to function in the formal sector, it has to obey various government regulations (Krueger, 2008:280).

The Indian economy has to grow rapidly in order to reduce the high number of people living in poverty (Denyer, 2011:1), lift living standards and create jobs (Munroe, 2011). The large gap between the rich and the poor and corruption are problems the Indian government is facing (Liena *et al*., 2011:3). India also has problems with extreme government debt, political instability (Denyer, 2011:1; Narasimhan, 2011), an inadequate infrastructure, electric power supplies and transport (Krueger, 2008:280). Economists also feel that inflation could reach 10% or more in the near future (Munroe, 2011).

3.2.3.2 SMEs in India

The economic liberation in the early 1990s made Indian SMEs vulnerable because they were being exposed to high competitive levels domestically and internationally. However, the SMEs that did survive the early 1990s have emerged as large competitive forces internationally (Venkataramanaiah & Parashar, 2007).

In 2006, there were about 12 million registered and unregistered SMEs in India. These 12 million SMEs contribute about 6% to GDP growth. SMEs are also very important in the Indian economy because they create jobs and increase exports (Singh *et al*., 2010:56). The SME sector plays a crucial role in job creation and provides jobs for about 60 million people. SMEs create about 1.3 million jobs annually and produce more than 8 000 goods. SMEs in India contribute 45% of industrial output, 40% of exports

(Anon., 2011a) and 45% of employment (Pandey & Shivesh, 2007:4). In the period 2003-2004 exports from SMEs grew by 21% (Singh *et al*., 2010:56).

Table 3.2 illustrates that since the economic reforms in the early 1990s SMEs has steadily contributed to employment and exports (Todd & Javalgi, 2007:170). The number of small scale industries, employment and exports all has grown.

Table 3.2: Indian SMEs contribution to employment and exports between 1991 and 2003

Year	Total number of Small Scale Industries	Employment (in millions of people)	Total exports (in billions of dollars)	Small Scale Industry export
1991-1992	7.063	16.599	9.047	2.051
1997-1998	8.971	21.316	25.931	9.126
2002-2003	10.494	26.013	51.908	17.662

Source: *Todd and Javalgi (2007:170)*

SMEs in India produce on a small scale, which makes cost reductions and technological upgrades difficult. In a bid to improve the competitiveness of Indian SMEs, the government has removed a restriction that prohibited SMEs to export more than 50% of their production (Singh *et al*., 2010:62). Indian SMEs also have problems with obtaining finance (Venkataramanaiah & Parashar, 2007:230).

In the next section, China is discussed.

3.2.4 China

3.2.4.1 Macroeconomic environment

Similar to India, China underwent economic reforms and opened up its economy in 1978 (Tong, 2008:1). As a result, the country has achieved great levels of GDP growth and exports (Hall, 2007:29). GDP growth has surpassed the world average since the 1980s (Tong, 2008:4) and China's share of world exports of goods and services increased from 1.4% in 1978 to 7.6% in 2006 (Tong, 2008:2).

Overall trade has expanded at a rapid pace. In contrast with India where service trade was superior to commodities trade, China relies on its high level of commodities trade to cover for the deficit in service trade. In 2005 commodities exports contributed 91% of total exports (Tong, 2008). China is labelled the factory of the world due to its powerful manufacturing sector (Liena *et al*., 2011:4). The share of manufactured goods exported as a percentage of total exports increased from 50% in 1985 to 95% in 2007 (Tong, 2008).

The internationalisation of the Chinese economy through trade is vital for growth and the stability in Asia and the world (Hall, 2007:29). China has the largest economy in Asia (Sally, 2011:22). The economy grew by 9.2% in 2009 and 10.3% in 2010. Growth is expected at 8% for 2011 (Liena *et al*., 2011:1), but rising inflation is threatening China's growth rate (Shih, 2010). Since October 2010, the Chinese government has implemented a set of tightening measures to counter the rising inflation. These include minimizing the granting of bank loans and five interest rate increases (Denyer, 2011:1; Jia, 2011:1; Ran, 2011).

3.4.4.2 SMEs in China

The set of tightening measures introduced by the government in 2010 has made it tougher for SMEs to operate especially since banks prefer to lend to big, state-owned enterprises (Jia, 2011:2: Ran, 2011). These measures made it difficult for SMEs since it resulted in increased labour and raw-material cost and made it tougher to get bank loans. Together with daily expenses and financial problems, it has made production slower and less efficient. Only the most competitive firms will survive (Ran, 2011). The financing difficulties made that many SMEs had to move to micro lending which had high interest rates and caused many bankruptcies. Firms had to raise prices due to rising labour and material cost. This posed a problem since foreign buyers got accustomed to lower prices and consequently Chinese SMEs had a decline in demand (Anon., 2011b).

The Chinese leader in the 1980s, Deng Xiaoping, opened up China to a market-based economy. SMEs were finally recognized as important for China's economic development (Hall, 2007:29; Xiangfeng, 2007:38). The Government also followed a policy that promoted the private enterprises rather than state-owned enterprises (Xiangfeng, 2007:38). Since the economic reforms, SMEs have developed and increased in numbers all over China (Hall, 2007:29; Xiangfeng, 2007:38).

China had many reforms and an opening-up policy a few decades ago that created a good external environment for SMEs to thrive on. This exposed Chinese firms to more intense international competition. The number of state-owned firms was also decreased. In 1980, China had 3 400 medium enterprises and 372 500 small enterprises. In the 1980s China experienced rapid growth, which increased the number of SMEs in the country. In the 1990s the economy continued to expand. Since the mid 1990s China excelled from a shortage economy to a buyer's market (Wang, 2004:35-36). In the late 1990s, the number of SMEs stood at approximately 8 million (Fong, 2011:313). China has more than 40 million private sector SMEs (Hall, 2007:29; Fong, 2011:313; Jia, 2011:2).

SMEs are a crucial sector in the Chinese economy since they are a powerful source of employment and wealth (Wang, 2004:36). SMEs in China were responsible for 62% of exports in 2002 and in 2005, this number increased to 68%. This figure is much higher than any other economy in OECD and APEC. Exporting SMEs in China are a huge contributor to economic growth (Hall, 2007:29). In 2007, SMEs were responsible for more than 50% of GDP growth. In 2008, SMEs were responsible for 75% of employment (Fong, 2011:313). SMEs are becoming more powerful in China and are contributing to the development of the Chinese economy and society (Wang, 2004:36).

SMEs in China are far more advanced than those SMEs in Europe and the USA. Chinese SMEs are roughly more than twice as internationalised as USA SMEs and more than five times as internationalised as European SMEs (Hall, 2007:30). "*The Chinese government has helped SMEs with finance and technology to exploit international markets*" and thus internationalise easier (Banga, 2011).

In the next section, South Africa is discussed.

3.2.5 South Africa

3.2.5.1 Macroeconomic environment

South Africa's transformation to a democracy resulted in a more open economy (Gonzalez-Nuñez, 2008:4). The more open economy resulted in a substantial growth in exports and imports between 1992 and 2006 (Gonzalez-Nuñez, 2008:9). Trade continues to be an important aspect of South Africa's economy (Gonzalez-Nuñez, 2008:4). Lately imports have begun to exceed exports that lead to a trade deficit (Gonzalez-Nuñez, 2008:9). This is worrisome, but South Africa has nonetheless made good strides since the 1990s when the economic growth rate was only around 1% (Gonzalez-Nuñez, 2008:4).

South Africa had an economic growth rate of 5% from 2005 to 2007. The global financial crisis worsened the economic growth rate (De Lange, 2011). In 2008, the economic growth rate declined to 3.1% (Appel, 2009). In 2009, South Africa's economy went into a recession for the first time in 17 years and GDP growth further declined to -1.8% (Liena *et al*., 2011:1; South Africa business forecast report, 2011:25; Tim, 2011:11). South Africa recovered well in 2010 and increased GDP growth to 2.8% (Liena *et al*., 2011:1; Munyaradzi, 2011). The main driving force behind South Africa's recovery in 2010 was domestic consumption, followed by a large increase in output from the agriculture, mining industry, and manufacturing sectors. GDP growth is expected to reach 3.7% in 2011 and 3.9% in 2012 (Liena *et al*., 2011:1).

In 2011 the South Africa economy "*has been characterized*" by the rise in oil prices, public sector wage negotiations, a strong rand (Munyaradzi, 2011) and "*high unemployment keeping a lid on economic activity*". (South Africa business forecast report, 2011:16). The minister of economic development, Ebrahim Patel introduced a new plan for economic growth in which 5 million new and better jobs will be created by 2020 if the plan succeeds (Ensor, 2011). With an eye on the new economic growth path, South Africa must learn from successful emerging markets like India and Brazil (Tim, 2011:10). In chapter 4 the descriptive statistics of SMEs in the BRICS countries are compared that give an idea on how South African exporting SMEs can learn from the BRIC countries.

South Africa has three underlying structural problems: low education levels, high unemployment and crime. (South Africa business forecast report, 2011:26). For a country like South Africa that struggles with high levels of income inequality, unemployment and poverty, it is very important to promote small business development (Fatoki & Smit, 2011:1413).

3.2.5.2 SMEs in South Africa

South Africa will remain stuck in the unemployment dilemma if it fails to promote SMEs successfully (Falkena *et al*., 2001:13). It is important for SMEs in South Africa to grow in order to create jobs and ultimately benefit the economy. The SME sector in South Africa has historically played a big part in the economy (Kauffmann, 2005:4). In 1997, South Africa had around 58 900 small enterprises and 11 322 medium enterprises (Falkena *et al*., 2001:38). All of these SMEs were responsible for 50% of total employment and approximately 33% of output of the manufacturing sector (Gumede & Rasmussen, 2002:163).

SMEs definitely have to be taken into account when it comes to economic growth and development. If every SME in South Africa only somewhat increased its number of workers until 2020 then the target of 5 million new or better jobs could be reached (see section 1.3), but it is not so simple since SMEs are subject to rigorous labour laws and high staff costs (Anon., 2011c).

It is estimated that there are about 5.9 million small businesses in South Africa with most of them present in Gauteng, the Eastern Cape, Kwazulu-Natal and the North-West (Munyaradzi, 2011). The sectors in the South African economy with the most SMEs are manufacturing, retail trade, agriculture, construction, community and social and personal services (Falkena *et al*., 2001:40).

SMEs contribute around 40% of GDP and employment in South Africa (Ekpott, 2011). SME output in South Africa is 50% of GDP and the SME sector employs more than 60% of the “total labour force” (Falkena *et al*., 2001:13). Funding to SMEs is better than in the rest of Africa, but lacks behind other countries in the world. SMEs are ignored because they are informal, chaotic (Ekpott, 2011) and risky (Chaudhary, 2011; Ekpott, 2011). A bank like Standard Bank is seeing the potential that the SME sector holds and is giving more opportunities for SMEs (Ekpott, 2011).

The discussion on the BRICS countries illustrated the importance of SMEs in terms of employment, GDP and export. All the BRICS countries were discussed individually and are now discussed as a group in the next section.

3.3 BRICS as a group

The four major emerging economies of the world are known as BRIC, which stands for Brazil, Russia, India and China. South Africa formally became part of the leading emerging economies on 24 December 2010 and the “S” was added to BRIC to form BRICS (Koba, 2011; Smith, 2011:1). Out of all the emerging economies globally, the BRIC countries were the most vital contributors to GDP growth between 2005 and 2007 (Georgieva, 2006:4; Hawksworth & Cookson, 2008:2).

The acronym BRICS represent the five emerging markets of Brazil, Russia, India, China and South Africa (Richburg, 2011:1). The BRICS does not represent a political alliance such as the European Union, but it has the potential to develop into a dominant economic unit in the future. The five emerging markets have not entered into any formal agreements, but there have been agreements between some of the BRICS. Those agreements include the Shanghai Cooperation Organization between Russia and China. Another agreement is the IBSA Trilateral Forum in which Brazil, India, and South Africa take part in annual talks. The BRICS countries have had several meetings in Russia, Brazil and China that indicate that they are trying to actually organize themselves as a group (Koba, 2011). In the meetings, discussions focused on strengthening economic and trade cooperation among the five emerging markets (Badasie, 2011). BRICS possess the two countries with the two largest populations on earth, namely China and India (De Almeida, 2009:1). Together all the BRICS countries represent 40% of the world's population (Liena *et al*., 2011:4).

The BRICS economies in total are valued at approximately $12 trillion, which is still $3 trillion shy of the American economy positioned at $15 trillion. It is estimated that the BRICS economies will likely outstrip the American economy by 2020 (Richburg,

2011:2). China was the leading BRICS economy last year (2010) with GDP growth of 10.3%. India was in second position with 8.6% and Brazil in third with 7.5%. Russia achieved 3.8% GDP growth that puts them in fourth position (Richardson, 2011). The BRICS economies together contribute 15% to 18% of the global GDP (Liena *et al*., 2011:4; Richburg, 2011:2).

South Africa, India and Brazil have three similar development issues namely a low share of international trade, a lack of quality infrastructure and education (Tim, 2011:10). The countries function together, but are still in a way competing with each other. India and Brazil are worried that China's undervalued Yen is "*hurting*" their exports. China on the other hand is criticizing Russia's high prices for oil and commodities because they are their main importer (Richburg, 2011:2).

The BRICS have had a huge growth in trade. From 2001 to 2010 trade grew by 28% per year. (Liena *et al*., 2011:4). China and India have both undergone significant trade liberalisation and regulatory reform that other countries can learn from. They have applied a mixture of tariff protection and "*selective trade liberalisation*". It is evident that a more open economy provides benefits (Gonzalez-Nuñez, 2008:5).

China dominates trade in the BRICS and was the biggest trading partner of South Africa last year. China also was one of biggest trading partners of India and Russia. In 2010 alone trade between China and the other four BRICS nations stood at more than $180 billion, which is an increase of 40% from 2009 (Liena *et al*., 2011:4).

All the BRICS countries bring something valuable to the table. Brazil is labelled the global source for raw materials, such as soybean and iron ore. Russia is renowned for its abundant oil and gas resources. China is labelled the factory of the world due to its powerful manufacturing sector. India is the world's office due to its "*highly professional employees in IT and service sectors*". This is an exceptional foundation to work from as Brazil and Russia can provide the raw materials to China and India while China and India can provide goods and services to the former two. South Africa, the biggest

economy in Africa, is the new member of BRICS and functions as a gateway to the African continent (Liena *et al*., 2011:4).

3.4 Summary

Chapter 3 provided an overview of the BRICS countries with specific reference to the macroeconomic environment and SMEs in each country. The third objective of the study was to provide an overview of the SMEs in Brazil, Russia, India, China and South Africa. This objective was reached in section 3.2.

Section 3.2 provided an overview of the macroeconomic environment and SMEs in Brazil, Russia, India, China and South Africa. Brazil has done very well economically over the last decade. The reasons for Brazil's success can be attributed to sound economic policies, strong domestic demand and a thriving export sector. The thriving export sector was mainly due to Brazil having a large global market share in various commodities. However, economists fear that Brazil might become too dependent on its commodities. As a result, Brazil is attempting to concentrate primarily on the export of commodities and services with high added value. Further concerns are inflation, income inequality, crime and unemployment.

SMEs play a significant role in employment generation and GDP in Brazil. It is estimated that the 3.5 million Brazilian SMEs are responsible for 43% of GDP and 60% of employment. SMEs in Brazil are devoted to selling their products in the domestic market whilst only 34% of the total SMEs have exported in their lifetime. The export market is dominated by a number of large firms. As a result the internationalisation of SMEs in Brazil is very low, which weakens Brazil's performance internationally. More attention has to be given to the internationalisation of SMEs in Brazil in order to improve their international competitiveness. As described in section 1.3, if SMEs' competitiveness improves, it may be less risky for them to internationalise, which can lead to them being able to export more successfully, grow as a result of exporting and so contribute to employment.

In the 1990s when the Soviet Union collapsed, the Russian economy moved into a new direction. The country underwent a number of reforms, but unfortunately it did not promote much-needed macroeconomic stabilisation. Since 2000, the picture has changed as macroeconomic stabilisation was achieved. The economy grew at an average of 7% between 1999 and 2008. The demand for Russian energy resources was high and it lead to rapid economic growth. Russia's economy grew by 5.2% in 2008. In 2008, when the global economic crisis struck Russia, the country suffered badly because they depended on the export of energy and the crisis caused a drop in world demand for energy. Economic growth fell by 13% to ultimately reach -7.8% for 2009. The very low growth figure meant that Russia performed the worst of all the BRIC countries during the crisis and the subsequent recession. Russia's economy recovered well to reach GDP growth of 4% for 2010. Russia has achieved stable growth levels in 2010 due to fiscal policy stimulus, a recovery in oil prices, an increase in investment demand and inventory restocking. GDP growth is expected to increase to 4.2% for 2011, but capital flight and a decline in domestic demand might restrain growth. A further concern is that oil prices are high, but economic growth is on the decline in 2011.

Russia is very dependent on its energy and raw material exports and needs these sectors to generate growth. Russia is attempting to rely less on its oil and natural gas revenues and instead diversify its economy by investing in areas such as medicine and aerospace in order to start new areas to generate economic growth from. Further concerns for Russia are the lack of competition in the domestic market, followed by the closed model of the economy, a declining population, the lack of long-term and direct investment and high unemployment in some regions.

Russian SMEs have been significant contributors to employment and GDP. It is estimated that SMEs provide employment to 45% of Russia's population and contribute between 13% and 17% to Russia's GDP. In 2007, the total number of officially registered SMEs in Russia stood at 1.1 million. Problems faced by Russian SMEs include higher rent, excessive bureaucracy, rising cost of entering the market and maintaining a business, higher accounting costs and average wages.

India’s success over the last 20 years is due to a series of economic reforms in the beginning of the 1990s, which opened up the private sector. The new government that was formed in 1991, viewed economic reform necessary to improve India’s economic performance. Since implementing the economic reforms India has done much better economically. India’s GDP growth increased to about 7% in the latter period of the 1990s. From 2003 to 2006, India’s economy grew by more than 8% per year. India has safely come out of the global economic recession and recorded a GDP growth of 6.8% in 2009. The Indian economy grew by 8.5% in 2010, but projected growth is down from 9% to 8.2% for 2011. This is mainly due to investments becoming stagnant and high inflation. Further problems for India include extreme government debt, political instability, an inadequate infrastructure, electric power supplies and transport. It is important that India maintain a high growth rate in order to reduce the high number of people living in poverty, lift living standards and create jobs. Indian SMEs play a significant role in job creation and provide jobs for about 60 million people. They create about 1.3 million jobs annually and produce more than 8 000 goods. In 2006 there were about 12 million registered and unregistered SMEs in India. These 12 million SMEs contribute about 6% to GDP growth. SMEs in India contribute to 45% of industrial output, 40% of exports and 45% of employment.

Similar to India, China underwent economic reforms and opened up its economy in 1978. As a result the country has achieved great levels of GDP growth and exports. GDP growth has surpassed the world average since the 1980s and China’s share of world export of goods and services increased from 1.4% in 1978 to 7.6% in 2006. Overall trade has expanded at a rapid pace. In contrast to India where service trade was superior to commodities trade, China relies on its high level of commodities trade to cover for the deficit in service trade. In 2005 commodities exports contributed 91% of total exports. The internationalisation of the Chinese economy through trade is vital for growth and the stability in Asia and the world. The economy grew by 9.2% in 2009 and 10.3% in 2010. Growth is expected at 8% for 2011, but rising inflation is threatening China’s growth rate. Since October 2010, the Chinese government has implemented a

set of tightening measures to counter the rising inflation. This includes minimizing the lending of bank loans and five interest rate increases.

The set of tightening measures introduced by the government in 2010 have made it tougher for SMEs to operate especially since banks prefer to lend to big, state-owned enterprises. These tightening measures made it difficult for SMEs since it resulted in increased labour and raw-material cost and made it tougher to obtain bank loans. Since the economic reforms of the 1980s, SMEs have developed and increased in numbers all over China. It is estimated that there is more than 40 million private sector SMEs in China. SMEs are a crucial sector in the Chinese economy since they are a powerful source of employment and wealth. SMEs in China were responsible for 62% of exports in 2002 and in 2005 this number increased to 68%. This figure is much higher than any other economy in OECD and APEC. Exporting SMEs in China are a huge contributor to economic growth. In 2007, SMEs were responsible for more than 50% of GDP growth. In 2008, SMEs were responsible for 75% of employment. SMEs are becoming more powerful in China and are contributing to the development of the Chinese economy and society. SMEs in China are far more advanced than those SMEs in Europe and the USA. Chinese SMEs are roughly more than twice as internationalised as USA SMEs and more than five times as internationalised as European SMEs.

South Africa has three underlying structural problems which is low education levels, high unemployment and crime. For a country like South Africa, which struggles with high levels of income inequality, unemployment and poverty, it is very important to promote small business development. South Africa will remain stuck in the unemployment dilemma if it fails to successfully promote SMEs. It is important for SMEs in South Africa to grow in order to create jobs and ultimately benefit the economy. The SME sector in South Africa has historically played a big part in the economy. In 1997, South Africa had around 58 900 small enterprises and 11 322 medium enterprises. All of these SMEs were responsible for 50% of total employment and approximately 33% of output in the manufacturing sector. The minister of economic development, Ebrahim Patel introduced a new plan for economic growth in which 5 million new and better jobs

will be created by 2020 if the plan succeeds. With an eye on the new economic growth path, South Africa must learn from successful emerging markets like India and Brazil.

In section 3.3 the BRICS countries was discussed as a group. The acronym BRICS represent the five emerging markets of Brazil, Russia, India, China and South Africa. Together all the BRICS countries represent 40% of the world's population. The BRICS economies together contribute 15% to 18% of the global GDP. All the BRICS countries bring something valuable to the table. Brazil is labelled the global source for raw materials, such as soybean and iron ore. Russia is renowned for its abundant oil and gas resources. China is labelled the factory of the world due to its powerful manufacturing sector. India is the world's office due to its "*highly professional employees in IT and service sectors*". This is an exceptional foundation to work from as Brazil and Russia can provide the raw materials to China and India, while China and India can provide goods and services to the former two. South Africa, the biggest economy in Africa, is the new member of BRICS and functions as a gateway to the African continent.

In chapter 4 the empirical analysis of SMEs in the BRICS countries are compared to get an idea on how South African exporting SMEs can learn from the BRIC countries in order to be more competitive internationally. South African SMEs should work on the factors in which they are not performing to be more competitive. If South African exporting SMEs can be more competitive internationally, their performance will most likely also improve.

Chapter 4
Empirical Analysis

4.1 Introduction

Chapter 2 provided important background on factors that are important on the topic of internationalisation. Chapter 3 provided background on firstly the macroeconomic environment and secondly on SMEs in each of the BRICS countries. Chapter 4 brings the factors identified in chapter 2 as important in internationalisation and the background of the BRICS countries together by evaluating how these factors perform in each of the respective countries through an empirical analysis.

Chapter 4 provides the empirical results, which are essential to make a comparison between the characteristics of internationalising SMEs in the BRICS countries and for establishing the characteristics that may make SMEs in South Africa more likely to internationalise through exports. This chapter is divided into two main sections, a descriptive statistics section and a logistic regression analysis section. In the descriptive statistics section, firms in the BRICS countries are evaluated according to data obtained from the World Bank. The firms in each of the BRICS countries are evaluated by describing variables that pertain to all of the firms' characteristics and secondly only to that of SMEs[2]. The results are separated throughout by firms/SMEs that export and firms/SMEs that do not export. The empirical results are used to make a comparison between the characteristics of internationalising SMEs in the BRICS countries.

The second main section of chapter 4 contains the logistic regression analysis. The regression analysis is only done for South Africa and provides further background on what characteristics enable South African SMEs to more likely internationalise through exports. The process of obtaining the best determinants is done by progressively filtering the variables to ultimately reach the best regression model.

[2] SMEs are classified according to the World Bank definition of firms with less than 100 employees.

The goal of the chapter is to compare the characteristics of internationalising firms and SMEs of the BRICS countries. Also, to further provide insight into the determinants of SME internationalisation in South Africa. This is important as it may provide guidance to SMEs in South Africa to help them improve their competitiveness by improving their ability to export to the international market. As stated in chapter 1, internationalisation (through exports) provides benefits to an SME. Finally, in chapter 5, the study also provides policy recommendations for the government.

The outline of the chapter is as follows. The chapter firstly explains the variables and data in section 4.2. In section 4.3, the descriptive statistics of exporting and non-exporting firms and SMEs in Brazil, Russia, India, China and South Africa are discussed. This is followed by a comparison of between the results of exporting SMEs. Section 4.4 contains the regression analysis of South Africa. Lastly, there is a summary in section 4.5.

4.2 Variables and data

The data used in the analyses is obtained from the World Bank Enterprise surveys (World Bank Enterprise Survey, 2011). All of the data that is used in this study is the most recent available data. The data for Brazil, Russia and South Africa are based on standardised data for the period 2006 to 2009. The data for India and China are based on standardised data for the period 2002 to 2005. Table 4.1 shows the data for the BRICS countries, i.e. the number of firms and the year in which the survey in the particular country was taken.

Table 4.1: BRICS countries data

Country	Number of firms	Year
Brazil	1 802	2009
Russia	1 004	2009
India	1 827	2002
China	2 400	2003
South Africa	1 057	2007

The data contains numerous variables. Only some of the variables are used in the countries surveys because of omitted data on specific variables. Therefore, variables were chosen for which adequate data exists. The variables are grouped according to enabling, motivating, mediating and moderating factors as done by Naudé and Rossouw (2009) and in accordance to the international entrepreneurship theory discussed in section 2.2.3. Section 2.2.3 provided a detailed description of each of these variables. It is very useful to group the variables in this manner. Table 4.2 provides a description of the variables used in this study as well as the survey period used.

Table 4.2: Variables and data

Variable	Description	Survey
FIRM CAPABILITIES		
Agefirm	The length of time that the firm has been in business in the country, calculated by subtracting the year the firm was established from the current year (2011).	Both
Number of employees	The average number of employees at the end of the fiscal year before the survey was undertaken.	Both
ENABLING FACTORS		
Education	The highest level of education that the firm's top manager has.	Both
ISO certification dummy	Does the firm have an internationally-recognised quality certification? 1 = YES, 2 = NO	2006-2009
Experience	The number of years experience the top manager has in the sector	Both
Average education	The highest level of education of the workforce of the firm (2002-2005 survey). The average educational attainment of a typical production worker employed in the firm (2006-2009 survey).	Both
MOTIVATING FACTORS		
National market share	Share of national market (%).	Both
Competitors	Number of competitors in the domestic market.	2006-2009
Networks	The number of firms that is a member of a business association or chamber of commerce (2002-2005). The firm's source of information concerning its new supplier (2006-2009).	Both
SME / FIRM PERFORMANCE		
Total sales	The total annual sales of the firm in the last complete fiscal year.	Both

Table 4.2: Variables and data (continued)

Variable	Description	Survey
OBSTACLES	In the 2002-2005 survey, the obstacles are a problem for the operation and growth of the firm. In the 2006-2009 survey, the obstacles are a problem to the current operations of the firm. The obstacles are ranked on a four-point scale according to severity perceived: 0 = NO OBSTACLE, 1 = MINOR OBSTACLE, 2 = MODERATE OBSTACLE, 3 = MAJOROBSTACLE AND 4 = VERY SEVERE OBSTACLE.	
Access to finance		Both
Access to land		Both
Anti-competitive or informal practices		2002-2005
Business licensing and permits		Both
Corruption		Both
Cost of financing		2006-2009
Courts		Both
Crime, theft and disorder		Both
Customs and trade regulations		Both
Economic and regulatory political uncertainty		2002-2005
Electricity		Both
Inadequately educated workforce		2006-2009
Labour regulations		Both
Macroeconomic instability		Both
Political instability		2006-2009
Practices of competitors in the informal sector		2006-2009
Skills and education of available workers		2002-2005
Tax administration		Both
Tax rates		Both
Telecommunication		2006-2009
Transportation of goods and services		Both

As indicated in table 4.1, the country surveys were not always undertaken in the same year, but there is a common base of questions that allows for cross-country comparisons. It should also be noted that for some of the countries, not all of the variables chosen could be used. Some firms did not answer the question or did not

indicate the answer to the particular question. In such invalid cases, the particular firms for that question were ignored and the number of valid firms was used to determine the results.

In the descriptive statistics section, the variables from the different countries' datasets are first compared in terms of those that export and those that do not. Thereafter, a similar comparison is done for the SMEs that export and the SMEs that do not export. The latter is also the focus of the study; therefore, much emphasis is placed on this topic.

4.3 Descriptive statistics

The literature study provided a basis from which the determinants of internationalisation were chosen. This helps to most effectively describe the characteristics of internationalising firms and SMEs in the BRICS countries. The determinants are matched with the available World Bank data. The relevant variables are used to describe the characteristics of internationalising firms and SMEs in the BRICS countries. The variables are chosen according to firm performance, enabling, motivating and moderating factors necessary for internationalisation. The results of the descriptive statistics of each of the BRICS countries are compared at the end of the descriptive statistics section.

The descriptive statistics section follows two approaches to best describe the characteristics of SME internationalisation through export in the BRICS countries. First, characteristics of firms in general are described (i.e. the firm-based approach). Secondly, the study is refined to only SMEs (SME approach). It is necessary to do both approaches in order to compare SMEs to firms in general.

Throughout the descriptive analysis, the following method was used. The first step was to split the data according to whether or not all of the firms in the data export (the firm-based approach). Exports were grouped according to direct export and indirect export.

A firm is an exporter if it has exported, either directly or indirectly. Direct export refers to a firm which sells products directly to the international market while indirect export means the firm sells products domestically to a third party that exports products. A dummy variable was used to distinguish between exporters and non-exporters (1 = exporter, 0 = non-exporter). For the analysis, only the firms that indicated whether they exported or not in the survey were considered valid cases. Similarly (for the SME approach), a dummy was used to identify the SME firms. SMEs are grouped according to size as defined in the World Bank Enterprise surveys. SMEs are defined as firms that have less than 100 employees (World Bank Enterprise Survey, 2011). Large firms have more than 100 employees. The data was again split, this time between SMEs and large firms (1 = SME, 0 = large firm). Then, only the SMEs that indicated whether they exported or not (1 = exporter, 0 = non-exporter) in the survey were considered to be valid cases and were used in the analysis.

Note that the interpretation of each variable used in this study is discussed briefly in the analysis for the first BRICS country (namely Brazil) and is not repeated in the discussion of the other countries. The other countries only contain the results and the comparisons. Some variables differ for some countries due to data being from different date sets – in such a case, mention is made thereof.

The results of the descriptive statistics for the BRICS countries are discussed in the sections below. The statistical programme SPSS v.18.0 was used in the analysis.

4.3.1 Brazil

4.3.1.1 Firms in Brazil

The survey on Brazil was undertaken in 2009 and contains 1 802 firms. Out of the total 1 802 firms in Brazil, 3 firms did not indicate whether the firm export directly or indirectly. Therefore, 1 799 Brazilian firms are valid for the study. Out of the 1 799 firms that did indicate the firms' exporting nature, 263 export directly. Out of the 263 firms that export

directly, 43 also export indirectly. Out of the 1 799 firms, 149 export indirectly. The valid 1 799 firms contain 369 (20.5%) exporting firms and 1 430 (79.5%) non-exporting firms Table 4.3 shows the variables and the results obtained using SPSS v.18.0. The results are grouped according to the 1 430 firms that do not export and 369 firms that do export. In some cases, the total amount of firms varies, since some variables have only a specific amount of valid cases. No data is available for the national market share, education levels and network variables.

Table 4.3: Firm-based descriptive statistics of export and non-export firms in Brazil

	Exporting firms	**Non-exporting firms**
Number of employees average	388.69	87.58
Agefirm average (in years)	32.22	21.55
Enabling factors		
ISO certification, %	42.1	13.3
Experience average (in years)	25.56	21.72
Motivating factors		
Number of competitors in the domestic market	5+ (53.6%)	5+ (61.6%)
Firm performance		
Total sales average (BRL)	55 718 000	14 811 770

It was stated in section 1.1 that internationalisation helps firms to grow and create more employment opportunities. The **number of employees** variable illustrates the average number of permanent employees for exporting and non-exporting firms. Permanent employees are defined as all paid employees that are contracted for a term of one or more fiscal years and/or have a guaranteed renewal of their employment contract and that work 8 or more hours per day. The number of employees variable is based on the total number of employees the firm had in the fiscal year before the survey was undertaken.

Out of the 1 799 valid Brazilian firms, 11 firms did not indicate the total number of employees the firm had at the end of 2008. The 11 firms that did not the answer the question contained 10 non-exporting firms and 1 exporting firm. Therefore, the number of employees variable, is based on 368 exporting firms and 1 420 non-exporting firms. The 368 exporting firms had an average of 389 employees working at the firm. The 1 420 non-exporting firms had an average of 88 employees working at the firm. The

results show that exporting firms had on average more employees than non-exporting firms. Furthermore, the results are an indication of the benefit of firm internationalisation through exports, since exporting firms had a far higher average of employees than non-exporting firms did.

The **age of the firm** is an important variable because it shows the average age of firms that export and do not export. The result obtained on the average age of the firm variable also shows the internationalisation that applies to the firm. As discussed in section 2.2, a firm that exports at a young age, internationalise rapidly, and firms that internationalise at an older age, follow the traditional internationalisation models.

The World Bank enterprise survey only provides the year that the firm was established. If the survey of each BRICS country was undertaken in the same year, that year could have been used as base to calculate the age of the firm. Instead, the age of the firm is calculated by subtracting the year the firm was established from the current year (2011).

Two of the firms, one an exporter and the other one a non-exporter, did not indicate in which year the firm was established, and is ignored in the results provided by the agefirm variable. Therefore, the agefirm variable is based on 368 firms that do export and 1 429 firms that do not export. The oldest Brazilian exporting firm was established in 1 826 and is 185 years old. The oldest Brazilian non-exporting firm was established in 1911 and is 100 years old. The average age of a Brazilian firm that export is 32 years and for a non-exporting firm is 22 years. Firms that export are on average 10 years older than firms that do not export. The results show that older firms tend to engage more in exporting. These firms are likely to internationalise incrementally according to the Uppsala model or the Innovation related model discussed in section 2.2.1. These types of firms first are established in the domestic market and then go abroad.

The **certification** variable reveals whether or not the firm have an internationally-recognised quality certification (ISO 9000, 9002, 14000, etc). The ISO 9000 standards series is internationally recognised as a minimum standard for a quality system for

firms. This ISO certification is described as a set of quality system standards that reveal that a firm has good quality practices (Chow-Chua, Goh & Wan, 2003:936). Nine of the firms did not indicate whether they have certification and 29 firms are still in process of obtaining certification. Therefore, 38 firms are considered invalid for the certification variable (15 of the invalid firms export and 23 do not export). Therefore, only 354 firms that export and 1 407 firms that do not export are valid for the certification variable. Out of the valid 354 firms that export, 149 or 42.1% said that they have certification. Out of the valid 1 407 firms that do not export, 187 or 13.3% said that they have certification. From the results, it is evident that firms that export have more certification than firms that do not export. Therefore, exporting firms are more internationally recognised than non-exporting firms. Chow-Chua *et al*. (2003:949-950) found that certification improves profitability and strengthens exports when a firm internationalises. Overall, certification improves the competitiveness of the firm. The most cited benefits for certification are an increase in productivity and access to international markets (Chow-Chua *et al*., 2003:938).

The **experience** variable shows how many years of experience the top manager has in the sector (establishment). Thirteen firms did not indicate how much experience the top manager had and is ignored (9 of these 13 firms do not export and 4 do export). Thus, the experience variable is based on 1 786 firms, consisting of 365 firms that export and 1 421 firms that do not export. The average years of experience the top manager had in a firm that exports were 26 years. The average years of experience the top manager had in a firm that does not export were 22 years. Therefore, the top manager in a firm that exports has on average 4 years more experience than a top manager of a firm that does not export. As discussed in section 2.2.2, an experienced manager would be crucial to recognise and seize opportunities in a foreign market. If the experience the top manager has includes the international experience he/she has, it will be even more beneficial to the firm. In the eclectic paradigm discussed in section 2.2.6 it was stated that international experience is a firm-specific characteristic from which a firm can derive an ownership advantage.

Taking into consideration the establishment's main market for its main product line, the **competitor** variable shows the number of competitors the firm faced in its main market (the domestic market). Firms that answered that the international market is its main market are ignored for this part of the study. Table 4.4 illustrates the competitor variable and specifically the answers respondents had to choose from.

Table 4.4: Competitor variable illustration

Number of competitors	Answer
None	1
One	2
2-5	3
More than 5	4
Don't know	-9

Approximately 13 firms did not indicate how many competitors the firm faced and 513 firms did not answer the question. For the firms that export and do not export, most answered that they had more than 5 competitors. More specifically, 156 or 53.6% of the firms that export have more than 5 competitors and 606 or 61.6% of the firms that do not export have more than 5 competitors. The results indicate that the majority of Brazilian firms have many competitors. However, the number of firms that export that have more than 5 competitors are 8% less than firms that do not export that have more than 5 competitors. Thus, the number of firms that have more than 5 competitors are lower for firms that export.

The **total sales**[3] variable reveals the total annual sales of the firm in the last complete fiscal year. The total sales variable is measured in local currency units for all the BRICS countries. Around 133 respondents did not indicate what their firms' total sales were in Brazil. The lowest total sales number for a firm that exported was R$ 8 000. The lowest total sales for firms that do not export were much lower at R$ 1 000. The average total sales number for firms that export was R$ 55 718 000 and for firms that do not export, R$ 14 811 770. Therefore, total sales for exporting firms are higher than for non-exporters. The results are correlated with the literature on the motivations for firms to

[3] The total sales value is expressed in the local currency used in each of the BRICS countries

internationalise in section 2.3 where one of the motivations was for growth and profit reasons.

All the firms had to indicate various **obstacles** they perceived in doing business in their country. In the 2002-2005 survey, the obstacles are a problem for the operation and growth of the firm. In the 2006-2009 survey, the obstacles are a problem to the current operations of the firm. The obstacles were ranked according to severity perceived, as illustrated in table 4.5. Several obstacles are evaluated for each country and only the 5 major obstacles are given for each country after the analysis in SPSS. Table 4.5 gives a clear idea of what obstacles are the most deterring to firms in the particular country. The results show the obstacles that countries can improve on, in order to better their exports.

Table 4.5: Obstacle variable illustration

Obstacle	Rank
No obstacle	0
Minor obstacle	1
Moderate obstacle	2
Major obstacle	3
Very severe obstacle	4

The **obstacles** evaluated in the 2006 to 2009 survey are access to finance, access to land, business licensing and permits, corruption, courts, customs and trade regulations, electricity, inadequately educated workforce, labour regulations, political instability, practices of competitors in the informal sector, tax administration, tax rates, transportation of goods and services, macroeconomic instability and crime, theft and disorder. Since there is no data on the inadequately educated workforce, labour regulations and macroeconomic instability obstacles, only the variables listed in table 4.6 are evaluated for Brazil.

Table 4.6: Obstacles for firms in Brazil

Obstacle	Exporting firm (%)	Non-exporting firm (%)
Access to finance	Moderate, 28.4	Major, 27.6
Access to land	No obstacle, 37.3	No obstacle, 33.2
Business licensing and permits	Major, 29.2	Moderate, 27.8 and Major, 27.8
Corruption	Very severe, 40.5	Very severe, 45.9
Courts	Moderate, 27.1	Moderate, 24.1
Crime, theft and disorder	Moderate, 27.9	Very severe, 36.9
Customs and trade regulations	Moderate, 31.3	No obstacle, 42.5
Electricity	Very severe, 31.5	No obstacle, 30.3
Political instability	Major, 28.5	Very severe, 26
Practices of competitors in the informal sector	Very severe, 24.5	Moderate, 29.9
Tax administration	Major, 41.3	Very severe, 36.6
Tax rates	Very severe, 47.3	Very severe, 43.3
Transportation of goods and services	Moderate, 36.8	No obstacle, 30.3

The top 5 obstacles for firms that export in order of severity are tax rates, corruption, electricity, practices of competitors in the informal sector and tax administration. The top 5 obstacles for firms that do not export in order of severity are corruption, tax rates, crime, theft and disorder, tax administration and political instability. The obstacles that are a problem for both exporters and non-exporter firms in Brazil are tax rates, corruption and tax administration. These 3 obstacles need close attention since they are a problem to the current operations of the firm whether the firms export or not.

As stated earlier, the descriptive statistics section is grouped into a firm-based approach and a SME-based approach. The firm-based approach gave important results, but more emphasis is placed in the SME-based approach, which is discussed next.

4.3.1.2 SMEs in Brazil

In order to get to a SME-based approach on Brazil, the firms has to be grouped according to firm size. Firm size is measured by the number of employees employed at the firm. Firms that have between 5 and 19 employees are classified as small enterprises, firms that have between 20 and 99 employees are medium-sized enterprises and firms that have 100 or more employees are large enterprises.

The study on Brazil contains 1 802 firms. All the firms answered the question relating to the size of the firm. Out of the total 1 802 firms, 1 428 are classified as SMEs and 374 are large firms. From the previous section, it was noted that 3 firms did not indicate their export nature, so these 3 firms must again be ignored. Of these 3 firms, 2 are SMEs and the other one is a large firm. Therefore, the SME section for Brazil is based on 1 426 SMEs and 373 large firms.

Out of these 1 426 SMEs, 187 or 13.1% export and 1 239 or 86.9% do not export. Out of the 373 large firms, 182 or 48.8% export and 191 or 51.2% do not export. On a percentage basis, SMEs that export are far less than large firms that export. These results are similar to that of Melo and Do Valle (2008) which shows that large firms control the Brazilian export market. The results for the 1 426 Brazilian SMEs are summarised in table 4.7.

Table 4.7: SME-based descriptive statistics of export and non-export firms in Brazil

	Exporting SMEs	**Non-exporting SMEs**
Number of employees average	44.5	25.28
Agefirm average (in years)	25.30	20.41
Enabling factors		
ISO certification, %	30.3	9.6
Experience average (in years)	23.93	21.25
Motivating factors		
Number of competitors in the domestic market	5+ (50.3%)	5+ (60.2%)
Firm performance		
Total sales average (BRL)	11 432 050	3 594 318

As mentioned in section 4.3.1.1, 11 Brazilian firms did not indicate the total number of employees the firm had at the end of 2008. The 11 firms that did not answer the question contained 9 SME of which all were non-exporters. Therefore, the number of employees variable, is based on 187 exporting SMEs and 1 230 non-exporting SMEs. The 187 exporting SMEs had an average of 45 employees working at the firm. The 1 230 non-exporting SMEs had an average of 25 employees working at the firm. The results show that exporting SMEs had on average more employees than non-exporting SMEs. The results show the benefit of internationalisation through exports for Brazilian SMEs, since exporting SMEs had a far higher average of employees than non-exporting

SMEs. Furthermore, the growth of SMEs through internationalisation is a crucial employment generator in Brazil.

As mentioned in the firm-based approach, two firms did not indicate in what year the firm was established. One of these firms is an SME that do not export and is ignored for the **agefirm** variable. Therefore, the agefirm variable is based on 187 SMEs that do export and 1 238 SMEs that do not export.

The average age of SMEs that export is 25 years and for SMEs that do not export 20 years. The results show that SMEs that export is on average older than SMEs that do not export (SMEs that export is about 7 years younger than firms that export). SMEs that do not export are about 1 year younger than firms that do not export. SMEs in Brazil export at a younger age than large firms, which could imply that Brazilian SMEs are rapid internationalisers according to the theories on rapid internationalisation discussed in section 2.2.2.

Approximately 178 exporting SMEs and 1 222 non-exporting SMEs are valid for the **certification** variable. Out of the 178 exporting SMEs, 54 or 30.3% have certification. Out of the 1 222 non-exporting SMEs, only 117 or 9.6% have certification. The results show that there are more exporting SMEs with certification than non-exporting SMEs with certification. The percentage of SMEs that export compared to firms with certification that export, there are 11.8% less, which implies that more large firms have certification. Therefore, exporting firms are more internationally recognised than non-exporting firms.

The average years of **experience** the top manager has for an exporting SME is 24 years and for a non-exporting SME 21 years. SMEs that export have a top manager with about 3 years more experience on average than an SME that does not export. If SMEs that export are compared with firms that export, the top manager has about 2 years less experience in the case of SMEs.

Around 149 SMEs that export and 860 SMEs that do not export are valid for the **competitor** variable. Out of the 149 exporting SMEs, 75 or 50.3% have 5 or more competitors. Out of the 860 non-exporting SMEs, 518 or 60.2% have 5 or more competitors. This result is more or less the same as for firms that export.

The average **total sales** for exporting SMEs are R$ 11 432 050 and for non-exporting SMEs, R$ 3 594 318. Therefore, total sales for SMEs that export are higher than for SMEs that do not export. The results are correlated with the literature on the motivations for firms to internationalise in section 2.3 where one of the motivations for internationalisation was for growth and profit reasons.

Table 4.8: Obstacles for SMEs in Brazil

Obstacle	**Exporting SME (%)**	**Non-exporting SME (%)**
Access to finance	Major obstacle, 28.3	Major obstacle, 27.7
Access to land	No obstacle, 38.7	No obstacle, 32.6
Business licensing and permits	Major, 28.1	Moderate, 27.9
Corruption	Very severe, 43.5	Very severe, 47.3
Courts	Major, 29.2	Very severe, 24.3
Crime, theft and disorder	Moderate, 26.2	Very severe, 37.2
Customs and trade regulations	Moderate, 29.3	No obstacle, 44.3
Electricity	Very severe, 28	No obstacle, 30.4
Political instability	Moderate, 26.3 and Very severe, 26.3	Very severe, 26.2
Practices of competitors in the informal sector	Very severe, 25.9	Moderate, 30.3
Tax administration	Major, 43.5	Very severe, 37
Tax rates	Very severe, 48.7	Very severe, 43.9
Transportation of goods and services	Moderate, 40.3	No obstacle, 31.8

The top 5 obstacles for SMEs that export in Brazil in order of severity are tax rates, corruption, electricity, practices of competitors in the informal sector and tax administration. The top 5 obstacles for SMEs that do not export in order of severity are corruption, tax rates, crime, theft and disorder, tax administration and political instability. The obstacles that occur for exporting and non-exporting SMEs are tax rates, corruption and tax administration. The result shows that large firms and SMEs in Brazil face similar problems.

In a relating question, respondents had to choose a most serious obstacle to the current operations of the firm from the following variables: access to finance, access to land, business licensing and permits, corruption, courts, customs and trade regulations, electricity, inadequately educated workforce, labour regulations, political instability, practices of competitors in the informal sector, tax administration, tax rates, transportation of goods and services, as well as crime, theft and disorder. For SMEs that export, the 5 most serious obstacles are tax rates (35.8%), tax administration (11.8%), practices of competitors in the informal sector (10.2%), inadequately educated workforce (10.2%) and access to finance (9.6%). For SMEs that do not export the 5 most serious obstacles are tax rates (31.6%), inadequately educated workforce (14%), practices of competitors in the informal sector (12.8%) and access to finance (8.7%).

According to the above results, tax rates and tax administration are very relevant as problems to the current operations of the firm. An obstacle that were not analyzed in table 4.8 due to omitted data, inadequately educated workforce, was found to be in the top 5 serious obstacles for exporting and non-exporting SMEs. Brazilian SMEs need to minimise the effect of these obstacles in order to better their exports and thus internationalisation.

The next country that is discussed is Russia.

4.3.2 Russia

4.3.2.1 Firms in Russia

The survey on Russia was undertaken in 2009 and contains 1 004 firms. Out of the 1 004 firms, 1 firm did not indicate the export nature of the firm and is therefore ignored. Approximately 152 firms exported directly, 88 firms exported indirectly and 38 firms exported both directly and indirectly. Out of the 1 003 valid Russian firms, 202 or 20.1% are exporters and 801 or 79.9% are non-exporters. As was the case with Brazil, no data

is available for the national market share, education levels and networks variables. The results for firms in Russia are summarised in table 4.9 and are discussed further below.

Table 4.9: Firm-based descriptive statistics of export and non-export firms in Russia

	Exporting firms	**Non-exporting firms**
Number of employees average	490.76	212.54
Agefirm average (in years)	27.86	19.56
Enabling factors		
ISO certification, %	52.3	16.2
Experience average (in years)	15.71	16.06
Motivating factors		
Number of competitors in the domestic market	5+ (50.7%)	5+ (62.7%)
Firm performance		
Total sales average (RUB)	831 000 000	315 000 000

Out of the 1 003 valid firms, 4 of the firms did not indicate the total number of employees the firm had at the end of 2008. The 4 firms that did not the answer contained 3 non-exporting firms and 1 exporting firm. Therefore, the number of employees variable, is based on 201 exporting firms and 798 non-exporting firms. The 201 exporting firms had an average of 491 employees working at the firm. The 798 non-exporting firms had an average of 213 employees working at the firm. The results are an indication of the benefit of firm internationalisation through exports, since exporting firms have a far higher average of employees than non-exporting firms do.

Out of the 1 003 valid firms, 13 of the firms did not indicate in which year the firm was established. Out of the 13 firms, 12 are non-exporters and 1 is an exporter. Therefore, for the **agefirm** variable, 789 non-exporting firms and 201 exporting firms are valid. The 201 exporting firms have an average age of 28 years. The 789 firms that do not export have an average age of 20 years. Thus, firms that export are on average 8 years older than firms that do not export. The results show that older firms tend to engage more in exporting. These firms are likely to internationalise incrementally according to the Uppsala model or the Innovation related model discussed in section 2.2.1. These types of firms first are established in the domestic market and then go abroad.

Out of the 1 003 valid firms, 9 firms did not indicate if the firm has **certification** and 10 firms are still in the process of getting certification. Therefore, 19 firms are ignored for the certification variable. Out of the 19 invalid firms, 9 are exporters and 10 are non-exporters. Therefore, for the certification variable, 791 non-exporting firms are valid and 193 exporting firms are valid. Out of the 193 firms that do export, 101 or 52.3% have certification. Out of the 791 firms that do not export, 128 or 16.2% have certification. Exporting firms have on average 36.1% more certification than non-exporting firms do. Therefore, exporting firms are more internationally recognised than non-exporting firms. As mentioned in the Brazil section, certification improves profitability and strengthens exports when a firm internationalises. Overall, certification improves the competitiveness of the firm. The most cited benefits for certification are an increase in productivity and access to international markets.

Out of the valid 1 003 firms, 17 firms did not how many years of **experience** the top manager had. Out of the 17 invalid firms, 5 are exporters and 12 are non-exporters. Therefore, for the experience variable, 789 non-exporting firms are valid and 197 exporting firms are valid. The 197 exporting firms' top managers have on average 16 years experience. The 789 non-exporting firms' top managers' experience level is also 16 years. Since the result is the same for the experience variable, the decimals show that the top manager in a firm that do not export have 0.35 years more experience that a top manager of a firm that exports. This result differs from Brazil where the top manager of firms that export have more experience than the top manager of firms that do not export.

Out of the 1 003 firms, 16 firms did not indicate how many **competitors** the firm faced. Approximately 418 firms did not respond to the competitor variable question. A total of 434 firms are therefore ignored for the competitor variable. Out of the 434 invalid firms, 62 are exporters and 372 are non-exporters. Therefore, for the competitor variable, 429 non-export firms are valid and 140 export firms are valid. Out of the 140 exporting firms, 71 or 50.7% have five or more competitors. Out of the 429 non-exporting firms, 269 or

62.7% have five or more competitors. The results show that Russian firms have a high number of competitors in the domestic market whether they export or not.

Out of the 1 003 valid firms, 258 firms did not indicate the **total sales** value. Out of the 258 invalid firms, 153 are exporters and 205 are non-exporters. Therefore, for the total sales variable, 596 non-exporting firms are valid and 149 exporting firms are valid. The average total sales value for firms that export is R 831 000 000 and for firms that do not export R 315 000 000. Therefore, the total sales number for firms that export is higher than for firms that do not export. One of the motivations for firms to internationalise was to get higher profits, which correlated with the results of the total sales variable.

The obstacles listed in table 4.10 are a problem to the current operations of the firm. The top 5 obstacles for firms that export in order of severity are electricity, political instability, corruption, tax administration and tax rates. The top 5 obstacles for firms that do not export in order of severity are electricity, tax rates, corruption, access to finance and tax administration.

Table 4.10: Obstacles for firms in Russia

Obstacle	Exporting firm (%)	Non-exporting firm (%)
Access to finance	Moderate, 26.6	Major, 22.7 and No obstacle, 22.7
Access to land	No obstacle, 35	No obstacle, 32.3
Business licensing and permits	No obstacle, 24.6 and Minor obstacle, 24.6	No obstacle, 35.3
Corruption	Major, 22.7	Major, 24.3
Courts	Moderate, 29.5	No obstacle, 32.7
Crime, theft and disorder	No obstacle, 30.3	No obstacle, 25.4
Customs and trade regulations	No obstacle, 28	No obstacle, 49.8
Electricity	Very severe, 31.5	Very severe, 28.5
Political instability	Major, 27	No obstacle, 23.7
Practices of competitors in the informal sector	No obstacle, 39.8	No obstacle, 38.9
Tax administration	Moderate, 35.3	Moderate, 32.7
Tax rates	Moderate 34.3	Major, 29.5
Transportation of goods and services	No obstacle, 38.9	No obstacle, 37.4

As was the case with the Brazilian study, respondents also had to choose a most serious obstacle. For firms that export the 5 most serious obstacles are access to finance (24.9%), tax rates (17.5%), inadequately educated workforce (9.5%), political instability (9%) and courts (7.9%). For firms that do not export the 5 most serious obstacles are access to finance (21.3%), tax rates (18.8%), inadequately educated workforce (10.3%), courts (9.5%) and political instability (9%).

The obstacles that are an issue for both exporting and non-exporting firms in Russia according to table 4.10 are electricity, corruption, tax rates and tax administration. Additional obstacles identified as serious obstacles for both exporters and non-exporters are access to finance, an inadequately educated workforce, courts and political instability. These 8 obstacles need close attention since they are a problem to the current operations of the firm whether the firms export or not. Electricity and corruption was not in the top 5 serious obstacles. Tax rates were the only variable in all the cases in the top 5 obstacles and need to be addressed followed by access to finance.

4.3.2.2 SMEs in Russia

Out of the total 1 004 Russian firms, 391 or 38.9% and 613 or 61.1% are large firms. The one firm that did not indicate the firms export nature is a large firm and do not have an effect on the study on SMEs. Therefore, the SME-based approach is based on 613 SMEs. Out of the 613 SMEs, 76 or 12.4% export and 537 or 87.6% do not export. The results for Russian SMEs are summarised in table 4.11 and discussed in detail below.

Table 4.11: SME-based descriptive statistics of export and non-export firms in Russia

	Exporting SME	Non-exporting SME
Number of employees average	48.25	32.57
Agefirm average (in years)	14.37	15.28
Enabling factors		
ISO certification, %	35.7	10.1
Experience average (in years)	14.19	15.15
Motivating factors		
Number of competitors in the domestic market	5+ (51.9%)	5+ (61.7%)
Firm performance		
Total sales average (RUB)	142 000 000	64 675 047.73

As mentioned earlier in section 4.3.2.1, four firm respondents did not indicate the total number of employees the firm had in 2008. The four ignored firms contained one firm of which one is an exporter. Therefore, the number of employees variable, is based on 76 exporting SMEs and 536 non-exporting SMEs. The 76 exporting SMEs had an average of 48 employees working at the firm. The 536 non-exporting SMEs had an average of 33 employees working at the firm. The results show that exporting SMEs had on average more employees than non-exporting SMEs. The results show the benefit of internationalisation through exports for Russian SMEs, since exporting SMEs had a higher average of employees than non-exporting SMEs. Furthermore, the growth of SMEs through internationalisation is a crucial employment generator in Russia.

Out of the 1 003 valid firms, 13 did not indicate which year the firm was established. Out of the 13 firms, 7 are non-exporting SMEs. Therefore, for the **agefirm** variable, 607 SMEs are valid. These 607 SMEs are further divided into 76 exporters and 530 non-exporters. The 76 SMEs that do export have an average age of 14 years. The 530 non-exporting SMEs have an average age of 15 years. Non-exporting SMEs are on average about 1 year older than exporting SMEs. The results show that exporting and non-exporting SMEs in Russia have about the same average age. The average age of firms that export is 25 compared to the average age of 13 for SMEs that export. Therefore, SMEs internationalise at a younger age than firms do.

As mentioned earlier in section 4.3.2.1, 19 firms are ignored for the **certification** variable. Out of the 19 invalid firms, 8 are SMEs. These 8 SMEs are further divided into

6 exporters and 2 non-exporters. Therefore, 605 SMEs are valid for the certification variable of which 70 are exporters and 535 are non-exporters. Out of the 70 exporting SMEs, 25 or 35.7% have certification. Out of the 535 non-exporting SMEs, 54 or 10.1% have certification. The results show that more exporting SMEs have certification than non-exporting SMEs. Therefore, exporting SMEs in Russia are more internationally recognised than non-exporting SMEs. Certification provides several other benefits to SMEs as discussed in section 4.3.1.1.

As mentioned earlier in section 4.3.2.1 for the **experience** variable, 17 firms did not indicate how many years of experience the top managers of the firms had. Out of the 17 invalid firms, 5 are SMEs of which one is an exporter and the other 4 non-exporters. Therefore, for the certification variable, 533 non-exporting SMEs are valid and 75 exporting SMEs are valid. The 75 exporting SMEs have top managers with experience of 14 years. The 533 non-exporting SMEs have top managers with 15 years experience. The result is similar to that of the firm-approach's experience variable. The decimals show that the top manager in a non-exporting SME has 0.96 years more experience than a top manager of an exporting SME.

Approximately 16 firms did not indicate how many **competitors** their firm faced and 418 firms did not respond to the competitor variable question. In total, 434 firms are ignored for the competitor variable. Out of the 434 invalid firms, 277 are SMEs of which 22 are exporters and 255 are non-exporters. The data on Russia contained 613 SMEs of which 76 are exporters and 537 are non-exporters. Therefore, 54 exporting SMEs and 282 non-exporting SMEs are valid for the competitor variable. Out of the 54 exporting SMEs, 28 or 51.9% have five or more competitors. Out of the 282 non-exporting SMEs, 174 or 61.7% have five or more competitors. The results show that Russian SMEs have a high number of competitors in the domestic market whether they export or not.

Around 258 firms did not indicate the **total sales** number of the firm. Out of the 258 invalid firms, 164 are SMEs of which 142 are non-exporters and 22 are exporters. The data on Russia contained 613 SMEs of which 76 are exporters and 537 are non-

exporters. Therefore, for the total sales variable, 395 non-exporting and 54 exporting SMEs are valid. The average total sales for SMEs that export is R 142 000 000 and for SMEs that do not export R 64 675 047.73. Therefore, the total sales number for exporting SMEs is higher than for non-exporting SMEs. The results are correlated with the literature on the motivations for firms to internationalise in section 2.3 where one of the motivations for internationalisation was for growth and profit reasons.

Table 4.12: Obstacles for SMEs in Russia

Obstacle	**Exporting SME (%)**	**Non-exporting SME (%)**
Access to finance	Major, 29.3	No obstacle, 22.6
Access to land	No obstacle, 32.9	No obstacle, 31.4
Business licensing and permits	Moderate, 29.2	No obstacle, 35.1
Corruption	Major, 24.7	Major, 24.4
Courts	No obstacle, 33.8	No obstacle, 34
Crime, theft and disorder	No obstacle, 28	No obstacle, 25.8
Customs and trade regulations	Very severe, 24.7 and Moderate, 24.7	No obstacle, 50.5
Electricity	No obstacle, 28	Very severe, 28.5
Political instability	Major, 33.3	No obstacle, 24.1
Practices of competitors in the informal sector	No obstacle, 30.3	No obstacle, 37.5
Tax administration	Moderate, 36.8	Moderate, 29.9
Tax rates	Moderate, 43.4	Major 29.8
Transportation of goods and services	No obstacle, 34.7	No obstacle, 38.7

The obstacles listed in table 4.12 are a problem to the current operations of the firm. The top 5 obstacles for SMEs that export in order of severity are customs and trade regulations, political instability, access to finance, corruption and tax rates. The top 5 obstacles for SMEs that do not export in order of severity are electricity, tax rates, corruption, tax administration and access to finance. In a relating question, respondents also had to choose a most serious obstacle. For SMEs that export the 5 most serious obstacles are tax rates (20.0%), access to finance (18.7%), political instability (10.7%), business licensing and permits (10.7%) and an inadequately educated workforce (9.3%). For SMEs that do not export the 5 most serious obstacles are access to finance (20.3%), tax rates (18.5%), inadequately educated workforce (10.4%), corruption (10%) and political instability (9.1%).

The obstacles that are an issue for both exporter and non-exporter firms in Russia according to table 4.12 are access to finance, corruption and tax rates. The most serious obstacles that occurred for both exporters and non-exporters were tax rates, access to finance and political instability. Tax rates and access to finance are the biggest problems to the current operations of SMEs in Russia.

The next country that is discussed is India.

4.3.3 India

4.3.3.1 Firms in India

The most recent available data for India is from a survey undertaken in 2002. The survey questionnaire for this year differs from the survey questionnaire used during the 2006 to 2009 period. Because of this, the variables are on some occasions interpreted differently. Since India is discussed before China, the interpretation of the variables that differ from the 2006 to 2009 survey is only explained under India.

The data on India contains 1 827 firms. Approximately 116 firms did not answer the questions in relation to direct and indirect exports. Therefore, 1 711 Indian firms are valid for the discussion. Out of the 1 711 valid firms, 315 firms only export directly, 1 396 export only indirectly and 61 firms export both directly and indirectly. Since 116 firms did not answer the question relating to the export variables, only 1 711 firms are valid. Of these valid firms, 373 or 21.8% are exporters, while 1 338 or 78.2% are non-exporters.

Data is available for all the variables outlined in table 4.2, except for certification and the number of competitors in the domestic market variable. The results for firms in India are summarised in table 4.13 and discussed in detail below.

Table 4.13: Firm-based descriptive statistics of export and non-export firms in India

	Exporting firms	Non-exporting firms
Number of employees average	263.33	42.83
Agefirm average (in years)	28.85	24.59
Enabling factors		
Education, %	Degree (88.1)	Degree (87.1)
Experience average (in years)	9.46	8.81
Education average	Less than 6 years (25.6)	Between 6 and 9 years (32.11)
Motivating factors		
National market share, %	16.3	12.3
Moderating factors		
Networks, %	89.5	74.1
Firm performance		
Total sales average (INR)	544 101.48	71 417.02

The data on India contained 1 711 valid firms of which 350 firms that export and 1 250 firms that do not export are valid for the **number of employees** variable. The 350 exporting firms had an average of 263 employees working at the firm. The 1 250 non-exporting firms had an average of 43 employees working at the firm. The results show that exporting firms had on average more employees than non-exporting firms. Furthermore, the results are an indication of the benefit of firm internationalisation, through exports, since exporting firms had a far higher average of employees than non-exporting firms did.

Approximately 93 firms did not answer the question and 1 734 answered the question relating to the **agefirm** variable. Out of the 1 734 firms that answered the question, 109 firms did not indicate the firm's export orientation. Therefore, 1 625 firms are valid for the agefirm variable. The 1 625 firms consist of 356 exporters and 1 269 non-exporters. The average age of firms that export is 29 years, while the average age of firms that do not export is 25. Thus, firms that export are on average 4 years older than firms that do not export. The results show that older firms tend to engage more in exporting. These firms are likely to internationalise incrementally according to the Uppsala model or the Innovation related model discussed in section 2.2.1. These types of firms first are established in the domestic market and then go abroad.

Two education variables are discussed in the descriptive statistics section. The first education variable shows the highest level of education of the top manager, while the second education variable shows the education levels of the workforce. The two education variables are discussed for the first time in the India section. The countries already discussed, Brazil and Russia, did not have data on the two education variables. The education variable is interpreted the same way for India and China because both countries' surveys were undertaken between 2002 and 2005.

The **education** variable shows the highest level of education of the top manager. The numbers between 1 and 6 represent various levels of education. Table 4.14 illustrates the numbers that represent the level of education.

Table 4.14: Illustration of the education variable (2002-2005 survey)

Level of education of the top manager	Number
Did not complete secondary school	1
Secondary School	2
Vocational Training	3
Some university training	4
Degree (BA, BSc etc.)	5
Postgraduate degree (PhD, Masters)	6

Out of the 1 711 total firms that indicated their export nature, 14 firms did not answer the question. The 14 firms consist of 12 firms that do not export and 2 firms that export. Therefore, 1 697 firms consisting of 371 exporting firms and 1 326 non-exporting firms are valid for the education variable. An interesting result is that no firms answered that the top manager has vocational training, some university training or a postgraduate degree. The results for firms that export and firms that do not export are virtually the same if the percentages are compared. Approximately 327 or 88.1% exporting firms answered that the top manager has a degree and 1 155 or 87.1% non-exporting firms answered that the top manager has a degree. The results lead to the conclusion that the top manager, whether in an exporting or non-exporting firm, is very likely to have a degree as the highest level of education.

The **experience** variable is almost interpreted the same way for India and China as for Brazil, Russia and South Africa. The only difference is that the experience variable now shows the number of years experience the top manager has working in this sector before running the establishment that he/she is now part of. In the other cases, the experience variable included the years the top manager worked in the establishment that he/she is part of. Around 73 firms did not answer the question and 1 754 answered the question relating to the experience variable. Out of the 1 754 firms that answered the question, 116 firms did not indicate the firms export orientation. Therefore, 1 638 firms are valid for the experience variable. The 1 638 firms consist of 358 exporters and 1 280 non-exporters. The average years of experience for exporting firms are 9.46 and for non-exporting firms 8.81. The results show that firms that export have a top manager with slightly more experience. Therefore, the years of experience of the top manager are not as important for exporting firms since top managers in non-exporting firms almost have the same amount of experience.

The **average education variable** is the second education variable discussed in the descriptive statistics section. The first education variable focused on the top manager while the average education variable is focused on the workforce. The average education variable shows the highest education level of the workforce of the firm. Table 4.15 illustrates the numbers that represent the level of education. The education levels with the percentages that got the most answers are summarised below table 4.15.

Table 4.15: Illustration of the average education variable (2002-2005 survey)

Level of education of the workforce	Number
Less than 6 years (“some elementary”)	1
6-9 years	2
10-12 years	3
More than 12 years (some university or higher)	4

For firms that export:

- 25.6% of the workforce has less than 6 years (“some elementary”) of education.
- 22.22% of the workforce has between 6 and 9 years of education.
- 24.48% of the workforce has between 10 and 12 years of education.

- 24.71% of the workforce has more than 12 years (some university of higher) of education.

For firms that do not export:

- 25.75% of the workforce has less than 6 years (“some elementary”) of education.
- 32.11% of the workforce has between 6 and 9 years of education.
- 24.48% of the workforce has between 10 and 12 years of education.
- 17.66% of the workforce has more than 12 years (some university or higher) of education.

Non-exporting firms have a workforce with more workers that have 6-9 years of experience education and exporting firms have a workforce with more workers that have 12 years of education. If exporting and non-exporting firms are compared overall, the workforce of firms that export have a more educated workforce since more workers have an education level of 10 years and beyond.

The national market share variable illustrates the share of national market the firm has. Out of the total 1 827 firms, 262 firms did not answer the question and 1 565 answered the question relating to the **national market share** variable. Out of the 1 565 firms that answered the question, 103 firms did not indicate the firm’s export orientation. Therefore, 1 462 firms are valid for the national market share variable. The 1 462 firms consist of 329 exporters and 1 133 non-exporters. The average national market share for exporting firms is 16.3% and for non-exporting firms the average is 12.3%. Firms that export have a larger national market share.

In chapter 2 the importance of **networks** was discussed in several sections. In section 2.2.4 it was stated that an entrepreneurial firm could achieve internationalisation through networks. Entrepreneurs should use networks to their advantage since networks can provide vital opportunities and probable strategic alliances abroad. In section 2.2.5 it was stated that firms that possess more contact networks are more likely to be exporters than those who do not. As discussed in section 2.3, networking is also

one of the motivations for internationalisation. Firms that collaborate with other firms and enter into networking relationships can get valuable resources. For example, distributors and customers can provide firms with vital foreign market knowledge and experience, which can have a big effect on a firm's success. However, inadequate networks can also be an internal barrier to firms, as stated in section 2.4. In addition, Naudé and Rossouw (2009:4) argue that networks assist firms that have minimal knowledge and experience of foreign markets. To summarise, networks are crucial for firms and are likely to increase the likelihood of internationalisation.

For Brazil, Russia and South Africa, the network variable is interpreted according to the firm's main source of information that the firm had about its newest supplier. For India and China the network variable differs slightly, and is therefore calculated by the number of firms that is a member of a business association or chamber of commerce.

Out of the 1 711 firms that indicated whether they export or not, 1 710 is valid since one exporting firm that did not answer the question relating to the network variable. Therefore, 372 exporting firms and 1 338 non-exporting firms are valid for the network variable. Out of the 372 exporting firms, 333 or 89.5% answered that the firm is a member of a business association or chamber of commerce. Out of the 1 338 non-exporting firms, 991 or 74.1% answered that the firm is a member of a business association or chamber of commerce. The results show that the majority of exporting and non-exporting firms are members of a business association or chamber of commerce. Therefore, networking in general plays a large role in Indian firms, but is more important for exporting firms.

The **total sales** variable shows the total sales the firm had in 2001. Out of the 1 711 firms that indicated whether they export or not, 1 710 is valid since 1 firm that did not export did not answer the question relating to the total sales variable. Therefore, 373 exporting firms and 1 337 non-exporting firms are valid for the network variable. The average total sales for exporting firms is Rs 544 101.48 and for non-exporting firms Rs 71 417.02. Firms that export have far superior average total sales than firms that do not

export. The results are correlated with the literature on the motivations for firms to internationalise in section 2.3 where one of the motivations for internationalisation was for growth and profit reasons.

In the 2002-2005 survey, the **obstacles** are a problem for the operation and growth of the firm. The serious obstacle question in the 2006-2009 survey that was analyzed and discussed in the Brazilian and Indian section was not included in the 2002-2005 survey. All the obstacles used in the study on Brazil, Russia and South Africa are used on India and China except for the court as obstacle, that has no data. However, some obstacles have different names in the 2002-2005 survey. Instead of an inadequately educated workforce, the variable used here is the skills and education of available workers. Political instability is here grouped under economic and regulatory political uncertainty. Practices of competitors in the informal sector are labelled anti-competitive or informal practices. Additional obstacles not included in Brazil, Russia and South Africa, include telecommunication and cost of financing. The results of the obstacles are summarised in table 4.16.

Table 4.16: Obstacles for firms in India

Obstacle	**Exporting firm (%)**	**Non-exporting firm (%)**
Access to finance	No obstacle, 35.3	No obstacle, 38.2
Access to land	No obstacle, 44.9	No obstacle, 50.9
Business licensing and permits	Minor obstacle, 32.2	No obstacle, 37.9
Corruption	Moderate obstacle, 24.5	No obstacle, 23.1
Crime, theft and disorder	No obstacle, 35.7	No obstacle, 37.8
Customs and trade regulations	Moderate obstacle, 30.2	No obstacle, 46.2
Electricity	No obstacle, 29.5	No obstacle, 25.2
Skills and education of available workers	No obstacle, 39.1	No obstacle, 41.7
Labour regulations	Minor obstacle, 27.4	No obstacle, 36.9
Economic and regulatory political uncertainty	No obstacle, 26.5	No obstacle, 34.9
Anti-competitive or informal practices	No obstacle, 34.9	No obstacle, 37.3
Tax administration	No obstacle, 25.8	No obstacle, 29.5
Tax rates	Moderate obstacle, 23.7	No obstacle, 33.6
Transportation of goods and services	No obstacle, 34.3	No obstacle, 40.6
Macroeconomic instability	Moderate obstacle, 26.7	No obstacle, 38.4
Telecommunication	No obstacle, 52.4	No obstacle, 59.3
Cost of financing	Moderate obstacle, 29.6	No obstacle, 32.6

The top 5 obstacles for firms that export in order of severity are customs and trade regulations, cost of financing, macroeconomic instability, corruption and tax rates. All the obstacles in table 4.16 were found to be not an obstacle for non-exporting firms. Exporting firms thus have more and bigger obstacles. Indian exporting firms should improve the top 5 obstacles that are a problem for the operation and growth of the firm. If the top 5 obstacles for exporting firms are improved, it is likely that the success of firms will improve and more firms will engage in exporting.

4.3.3.2 SMEs in India

Out of the 1 827 total firms, 164 firms did not answer the question. 118 firms have less than 5 employees and are not included in this study. Therefore, 282 firms are invalid for calculating the number of SMEs in India. The number of valid firms is 1 545. Out of the 1 545 valid firms, 1 315 are SMEs and 230 are large firms.

Out of the 1 315 SMEs, 77 SMEs did not answer whether they export or not. Therefore, 1 238 SMEs are valid for the study. Out of the 1 238 SMEs, 191 export while 1 047 do no export. The results of SMEs in India are summarised in table 4.17 and discussed in detail below.

Table 4.17: SME-based descriptive statistics of export and non-export firms in India

	Exporting SMEs	**Non-exporting SMEs**
Number of employees average	33.18	19.48
Agefirm average (in years)	27.08	23.4
Enabling factors		
Education, %	Degree (90.5)	Degree (88.5)
Experience average (in years)	9.65	8.81
Education average	6 to 9 years (27.42)	6 to 9 years (32.16)
Motivating factors		
National market share, %	13.88	10.95
Moderating factors		
Networks, %	88	75
Firm performance		
Total sales average (INR)	82 833.41	26 610.47

The data on India contained 1 711 valid firms of which 1 238 are valid SMEs. The 1 238 SMEs contain no invalid exporting SMEs and 50 invalid non-exporting SMEs. Therefore, 191 exporting SMEs and 1 047 non-exporting SMEs are valid for the **number of employees** variable. The 191 exporting SMEs had an average of 33 employees working at the firm. The 1 047 non-exporting SMEs had an average of 19 employees working at the firm. The results show that exporting SMEs had on average more employees than non-exporting SMEs. Furthermore, the results are an indication of the benefit of firm internationalisation through exports, since exporting SMEs had a higher average of employees than non-exporting SMEs.

Out of the 191 SMEs that export, 179 are valid SMEs and out of the 1 047 SMEs that do not export, 1 003 SMEs are valid for the **agefirm** variable. The average age of SMEs that export are 27 years, while the average age of SMEs that do not export is 23. Thus, SMEs that export are on average 4 years older than SMEs that do not export.

Out of the 1 238 SMEs, 191 export while 1 047 do no export. Two SMEs that export and 5 SMEs that do not export are invalid for the **education** variable. Therefore, 189 exporting SMEs and 1 042 non-exporting SMEs are valid for the education variable.

Similar to the firm section, no respondents answered that the top manager has vocational training, some university training or a postgraduate degree. The results for exporting and non-exporting SMEs are virtually the same if the percentages are compared. 171 or 90.5% SMEs that export answered that the top manager has a degree. 922 or 88.5% SMEs that do not export answered that the top manager has a degree. The results lead to the conclusion that the top manager, whether in an export or non-export SME, is very likely to have a degree as highest level of education.

Out of the 1 238 SMEs, 191 are exporters while 1 047 are non-exporters. For the experience variable, there are 189 valid SMEs that export and 1 009 valid SMEs that do not export. The average years of experience for exporting SMEs are 9.65 and for non-exporting SMEs, it is 8.81. The results show that SMEs that export have a top manager

with slightly more experience. Therefore, the years of experience of the top manager is not as important for exporting SMEs since top managers in non-exporting SMEs almost have the same amount of experience.

The average **education** variable shows the highest level of education of the workforce of the SME. The results are summarised below.

For SMEs that export:

- 22.76% of the workforce has less than 6 years (“some elementary”) of education.
- 27.42% of the workforce has between 6 and 9 years of education.
- 25.71% of the workforce has between 10 and 12 years of education.
- 24.1% of the workforce has more than 12 years (some university or higher) education.

For SMEs that do not export:

- 23.96% of the workforce has less than 6 years (“some elementary”) of education.
- 31.16% of the workforce has between 6 and 9 years of education.
- 25.93% of the workforce has between 10 and 12 years of education.
- 17.95% of the workforce has more than 12 years (some university or higher) education.

The results for exporting and non-exporting SMEs are very similar. SMEs that do not export have a workforce with more workers that have 6-9 years of education, but SMEs that export have more workers that have more than 12 years education. Therefore, exporting SMEs have a more educated workforce than non-exporting SMEs.

Around 1 059 SMEs are valid for the **national market share** variable. The 1 059 firms consist of 168 exporters and 891 non-exporters. The average national market share for SMEs that export is 13.88% and for SMEs that do not export, it is 10.95%. Thus, SMEs that export have a larger national market share.

Out of the 191 SMEs that export, 168 or 88% answered that the SME is a member of a business association or chamber of commerce. Out of the 1 047 SMEs that do not export, 785 or 75% answered that the SME is a member of a business association or chamber of commerce. The results show that the majority of exporting and non-exporting SMEs are members of a business association or chamber of commerce. Therefore, networking in general plays a large role in Indian SMEs, but is more important for exporting SMEs.

The average **total sales** for SMEs that export is Rs 82 833.41 and for SMEs that do not export Rs 26 610.47. Therefore, the total sales number for exporting SMEs is higher than for non-exporting SMEs. The results are correlated with the literature on the motivations for firms to internationalise in section 2.3 where one of the motivations for internationalisation was for growth and profit reasons.

Table 4.18: Obstacles for SMEs in India

Obstacle	Exporting SME (%)	Non-exporting SME (%)
Access to finance	No obstacle, 30	No obstacle, 36.7
Access to land	No obstacle, 39.3	No obstacle, 48.7
Business licensing and permits	Moderate obstacle, 29.8	No obstacle, 35.7
Corruption	Moderate obstacle, 25.7	Moderate obstacle, 22.9
Crime, theft and disorder	No obstacle, 35.1	No obstacle, 35.4
Customs and trade regulations	Minor obstacle, 33	No obstacle, 44.7
Electricity	No obstacle, 25.1	No obstacle, 25.2
Skills and education of available workers	No obstacle, 38.2	No obstacle, 40.2
Labour regulations	No obstacle, 27.4	No obstacle, 35.4
Economic and regulatory political uncertainty	No obstacle, 25.8	No obstacle, 33.8
Anti-competitive or informal practices	No obstacle, 33	No obstacle, 34.8
Tax administration	Major obstacle, 25.7	No obstacle, 28.2
Tax rates	Major obstacle, 24.7	No obstacle, 26.1
Transportation of goods and services	Minor obstacle, 36.6	No obstacle, 39.4
Macroeconomic instability	Moderate obstacle, 31.9	No obstacle, 36.5
Telecommunication	No obstacle, 50.8	No obstacle, 58
Cost of financing	Moderate obstacle, 28.9	No obstacle, 30.9

The top 5 obstacles for SMEs that export in order of severity are tax rates, macroeconomic instability, business licensing and permits, cost of financing and corruption. For SMEs that do not export, the most answers indicated no obstacle for every obstacle, except for corruption, which was found to be a moderate obstacle. SMEs that export thus have more and bigger obstacles. Indian exporting SMEs should improve the top 5 obstacles that are a problem for the operation and growth of the firm. If the top 5 obstacles for exporting firms are improved, it is likely that the success of firms will improve and more firms will engage in exporting.

The next country discussed is China.

4.3.4 China

4.3.4.1 Firms in China

The survey on China was undertaken in 2003 and contains 2 400 firms. Out of the 2 400 firms, 20 firms did not answer the direct and indirect export questions, which imply that 2 380 firms are valid for the firm-based approach. Of the exporters, 274 firms exported directly and 115 firms only exported indirectly. No firm exported directly and indirectly. Therefore, 389 or 16.3% firms are exporters and 1 991 or 83.7% firms do not export.

There is no experience, average education and obstacle variables in the data on China, and a certification variable lacked in the India section. Table 4.19 summarises the results for firms in China. A discussion of the result follows below table 4.19.

Table 4.19: Firm-based descriptive statistics of export and non-export firms in China

	Exporting firms	Non-exporting firms
Number of employees average	692.97	463.79
Agefirm average (in years)	21.19	24.44
Enabling factors		
Education, %	Degree (66.4)	Degree (68.1)
ISO certification, %	57.6	30.8
Motivating factors		
National market share, %	19.65	21.19
Moderating factors		
Networks, %	62.2	57.7
Firm performance		
Total sales average (CNY)	423 177.3	160 923 400 000

The **number of employees** variable for Chinese firms is based on the total number of permanent workers the firm had in 2002. The number of employees variable is analyzed on 261 exporting firms and 1 420 non-exporting firms. The 261 exporting firms had an average of 693 employees working at the firm. The 1 420 non-exporting firms had an average of 464 employees working at the firm. The results show that exporting firms had on average more employees than non-exporting firms. Furthermore, the results are an indication of the benefit of firm internationalisation to economic growth through exports, since exporting firms had a far higher average of employees than non-exporting firms did.

All the firms answered the question relating to the **agefirm** variable. The 389 firms that export have an average age of 21 years, whilst the 1 991 firms that do not export have an average age of 24 years. In contrast with previous results of the other countries, firms that export have a younger age than firms that do not export.

Out of the valid 2 380 firms in China, 18 firms did not answer the question relating to the **education** variable. Of these 18 firms, 2 are exporters and 16 are non-exporters. Therefore, 387 firms that export and 1 975 firms that do not export are valid for the education variable. An interesting finding is that no firms indicated that the top manager has vocational or some university training. Chinese firms answered that 18.9% of the firms has a top manager with a postgraduate degree. For India, no firms answered that

the top manager has a postgraduate degree. 257 or 66.4% of the firms that export answered that the firm has a top manager with a degree. 1 345 or 68.1% of the firms that do not export answered that the firm has a top manager with a degree. Firms that export with a top manager with a postgraduate degree are 18.9% in contrast with 14.5% for firms that do not export.

All the firms answered the question relating to the **certification** variable. Out of the 389 firms that export, 224 or 57.6% have certification. Out of the 1 991 firms that do not export, 613 or 30.8% have certification. Therefore, exporting firms are more internationally recognised than non-exporting firms.

Around 1 753 firms did not answer the question relating to the national market share variable. 162 firms that export and 482 firms that do not export are valid for the **national market share** variable. The average national market share for firms that export is 19.65% and for firms that do not export the average is 21.19%. Firms that do not export has a larger national market share

Three firms that export and 16 that do not export are invalid for the **network** variable. Therefore, the network variable is based on 386 firms that export and 1 975 firms that do not export. Out of the 386 firms that export, 240 or 62.2% indicated that the firm is a member of a business association or chamber of commerce. Out of the 1 975 firms that export, 1 139 or 57.7% answered that the firm is a member of a business association or chamber of commerce. The network variable is thus more important for firms that export.

The average **total sales** for exporting firms is ¥ 423 177.3 and for non-exporting firms it is ¥ 160 923 400 000. In contrast to the results of Brazil and Russia, non-exporting firms have far superior average total sales than exporting firms.

4.3.4.2 SMEs in China

Out of the 2 400 firms, 1 695 firms provided the average number of employees at their firms. The 1 695 firms contain 954 or 56.3% SMEs and 741 or 43.7% are large firms.

Out of the 954 SMEs, 8 SMEs did not indicate their export orientation. Therefore, 946 SMEs are valid for this section. Out of the valid 946 SMEs, 107 or 11.3% export, while 839 or 88.7% do not export. The results for SMEs are summarised in table 4.20 below and the results are discussed thereafter.

Table 4.20: SME-based descriptive statistics of export and non-export firms in China

	Exporting SMEs	**Non-exporting SMEs**
Number of employees average	35.50	31.57
Agefirm average (in years)	18.15	21.32
Enabling factors		
Education, %	Degree (66.7)	Degree (66.6)
Certification, %	48.6	21.3
Motivating factors		
National market share, %	23.82	22.55
Moderating factors		
Networks, %	51.9	49.6
Firm performance		
Total sales average (CNY)	60 075.06	13 418.86

The data on China contained 2 380 valid firms of which 954 are valid SMEs. The 1 698 SMEs contain 107 valid exporting SMEs and 839 valid non-exporting SMEs for the **number of employees** variable. The 107 exporting SMEs had an average of 36 employees working at the firm. The 839 non-exporting SMEs had an average of 32 employees working at the firm. The results show that exporting SMEs had on average more employees than non-exporting SMEs. Furthermore, the results are an indication of the benefit of firm internationalisation through exports, since exporting SMEs had a higher average of employees than non-exporting SMEs.

The **agefirm** variable has 107 valid exporting SMEs and 839 valid non-exporting SMEs. The average age of the 107 exporting SMEs are 18 years, while the average age of the

839 non-exporting SMEs is 21. Thus, non-exporting SMEs are on average 3 years older than exporting SMEs. The results show that younger SMEs tend to engage more in exporting. Chinese exporting SMEs internationalise faster than non-exporting SMEs. These SMEs are likely to internationalise rapidly according to the born global and international new venture theories in section 2.2.2. These SMEs are called early adopters of internationalisation.

Five firms, consisting of 3 non-exporting SMEs and 2 exporting SMEs, did not answer the question relating to the **education** variable. Therefore, 105 exporting SMEs and 836 non-exporting SMEs are valid for the education variable. 70 or 66.7% of the exporting SMEs have a top manager with a degree. 557 or 66.6% of the non-exporting SMEs has a top manager with a degree.

All the SMEs answered the question relating to **certification**. Out of the 107 SMEs that export, 52 or 48.6% have certification. Out of the 839 firms that do not export, 179 or 21.3% have certification. Therefore, exporting SMEs are more internationally recognised than non-exporting SMEs.

There are 37 valid exporting SMEs and 140 valid non-exporting SMEs for the **national market share** variable. The average national market share for exporting SMEs is 23.82% and for non-exporting SMEs, it is 22.55%. SMEs that do not export have a larger national market share.

106 SMEs that export and 835 SMEs that do not export are valid for the **network** variable. Out of the 106 exporting SMEs, 55 or 51.9% is a member of a business association or chamber of commerce. Out of the 835 non-exporting SMEs, 414 or 49.6% is a member of a business association or chamber of commerce. The network variable is thus slightly more important for non-exporting firms.

All SMEs in the study are valid for the **total sales** variable. The average total sales for SMEs that export is ¥ 60 075.06 and for SMEs that do not export ¥ 13 418.86. In

contrast to the firm section of China, SMEs that export have far superior average total sales. A number of large non-exporting firms likely dominate the Chinese domestic market. As a result, Chinese exporting SMEs perform better than exporting firms in terms of total sales. The results are correlated with the literature on the motivations for firms to internationalise in section 2.3 where one of the motivations for internationalisation was for growth and profit reasons.

The last BRICS country, South Africa, is discussed in the next section.

3.3.5 South Africa

3.3.5.1 Firms in South Africa

The survey on South Africa was undertaken in 2007. The World Bank data contains 1 057 South African firms. In some cases, the total number of firms varies since some variables have only a specific number of valid cases.

The data contains 78.1% non-exporter firms and 21.9% exporter firms. Out of the valid 1 056 firms, 825 firms are non-exporters and 231 are exporters. If the 231 export firms are further analyzed, the results show that 181 of the firms only engage in direct exports, 81 of the firms only engage in indirect export and 31 of the firms engage in both direct and indirect exports.

Table 4.21: Firm-based descriptive statistics of export and non-export firms in South Africa

	Exporting firms	Non-exporting firms
Number of employees average	215.7	64.42
Agefirm average (in years)	33.62	17.35
Enabling factors		
Education	Degree (7)	Vocational training (5)
ISO certification, %	61.3	22.2
Experience (in years)	19.01	12.29
Education average	7 to 12 years (68.3%)	7 to 12 years (65.2%)
Motivating factors		
National market share, %	6.21	2.3
Number of competitors in the domestic market	5+ (43.6%)	5+ (56.3%)
Moderating factors		
Networks, %	Other businesses in the same line of business as the firm (32)	Other businesses in the same line of business as the firm (22.2) Personal knowledge (22.2)
Firm performance		
Total sales average (ZAR)	194 000 000	35 410 394.81

For the firm-based approach the data is split according to whether the firm exports or not. Table 4.21 summarises the results for firms in South Africa. The results are discussed below.

All the firms indicated the **number of employees** the firm had at the end of 2006. Therefore, the number of employees variable is analyzed on 231 exporting firms and 825 non-exporting firms. The 231 exporting firms had an average of 216 employees working at the firm. The 825 non-exporting firms had an average of 64 employees working at the firm. The results show that exporting firms had on average more employees than non-exporting firms. Furthermore, the results are an indication of the benefit of firm internationalisation through exports, since exporting firms had a far higher average of employees than non-exporting firms did.

All the firms, except for one non-exporting firm, knew in which year the firm was established. Therefore, 231 firms that export and 825 firms that do not export are valid for the agefirm variable. The **age of the firm** is calculated by subtracting the year the

firm was established in from the current year (2011). The oldest firm in the survey is 146 years. Exporting firms have an average age of 34 years, while non-exporting firms have an average age of 17. The results show that older firms tend to engage more in exporting. These firms are likely to internationalise incrementally according to the Uppsala model or the Innovation related model discussed in section 2.2.1. These types of firms are first established in the domestic market and then they go abroad.

The **education** variable is slightly different for South Africa than is the case of India and China. Table 4.22 illustrates the education variable for South Africa. The education variable shows the highest level of education that the firm's top manager has. No education is the lowest number with 1 and the highest level of education is 11. The numbers between 1 and 11 represent various levels of education. The education variable in the India and China section only had 6 levels of education to choose from.

Table 4.22: Illustration of the education variable (2006-2009 survey)

Level of education of the top manager	Number
No education	1
Primary school	2
Started but did not complete secondary school	3
Secondary School	4
Vocational Training	5
Some university training	6
Degree (BA, BSc etc.)	7
Master of Business Administration (MBA) from a university in the RSA	8
Master of Business Administration (MBA) from a university in another country	9
Other postgraduate degree (PhD, Masters) from a university in the RSA	10
Other postgraduate degree (PhD, Masters) from a university in another country	11

Of the 231 firms that export, 82 or 35.5% answered that the top manager has a degree (7). Of the 825 non-exporting firms, 226 or 27.4% answered that the top manager has vocational training (5). Secondary school education was in close second with 199 or 24.1%. Another interesting result was that 62% of firms that export has a top manager with a degree or higher in contrast with 27.6% of firms that do not export. From the results, it is evident that firms that export have top managers with a higher education

level. This is similar to Reid's Innovation related model in section 2.2.1.2 that states that the manager plays a vital role in firm exports.

Out of the 826 firms that do not export, only 711 answered the question relating to **certification**. 158 or 22.2% of the firms that do not export answered that they have certification. Out of the 231 exporting firms, only 225 answered the question relating to certification. 138 or 61.3% of the firms that export indicated that they have certification. Firms that export have on average 40% more certification than firms that do not export. The results show that certification is more important for firms that export. Therefore, exporting firms are more internationally recognised than non-exporting firms. As mentioned in section 4.3.1.1 certification improves profitability and strengthens exports when a firm internationalises. Overall, certification improves the competitiveness of the firm. The most cited benefits for certification are an increase in productivity and access to international markets.

The survey covered 1 057 firms. 1 056 firms were considered for each variable according to their exporting nature. One firm did not answer the question and another did not indicate how much experience the top manager had. Therefore, the **experience** variable is based on 1 054 firms that gave a valid answer. The two firms that are invalid for this part of the study are firms that do not export, which leave 823 non-exporting firms and 231 exporting firms on which the results are based.

The most experience that a top manager had in an exporting firm is 61 years and in a non-exporting firm 60 years. The average years of experience for a top manager in an exporting firm are 19 years, while the average years of experience for a top manager in a non-exporting firm is 12 years. Therefore, on average a top manager of an exporting firm has 7 years more experience than a top manager of a non-exporting firm does. Firms that export have top managers with more years of experience in the sector (establishment) than top managers of non-export firms. As discussed in 2.2.2, an experienced manager would be crucial to recognise and seize opportunities in a foreign market. If the experience the top manager has includes international experience, it will

be even more beneficial to the firm. In the eclectic paradigm discussed in section 2.2.6 it was stated that international experience was one of the firm-specific characteristics that a firm can derive an ownership advantage from.

The **average education** variable shows the average educational attainment of a typical production worker employed in the firm. The average education differs slightly from the average education variable in the 2002 to 2005 survey. The focus here is on the education level of the production workers instead of the whole workforce of the firm. Respondents had four options to choose from as illustrated in table 4.23. 95 firms did not indicate the answer and is ignored, with 351 other firms that did not answer the question relating to the average education variable. The results for firms that export and do not export are very similar. Most firms have production workers with 7 to 12 years education.

Table 4.23: Illustration of the average education variable (2006-2009 survey)

Level of education of the workforce	Number
0-3 years of education	1
4-6 years of education	2
7-12 years of education	3
13 years or more education	4

Considering the establishment's main product line sales item, the **national market** share variable gives the percentage of national market share the firm has. 224 firms that export and 711 that do not export are valid for the national market share variable. One firm did not indicate the firm's national market share and 120 firms did not answer the question relating to national market share.

For firms that export, 60% was the largest national market share. For firms that do not export, 30% was the largest national market share. The average national market share for firms that export are 6.25%, while the average national market share for firms that do not export are 2.3%. The results show that on average firms that export have a 3.95% higher national market share than non-export firms. This is a good result since it is evident that a firm that holds a larger market share tends to be an exporter.

Thirty firms that answered the question did not indicate how many **competitors** they faced and thus together with the 376 firms that did not answer the question is ignored for the analysis on the competitor variable. Out of the 181 valid entries for firms that export and the 469 that do not export, the most entries was under firms that had more than 5 competitors with 43.6% and 56.3% respectively. The results show that South African firms had many competitors in general, whether they export or not. The number of competitors seems not to have a large impact on whether the firm exports or not.

The **network** variable in South Africa's case reveals the firm's source of information concerning its new supplier. Out of the 826 firms that do not export, only 711 answered the question relating to networks. Out of the 231 firms that export, only 225 answered the question relating to networks. Respondents had 12 options to choose from as source of information. The biggest source of information for firms that export was other businesses in the same line of business as the firm with 72 or 32% of the firms. The second biggest source of information was personal knowledge with 43 firms or 19.1%. Other business associates, suppliers, or customers were in third position with 27 or 12% of the firms. Two sources of information were answered equally the most for firms that do not export. 158 or 22.2% of the firms answered personal knowledge and other businesses in the same line of business as the firm as the biggest source of information. The third most was other business associates, suppliers, or customers with 119 or 14.4% of the firms. The results show that networking with other businesses in the same line of business as the firm, is more important for firms that export. Personal knowledge is 3.1% more important for firms that do not export.

The **total sales** variable reveals the total sales of the firm for 2006. All of the 1 056 firms answered the question relating to total sales. Firms that export had a far higher sales average for 2006, with R194 000 000 versus R35 410 394.81 for firms that do not export. The results show that firms that export have far higher sales. This correlated with the literature on the motivations for firms to internationalise in section 2.3 where one of the motivations was for growth and profit reasons.

The obstacles evaluated are obstacles to the current operations of the firm. The **obstacles** evaluated in South Africa are access to finance, access to land, business licensing and permits, corruption, courts, customs and trade regulations, electricity, inadequately educated workforce, labour regulations, political instability, practices of competitors in the informal sector, tax administration, tax rates, transportation of goods and services, macroeconomic instability and crime, theft and disorder.

Table 4.24: Obstacles for firms in South Africa

Obstacle	Exporting firm (%)	Non-exporting firm (%)
Access to finance	No obstacle, 77.9	No obstacle, 59.6
Access to land	No obstacle, 81	No obstacle, 73.8
Business licensing and permits	No obstacle, 84.4	No obstacle, 72.2
Corruption	No obstacle, 52.4	No obstacle, 51.7
Courts	No obstacle, 87	No obstacle, 87.2
Crime, theft and disorder	Minor obstacle, 29.4	Moderate obstacle, 23.9
Customs and trade regulations	No obstacle, 71	No obstacle, 87.9
Electricity	No obstacle, 36.4	No obstacle, 47.5
Inadequately educated workforce	No obstacle, 45	No obstacle, 63.8
Labour regulations	No obstacle, 46.8	No obstacle, 71.3
Political instability	No obstacle, 79.7	No obstacle, 83.2
Practices of competitors in the informal sector	No obstacle, 68	No obstacle, 55.7
Tax administration	No obstacle, 82.3	No obstacle, 84.5
Tax rates	No obstacle, 75.3	No obstacle, 78.2
Transportation of goods and services	No obstacle, 68.4	No obstacle, 71.3
Macroeconomic instability	No obstacle, 73.2	No obstacle, 73.2

All of the variables, except for crime, theft and disorder are found to be not an obstacle for most of the firms as illustrated in the table above. The lowest percentages in the table give the other biggest obstacles for South African firms.

The top 5 obstacles for firms that export in order of severity are crime, theft and disorder, electricity, inadequately educated workforce, labour regulations and corruption. The top 5 obstacles for firms that do not export in order of severity are crime, theft and disorder, electricity, corruption, practices of competitors in the informal sector and access to finance. The obstacles that occurred for both exporting and non-exporting firms were crime, theft and disorder, electricity and corruption. An inadequately educated workforce is a bigger obstacle for exporting firms while access to finance is a

bigger obstacle to non-exporting firms. This is probably because exporting firms need a more educated workforce. As the results on South Africa showed, exporting firms tend to be established in the domestic market, and have higher total sales, which improve their access to finance.

To confirm the previous results, the respondents had to choose the most, second most and third most serious obstacle. These obstacles present a problem to the current operations of the firm. The most serious obstacle was crime, theft and disorder for firms that export and do not export. An interesting finding was that electricity was not rated very high and was indicated as the second most serious obstacle. For firms that export an inadequately educated workforce was the second most serious obstacle and for firms that do not export, it was corruption. The results are more or less the same as in the table, except for electricity.

3.3.5.2 SMEs in South Africa

Out of the 1 057 firms, 937 firms responded to the question regarding the size of the firm. Out of the 937 respondent firms, 741 are SMEs and 196 are large firms.

Only one of the 741 SMEs in the survey did not answer the question relating to direct and indirect export. The study is based on SMEs and internationalisation through exports so only 740 SMEs are used in this study. If the 740 firms are separated according to export, 125 or 16.9% of the SMEs export and 615 or 83.1% SMEs do not export. An interesting finding is that out of the 196 large firms, 100 of them export, which is more than 50%. The results therefore show that in South Africa large firms are more engaged in export than SMEs. A low percentage of SMEs engage in export, which is worrisome.

All the SMEs indicated the **number of employees** the firm had at the end of 2006. Therefore, the number of employees variable is analyzed on 215 exporting SMEs and 615 non-exporting SMEs. The 215 exporting SMEs had an average of 40 employees

working at the firm. The 615 non-exporting SMEs had an average of 23 employees working at the firm. The results show that exporting SMEs had on average more employees than non-exporting SMEs. Furthermore, the results are an indication of the benefit of SME internationalisation through exports, since exporting firms had a higher average of employees than non-exporting SMEs.

Table 4.25: SME-based descriptive statistics of export and non-export firms in South Africa

	Exporting SMEs	**Non-exporting SMEs**
Number of employees average	39.53	23.03
Agefirm average (in years)	27.18	16.87
Enabling factors		
Education	Degree (7)	Vocational training (5)
ISO certification, %	47.2	18.5
Experience average (in years)	19.73	12.31
Education	7 to 12 years	7 to 12 years
Motivating factors		
National market share, %	4.58	2.04
Number of competitors in the domestic market	5+	5+
Moderating factors		
Networks, %	Other businesses in the same line of business as the firm (32)	Other businesses in the same line of business as the firm (21.6)
SME performance		
Total sales average (ZAR)	26 422 268.93	8 990 452.98

The **average age** of SMEs that export are 27 years and for SMEs that do not export 17 years. The results show that older SMEs tend to export rather than younger SMEs. In comparison with firms that export, SMEs that export are on average 7 years younger. This could be due to the fact that older and larger firms export.

Out of the 125 exporting SMEs, 44 or 35.2% answered that the top manager has a degree (7). Out of the 615 non-exporting firms, 187 or 30.4% of the firms answered that the top manager has vocational training (5). Another interesting result was that 46.4% of SMEs that export has a top manager with a degree or higher in contrast with 25.7% of SMEs that do not export. From the answers, it is evident that SMEs that export have top

managers with a higher **education** level. This is similar to Reid's Innovation related model in section 2.2.1.2 that states that the manager plays a vital role in firm exports.

If firms and SMEs are compared with regards to the education variable, similar results are found. SMEs and firms that export both have top managers with a degree as the highest level of education as the highest number of answers, with 35.2% and 35.5% respectively. For SMEs and firms that do not export, 30.4% and 27.5% respectively indicated that they have top managers with vocational training as the highest level of education. Another interesting finding was that 62% of firms that export have a top manager with a degree or higher in contrast with the 46.4% of SMEs that export.

Out of the 125 exporting SMEs, 59 or 47.2% of them have **certification.** Out of the 625 non-exporting SMEs, 114 or 18.5% have certification. The number of SMEs, with certification, that export are 28.7% more than the SMEs that do not export. SMEs that export thus tend to have more certification than SMEs that do not export. This is the same general finding for firms, but in contrast to the finding in the firm-based approach for the certification variable, 14.1% of exporting SMEs have certification.

One SME did not answer the question and another did not indicate how much **experience** the top manager has. Therefore, the experience variable is based on 738 SMEs that gave a valid answer. The two SMEs that are invalid for this part of the study are SMEs that do not export, which leave 613 non-exporting SMEs and 125 exporting SMEs on which the results are based. The most experience a top manager has in an exporting SME is 54 years and in a non-exporting SME 60 years. The average years of experience for a top manager in an exporting SME is 20 years, while the average years of experience for a top manager in a non-exporting SME is 12 years. Therefore, on average a top manager of an exporting firm has 8 years more experience than a top manager of a non-exporting SME. Exporting SMEs have top managers with more years experience in the sector (establishment) than top managers of non-exporting SMEs. If firms and SMEs are compared in detail, the difference is not even a year. Exporting SMEs have a top manager with 0.72 more years experience than a top manager in an

exporting firm. The average experience of top managers in SMEs and firms that do not export is virtually the same. The fact is that whether the establishment is a firm or SME, a top manager has more experience if that firm or SME exports.

The results for SMEs that export and do not export are very similar for the **average education** variable. Most SMEs have production workers with 7 to 12 years education. The results are the same for firms.

The average **national market share** for exporting SMEs is 4.58%, while the average national market share for non-exporting SMEs is 2.04%. The results show that on average, exporting SMEs have 2.54% more national market share than non-exporting SMEs. Therefore, a firm that holds a larger market share tends to be an exporter. If firms and SMEs are compared with regards to the national market share variable, firms that export on average have 1.63% more national market share than SMEs that export. Firms that do not export on average have 0.24% more national market share than SMEs that do not export.

For both exporting and non-exporting SMEs, most answers were that they had more than 5 **competitors** with 50% and 57.4% respectively. A large percentage of the other answers were that the SME faced 2 to 5 competitors, with 32% for exporters and 31.9% for non-exporters.

The biggest source of information for SMEs that export is other businesses in the same line of work (32%). The biggest source of information for non-exporting SMEs is also other businesses in the same line of work (21.6%). However, the second biggest source of information, namely personal knowledge, is just 0.1% behind with 21.5%. **Networking** definitely plays a role in an SME, whether they export or not. The results are virtually the same for SMEs as for firms.

All of the SMEs answered the question relating to **total sales**. SMEs that export had a far higher sales average for 2006, with R 26 422 268.93 versus R 8 990 452.98 for

SMEs that do not export. The results show that SMEs that export have far higher sales. This correlated with the literature on the motivations for firms to internationalise in section 2.3 where one of the motivations was for growth and profit reasons.

Table 4.26: Obstacles for SMEs in South Africa

Obstacle	Exporting SME (%)	Non-exporting SME (%)
Access to finance	No obstacle, 72.8	No obstacle, 59.7
Access to land	No obstacle, 76.8	No obstacle, 73.7
Business licensing and permits	No obstacle, 83.2	No obstacle, 78.2
Corruption	No obstacle, 52.8	No obstacle, 50.4
Courts	No obstacle, 88.8	No obstacle, 86.3
Crime, theft and disorder	Minor obstacle, 35.2	Moderate obstacle, 25.5
Customs and trade regulations	No obstacle, 77.6	No obstacle, 88.1
Electricity	No obstacle, 36.8	No obstacle, 47.2
Inadequately educated workforce	No obstacle, 51.2	No obstacle, 63.3
Labour regulations	No obstacle, 49.6	No obstacle, 71.7
Political instability	No obstacle, 82.4	No obstacle, 83.1
Practices of competitors in the informal sector	No obstacle, 64	No obstacle, 56.5
Tax administration	No obstacle, 83.2	No obstacle, 84.4
Tax rates	No obstacle, 68.8	No obstacle, 75.9
Transportation of goods and services	No obstacle, 67.2	No obstacle, 72.2
Macroeconomic instability	No obstacle, 73.6	No obstacle, 73.2

The top 5 obstacles for SMEs that export in order of severity are crime, theft and disorder, electricity, inadequately educated workforce, labour regulations and corruption. The top 5 obstacles for SMEs that do not export in order of severity are crime, theft and disorder, electricity, corruption, practices of competitors in the informal sector and access to finance. Thus, the same answer as for firms. The obstacles that occurred for both exporting and non-exporting firms were crime, theft and disorder, electricity and corruption. An inadequately educated workforce is a bigger obstacle for exporting firms while access to finance is a bigger obstacle to non-exporting firms. This is probably because exporting firms need a more educated workforce. As the results on South Africa showed, exporting firms tend to first establish themselves in the domestic market and have higher total sales, which improve their access to finance.

In the next section, the results of all the exporting SMEs in the BRICS countries are compared.

4.3.6 Comparison of the characteristics of internationalising SMEs in the BRICS countries

The primary objective of the study outlined in chapter 1 is to compare the characteristics of internationalising SMEs in South Africa with the BRICS countries. If South Africa can improve their SMEs by learning from the BRIC countries, our SMEs may become more competitive and be more successful internationally.

Table 4.27: SME comparison between the BRICS countries

Country	Valid firms	Number of SMEs	Number of SMEs that export	Average age of exporting SMEs	SMEs that export with certification	Experience of top manager (years)	Number of employees
Brazil	1799	1426 (79.2%)	187 (13.1%)	25.30	30.3%	23.93	44.5
Russia	1003	613 (61.1%)	76 (12.4%)	14.37	35.7%	14.19	48.25
India	1711	1238 (72.4%)	191 (15.4%)	27.08	n/a	9.65	33.18
China	2380	946 (56.3%)	107 (11.3%)	18.15	48.6%	n/a	35.50
South Africa	1057	740 (70%)	125 (16.9%)	27.18	47.2%	19.73	39.53

Table 4.27 compares some of the variables between the BRICS countries. The trend for each country is that a relatively high percentage of the total firms are SMEs while a low percentage of SMEs export. Brazil has the highest percentage of SMEs, followed by India, South Africa, Russia and China. South Africa has the highest percentage of exporting SMEs, followed by India, Brazil, Russia and China.

The **number of employees** variable was discussed in all the BRICS countries. It was stated in section 1.1 that internationalisation helps firms to grow and create more employment opportunities. In this study, firms internationalise through exports, which makes it important to look at the export figure in the SME approach of each country. In

all the countries, exporting SMEs had a higher number of employees than non-exporting SMEs. Russia had the most number of employees, followed by Brazil, South Africa, China and India. The results confirm that SMEs through internationalisation creates employment.

The agefirm variable was applicable to all the BRICS countries. For SMEs that export, South Africa had the highest **average age** as can be seen in table 4.27. India and Brazil also have “older” SMEs. Russia has the SMEs that export with the youngest age followed by China. Russian and Chinese exporting SMEs are older than non-exporting SMEs. The difference for Russia is about a year, but for China, it is about 3 years. Russian and Chinese exporting SMEs are likely to be rapid internationalisers because they have a significantly lower average age than the exporting SMEs of Brazil, India and South Africa. The average age of exporting SMEs in Russia is much lower than for the rest of the countries evaluated in this study. In comparison to the other countries evaluated, SMEs in Russia internationalise at the youngest age by far.

The **education** variable was applicable to India, China and South Africa. For all three countries, the top manager in exporting SMEs has a degree. Almost 91% of Indian SMEs that export have top managers with a degree. Chinese SMEs that have top managers with a degree are 66.7% of the total, but the figure is lower since more top managers in China have a postgraduate degree. South African exporting SMEs fared worse than exporting SMEs in China and India since only 35.2% of top managers have a degree. In contrast to China where the remaining percentages were mostly filled with top managers with postgraduate degrees, the top managers of South African SMEs mostly have a degree or a lower level of education. The results show that Chinese SMEs that export have top managers that are more educated than those in India and South Africa are. South Africa is lacking far behind China and India in terms of education levels for the top manager in SMEs that export and therefore should work on improving education levels.

The **certification** variable was applicable to every country except for India. As can be seen in table 4.27, the country with the most exporting SMEs with certification was China followed by South Africa, Russia and Brazil. Almost half of SMEs that export in South Africa have certification, which is good if compared to the other BRICS countries.

The **experience** variable is a difficult variable to compare since the definition differs between the two surveys the data was taken from. However, it is only for the data on India that the definition differs. The experience variable was applicable to all the BRICS countries except for China. For India, the experience variable was interpreted as the experience the top manager had before working at the firm/establishment. This is probably why Indian SMEs that export has top managers with the lowest experience of all the countries. Brazilian SMEs that export had a top manager with the most experience. South Africa did reasonably well with about 20 years of experience for the top manager. The average experience of top managers in Russian exporting SMEs are 14 years.

Only India and South Africa have data on the **average education** variable. In South Africa's case, the question on the average education variable was asked differently, which makes the interpretation more difficult. The average education variable is applicable to the workforce in India and to the production workers in South Africa. In the survey on India, the respondents could choose from 6 to 9 years and 9 to 12 years, whilst in South Africa respondents could only choose from 6 to 12 years. In South Africa, the 6 to 12 year education option was chosen by 57.6% of SMEs that export. If India's results of 6 to 9 years and 9 to 12 years are added up, it gives 53.13% which is almost the same as that of South Africa. About 24.1% of the workforce in Indian exporting SMEs have more than 12 years education, while South African exporting SMEs only has 8% of the production workers that have more than 12 years education. Despite the fact that most of the workforce/production workers in India and South Africa have 6 to 12 years education, India has 16.1% more SMEs that export with workforce/production workers that has more than 12 years education.

Only China, India and South Africa have data on the **national market share** variable. SMEs that export have the highest national market share in China with 23.82% followed by India with 13.88% and South Africa with 4.58%. South Africa has fared by far the worst of the three countries and SMEs' national market share needs to be improved.

Only China, India and South Africa have data on the **network** variable. The network variable was interpreted differently due to the different surveys. Respondents of Chinese and Indian SMEs had to answer if the SME belongs to a member of a business association or a chamber of commerce, while South African SMEs had to reveal their biggest source of new information regarding the SMEs new supplier. In India 88% of SMEs that export, belong to a network, while in China the figure is 51.9%. The biggest source of information for South African SMEs that export is other businesses in the same line of the SME with 32%. South Africa fared the worst of all countries in the network variable.

The **competitor** variable illustrates the number of competitors the firm's main product line faced. In Brazil, India and South Africa the most answers were more than five competitors for SMEs that export.

All the countries except for China answered the **obstacles** question. The top 5 obstacles for SMEs that export in Brazil in order of severity are tax rates, corruption, electricity, practices of competitors in the informal sector and tax administration. In a related question, respondents had to choose a most serious obstacle. For SMEs that export, the 5 most serious obstacles are tax rates (35.8%), tax administration (11.8%), practices of competitors in the informal sector (10.2%), inadequately educated workforce (10.2%) and access to finance (9.6%).

In Russia, the top 5 obstacles for SMEs that export in order of severity are customs and trade regulations, political instability, access to finance, corruption and tax rates. In a related question, respondents also had to choose a most serious obstacle. For SMEs that export the 5 most serious obstacles are tax rates (20%), access to finance (18.7%),

political instability (10.7%), business licensing and permits (10.7%) and an inadequately educated workforce (9.3%).

In India the top 5 obstacles for SMEs that export in order of severity are tax rates, macroeconomic instability, business licensing and permits, cost of financing and corruption.

In South Africa, the top 5 obstacles for SMEs that export in order of severity are crime, theft and disorder, electricity, inadequately educated workforce, labour regulations and corruption.

The top obstacles for SMEs that export in most countries were tax rates. South Africa's top 2 obstacles, i.e. crime, theft and disorder as well as electricity, are not a top 5 obstacle for any of the other countries.

The comparison between the characteristics of internationalising SMEs of the BRICS countries provided several lessons for South African exporting SMEs and government. These lessons are discussed in the next section below.

4.3.7 Lessons for South African exporting SMEs and government

In all the countries, exporting SMEs had a higher number of employees than non-exporting SMEs. South African exporting SMEs have an average of 40 employees compared to 23 employees in non-exporting SMEs. The results confirm that SMEs through internationalisation create employment. South Africa has a high unemployment figure as discussed in chapter 1. Therefore, one way for employment to increase in South Africa is to establish a business environment that encourages SMEs to internationalise through export, since they are able to create more employment opportunities than non-exporting SMEs.

South Africa was the only country that had SMEs that experienced the obstacles in terms of crime, theft and disorder, and electricity. These obstacles should be lessened or even eliminated in order to encourage a positive business environment.

South Africa had the oldest exporting SMEs of all the BRICS countries. The South African government and policy-makers should aim to foster an environment where new firms can start exporting sooner (perhaps through targeted export promotion). If South African SMEs start exporting sooner, the average number of employees will also further increase at an earlier stage.

South Africa had the lowest level of education for a top manager. Policy-makers should encourage graduates to further studies and become entrepreneurs. South African exporting SMEs also had the lowest national market share. Therefore, South Africa should help SMEs grow their national market share to increase the experience of the top manager in a particular sector.

South Africa had the lowest level of networks. The government should help exporting SMEs to establish networks.

In the next section, a regression analysis is done for South Africa.

4.4 Regression analysis

In the previous section, the characteristics of internationalising SMEs in the BRICS countries were compared. The comparison identified factors that South African SMEs can improve on by learning from the BRIC countries. If South Africa's SMEs can be improved by learning from the BRIC countries, then they may become more competitive and be more successful internationally. The regression analysis empirically also identifies characteristics, or factors that may enable South African SMEs to export and what characteristics (or factors) South African SMEs should improve on to be more successful.

Of the BRICS countries, only South Africa is analysed in this section (doing similar analyses for the other BRICS countries is recommended for further research). One of the objectives outlined in chapter 1 for this study was to determine the characteristics of internationalising SMEs in South Africa. A logistic regression model is applied (in section 4.4.2) to determine the characteristics of SMEs in South Africa that internationalise. A logistic regression model is specifically suited when the dependent variable is binary (in other words, when its value is either 0 or 1). In this study, SMEs that are exporters have a value of 1 and non-exporting SMEs have a value of 0. The model identifies factors (through a range of independent variables) that may make South African SMEs more likely to export. Or put differently, factors that may increase or decrease the probability of exporting. The model specification is discussed in detail in the next section.

4.4.1 Model specification

The model used in this study is tested by the estimation of a limited probability model/binary regression. A series of variables are combined in order to attain the best probability of the dependent variable. The equation below illustrates logistic regression in its simplest form.

$$P(Y) = \frac{1}{1 + e^{-(b_0 + b_1 X_1 + \varepsilon_i)}} \qquad (1)$$

P(Y) is the dependent variable which predicts the probability of an SME exporting to a foreign country given known values of X. *X* is the independent variable and it is very important that the best independent variables are chosen to obtain the best results of the dependent variable. The rest of the model consists of the base of natural logarithms (e), the constant (b0) and a coefficient attached to the predictor (b1) (Field, 2005:220). The model was adjusted according to the method of estimation by maximum likelihood. The statistical programme SPSS v.18.0 is used for the estimation (Del Canto & Gonzalez, 1999:900).

4.4.2 Regression results

All the variables used in the descriptive statistics are used for the regression analysis. The variables used in the descriptive section were agefirm, education, ISO certification, experience, average education, national market share, number of competitors in the domestic market, networks and total sales. As mentioned in section 4.1.5, data is available for all the variables for South Africa.

By using the literature and descriptive statistics as background, this section aims to determine empirically what characteristics make SMEs in South Africa more likely to internationalise through exports. By progressive filtering of the variables, four regression models are estimated. The filtering is based on overall performance of the model, the Wald significance of the variables, the sign of the coefficient of the variables and the pseudo R-squares of Cox and Snell, and Nagelkerke.

The **overall performance or percentage** of the model gives the percentage of cases for which the dependent variables were correctly predicted given the model. The overall percentage normally gets larger if more variables are added, depending on the correlation between the dependent and set of independent variables (Wuensch, 2009:10).

In logistic regression there is an analogous statistic known as the Wald statistic. The Wald **significance** value is interpreted in order to establish the individual contribution of the predictors (Wuensch, 2009:10). The null hypothesis states that the beta coefficient for the specific predictor is not significantly different from zero (Del Canto & Gonzalez, 1999:900). If the predictor is significantly different from zero ($P < 0.05$), it indicated that the variable is a significant predictor of the dependent variable. A variable can be statistically significant on the 10%, 5% and 1% level. It is preferred that more variables are significant than not significant because then the model would better explain the likelihood of SMEs internationalising through exports. A significant variable also implies

that the variable is a significant predictor of export and has to be included in the final regression model (Field, 2005:224; Wuensch, 2009:10).

The **sign of the coefficient** illustrates the relationship between the dependent variable and the specific independent variable. The relationship can be positive or negative. If the value is greater (less) than one this means as the predictor increases, the odds of the outcome occurring increase (decrease). A positive coefficient for an independent variable means that it tends to increase the probability of the dependent variable (Del Canto & Gonzalez, 1999:900). The variables expected to have a positive relationship with exports are agefirm, education, ISO certification, experience, average education, national market share, networks, the number of competitors in the domestic market and total sales. All these positive variables increase the probability of the SME to export.

The last aspect that has to be used to analyse the model is the **pseudo R squares** of Cox and Snell, and Nagelkerke. The pseudo R-squares is a logistic analogy to the R^2 in OLS regression (the proportion of variance explained by the predictors). The interpretation of the two R^2 statistics is the same as in OLS regression since they provide a gauge of the substantive significance of the model (Field, 2005:223). However, the R-square of Cox and Snell, and Nagelkerke does not mean the same as R-square in OLS regression, which implies that the pseudo R-squares should be interpreted with caution (Wuensch, 2009:12).

The aspects of the literature review, overview of South Africa and descriptive statistics are used to obtain the best set of independent variables to empirically determine what characteristics make SMEs in South Africa more likely to internationalise through exports. The best model is chosen as end result. Table 4.28 illustrates the four models and the method used to ultimately arrive at the best model, model four, is discussed below. The first column contains the estimated coefficient of the independent variable. The second column contains the standard error (SE) and the Wald significance of the independent variable.

Generally, the best way to achieve regression results is when it is linked with the descriptive statistics. The variables that were used in the descriptive statistics section are used in the regression analysis section as well. The desirable result was that SMEs that export perform better, or as expected, than SMEs that do not export for each of the variables analysed with SPSS. For every variable, this was the case. It is difficult to analyse the agefirm variable because there is no precise answer of whether a SME should export at a young or older age. SMEs that export was older than SMEs that do not export, which implies that South African SMEs that export are likely to first get established in the domestic market for a period of time before they export.

Four models are estimated through a step-by-step process as illustrated by table 4.28, which contains the regression results. As the estimation progress from model 1 to model 4, more variables are added. Model 1 contains the least variables. It is important to start correctly otherwise all the regression models could end up faulty and ultimately also the determinants of SME internationalisation in South Africa. The first variables that are used in the models must therefore be significant. The overall percentage of the model is irrelevant at this stage since only two variables are used in the model and the more the variables, the better the overall percentage of the model. Therefore, it is assumed that the overall percentage of the model will improve as the variables increase and ultimately reach model 4. All the variables were combined separately and the two variables, national market share and the experience variable, are used as the base for the other three models.

Table 4.28: The results from the four regression models

	Model 1		Model 2		Model 3		Model 4	
Variable	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
Constant	-2.763	0.198 (0.000)	-3.508	0.339 (0.030)	-3.085	-0.940 (0.001)	-5.376	1.593 (0.001)
National market share	0.113	0.023 (0.000)***	0.114	0.024 (0.000)***	0.098	0.026 (0.000)***	0.087	0.035 (0.014)**
Experience	0.053	0.009 (0.000)***	0.044	0.010 (0.000)***	0.048	0.010 (0.000)***	0.055	0.014 (0.000)***
Agefirm			0.024	0.007 (0.000)***	0.018	0.007 (0.018)**	0.019	0.010 (0.064)*
Networks				(0.091)		(0.072)		(0.010)
Networks(1)			0.803	0.321 (0.012)**	1.034	0.342 (0.003)***	1.452	0.423 (0.001)***
Networks(2)			-0.002	0.385 (0.996)	0.107	0.397 (0.787)	0.811	0.492 (0.099)*
Networks(3)			0.446	0.535 (0.404)	0.577	0.538 (0.283)	0.702	0.696 (0.313)
Networks(4)			-19.031	22168.372 (0.999)	-18.379	22555.969 (0.999)	-17.136	40192.970 (1.000)
Networks(5)			-1.102	0.679 (0.881)	0.033	0.704 (0.963)	-0.207	0.883 (0.815)
Networks(6)			1.047	0.893 (0.241)	1.201	0.938 (0.200)	2.062	1.081 (0.056)*
Networks(7)			0.938	0.400 (0.019)**	1.113	0.417 (0.008)***	1.915	0.498 (0.000)***
Networks(8)			1.285	0.570 (0.024)**	1.246	0.594 (0.036)**	0.945	0.790 (0.231)
Networks(9)			-19.054	7909.544 (0.998)	-18.869	7661.138 (0.998)	-18.593	9129.948 (0.998)
Networks(10)			-0.180	0.443 (0.684)	0.111	0.468 (0.812)	-0.314	0.671 (0.639)
Networks(11)			0.627	1.099 (0.568)	0.803	1.232 (0.514)	0.888	1.336 (0.506)
Total sales					0.000	0.000 (0.128)	0.000	0.000 (0.087)
Education						(0.023)		(0.571)
Education(1)					-20.577	23170.798 (0.999)	-19.828	22231.989 (0.999)
Education(2)					-1.744	1.359 (0.192)	-18.841	8945.918 (0.998)
Education(3)					-1.003	0.903 (0.267)	-0.400	1.226 (0.744)
Education(4)					-0.843	0.895 (0.346)	-0.169	1.209 (0.889)
Education(5)					-0.136	0.902 (0.880)	0.507	1.212 (0.676)
Education(6)					-0.018	0.883 (0.984)	0.350	1.202 (0.771)
Education(7)					-0.969	0.999 (0.332)	-0.530	1.314 (0.686)
Education(8)					-1.464	1.449 (0.313)	-0.835	1.731 (0.630)
Education(9)					0.710	1.104 (0.520)	0.625	1.480 (0.673)
Education(10)					1.633	1.618 (0.313)	2.056	1.899 (0.279)
Certification(1)							-0.593	0.319 (0.063)*
Competitors								(0.024)
Competitors(1)							0.792	0.544 (0.145)
Competitors(2)							1.577	0.543 (0.004)***
Competitors(3)							0.325	0.319 (0.307)

Table 4.28: The results from the four regression models (continued)

	Model 1		Model 2		Model 3		Model 4	
Variable	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
Average education								(0.081)
Average education(1)							2.205	1.148 (0.055)*
Average education(2)							1.375	1.109 (0.215)
Average education(3)							1.610	1.175 0.171
Employees							0.001	0.007 (0.897)
Overall percentage	83.1		84.1		85.9		84.9	
Cox Snell R^2	9.2		14.2		17.5		24.9	
Nagelkerke R^2	15.3		23.7		29.2		39.3	

* Significant at the 10 percent level

** Significant at the 5 percent level

*** Significant at the 1 percent level

To estimate the first model, all the variables were analysed in a binary logistic regression model with exports as the dependent variable. The independent variables that had the best combined results are **national market share** and **experience**. The overall percentage for the model with these two independent variables is 83.1%. Both variables in model 1 have the expected positive sign. A positive sign for a variable implies that the dependent variable is positively correlated with export, and thus increases the probability of export. An SME that has a larger national market share and has a top manager with more experience is more likely to export. The Wald sig. values for national market share and experience are significant at the 1% level, meaning that these variables are more likely to increase the probability of export.

The age of the firm variable also showed good correlation with the national market share and experience variable and should therefore be considered for the subsequent models. The R^2 of Cox and Snell, and Nagelkerke is very low in model 1 and is expected to increase as more variables are added. Now that the best model with two independent variables is obtained, the regression analysis can progress to model 2.

From model 1 to model 2

Each model's predecessor lays the foundation for the applicable model (in this case model 2). Therefore, the variables national market share and experience remain in the model and from there the next variables are added to arrive at the best model 2.

To arrive at a model 2 with more variables, and most of them significant it is effective to go through a variable filtering process. This implies that different variables are added at different times to get the most effective model. The aim is to obtain a final model that has the best overall aspects such as overall percentage, the sign of the coefficients and the Wald significance.

The agefirm and network variables have the best combined results with the independent variables of model 1 in terms of the overall percentage, the sign of the coefficients and the Wald significance. The overall percentage of model 2 increased to 84.1%. Although the R^2 of Cox and Snell, and Nagelkerke has to be interpreted with caution, it is interesting to see that these values increased as expected.

National market share, experience and **agefirm** are all positively correlated with export and are significant at the 1% level. This implies that these three variables may increase the probability of exports. The other variable in model 2 is **networks**, which is a categorical variable that consists of 12 categories. For the interpretation of categorical variables, the following should be noted. In each instance, a reference category is specified. Then, each of the categories is interpreted in comparison to that reference category.

In the case of networks, SMEs had to choose the main source of information that the establishment had about its new supplier (as discussed in section 4.3.5.1). The reference category here is personal knowledge. The Wald sig. value for other businesses in the same line of business as the SME (networks 1), advertisements (networks 7) and the internet (networks 8) are statistically significant, meaning that

these sources of information are more likely to increase the probability of an SME exporting, compared to those SMEs that make use of personal knowledge (i.e. the reference group). Apart from being significant, these variables are also positively correlated with exports. Other sources due of information, albeit not significant, that have a positive correlation with export are business association or chamber of commerce (networks 3), tenders (networks 6) and other sources not included elsewhere (networks 11). The remaining sources of information, other business associates, suppliers or customers (networks 2), government agency (networks 4), family and friends (networks 5), a supplier located close to the SME (networks 9) and supplier contacted to the SME (networks 10) are negatively correlated, although not statistically significant.

From model 2 to model 3

If the education and total sales variables are added to model 2, the overall percentage of the model increases to 85.9%. The R^2 of Cox and Snell, and Nagelkerke increased as expected. **National market share** and **experience** are statistically significant at the 1% level. **Agefirm** is significant at the 5% level. These variables, together with **total sales** all have a positive correlation with export, which imply that the variables increase the probability or likelihood of exports. Model 3 contains two categorical variables namely networks and education.

The first categorical variable is **networks**. The network variable interpretation was explained in model 2. The Wald sig. value for other businesses in the same line of business as the SME (networks 1), advertisement (networks 7) and the internet (networks 8) are statistically significant, meaning that these sources of information are more likely to increase the probability of an SME exporting, compared to those SMEs that make use of personal knowledge (i.e. the reference group). Apart from being significant, these variables are also positively correlated with exports. All the other sources of information, except for government agency (networks 4) and a supplier

located close to the SME (networks 9), are positively correlated with export. They are, however, not statistically significant.

The second categorical variable is **education**. The education variable shows the highest level of education of the firm's top manager. No education is the lowest number with 1 and the highest level of education is 11. The numbers between 1 and 11 represents various levels of education. An illustration of the education variable is provided in table 4.22. The reference category for this categorical variable is no education. SMEs with top managers that have another postgraduate degree (PhD, Masters) from an university in South Africa (Education 9) and another postgraduate degree (PhD, Masters) from an university in another country, are more likely to increase the probability of export compared to those SMEs with top managers with an education level of no education (i.e. the reference group). All the other education levels are less probable to export, compared to those in the reference category. Unfortunately, none of the education levels in model 3 is significant.

From model 3 to model 4

The only variables that remain are certification, competitors, average education and total employees. These variables have not been included in any of the previous models because they did not have the desired effect on the overall percentage of the model, the coefficient sign and the significance of the independent variables. It makes better sense to add all four variables to the variables already in model 3 because the overall percentage remains consistent between 84.9% and 85.1%. As was the case in model 3, the R^2 of Cox and Snell, and Nagelkerke increased as expected. These values are the highest in model 4. Although the overall percentage of model 4 decreased to 84.9%, model 4 is the best model if R^2 and overall percentage is taken into account. Furthermore, all four variables are categorical, except for total employees, and thus have to be included in the final model.

The final model (model 4), contains 5 non-categorical and 5 categorical variables. The non-categorical variables are national market share, experience, agefirm, total sales and total employees. All the non-categorical variables have a positive correlation with exports and are statistically significant, except for **total employees**. **Experience** is significant at the 1% level, **national market share** is significant at the 5% level and **agefirm** and **total sales** are significant at the 10% level. This implies that all four statistically significant variables are likely to increase the probability of export.

The categorical variables are networks, education, certification, competitors and average education. The **network** variable interpretation was explained in model 2. The Wald sig. value for other businesses in the same line of business as the SME (networks 1), other business associates, supplier or customers (networks 2), tenders (networks 6) and advertisement (networks 7) are statistically significant. Therefore, these sources of information are more likely to increase the probability of an SME exporting, compared to those SMEs that make use of personal knowledge (i.e. the reference group). Apart from being significant, these variables are also positively correlated with exports. The other sources of information which is more likely to increase the probability of export, are business association or Chamber of Commerce (networks 3), internet (networks 8) and other (networks 11). Government agency (networks 4), family and friends (networks 5), a supplier located close to the SME (networks 9) and a supplier contacted this SME (networks 10), are negatively correlated with export and thus are likely to make SMEs less probable to export, compared to those in the reference category.

The second categorical variable is **education**. The education variable interpretation was explained in model 3. The reference category for this categorical variable is no education. SMEs with top managers that have some university training (education 5), a degree (education 6), a postgraduate degree (PhD, Masters) from an university in South Africa (education 9) and a postgraduate degree (PhD, Masters) from an university in another country (education 10), are more likely to increase the probability of export compared to those SMEs with top managers with an education level of no education (i.e. the reference group). SMEs that have top managers with primary school (education

1), started but did not complete secondary school (education 2), secondary school (education 3), vocational training, a MBA in South Africa (education 7) and a MBA in another country (education 8), are less likely to export compared to those in the reference category. However, as was the case with model 3, none of the education levels in model 4 is significant.

The third categorical variable is **certification**. The reference category is yes, i.e. those SMEs that answered that they do have ISO certification. Certification is significant at the 10% level, meaning that SMEs that have no certification (certification 1) are less likely to export compared to those who do have certification.

The fourth categorical variable is **competitors**. SMEs had to indicate the number of competitors they face in the domestic market (as discussed in section 4.3.1.1). The reference category here is having more than 5 competitors. The Wald sig. value for SMEs with 1 competitor (Competitor 2) is statistically significant at the 1% level and positively correlated to exports. This implies that SMEs with only 1 competitor are more likely to export, compared to those SMEs that have 5 or more competitors (i.e. the reference group). SMEs with no competitors, as well as those that have between 2 and 5 competitors, are more likely to export than those in the reference category are. However, these results are not statistically significant.

The fifth and last categorical variable is **average education**. The average education variable shows the average educational attainment of a typical production worker employed in the firm. An illustration of the average education variable is provided in table 4.23. The reference category here is having a production worker that has between 0 and 3 years education. The Wald sig. value for 4-6 years education (education 2) is statistically significant at the 10% level and also positively correlated with export, meaning that SMEs with production workers with 4-6 years education are more likely to export, compared to those SMEs that have production workers with 0 to 3 years education (i.e. the reference group). The remaining education levels all are more likely

to increase the probability of export, compared to the reference group. These levels are, however, not statistically significant.

One of the objectives of the study is to find the determinants of SMEs in South Africa that internationalise (through exports). The results from the logistic regression analysis illustrate that SMEs in South Africa are more likely to internationalise through exports if they:

- are older (longer established in the domestic market),
- have a larger market share in the South African domestic market,
- have a top manager with experience and a higher education level (some university training minimum),
- have less competitors in the South African domestic market,
- have a high total sales value and have a workforce with a higher education level of 4 years or more,
- have certification and use networks.

The regression results indicate that South African SMEs are more likely to internationalise through exports if they are older. This finding correlates with the finding in the descriptive statistics section that South Africa had the oldest exporting SMEs of all the BRICS countries. The South African government and policy-makers should aim to foster an environment where new firms can start exporting sooner (see section 4.3.7).

The descriptive statistics for the national market share variable indicated that South African exporting SMEs had the lowest national market share. The result is an area of concern because the regression results indicate that South African SMEs are more likely to internationalise through exports if they have a larger market share in the South African domestic market.

In the descriptive statistics section South African SMEs had the lowest level of education for a top manager of all die BRICS countries. The regression results illustrate

that SMEs in South Africa are more likely to internationalise through exports if they have a top manager with a higher education level (some university training minimum). Thus, the lesson of section 4.3.7 that policy-makers should encourage graduates to further studies and become entrepreneurs correlates with finding in the regression results section.

In the descriptive statistics section South African SMEs had the lowest level of networks of all die BRICS countries. The regression results illustrate that SMEs in South Africa are more likely to internationalise through exports if they use networks. Thus, the lesson of section 4.3.7 that the government should help exporting SMEs to establish networks correlates with the finding in the regression results section.

4.5 Summary

Chapter 4 provided the empirical results that were essential for making a comparison between the characteristics of internationalising SMEs in the BRICS countries and for establishing the characteristics that may make SMEs in South Africa more likely to internationalise through exports.

In section 3.2 the variables and data of the BRICS countries were provided. The data was from the World Bank. The data contained numerous variables and only the variables that provided adequate data were chosen. The variables are grouped according to enabling, motivating, mediating and moderating factors. The variables used in this study were illustrated in table 4.2. The study progressed to section 3.3 (descriptive statistics section) where the firms and SMEs of the BRICS countries were analysed and compared in detail.

In the descriptive statistics section, the variables from the different countries' datasets are first compared in terms of those that export and those that do not. Thereafter, a similar comparison is done for the SMEs that export and the SMEs that do not export.

The latter is also the focus of the study; therefore, much emphasis is placed on this topic.

The empirical results for exporting and non-exporting firms/SMEs of each BRICS country were illustrated in the descriptive statistics section. The results were used to reach the first, and main, objective of the study namely to compare the characteristics of internationalising firms and SMEs of the BRICS countries.

Brazil had the most SMEs followed by India, South Africa, Russia and China. In all the countries, exporting SMEs had a higher number of employees than non-exporting SMEs. The results confirm that SMEs that internationalise through export create employment. In comparison to the other countries evaluated, SMEs in Russia internationalise at the youngest age by far and thus are likely to follow the rapid international theories. South African SMEs had the highest average age, meaning that SMEs first are established in the domestic market before they internationalise through export. South African SMEs thus follow the traditional internationalisation theories. Chinese exporting SMEs have top managers that are higher educated than those in India and South Africa. The country with the most exporting SMEs with certification was China, followed by South Africa, Russia and Brazil. Brazilian SMEs that export had a top manager with the most experience. South Africa did reasonably well with about 20 years of experience for the top manager. The average experience of top managers in Russian exporting SMEs are 14 years. Despite the fact that most of the workforce/production workers in India and South Africa have 6 to 12 years education, India has 16.1% more SMEs that export with workforces/production workers that have more than 12 years education. SMEs that export have the highest national market share in China with 23.82% followed by India with 13.88% and South Africa with 4.58%. The results show that 88% of Indian SMEs that export belong to a network, while in China the figure is 51.9%. The biggest sources of information for South African SMEs that export are other businesses in the same line of the SME with 32%. In Brazil, India and South Africa the most answers was more than 5 competitors for SMEs that export. The top obstacles for SMEs that export in most countries were tax rates. South Africa's top 2

obstacles, crime, theft and disorder, and electricity are not a top 5 obstacle for any of the other countries.

The second objective of this chapter was to empirically determine the characteristics of internationalising SMEs in South Africa. This objective was reached in section 4.4 (the logistic regression analysis section). All the variables, except for the obstacles, are analysed in section 3.4. The variables were used to estimate four binary regression models through a step-by-step process. The best model estimated was model 4. Model 4 illustrated that SMEs in South Africa are more likely to internationalise through exports if the SME is older (longer established in the domestic market), has a large market share in the South African domestic market, has a top manager with experience and a higher education level (minimum some university training), has less competitors in the South African domestic market, has high total sales, has a workforce with a higher education level of 4 years or more, has certification and use networks.

Chapter 4 also provided important lessons for South African exporting SMEs. Policy-makers in South Africa should further promote SMEs to increase their export activity since internationalisation can create urgently needed employment. South Africa had the oldest exporting SMEs of all the BRICS countries. The South African government and policy-makers should aim to foster an environment where new firms can start exporting sooner (perhaps through targeted export promotion). If South African SMEs start exporting sooner, the average number of employees will also further increase at an earlier stage. South Africa had the lowest level of education for a top manager. Policy-makers should encourage graduates to further studies and become entrepreneurs. South African exporting SMEs also had the lowest national market share. Therefore, the government should help SMEs grow their national market share to increase the experience of the top manager in a particular sector. In addition, the government should help exporting SMEs to establish networks.

South Africa was the only country that had SMEs that experienced the obstacles in terms of crime, theft and disorder, and electricity. These obstacles should be lessened or even eliminated in order to encourage a positive business environment.

The next chapter concludes the study and makes recommendations for policy-makers, SMEs and future research.

Chapter 5
Conclusions and recommendations

5.1 Introduction

SMEs are important for a country's economy, since they provide benefits such as entrepreneurship, employment, exports and productivity to an economy. An economy that shows substantial growth is usually characterised by a strong and growing SME sector (see section 1.1).

The problem statement in section 1.2 indicates that South African SMEs need to grow to create jobs and benefit the South African economy. To enter foreign markets through exporting is one of the ways in which SMEs can become strong and grow. Empirical analysis of internationalising SMEs have shown that the average number of employees in exporting SMEs were around 40 and in non-exporting SMEs 23. Therefore, exporting SMEs have on average 17 more employees. SMEs that internationalise through exports are able to achieve an increase in employment levels (see section 4.3.5.1).

In the problem statement it was further emphasised that internationalisation for SMEs implies numerous risks and many fail in their international endeavours. An interesting finding was that the two obstacles South Africa had in the top 5 namely, crime, theft and disorder, and electricity, are not a top 5 obstacle for any of the other countries (see section 4.3.5.2).

The motivation of the study was to identify the areas that the South African government can develop in order to transform the economy into an emerging economy that can be on par with the BRIC countries. The overview of the BRICS countries (see section 3.2) and the empirical results of the BRIC countries (see section 4.3) showed that SMEs make up a large part of the BRICS economies and they grow through exports. In order to be on par with the BRIC countries, it is necessary to compare South African exporting and non-exporting SMEs with those in the BRIC countries. This will help to identify

areas where South African SMEs' competitiveness can improve, especially in South-South trade. The competitiveness of SMEs involved in exporting also tends to improve. Therefore, if SMEs' competitiveness improves, it may be less risky for them to internationalise, which can lead to them being able to export more successfully, grow as a result of exporting and so contribute to employment.

5.2 Conclusions

The primary objective of the study was to make a comparison between the characteristics of internationalising SMEs in the BRICS countries. This objective was achieved through the following sub-objectives.

The first sub-objective was to provide an overview on the theories on internationalisation. The objective was reached in section 2.2. Section 2.2 provided seven theories or models on firm internationalisation. The first two models are known as the traditional or incremental internationalisation models, which includes the Uppsala model and innovation-related model. Firms in the above-mentioned models follow a certain number of stages in order to achieve internationalisation. In the Uppsala model, knowledge and psychological distance play a significant role. As the firm goes through the stages, it gathers more knowledge that reduces the risk associated with the foreign market. The firm consequently commits more resources to the foreign market. Psychological distance implies that the firm first enter markets that they are more familiar with. In the innovation-related model, the focus is on the adoption of innovation between the stages (see section 2.2.1). Not all firms follow the traditional route to internationalisation and have found an useful alternative in rapid internationalisation. The rapid internationalisation model was discussed through the theories on born global firms and international new ventures. In contrast to the traditional theories, rapid internationalising firms ignore an established domestic market and instead aspire to access new markets abroad from its inception (see section 2.2.2).

Another important theory namely international entrepreneurship, started with interest in international new ventures. International entrepreneurship is defined as the process of discovering, enacting, evaluating and exploiting opportunities across national borders in pursuit of a competitive advantage (see section 2.2.3). The transaction cost theory was the fourth theory discussed. The basic principle of the transaction cost theory is that the firm will shift low cost activities to the firm itself and rely upon the market to provide the other external activities where other firms carry an advantage in (see section 2.2.4). The resource-based theory is concentrated on the firm's unique bundle of resources and the way advantages can be generated from these resources (see section 2.2.5). Dunning's eclectic approach explains internationalisation strategies according to three advantages, namely ownership advantages, locational advantages and internalising advantages (section 2.2.6).

The second sub-objective was to discuss the motivations for internationalisation and the barriers to internationalisation. This objective was reached in section 2.3 and 2.4. These are important aspects as they hinder or motivate a firm to export (in other words, to internationalise). Numerous motivating factors for internationalisation were identified in the literature. It was found that firms are motivated to internationalise because of a saturated and small domestic market, competitive pressures, opportunities in the foreign market and to achieve growth. Barriers include inadequate networks, language or cultural differences and the lack of access to necessary finance. The lack of knowledge of foreign markets was the barrier that occurred amongst most internationalising firms.

The third sub-objective of the study was to provide an overview of the SMEs in Brazil, Russia, India, China and South Africa. This objective was reached in section 3.2. In the SME section of the BRICS countries, the contribution of SMEs to employment, economic growth and exports in each country were discussed in detail (see sections 3.2.1.2 - 3.2.5.2). The SMEs section of the BRICS countries provided background for the descriptive statistics section on SMEs in each BRICS country (see section 4.3). The overview of the BRICS countries and descriptive statistics of the BRICS countries was

important to ultimately reach the primary objective, which is to make a comparison between the characteristics of internationalising SMEs in the BRICS countries.

The fourth sub-objective was to provide descriptive statistics on internationalising firms and SMEs in the BRICS countries. This objective was reached in section 4.3. The descriptive statistics was used to make a comparison between the characteristics of internationalising SMEs in the BRICS countries (primary objective) in section 4.3.6. In all the countries, exporting SMEs had a higher number of employees than non-exporting SMEs. The results confirm that SMEs can create employment through internationalisation. In comparison to the other countries evaluated, SMEs in Russia internationalise at by far the youngest age and thus are likely to follow the rapid international theories. South African SMEs had the highest average age, meaning that SMEs first are established in the domestic market before they internationalise through exports. South African SMEs thus follow the pattern described by traditional internationalisation theories. Chinese exporting SMEs have top managers that are higher educated than those in India and South Africa. The country with the most exporting SMEs with an internationally recognised certification was China followed by South Africa, Russia and Brazil. Brazilian SMEs that export had a top manager with the most experience. South Africa did reasonably well with about 20 years of experience for the top manager. The average experience of top managers in Russian exporting SMEs are 14 years. Most of the workforce/production workers and India and South Africa have 6 to 12 years education. However, in comparison with South Africa, India has 16.10% more exporting SMEs with a workforce/production workers that has more than 12 years education. SMEs that export has the highest national market share in China with 23.82% followed by India with 13.88% and South Africa with 4.58%. 88% of Indian SMEs that export belong to a network, while in China the figure is 51.9%. The biggest source of information for South African SMEs that export are other businesses in the same line of the SME with 32%. The competitor variable illustrated the number of competitors the SMEs main product line faced. In Brazil, India and South Africa, the most answers were that exporting SMEs had faced more than five competitors in their domestic market. The top obstacles for SMEs that export in most countries were tax

rates. South Africa's top 2 obstacles, crime, theft and disorder and electricity are not a top 5 obstacle for any of the other countries.

The fifth sub-objective of the study was to empirically determine the characteristics of internationalising SMEs in South Africa. This objective was reached in section 4.4. SMEs in South Africa are more likely to internationalise through exports if they are older (longer established in the domestic market), have a larger market share in the South African domestic market, have a top manager with experience and a higher education level (some university training minimum), have less competitors in the South African domestic market, have a high total sales value, have a workforce with an education level of 4 years or more, have an internationally recognised certification and use networks.

In summary, the primary objective of the study was to make a comparison between the characteristics of internationalising SMEs in the BRICS countries. The areas or aspects that the South African government need to develop in order to transform the economy into an emerging economy that can compete with the BRIC countries, include assisting SMEs in exporting at an earlier age, improving the education levels of top managers in SMEs, increasing the national market share of SMEs and lessening, or even eliminating, obstacles like crime, theft and disorder as well as electricity. These aspects, together with the characteristics of internationalising SMEs in South Africa, are vital to improve SME competitiveness. Therefore, if SMEs' competitiveness improves, then it may be less risky for them to internationalise, which can lead to them being able to export more successfully, grow as a result of exporting and so contribute to employment.

5.3 Recommendations

In section 1.3, it was stated that SMEs need to have some sort of assistance to help them grow in order for them to survive the fierce competition. SMEs are destined to come across certain obstacles or problems whichever internationalisation strategy is chosen. A government should enforce policies that promote growth and remove or minimise problems.

The study provides important lessons for South African exporting SMEs and government. The lessons can help government and policy-makers to improve certain areas in order to enhance the competitiveness of SMEs.

Policy recommendations for the South African government:

- Policy-makers in South Africa should further promote SMEs to increase their export activity since internationalisation can create urgently needed employment.
- South Africa had the oldest exporting SMEs of all the BRICS countries. The South African government and policy-makers should aim to foster an environment where new firms can start exporting sooner (perhaps through targeted export promotion). If South African SMEs start exporting sooner, the average number of employees will also further increase at an earlier stage.
- South Africa had the lowest level of education for a top manager. Policy-makers should encourage graduates to further studies and become entrepreneurs.
- South African exporting SMEs also had the lowest national market share. Therefore, the government should help SMEs grow their national market share to increase the experience of the top manager in a particular sector.
- In addition, the government should help exporting SMEs to establish networks.
- South Africa was the only country that had SMEs that experienced the obstacles in terms of crime, theft and disorder, and electricity. These obstacles should be lessened or even eliminated in order to encourage a positive business environment.

A recommendation for future research is to do similar empirical analysis (logistic regression models) for the other BRIC countries. This will empirically determine the characteristics of internationalising SMEs in the BRIC countries. The results will indicate which areas the BRIC countries should improve to enhance the competitiveness of their SMEs.

A limitation of the study is that in terms of data, there is no adequate panel data to account for unobserved fixed effects (thus endogeneity exists in the data). Using panel data would take unobserved fixed effects into account. Therefore, a positive contribution to firm-level research in general would be the creation of panel data sets.

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