The identification of South African export opportunities: special reference of fruit juice to Oman and Qatar

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Key words: Decision Support Model, export potential, market selection, Middle East, and product selection.

ABSTRACT

As part of the Accelerated Shared Growth Initiative of South Africa (AsgiSA), the South African government is focusing on improving the country's export performance (Department of Trade and Industry, 2006a). One of the objectives of the Department of Trade and Industry (DTI) is to increase the level of South African exports through the development and implementation of strategies for targeted markets. The DTI commissioned a study to scientifically identify priority products and markets in order to justify its export promotion activities and to ensure that government resources are effectively allocated. This led to the development of the Decision Support Model (DSM) by Viviers and Pearson (2007) as an instrument to identify realistic export opportunities for South Africa.

The Viviers and Pearson (2007) study adapted and refined the methodology of Cuyvers *et al.* (1995) to the South African circumstances and used a sequential filtering process to identify realistic product/market export combinations for South Africa. The outcome of the DSM for South Africa was 9690 SITC product/market opportunities in seventy-four countries, clustered in twelve geographic regions. One of these regions was the Middle East. The DTI indicated the need for a study on South Africa's export opportunities to the Middle East as a result of their prioritisation of regions for export promotion. This need is therefore the rationale of this study. The research objectives were to analyse the identified Middle East countries and determine the product with the most realistic export opportunities to two of the Middle East countries and lastly, to develop a market profile to assist the DTI in promoting the exports of this product to these countries.

In this study, several methods of product and market selection were investigated in order to determine the most suitable method to identify the product/market opportunities from the DSM to the Middle East. The product selection method selected involved a three-phase filtering process to determine the product with the highest export potential to the Middle East. The analysis was based on a cluster-selection process. It was determined that fruit juice was the product with the highest export potential to the region. The market selection process used a composite market potential index to determine which country in the Middle East had the highest

potential for exports of fruit juice from South Africa. The two countries in the Middle East with the highest potential to import fruit juice from South Africa were Oman and Qatar.

A market profile for the export of fruit juice to Oman and Qatar was developed. The market profile provided an economic overview of the two markets, analysed the market potential of fruit juice and provided technical information regarding the requirements for the export of fruit juice by South Africa to Oman and Qatar. The results of this study firstly indicate to the DTI and exporters that South Africa should export fruit juice to Oman and Qatar and secondly presents a market profile with detailed information of the process to follow in exporting fruit juice to these countries.

Sleutelwoorde: Decision Support Model, markkeuse, Midde-Ooste, produkkeuse, en uitvoerpotensiaal.

OPSOMMING

As deel van die 'Accelerated Shared Growth Initiative' (AsgiSA), fokus die Suid-Afrikaanse regering op die verbetering van die land se uitvoerprestasie (Department of Trade and Industry, 2006a). Een van die doelwitte van die Departement van Handel en Nywerheid (DHN) is om die vlak van Suid Afrika se uitvoer te verhoog deur die ontwikkeling en implementering van strategieë vir teikenprodukte en -markte. Die DHN het 'n studie laat onderneem om prioritietsprodukte en -markte wetenskaplik te identifiseer ten einde die DHN se uitvoerbevordeingsaktiwiteite wetenskaplik te regverdig en daardeur te verseker dat die toedeling van die regering se hulpbronne effektief plaasvind. Hierdie opdrag het tot die ontwikkeling van die 'Decision Support Model' (DSM)) van Viviers en Pearson (2007) gelei, as 'n instrument om realistiese uitvoergeleenthede vir Suid-Afrika te identifiseer.

Die Viviers en Pearson-studie (2007) het die metodologie van Cuyvers *et al.* (1995) by die Suid-Afrikaanse handlesomstandighede aangepas en verfyn. Dié metodologie van die DSM behels 'n opeenvolgende filterproses om realistiese produk/markkombinasies vir uitvoer te bepaal. Die uitkomste van die DSM was 9690 SITC produk/ markgeleenthede na 74 lande, wat in twaalf geografiese streke gegroepeer is. Een van hierdie groeperings was die Midde-Ooste. Die DHN het die noodsaaklikheid van 'n studie van Suid-Afrikaanse uitvoergeleenthede na die Midde-Ooste aangetoon as gevolg van hul die prioritisering van die streke vir uitvoerbevordering. Hierdie noodsaak is gevolglik die motivering vir die studie. Die studie se doelstellings was om die Midde-Oosterse lande te analiseer, die produk met die mees realistiese uitvoergeleenthede na twee Midde-Oosterse lande te identifiseer en om laastens 'n markprofiel te ontwikkel om die DHN in die bevordering van uitvoer van die produk na die twee lande te bevorder.

In hierdie studie word 'n aantal produk- en markkeuse-metodes ondersoek om die mees toepaslike wyse vir produk/markgeleenthede vir uitvoer na die Midde-Ooste te analiseer. Die produkkeuse-metode het 'n drie-fase filterproses behels om die produk met die hoogste uitvoerpotensiaal na die Midde-Ooste te bepaal. Die analise was gebaseer op 'n 'cluster'-gebaseerde keuringsmetode. Uit die analise is bevind dat vrugtesap dié produk is met die hoogste uitvoerpotensiaal na die Midde-Ooste. Die markkeuse-proses het gebruik gemaak van 'n saamgestelde markpotensiaalindeks om dié land in die Midde-Ooste met die hoogste potensiaal

vir invoer van vrugtesap te bepaal. Die twee lande in die Midde-Ooste met die hoogste potensiaal vir die invoer van vrugtesap is Oman en Qatar.

'n Markprofiel vir die uitvoer van vrugtesap na Oman en Qatar is ontwikkel. Die markprofiel bevat 'n ekonomiese oorsig van elke mark, 'n analise van die markpotensiaal van vrugtesap in elke mark en verskaf ook tegniese inligting oor die vereistes vir die uitvoer van vrugtesap van Suid-Afrika na Oman en Qatar. Die resultate van die studie toon eerstens aan die DHN en uitvoerders dat Suid-Afrika vrugtesap na Oman en Qatar moet uitvoer en tweedens verskaf die markprofiel, gedetailleerde inligting oor hoe om vrugtesap na die twee lande uit te voer.

ABBREVIATIONS

AGEG	Arabian Gulf Export Group
AsgiSA	Accelerated Shared Growth Initiative of South Africa
DSM	Decision Support Model
DTI	Department of Trade and Industry
ESCWA	Economic and Social Commission for Western Asia
GAFTA	Greater Arab Free Trade Area
GCC	Gulf Cooperation Council
GSO	Gulf Standards Organisation
HS	Harmonized System
IMF	International Monetary Fund
ITC	International Trade Centre
ITRISA	International Trade Institute of Southern Africa
L/C	Letter of Credit
MFN	Most Favoured Nation
MOCI	Ministry of Commerce and Industry
n.e.s.	Not elsewhere specified
NIPF	National Industrial Policy Framework
OMR	Omani Rial
QAR	Qatari Rial
RCA	Revealed Comparative Advantage
SABS	South African Bureau of Standards
SITC	Standard International Trade Classification
TPI	Trade Performance Index
TISA	Trade and Investment South Africa
UAE	United Arab Emirates
UNSD	United Nations Statistics Division
USD	United States Dollar

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION TO STUDY

1.1 Introduction

This chapter provides the background to and problem statement for the problem under investigation. Thereafter, the research questions and objectives in response to the problem statement are given. The research methodology is also sketched, and the chapters of the dissertation are outlined.

1.2 Background

The Accelerated and Shared Growth Initiative of South Africa (AsgiSA) is an initiative through which the South African government was mandated to halve poverty and unemployment by 2014. The global economic strategy within AsgiSA focuses on improving the country's export performance by dismantling the barriers to trade and gaining increased market access (Department of Trade and Industry, 2006a:5–13). The National Industrial Policy Framework (NIPF) was developed as a policy document to play a role in achieving the AsgiSA goals. The primary objective of the NIPF was setting out Government's policy approach to the industrial development of the South African economy. The NIPF will serve as a blue print for South Africa's industrialisation process while adopting the same methodological approach as AsgiSA (Department of Trade and Industry, 2008:6).

Both AsgiSA and the NIPF established a set of institutional coordination mechanisms that can integrate trade policy into economic development strategy in an operationally meaningful manner. An important objective of the NIPF in terms of trade policy is the improvement of non-traditional export performance, particularly in more sophisticated and value added products. The NIPF also prescribed that the development of more refined foreign direct investment and export promotion strategies is necessary to provide for more targeted investment promotion driven by identified opportunities and more focused export promotion based on detailed analysis of trade opportunities (Department of Trade and Industry, 2008:29).

The Department of Trade and Industry (DTI) is the export promotion authority of South Africa. It has the objectives of promoting the co-ordinated implementation of AsgiSA; promoting direct investment in growth of the industrial and services economy, focusing on the creation of employment; increasing the level of exports and promoting equitable global trade; promoting

broader participation, equity and redress in the economy; and contributing to Africa's development and regional integration within the New Partnership for Africa's Development (Department of Trade and Industry, 2009).

Trade and Investment South Africa (TISA) is a division of the DTI. It has the specific objectives of increasing South Africa's capacity to export by developing and implementing strategies for targeted markets, increasing the level of direct investment flow, and effectively managing the DTI's network of foreign offices (Department of Trade and Industry, 2009:36).

The DTI commissioned a study to scientifically justify the export promotion activities of TISA, particularly in reference to its objective of developing and implementing strategies in targeted markets (Viviers & Pearson, 2007:3). Identifying markets and product opportunities should be based on sound research and analysis (Cuyvers, De Pelsmacker, Rayp & Roozen, 1995). The DTI indicated the need for an extensive study on export promotion in order to ensure that government sources were effectively allocated through the identification of priority markets (Viviers & Pearson, 2007). It was further held that focused export promotion activities could lead to a higher success rate of exporters in foreign markets and therefore exacerbate the need for a study to identify priority markets (Viviers & Pearson, 2007).

The Decision Support Model (DSM) of Viviers & Pearson (2007) was developed as a tool to identify realistic export opportunities specifically for South Africa for the DTI. The DSM was to be used to prioritise export assistance to exporters by the DTI and allow exporters to access foreign markets (Viviers & Pearson, 2007). This DSM was adapted from the original DSM of Cuyvers *et al.* (1995) to suit South African trade circumstances. The DSM of Cuyvers *et al.* (1995) suggested a sequential filtering process to identify product/market combinations that present realistic export opportunities. The DSM of Viviers and Pearson (2007) identified realistic export opportunities for South Africa through analysing 238 countries and 623 Standard International Trade Classification (SITC) product categories. The outcome of the filtering process was 9690 SITC-product/market opportunities to seventy-four countries.

The study on which this dissertation reports is based on the results of the DSM of Viviers and Pearson (2007). The next section presents the problem statement and indicates the importance of this study and its contribution to the DSM and the activities of TISA.

1.3 Problem statement

This section presents the problem statement. It thereby indicates the importance of this study in light of the objectives and activities of TISA. Furthermore, this section demonstrates this study's contribution to the results of the DSM.

One of the critical outcomes of the DSM was that it provided twelve geographical clusters for countries with high export potential, namely Africa, Asia, Western Europe, Middle Europe, Eastern Europe, Scandinavia, the Baltic States, Australasia, North America, South America, the Caribbean and the Middle East (Viviers & Pearson, 2007). These geographical regions were identified by the DSM as regions with high export potential in consultation with the DTI (Viviers & Pearson, 2007). The Middle East was identified by the DSM as a geographic cluster with export potential, with the cluster contributing 911 realistic export opportunities and 9.5 per cent of all realistic export opportunities (Viviers & Pearson, 2007). The Middle East geographical cluster consists of eight countries: Bahrain, Iran, Israel, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE).

In order to meet its objective of developing and implementing strategies in targeted markets, TISA introduced the Arabian Gulf Export Group (AGEG). The four objectives of the AGEG are to raise awareness amongst South Africans of the opportunities in the Gulf (Middle East) region, promote the South African brand, facilitate market entry and exports for South African exporters, and facilitate foreign direct investment (Department of Trade and Industry, 2006b). The introduction of the AGEG indicates the importance of the Middle East region to the DTI as a target market for both exports and investments. Therefore, the DTI would benefit from a focused study for exporters wishing to export to the Middle East.

Cuyvers *et al.* (1995:173–174) suggests that identifying a limited list of export promotion priorities and prioritising target markets would strengthen the export strategy of a government export promotion department, leading to the most effective allocation of limited government resources. The identification of the Middle East as one of the geographical clusters in the DSM and the requirements of the AGEG clearly indicate that there is a need for a focused study on the Middle East. The DSM results for the Middle East indicated a large number of realistic export opportunities and the objective of the AGEG to facilitate market entry and exports for South African exporters would only be achieved were the results of the DSM to be narrowed down to determine a focused strategy for the Middle East. The product/market opportunities identified in

the Middle East by the DSM thus need to be translated into meaningful product-specific market profiles. These market profiles should provide information to both exporters and TISA on the potential of a specific product in the Middle Eastern market and give insight into the technical requirements of the markets for South African exporters. The next section provides further motivation as to the importance of developing product-specific market profiles for the Middle East.

1.4 Rationale for study

This section provides the rationale for this study regarding the importance of developing product-specific market profiles in the Middle East. It considers South Africa's trade structure and performance, as well as the attractiveness of the Middle East as an export destination for South African exporters.

1.4.1 South Africa's trade structure and performance

This section analyses South Africa's trade structure and performance in order to indicate the importance of a focused export strategy that identifies priority markets. The trade relationship between South Africa and the Middle East is analysed and the implications of the trade relationship for the strategic objectives of the South African government are discussed.

The increase in the South African current account deficit since 2003 poses a threat to the AsgiSA objectives of halving poverty and achieving economic growth and the NIPF objective of industrial development. The deficit exceeded 7 per cent of GDP in 2007 and 2008, reaching R146 billion and R169 billion, respectively (SARB, 2009). The global economic strategy of AsgiSA focuses on improving the country's export performance and therefore it is necessary to determine the drivers of the increasing current account deficit and improve efforts to increase exports.

In 2008, South Africa's top import was crude petroleum oils, which amounted to USD15 billion, (United States Dollar) showing an increase of 36.3 per cent from USD11 billion in 2007. Imports of crude petroleum oil accounted for 17.1 per cent of total imports in 2008. These imports primarily originated from the Middle East, particularly from Saudi Arabia with crude petroleum oil imports at USD4.3 billion in 2008, showing an increase of 48.8 per cent from USD2.9 billion in 2007 (Trade Map, 2009). Rising import figures can be attributed to oil prices in 2008 reaching

record levels of USD91.48 per blue barrel (Inflationdata, 2009). Therefore, the main driver of the increasing current account deficit is the reliance of South Africa on crude petroleum oil imports. The dependence on imported crude petroleum oils is distorted by the fluctuations in oil prices. This situation places a burden on the South African economy by placing pressure on the current account balance.

The pressure on the South African economy to increase export performance is compounded by the structure of exports, limited export market diversification and focus on traditional export markets. In 2008, South Africa's top export destinations were Japan (USD8.1 billion), the United States (USD7.9 billion), Germany (USD5.7 billion), the United Kingdom (USD4.9 billion), and China (USD4.3 billion; Trade Map, 2009). South Africa is the most dependant on imports from the Middle East; yet in 2008, South Africa exported USD3 billion to the Middle East and imported USD13 billion from the region (Trade Map, 2009). This is a trade deficit of USD10 billion and an export-to-import ratio of 1:4.3, demonstrating the high level of disparity in the trade relationship between South Africa and the Middle East.

South Africa imported largely from Saudi Arabia (USD5.5 billion) and Iran (USD3.3 billion), while exporting mainly to Israel (USD841 million) and the UAE (USD770 million) in 2008. South Africa mainly exported diamonds (USD456 million), coal (USD450 million) and cars (USD335 million) to the Middle East (Trade Map, 2009). Therefore, it is evident that South Africa's trade structure with the Middle East requires attention and the development of a focused strategy to improve exports to the region is important. The next section examines the attractiveness of the Middle East as an export destination for South African exporters.

1.4.2 Attractiveness of the Middle East as an export destination

The Arab World Competitiveness Report of 2007 holds that the Middle East has had high rates of growth for four consecutive years. Recent reforms have contributed to high growth rates, but the region has yet to reach its full potential (World Economic Forum, 2007). For South African exporters, the economic growth in these countries means that buyers will have a larger income and an appetite for imported goods. Saxena (2007:45) holds that the dynamic and viable trading environment is a factor attracting business to the region, particularly through the Jebel Ali Free Zone in Dubai, which attracts investors and commercial businesses from around the world as it allows exemption from import, export, and personal tax. South Africa could use this new

emerging market to its advantage to increase exports to the region, and to explore Dubai as a trading hub.

Jones (2003:360–361) states that the Middle East countries have been described as some of the most exciting emerging retail markets, with consumers having higher disposable income. The UAE and Bahrain are competing to become regional business hubs and Bahrain is known as the freest economy in the region. Jones also points out that the Middle East and North African region is ranked the fastest growing economy behind China and India. The Gulf Cooperation Council (GCC) is described by Metwally and Tamaschke (2001:292), as a financially powerful political and economic union amongst Bahrain, Kuwait, Oman, Saudi Arabia, and the UAE. The GCC countries import most of their consumer and capital goods, owing to their limited domestic productive capacity and do not impose any significant import restrictions. This situation creates a clear and open market for South African exports and the opportunity to become a competitor in these markets, therefore it is vital that South African exporters be prepared to take advantage of the export opportunities that may arise from this market.

From this section, it is evident that South Africa needs to develop a focused export strategy for the Middle East in order to insulate the South African economy from the price fluctuation shocks resulting from its dependence on crude petroleum oils from the region (see Section 1.4.1). Apart from the need to protect the South African economy, the Middle East has been identified by the DSM as a region holding export potential. Moreover, the Middle East is regarded as an attractive region for trade owing to its economic growth and potential for exporters and investors. Therefore, it is evident that a focused study on the Middle East is required in order to determine the opportunities of this market for South African exporters.

The rationale for the study and the problem statement elicited questions to be addressed in this study. These research questions are presented in the next section.

1.5 Research questions

The research questions of this study are:

- Which product, based on the DSM, holds the most export potential to the Middle East?
- Which market in the Middle East, based on the DSM, has the most export potential for the identified product?

- Within the identified Middle Eastern countries:
    - what is the feasibility of the markets given their economic structures; provide an economic overview of each market;
    - what is the demand for the identified product in each market; and
    - what technical information for South African exporters is needed in order to enter each market?

Based on these research questions, research objectives that guided the study were derived. These research objectives are given in the next section.

1.6 Research objectives

The objectives of this study are:

- to identify the product from the DSM that holds the most export potential to the Middle East,
- to determine the market[1] in the Middle East from the DSM that has the most export potential for the identified product, and
- to develop a product-specific market profile for the identified Middle East countries that will:
    - provide an economic overview of each market;
    - analyse the demand for the identified product in each market; and
    - provide technical information for South African exporters in order to enter each market.

Therefore, this study has three research objectives: the identification of a product with the highest export potential to the Middle East, the identification of the market with the highest export potential of that product, and the development of a market profile. The next section outlines the research methodology followed in this study in order to achieve the research objectives.

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[1] Within this study all references to market will pertain to a specific country, for example, a country in the Middle East.

1.7   Research methodology

The research methodology involved secondary desk research that included a literature review and empirical study to determine the products and markets from the DSM with the most export potential in the Middle East.

For the literature review, various academic articles and journals were examined. The results of this review will be provided in Chapter 2 and will focus on product and market selection methods. The literature review will discuss the requirements of effective product and market selection and provide an overview of the most common product and market selection methods. Specific attention will be given to the geographic clustering of markets and analysing the export potential of a region in order to ensure that the empirical study meets the requirements of a geographic cluster. The most suitable indicators for product and market selection were determined, which were then used in the empirical study.

The results of the empirical study will be presented in Chapters 3 and 4. In Chapter 3, the potential products for export to the Middle East will be determined. In Chapter 4, the Middle Eastern market with the most export potential of the identified product will be determined. The empirical study primarily used Web-based sources, such as Trade Map and Market Access Map. The empirical analysis required analysis of trade data using SITC codes and HS (Harmonized System) codes. In Chapter 3, the SITC codes will be translated into HS codes using United Nations Statistics Division (UNSD) data.

The market profiles of Chapter 5 will provide an economic overview of the market, an analysis of the market potential of the identified product in each market, and technical information on each market. The economic overview will provide information on the suitability of the markets using macroeconomic indicators. The market potential of the identified product in the market was determined by analysing the trade statistics of the identified product in each of the markets. The technical information for each market will be a qualitative analysis of the requirements faced by an exporter to enter each market, focusing on tariffs, import requirements and documentation, standards and regulations, price-influencing factors, distribution channels, methods of payment, and the marketing of the product. The information was gathered from various journals, articles and websites.

The next section outlines the study that followed the research methodology specific to the empirical study discussed in this section. The section will indicate the sources and time periods used in the empirical study.

1.8   Demarcation of the study

In this study, the potential of the products and countries identified in the DSM for the Middle East as realistic export opportunities was analysed. The countries are those identified in the DSM as Middle Eastern countries, i.e. Bahrain, Israel, Iran, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. This study focuses on those product/market combinations identified in the DSM in order to determine the product/market combination with the most export potential to the Middle East.

The trade data in Chapters 3 and 4 were sourced from Trade Map (which is a database of trade indicators from the International Trade Centre; ITC) and the analysis of the trade data was for the period of 2004 to 2008. This is also the five-year period for the growth indicators of Trade Map. The macroeconomic data in Chapter 5 was sourced from the International Monetary Fund (IMF) for 2007 to 2013, the trade data from Trade Map for 2008, and the tariff data from Market Access Map.

However, in Section 3.4.2 the trade data will be sourced from Quantec for the period of 1998 to 2008. The reason for this is that Quantec allows the unlimited selection of products, while Trade Map only allows the selection of thirty products. In this section, 387 products were analysed that necessitated the use of a source that was capable of allowing the selection of such a large number of products. The analysis from 1998 to 2008 in this section is because the DSM was developed using import data for the period 2000 to 2002. It was decided to include the additional two years to round off the analysis to a ten-year period.

This study does not consider the development of an export strategy or market entry strategy to the Middle East. The focus was on the identification of opportunities and the creation of a market profile to inform exporters when making a decision regarding the most appropriate market for export.

1.9 Outline of the dissertation

This chapter has provided the background of the study, the problem statement, research questions and research objectives of the study. It has also indicated the research methodology. This section outlines the remaining chapters of the dissertation.

Chapter 2 will present the literature review, which will discuss the methods of determining export opportunities in foreign markets. The chapter will analyse various product and market selection methods with a specific focus on product and market selection within a geographic cluster. The chapter will also determine the most suitable indicators for quantitative product and market selection methods. The importance of information for exporters entering foreign markets and the types of information required by exporters will also be discussed in this chapter.

Chapter 3 will present the first part of the empirical study, focusing on identifying the product with the most export potential to the Middle East from the results of the DSM. The chapter will approach the selection process using a filtering process in three phases. An index for export potential will be used as part of the final selection to identify the product with the most export potential to the Middle East.

Chapter 4 will present the second part of the empirical study, focusing on identifying the market with the most export potential to the Middle East for the product identified in Chapter 3. The chapter will study the Middle East markets identified as potential markets in the DSM. A market potential index will be used to determine the market with the most export potential.

Chapter 5 will provide product-specific market profiles for the two most attractive markets from the analysis in Chapter 4. The market profiles will provide an economic overview of the market, analyse the market potential of the identified product in each market, and provide the technical information on each market required by an exporter in order to make an informed decision to enter the market.

Chapter 6 will provide a summary of the dissertation and will outline the main findings of the study. The limitations to the study will also be discussed in this chapter, and recommendations for further research made.

2.   DETERMINING EXPORT OPPORTUNITIES IN FOREIGN MARKETS

2.1   Introduction

This chapter presents a literature review of product and market selection processes to identify export opportunities in foreign markets. The most common product and market selection methods are discussed and the requirements for effective product and market selection are identified. There is a specific focus on the selection process within a geographic cluster in order to ensure that the export opportunities in the Middle East are evaluated efficiently. The findings of this chapter informed the empirical study, presented in the following chapters.

In the previous chapter, it was indicated that this study developed from the need for a study on the Middle East to determine the export opportunities of South Africa to the region. The Middle East is one of the twelve geographic clusters resulting from the DSM (Viviers & Pearson, 2007), the introduction of the AGEG by the DTI to promote exports to the Middle East, and the current trade relationship between South Africa and the Middle East. The Middle East geographic cluster identified in the DSM consisted of 911 realistic export opportunities in eight countries. The large number of realistic export opportunities to the region needs to be analysed in order to determine the most realistic export opportunities from the results of the DSM, which could be used by the government in promoting exports to the Middle East. This means that the product with the highest export potential to the region first needs to be identified and subsequently the country in the Middle East with the highest export potential for that product needs to be identified. Once the product and market with the highest export potential have been identified, it is necessary to develop a market profile in order to outline the potential and present technical information for exporting the identified product to the identified market.

Therefore, the following sections discuss the pertinent literature regarding product and market selection, geographic clustering in the selection process, the identification of indicators for quantitative product and market selection, and the information requirements of a market profile. As the DTI indicated the need to identify priority markets to inform its national export strategy, it is necessary to discuss the importance of a focused national export strategy before proceeding to discuss the literature of product and market selection. Therefore, the next section discusses the importance of a focused national export strategy.

2.2   The importance of a focused national export strategy

According to Viviers and Pearson (2007), the DTI indicated the need for an extensive study on export promotion to ensure that government sources were effectively allocated through the identification of priority markets, in order to inform its national export strategy. Owing to this need, the DSM of Cuyvers *et al.* (1995) was applied to South African trade data by Viviers and Pearson (2007) in order to identify realistic export opportunities for South Africa. Therefore, it is necessary to discuss the importance of a focused national export strategy and what it would entail.

Almost 90 per cent of export promotion agencies in sub-Saharan Africa have an export promotion strategy as part of their national economic development plan (Lederman, Olarreaga & Payton, 2006:9). South Africa is no different, with AsgiSA focusing on improving the export performance of South Africa as one of its strategies to achieve economic growth (see Section 1.1). Emerging markets such as Brazil, Chile and Mexico implemented export-led economic growth strategies that lead to increased export performance (Aulakh, Kotabe & Teegen, 2000). They also found a positive correlation between export performance and a focused export strategy, demonstrating that the more export performance improved, the more focused the export strategy. As a result of this correlation, Aulakh *et al.* (2000) found that exporters develop their products especially for export markets identified in national export strategies. This means that governments should exercise vigilance and pragmatism when identifying target markets for export as part of their national export strategy. This should be done in close collaboration with the private sector as government cannot promote what private sector cannot deliver.

The information technology (IT) industry in India has become a global leader as a result of the Indian government recognising the export potential of the industry and the development of a focused export strategy for the Indian IT industry. Part of the strategy of the Indian government was the creation of research units to enhance the India's knowledge of the IT industry (Joseph & Harilal, 2001:3263–3264). From the Indian example, it becomes apparent that South Africa should identify clear industries for development and the alignment of trade policy with industrial policy could create an environment for exports for a chosen priority industry. Increased and improved research of priority industries could also enhance South Africa's knowledge of those industries and prepare exporters in those industries.

A national export strategy should encourage the exposure of exporters to foreign markets through export promotion programmes such as trade missions and trade shows (Lederman *et al.*, 2006). In-depth market knowledge is gained by exporters from exposure to foreign markets and allows exporters to formulate an enhanced export strategy based on this primary research (Spence, 2003:83–85). According to Spence, experiential market-specific knowledge is gained as trade fairs allow exporters to display their goods and services in foreign markets and trade missions place exporters into direct contact with local businesses and government representatives.

Apart from the market knowledge gained by the exporters in participating in export promotion programmes, these programmes are considered to be effective in increasing sales (Wilkinson & Brouthers, 2000:726). Export promotion programmes with activities such as trade missions and trade shows would be more effective were they strategically aligned to the industrial policy of the country as the flow of strategic focus is consistent and within the same industry (Wilkinson & Brouthers, 2000:729). It is of little value in instances in which export promotion programmes are directed at industries that have limited supply and/or there is no priority to develop the industry by government (Lederman *et al.*, 2006:7). According to Papadopoulos, Chen and Thomas (2002:185), government export promotion initiatives should be directed towards programmes focusing on specific sectors rather than a generic approach of different industries exploring different markets. Therefore, a focused export strategy is required by government that prioritises markets with export potential, and encourages research into markets and within industries. A national export strategy should not be developed in isolation and should be aligned to and based on industrial policy. This alignment would improve the effectiveness of export promotion programmes and increase exports.

The study does not elaborate on an export strategy of government any further but focuses on the selection of a product and market with the highest export potential with the aim of producing a market profile for this product to an identified market. The next section investigates the methods of selecting of a product with the highest export potential to foreign markets.

2.3   Selecting the product with the highest export potential

This section investigates some of the methods on the selection of products with export potential in a geographic region/cluster. As mentioned in Section 2.1, the Middle East geographic cluster identified in the DSM consisted of 911 realistic export opportunities in eight countries, which

translated into 360 product opportunities to the region. As an export strategy has to be focused, these many product opportunities to the Middle East have to be analysed in order to determine which product has the highest export potential to the region. The findings of this section will be applied in Chapter 3, in which the results of the statistical analysis to identify the product with the highest export potential to the Middle Eastern region will be presented. As the product selection seeks to identify the product with the highest export potential to the Middle East, it is necessary to investigate product selection within a geographic cluster. According to Papadopoulos and Denis (1988:41), market selection within a geographic cluster should be concerned with determining a product's best fit within a cluster and then selecting the best country within that cluster. Therefore, it is essential to identify which product has the best fit within the Middle East before the market with the highest export potential in the region can be identified.

Traditionally, the global market is grouped according to geographic, political, economic, and cultural clusters (Baalbaki & Malhotra, 1993:21) and the Middle East is a suitable example of a market in which all four clusters are applicable. The close geographic proximity of the Middle Eastern countries to one another was the initial reason for clustering the countries together. Furthermore, these countries have similar economic structures, with severe dependence of their economies on the oil industry (see Section 1.4). The region also boasts cultural and religious similarities between the countries. Therefore, the Middle East is a very suitable region for geographic clustering of export potential.

According to Kale and Sudharshan (1987:61–64), clustering is based on the premise that countries are separate yet spatially connected areas wherein consumers share a language, culture and other distinct national characteristics. Kale and Sudharshan suggest that by understanding these similarities a logical framework can be created for the group of countries upon which an export strategy can be formulated. This means that if the similarities between the countries in the Middle East are understood, similarities can be identified and an export strategy can be formulated for the region.

Dividing the globe into geographic clusters allows an exporter to concentrate on a more manageable number of markets and formulate a more effective export strategy (Kale & Sudharshan, 1987:60–61; Day, Fox & Huszagh, 1988:24–26). Targeting a geographic cluster such as the Middle East could increase an exporter's market coverage, as more countries would be reached (Aulakh et al., 2000:350). Focusing on a particular product within the Middle East

geographic cluster could increase export performance of an exporter as the export strategy is targeted to exporting the product to the region and not to a multitude of countries (Aulakh *et al.*, 2000:350). Clearly identifying a product with export potential to a geographic cluster allows an exporter to develop an export strategy specifically for the cluster, increasing the efficacy in the allocation of limited resources in export promotion (Shankarmahesh, Olsen & Honeycutt, 2005:204–207). Therefore, addressing the Middle East as a region and identifying the product with export potential in the region could lead to the formulation of an effective export strategy and optimal allocation of resources.

The identification of similarities across the countries in a cluster and consequently the identification of products with export potential in the cluster would enable exporters to standardise their offerings and marketing strategies across the different countries in the cluster (Day *et al.*, 1988:14–26; Sakarya, Eckman & Hyllegard, 2006:212–213). This approach allows marketers to narrow their focus on the small number of potentially attractive markets with meaningful similarities in the cluster (Sakarya *et al.*, 2006:215–216). Exporters could have substantial cost savings by developing one marketing programme that could be implemented in the countries in the cluster. Such a marketing approach builds brand awareness in the cluster and prevent confusion in the minds of consumers (Aulakh *et al.*, 2000:348). Therefore, approaching the Middle East as a cluster would allow exporters to standardise their offerings and marketing strategies for all the countries in the region. In addition, this would provide cost savings and improve brand awareness of the consumers in the region.

Market clustering is concerned with determining similarities between markets (Kumar, Stam & Joachimsthaler, 1994:31; Shankarmahesh *et al.*, 2005:204–207). Thus, in clustering a group of countries, the primary focus is to identify common needs and group the consumers in the region based on similar needs (Hofstede, Wedel & Steenkamp, 2002:160). Therefore, the demand similarities between the countries in the Middle East have to be determined. Evaluating similarities across the countries in a cluster can lead to the identification of the type of product with the most export potential to the cluster (Day *et al.*, 1988:14–26; Sakarya *et al.*, 2006:212–213). In order to cluster a group of countries successfully, the countries should display the same demand potential for a given product (Sakarya *et al.*, 2006; Shankarmahesh *et al.*, 2005; Papadopoulos & Denis, 1988:39–41). Therefore, a product should have export potential to most of the countries in the Middle East in order to have export potential to the region as a cluster.

The analysis of the similarities in a cluster to determine export potential should exhibit product specificity (Sakarya *et al.*, 2006:212–213). This means that in determining similar demand levels in the cluster, it is crucial to analyse demand for products specifically and not assume a macro-level approach to the analysis (Papadopoulos & Denis, 1988:39–41). Selecting the product is an important part of grouping countries (Baalbaki & Malhotra, 1993:26). Owing to the importance of selecting the best product in the region, the first step in selecting the product with the highest export potential in the Middle East is to identify the products from the results of the DSM with the best fit in the region.

According to Sakarya *et al.* (2006:212–213), ranking countries within clusters may differ depending on whether general or product-specific indicators are used and it is essential that comparability across countries is present. In this study, the requirements of Sakarya *et al.* (2006) were reversed: the products within the Middle East cluster were ranked according to country-specific indicators. Thus, a product/market matrix was tabled that ranks the products according to specific criteria related to the countries in the Middle East, in order to determine the products with the most export potential to the region.

The criteria for a cluster according to Sakarya *et al.* (2006:212–213) is that the countries in the cluster display similar market attractiveness and potential. Therefore, the products in the product/market matrix were ranked according to the results of the DSM of Viviers and Pearson (2007). As the DSM has already determined that there is export potential for the products in each of the Middle Eastern countries, which products are the best fit in the region needs to be determined. Therefore, the first criteria is that the products are ranked according to the number of countries in which they have export potential. The results of this process are given in Chapter 3 in which the products with the highest export potential for the largest number of Middle Eastern countries are identified.

In this section, the methods of selection of a product with the highest export potential to the Middle East have been briefly discussed. The primary focus of the section was the selection of a product within a geographic cluster. The next section examines market selection methods to identify the country in the Middle East with the highest export potential for an identified product.

2.4   Selecting the market with the highest export potential

This section examines market selection methods and identifies the requirements of effective market selection of the countries with the highest export potential in the Middle East for the product identified in Chapter 3. The findings of this section informed the empirical study detailed in Chapter 4 through which the Middle East market with the highest export potential was identified.

The DSM of Viviers and Pearson (2007) identified eight countries in the Middle East with export potential: Bahrain, Iran, Israel, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. Although in Section 2.3 it was determined that a single export strategy could effectively be applied to the Middle East as a region, it is sensible to identify the country in the region with the most export potential in order to develop a focused export strategy for the Middle East. The country identified as having the highest export potential is regarded as the first point of entry into the Middle East and because it has the highest potential it carries the highest success rate relative to the other countries. The next section therefore highlights the importance of effective market selection.

2.4.1   The importance of effective market selection

An export strategy needs to be focused in order to achieve optimal allocation of resources and success in exports, and carefully identifying markets with the highest export potential is principal to an effective export strategy (Shankarmahesh *et al.*, 2005:204–207). Market selection is a critically important part of an export strategy as global markets are becoming more complex and exporters have to evaluate their global strategic position (Papadopoulos *et al.*, 2002:165–166). Establishing strategic export markets can be invaluable to an exporter aspiring to be globally competitive, which highlights the importance of market selection (Papadopoulos & Denis, 1988:38). Furthermore, it was found that exporters experienced export growth in cases in which effective market selection was used and inadequate market selection lead to exporters facing financial losses (Papadopoulos *et al.*, 2002:166), which demonstrates that market selection can affect export performance. Therefore, South African exporters need to understand the necessity for an export strategy that targets markets that are the outcome of careful market selection.

It would be expected that exporters meticulously compile their export strategy, focusing on determining a suitable market for their product and that market selection is conducted

scrupulously. However, many exporters are ill equipped to conduct market selection and have a reactive response to their export strategy purely as a result of irregular orders from foreign buyers (Papadopoulos *et al.*, 2002:166). This approach is not sustainable in the long-term and therefore market selection needs to be practised in order for an exporter to achieve long-term, sustainable export growth.

Market selection is concerned with developing an efficient and effective method that is greatly selective in order to identify the markets with the highest export potential (Papadopoulos & Denis, 1988:38; Cuyvers, 2004:255–256). Thorough analysis of potential export opportunities is important in the market selection process (Cuyvers, 2004:255–256). A number of markets must be compared and it is important that a formalised statistical analysis be conducted to systematically evaluate and select potential foreign market opportunities (Papadopoulos & Denis, 1988:38–39; Kumar *et al.*, 1994:29). The market selection methodology should be inexpensive, easy to understand and apply, and should use a flexible framework to be applied by any user (Kumar *et al.*, 1994:32). Therefore, in selecting the market in the Middle East with the highest export potential for the product in question, one should use selective methodologies that provide a thorough analysis of the potential export opportunities in the Middle Eastern countries. The market selection process should use methods that can easily be applied by South African exporters using available sources of trade information, and allow exporters to adjust the method to be more applicable to their business or industry.

Foreign markets can be evaluated using a qualitative approach or a quantitative/statistical approach. The qualitative approach uses information from industry or country specialists and adopts a subjective approach (Kumar *et al.*, 1994:31). The quantitative approach is compiled from data sources, is a more objective evaluation and can be applied to a large number of markets (Papadopoulos & Denis, 1988:45; Kumar *et al.*, 1994:31). This study adopts a quantitative approach to evaluating markets as a more objective approach is preferred and the data for analysis is easily available from Trade Map. The next section briefly discusses the common market selection methods to identify the best indicators of market selection to be used in the quantitative analysis in Chapter 4.

2.4.2   Market selection methods

The process of evaluating potential foreign markets can be summarised into three stages: screening, identification and selection (Kumar *et al.*, 1994:31; Rahman, 2003:119). In the

screening stage, countries are eliminated on the basis of probability of success using macro-level indicators. In the identification stage industry-specific (or product-specific) information is used to assess the attractiveness of an industry (or product) in each country. In the selection stage, which is sequential, markets are selected based on exporter-specific information and requirements (Kumar *et al.*, 1994:33–34; Rahman, 2003:120).

This study focuses on market identification and selection, as the results of the DSM of Viviers and Pearson (2007) provided the screening stage in which the countries and products with the highest export potential in the Middle East were provided. In this study, the identification of a market with the highest export potential is based on empirical analysis using product-specific information[2]. The selection of a market is based on the requirements of a government export promotion agency (growth and sustainability) and is not specific to any exporter, which include export growth and relatively high export values.

Three basic strategies for the quantitative assessment of markets were identified by Kumar *et al.* (1994:31-32): market clustering, market potential estimation and demand analysis. Market clustering is concerned with determining similarities between markets. Market potential estimation approach uses indicators to evaluate the industry market potential and determine the country-segments most suitable for entry. Demand analysis is concerned with assessing the potential demand for a product in a target market to determine the country-segment most suitable for entry. Comparing the three strategies it can be concluded that the first is a macro level analysis, the second an industry level analysis and the last a product level analysis. Having touched on market clustering in Section 2.3, this study focuses on market potential estimation and demand analysis in order to identify the Middle Eastern markets with the highest export potential.

The process followed and results of the identification of the country with the highest export potential in the Middle East will be detailed in Chapter 4 using the identification and selection stages of evaluating foreign markets, market potential estimation and demand analysis strategies of quantitative assessment of markets. Product-specific information based on the requirements of government were used to evaluate the Middle Eastern countries for export potential and the assessment used quantitative indicators to measure the potential demand.

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[2] Product-specific information refers to data which relates to a specific product (oranges) and not only a sub-sector (citrus fruit).

As the identification of markets was not an elimination process, market estimation was used. Market estimation of the Middle Eastern countries entailed evaluating the countries on a number of criteria and ranked according to the results of the analysis (Papadopoulos & Denis, 1988:41; Kumar et al., 1994:34). Usually countries are ranked on the basis of aggregate market potential and overall attractiveness (Sakarya et al., 2006:212–213). Using market estimation by ranking the Middle Eastern countries allows the identification of the country with the highest export potential and highlights the countries with the most potential.

In the previous section, it was indicated that a market selection process should use methods that can easily be applied by South African exporters using available sources of trade information, and allow exporters to adjust the method to be more applicable to their business or industry. This need lead to use of the methodology of Freudenberg & Paulmier (2005) and Freudenberg et al. (2008), both of which are ITC studies. The simple methods used in both studies are easy to replicate and allow exporters to apply available information. Furthermore, these methodologies allowed analysis within the requirements of this study such as product-specific information and selection based on the requirements of a government export promotion agency, using market estimation techniques.

The process of market estimation will be detailed in Chapter 4, to identify the country in the Middle East with the highest export potential. The next section identifies the best indicators for the market selection in Chapter 4.

2.4.3   Indicators for market selection

Papadopoulos et al. (2002:167–168) analysed various models for international market selection and found that there was a lack of consensus regarding the indicators that should be used to measure market attractiveness. A market selection process should analyse multiple markets at an industry level in order to identify the most promising markets (industry specific), using easily accessible variables specific to the industry or product (Papadopoulos et al., 2002:169; Kumar et al., 1994:33). Variables should be relevant, frequently used in research, easily available, reliable and comparable (Papadopoulos et al., 2002:171; Kumar et al., 1994:33). As a result, the trade data used for the empirical studies presented in Chapters 3 and 4 was provided by Trade Map, which is a reliable and accessible source of trade data.

In order to determine the attractiveness of a market and identify whether a market holds possible export opportunities, the appropriate variables have to be used in the quantitative analysis. Papadopoulos and Denis (1988:43) mention that the ITC commonly uses size of imports, import growth, market coverage (import/export) and competition levels as part of multiple criteria variable selection in market selection. Cuyvers (2004:259) used growth of imports and the import market size as criteria for detecting possible export opportunities. Kumar *et al.* (1994:37) suggest that import size and import growth are variables that could be used to determine market potential. Sakarya *et al.* (2006:212–213) suggests analysing import size, growth of imports and import share as a percentage to analyse market potential. These indicators were used in the Middle East Import Index (Section 3.4.3.5) and will be used in the Middle East Market Attractiveness Index (Section 4.3).

The ITC developed a Trade Performance Index (TPI) to assess the trade competitiveness of a country (ITC, 2007). According to the ITC (2007:4–5), competitiveness can be measured by determining the growth of exports and the relative position of a country or product on the international market. The TPI assesses twenty-two quantitative indicators of trade performance, of which value of exports, growth of exports, share in world exports and net exports are relevant to this study. These indicators were used in the South African Export Performance Index (Section 3.4.3.4) and the Middle East Export Performance Index (Section 4.4).

Papadopoulos *et al.* (2002) used trade barriers as an indicator to measure the ease of access and the potential relative to other possible markets. Kumar *et al.* (1994:33) used tariffs, taxes, duties and quotas as indicators to measure the trade barriers. Papadopoulos *et al.* (2002:170) limited the analysis of potential markets to tariffs as non-tariff barriers were difficult to quantify. In the Middle East Import Index (Section 3.4.3.5), the average tariff applied to South Africa was used. In the Middle East Market Attractiveness Index (Section 4.3), the average tariff applied to South Africa and the average tariff applied to the top five non-Middle East exporters from Market Access Map (2009) were used.

Non-tariff barriers can be included in the qualitative analysis of the potential of the markets in order to ensure that the indicator is appropriately included (Papadopoulos *et al.*, 2002:170). The results of the qualitative analysis of the non-tariff barriers will be presented in Sections 5.5 and 5.6., in which import requirements and documentation as well as product-specific import requirements will be investigated. The next section discusses the importance of providing market information to exporters and the type of market information preferred by exporters.

2.5   Market information

This study arose from the outcomes of the DSM and the DTI's need for a study on export opportunities in the Middle East. Although a quantitative analysis of the results of the DSM could identify such opportunities, Cuyvers (2004:273) points out that these opportunities should not be regarded as a guaranteed opportunity that will result in export success. Cuyvers suggests that the market be studied to determine the extent of the opportunity and the manner in which it should be approached. This section discusses the importance of providing market information to exporters and the type of market information preferred by exporters to inform the content of the market profile in Chapter 5.

The services offered by export promotion agencies include market research (Lederman *et al.*, 2006:2), this is because governments have realised the value in providing market research to exporters. According to Cadogan, Diamantopoulos and Siquaw, (2002:618–619) and Spence (2003), increased export knowledge positively influences export performance. Exporters need to understand the barriers to entry into the market in order to determine the best way to approach the market (Cuyvers, 2004:273), which is provided through market research. Exporters rely on government agencies to provide market research, as they often do not have the financial resources or skills necessary to conduct export market research (Ahmed, Mohamed, Johnson & Meng, 2002:832). Cuyvers (2004:255) suggests that governments should gather detailed market information that should be centralised in order to be accessible to exporters.

Limited access to market information is the main factor contributing to the poor export performance of exporters, particularly small to medium-sized exporters (Spence, 2003:85; Cadogan *et al.*, 2002:615–616). Exporters with more experience in foreign markets have increased market knowledge owing to their exposure to the markets (Cadogan *et al.*, 2002:615–616). This is places small exporters in an unsolvable situation as small exporters with limited access to funds do not have the means to explore foreign markets in order to gain market intelligence and lack of market intelligence limits their chances of success. The role of government and an effective export promotion programme whereby exporters are exposed to the markets to gain market information is evident in this situation. Should exporters not be able to gain exposure to markets, the government should provide the market information (Cuyvers, 2004).

Wood and Robertson (1999) determined that exporters irrespective of their industry most value information regarding market potential, level of competition and export restrictions. Ahmed *et al.* (2002:832) found that the biggest barriers to exporters entering foreign markets are the lack of information about foreign markets, the complexities of export documentation and procedures, and the risks and uncertainties associated with new markets. Therefore, the market profile in Chapter 5 should ensure that exporters receive information regarding market potential, competition, and export restrictions in the form of tariff and non-tariff barriers. Essentially the exporter should be provided with as much information as necessary to make an informed decision to enter the market.

Market information is important to exporters as products need to be adapted to meet the requirements of the market, whether mandatory product requirements that have to be adhered to or requirements based on consumer preference (Baalbaki & Malhotra, 1993:23). Changing the product can have cost and time implications for the exporter, making information on the product of paramount importance to the exporter and necessary information that cannot be omitted. Product-specific import requirements will be examined in Section 5.6.

According to Baalbaki and Malhotra (1993:34), price-influencing factors need to be determined in considering a market for export, and will be provided in Section 5.7. The price-influencing factors can be determined by analysing the competition in the industry and determining the price leaders. The exporter can then evaluate whether it is possible to compete in the market. It is also important to determine the purchasing power of potential consumers in the market. This can be determined by analysing the spending habits of the country or determining the per capita income of the country. Demand and consumption patterns will be discussed in Section 5.3.

Baalbaki and Malhotra (1993:36) suggest that the distribution channels available in a market need to be determined in order to allow the exporter to identify the most suitable distribution channel. In the Middle East, finding a local agent is the key to trading in the region, as a good agent will help smooth the way in negotiating international transactions with local buyers (Nims, 2007:74). However, this is only one distribution channel. Baalbaki and Malhotra (1993:36) also suggest determining the capability of the transport infrastructure, government regulations and laws affecting distribution. Giunipero and Flint (2001:686) hold that improvements in logistics and information competencies have created more opportunities in the global marketplace for distribution. Therefore, the distribution channels will be discussed (in Section 5.8), addressing all

of the aspects mentioned by Giunipero and Flint in order to ensure that all of the relevant market information on distribution is provided.

Baalbaki and Malhotra (1993:32) explain that it is important for exporters to understand the culture and habits of consumers in countries. According to Nims (2007:74), the Middle East is a volatile region in which business must be negotiated with sensitivity and all aspects of business are affected by the religion of the region. According to the Nims, personal interaction is critical in all business transactions in the Middle East, with personal contact or a phone conversation preferred to e-mail. Understanding the way consumers communicate is essential to determining the methods of promotion of goods and services (Baalbaki & Malhotra, 1993:32).

Marketing in foreign markets requires that the unique selling points of the product be effectively communicated to the potential buyer. Therefore, it is important to determine the best method of communicating with the potential buyer in the foreign market. In some countries, governments regulate marketing activities; thus, it is important to determine not only the way to communicate with the potential buyer but also the way to do so legally (Baalbaki & Malhotra, 1993:32). Section 5.10 will analyse the marketing methods in the markets in order to determine the most effective methods of communicating the product to the potential buyer.

This section has discussed the importance of providing market information to exporters and highlighted the type of market information preferred by exporters. The type of information required by exporters, which will be provided in Chapter 5, is the following: general market information, demand and consumption information, market access information (tariff), import requirements and documentation, product-specific import requirements, factors influencing pricing, distribution channels, methods of payment and marketing. The next chapter will present the empirical study based on the findings of Section 2.3 in order to identify the product with the highest export potential to the Middle East.

3. IDENTIFICATION OF THE PRODUCT WITH THE HIGHEST EXPORT POTENTIAL TO THE MIDDLE EAST

3.1 Introduction

In this chapter, a product or group of products with export potential to the Middle East countries are selected from the results of the DSM (Viviers & Pearson, 2007). The product selection in this chapter involved a three-phase filtering process that eliminated certain products according to set criteria. The purpose of the product selection was to identify the products that firstly form a geographic export cluster and secondly hold export potential. Phase 1 determined the products with potential to the most Middle East countries using a product/market matrix. Phase 2 consisted of a selection process according to trade performance criteria and had two parts: the first part identified the products that are currently exported to most Middle Eastern countries and the second part identified products that have positive export growth to most Middle Eastern countries. Phase 3 consisted of a more rigorous selection process of the products that remained from Phase 2. This chapter provides the results of the three-phase filtering process and identifies the product or group of products with the highest export potential in the Middle East. The next section will discuss the data used in this chapter for the three-phase filtering process.

3.2 Description of the data used

The data used in this chapter is SITC and HS trade data. In this chapter, reference is made to both types of classification; therefore, it is important to establish the difference between them and understand the way they are used. According to the ITC, SITC codes and HS codes are two different trade classifications. The main difference is that the SITC codes are more focused on the economic functions of products at various stages of development, whereas the HS codes deal with a precise breakdown of the products' individual categories (ITC, 2009).

The SITC was developed by the United Nations to classify traded products not only on the basis of their material and physical properties, but also according to their processing stage and economic functions in order to facilitate economic analysis. The SITC was originally developed for statistical purposes and it had to maintain a correlation with the tariff nomenclature (classification) of customs, given that the customs declarations are the principal source of trade data. After its introduction, trade data was provided according to the SITC classification for

various products. The SITC had undergone three revisions to maintain consistency with the development of tariff nomenclatures. The SITC Revision 3 was adopted in 1988 and maintained the basic ten-section structure of the previous editions. The sections are subdivided into 67 two-digit divisions, 261 three-digit groups, 1,033 four-digit groups, and 3,121 five-digit headings (ITC, 2009).

The HS is an international nomenclature for the classification of products. It allows participating countries to classify traded goods on a common basis for customs purposes (Trade Map, 2009). The HS was introduced in 1988, and since then it has become an internationally accepted method of classification wherever products are traded. The HS classification was revised in 1996 to become 'harmonized' in relation to the classifications of the United Nations and the European Communities. Goods are classified according to simple objective criteria and applications. The HS included a six-digit sub-heading that was introduced for more precise tagging of products. At present, this system contains twenty-one sections, ninety-seven chapters and 1,241 headings at the four-digit level, 930 of which are further divided into sub-headings, representing a total of 5,113 separate categories of goods identified by a six-digit code (ITC, 2009). At the international level, the HS is a six-digit good classifying code system (Trade Map, 2009). Most of the countries that have adopted the HS six-digit codes, have added one or more digits in order to further classify products of particular national interest (eight-digit or ten-digit level; ITC, 2009). The most important characteristic of the HS system that is relevant to this study is that across all countries, products are classified according to the **same** six-digit HS. From eight-digit HS level upwards, each country classifies a specific product according to national regulations (ITC, 2009). As this study focused on the international flow of products, the HS classification system of products was used for the trade analysis of the products in this chapter. The following section addresses the determination of the products that represent potential trade in the most Middle East countries.

3.3   Product selection

This section discusses the approach used in the chapter for determining the product with the highest export potential to the Middle East. The DSM is briefly explained and the how the results of the DSM will be used to identify the product with the highest export potential to the region. To ensure that the region is effectively analysed, the section discusses the clustering of countries as a basis for product selection. This section also examines the requirements for measuring the potential of a product within a cluster.

3.3.1 Decision Support Model

Viviers and Pearson (2007) used the DSM methodology of Cuyvers *et al.* (1995) to identify realistic export opportunities for South Africa. The DSM applies four filters to identify product/market combinations that hold the most potential for South African exporters. The filtering process eliminates less realistic export opportunities and focuses on the product/market combinations that demonstrate the highest potential. The four filters applied by the DSM are the following (Cuyvers *et al.*, 1995; Viviers & Pearson, 2007):

i.   Macroeconomic analysis

    i.   Political and commercial risk — countries with the highest risk are eliminated

    ii.   Economic size and economic growth — countries with a low GDP, low economic growth or both are eliminated

ii.   Detection of possible export opportunities

    i.   Revealed Comparative Advantage (RCA) — products with a low RCA are eliminated

    ii.   Import demand — products not exhibiting a relative import market size and/or short- and medium-term import growth are eliminated

iii.   Realistic export opportunities

    i.   Degree of market concentration — products not meeting the required degree of market concentration in a given country are eliminated

    ii.   Import restrictions/barriers to entry — product/market combinations exceeding a specific distance from South Africa were eliminated (distance was used as a proxy for barriers to trade)

iv.   Final analysis of export opportunities — product/market combinations are categorised according to market share and market growth

Although the DSM is a useful tool for the identification of potential products and markets for export, it is essential to bear in mind that the product/market combinations identified by the DSM need to be supplemented with further research. The reason for this is three-fold. Firstly, the DSM results of Viviers and Pearson (2007) made use of import data for the period 2000 to 2002, which means that the application of the DSM needs to be tested with the most recent trade data in order to determine the present feasibility of the product/market combinations. Secondly, the model does not consider tariff- and non-tariff barriers in its third filter of the filtering process. Thirdly, while the Viviers and Pearson (2007) study used the SITC classification of products, HS data is more relevant to exporters, as they use HS codes in all their export transaction documents.

Therefore, the results need to be supplemented with further analysis in order to provide a more detailed and relevant approach and outcome for the relevant exporters and the DTI.

One of the outcomes of the DSM was that it provided twelve geographical clusters for the countries with a high export potential (Viviers and Pearson, 2007). In order to assist the DTI in its export promotion activities, it is necessary to determine whether there are common potential products within these regions with high export possibilities. Therefore, if this study demonstrates that one specific geographical region has a high export potential for a product that the DSM identified, South Africa (and the DTI) might benefit by developing an export strategy for that region as a whole for that given product or sector. It is important to note, however, that the product may not hold equal potential in all of the countries within the region. Supplementary research will also have to be conducted in order to determine which countries in the region hold the highest import potential for the identified product. For an exporter to enter a specific geographical region, it might be best to identify the country with the highest import potential in that region to act as a **first** point of entry.

The DSM of Viviers and Pearson (2007) identified **911 export opportunities** to the Middle East in eight countries, which translated into 360 product opportunities. The results of the DSM identified 125 potential export products to Bahrain, 127 to Iran, 83 to Israel, 93 to Kuwait, 114 to Oman, 139 to Qatar, 103 to Saudi Arabia and 127 to the UAE. This study explores the export potential of the Middle East because of the large number of products and the large number of Middle Eastern countries that the DSM identified (see section 1.4.2). The following section describes the clustering of countries as a basis for product selection.

3.3.2 Clustering of countries as a basis for product selection

As the objective of this study is to provide market information for exporters about the Middle East for a product or products in order to inform a regional export strategy or geographical export cluster (see Section 1.4), the purpose of this chapter is to identify a product or group of products that hold the highest export potential to the largest number of Middle Eastern countries. This means that countries' similarities, particularly with regard to trade indicators, should be determined in order to identify a set of potential products and markets that exhibit clustering characteristics (see section 2.3).

According to Sakarya *et al.* (2006:212–216), a group of countries can be clustered together on the basis of similarity. It is therefore a requirement that a group of countries clustered together for the purpose of exporting a given product, exhibit the same demand potential for that given product. Therefore, the product or products identified as holding the highest export potential must demonstrate the same demand characteristics to the largest number of Middle Eastern countries (see section 2.3).

The DSM of Viviers and Pearson (2007) identified potential export products to Bahrain, Iran, Israel, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. The next step in the clustering process was to find the common products amongst the identified countries, which will be the products holding the most export potential to the largest number of countries in the Middle East region. Once common products had been determined, trade data was used to determine the common import demand. The following section discusses the process of measuring the similarities in demand potential, required for a cluster, with the use of trade indicators.

3.3.3 Measuring the requirements of a potential product within a cluster

In order to select a product with the highest export potential to the largest number of Middle Eastern countries from the results of the DSM, an analysis of the products to identify the products meeting the requirements of a cluster was required. Therefore, the indicators for a cluster had to be determined and the products had to be analysed according to those requirements.

Sakarya *et al.* (2006:212–213) requires that countries in a cluster have similar aggregate market potential and overall attractiveness for a product, suggesting that the analysis of markets considers the size and growth of imports for a product. The strength of a product can also be determined by analysing the relative position of a product in the international market coupled with its development over time, i.e. ranking of a product as an import product coupled with growth rates of imports (ITC, 2007:4). The requirements of a product with the highest export potential to the Middle East is that the product has similar market size, market share and growth trends for most of the countries in the region.

Sakarya *et al.* (2006:212–213) holds that the analysis of the markets or products in a cluster use indicators that are comparable across all of the countries in the geographic region. This means that the trade indicators used for the analysis should be available for all of the products and

countries. The ITC (2007:5) provided a list of twenty-two quantitative indicators for the measurement of trade performance. However, as the number of products identified for the analysis is substantial and due to data availability, the number of indicators used in the analysis was limited to the following: value of imports, value of exports, import growth rates, relative share of exports and trade balance.

Furthermore, the analysis using the trade indicators considered the short-term trends and an emphasis on changes between 2007 and 2008. The rationale for this is that 2008 represented a year of poor global economic growth, characterised by reduced merchandise trade. It is assumed that should there be significant and/or growing trade for a product and country within a 'depressed' year, then that product and country will most probably have a competitive advantage, which should be explored.

Therefore, once common products with export potential to the most Middle Eastern countries had been identified, these products were analysed using trade indicators. The analysis determined the products that meet the requirements of a cluster regarding similarity of market attractiveness and potential. The product with both similar market attractiveness for the most countries in the Middle East and the most favourable trade performance was regarded as the product with the most export potential to the Middle East. The following section details the analysis of the products identified in the DSM with export potential in the Middle East, according to the requirements of a cluster and selected trade indicators in order to identify the product with the most export potential in the Middle East.

3.4   Selecting a product using a clustering framework

The product selection process consists of a three-phase filtering process. Phase 1 consisted of compiling a product/market matrix in order to determine the products with potential to the most countries in the Middle East. Phase 2 consisted of the selection process according to the selected trade performance criteria. Phase 3 consisted of a more rigorous selection process of the products that remained from Phase 2. Each of these phases is subsequently discussed.

3.4.1 Phase 1: Identifying products with a high export potential for a large number of Middle Eastern countries

The first step of Phase 1 involved tabling the products for each country identified by the DSM in order to determine which products have export potential in most of the countries in the Middle Eastern region. This was done by compiling a product/market matrix for each product in order to determine the number of countries in which this product has export potential. In the product/market matrix (see Table 3.1), a product is assigned a value of 1 if it is was identified by the DSM as having export potential to a specific country and 0 if the product was not identified for a specific country. The total number of countries with identified potential is summed up and the product categories are ranked according to number of countries for which the DSM identified export potential. Therefore, the products are ranked according to the number of Middle Eastern countries with export potential as identified by the DSM (also see section 2.3).

The second step of Phase 1 was to determine a criterion for the elimination of products. A criterion was set for a product to move onto the next phase of selection. The criterion was that the product be exported to at least five of the eight markets, i.e. to 62,5 per cent of the markets. The DSM identified 360 products with export potential to the Middle East. After the application of the above-mentioned criterion, only 34 products had high export potential in five or more of the countries. There were no products identified with export potential to all eight countries. The 34 products that were identified according to the above-mentioned criteria are listed in Table 3.1.

This phase identified the products that had export potential to the most Middle Eastern countries. These products meet the requirement of a cluster, i.e. that products have potential across a number of countries in a region (also see section 2.3).

The following section analyses the products identified in Phase 1 with the use of the trade indicators (see Section 3.3.3.). This was done in order to determine which products meet the cluster requirements of similarity of market attractiveness and export potential.

Table 3.1: List of products identified in Phase 1

SITC product	Bahrain	Iran	Israel	Kuwait	Oman	Qatar	Saudi Arabia	UAE	Number of countries with identified potential
7284: Mach.& appliances for specialised particular industries	1	1	1	1	1	0	1	1	7
2929: Other materials of vegetable origin, n.e.s.	1	1	0	1	1	1	0	1	6
5331: Other colouring matter, inorganic products	1	1	0	0	1	1	1	1	6
0116: Edible offal of animals in headings 001.1–001.5	1	0	0	1	1	1	0	1	5
0565: Vegetables, prepared or preserved, n.e.s.	0	1	0	0	1	1	1	1	5
0585: Juices; fruit and vegetable (including grape must) unfermented	1	1	0	0	1	1	1	0	5
0741: Tea	1	0	1	0	1	0	1	1	5
3345: Lubricating petrol oils and other heavy petrol oils	1	0	1	1	0	1	1	0	5
3351: Petroleum jelly and mineral waxes	1	1	0	1	1	1	0	0	5
3354: Petroleum bitumen, petrol, coke and bitumen mixture, n.e.s.	0	1	0	1	1	0	1	1	5
5169: Organic chemicals, n.e.s.	1	0	1	0	1	1	0	1	5
5225: Other inorganic bases and metallic oxides, hydroxide and peroxide	0	1	1	0	1	1	1	0	5
5621: Mineral or chemical fertilizers, nitrogenous	1	1	0	0	1	1	1	0	5
5629: Fertilizers, n.e.s.	0	0	1	1	1	1	1	0	5
6359: Manufactured articles of wood, n.e.s.	1	0	0	1	1	1	0	1	5
6412: Printing paper and writing paper, in rolls or sheets	1	1	0	1	1	1	0	0	5
6428; Articles of paper pulp, paper, paperboard, cellular wadding	1	1	0	0	1	1	1	0	5
6672; Diamonds, unworked, cut or otherwise worked, not mounted/set	0	1	1	1	0	0	1	1	5
6731: Wire rod of iron or steel	1	0	0	1	1	1	1	0	5
6733: Angles, shapes and sections and sheet piling, of iron/steel	0	1	1	1	1	1	0	0	5
6822: Copper and copper alloys, worked	0	1	0	1	1	1	0	1	5
6852: Lead and lead alloys, worked	0	1	1	0	1	1	1	0	5
6863: Zinc and zinc alloys, worked	0	1	1	1	0	1	0	1	5
6954: Interchangeable tools for hand and machine tools	1	0	0	1	0	1	1	1	5
6996: Miscellaneous articles of base metal	1	1	1	0	0	0	1	1	5
7139: Parts of internal combustion piston engines of 713.2-/3-/8-	1	1	0	1	1	0	1	0	5
7252: Paper and paperboard cutting machines of all kinds	1	1	0	0	0	1	1	1	5
7361: Metal cutting machine tools	0	1	0	0	1	1	1	1	5
7781: Batteries and accumulators and parts	0	1	1	0	1	1	0	1	5
7822: Special purpose motor lorries and vans	1	0	1	1	0	1	1	0	5
8461: Under garments, knitted or crocheted of wool	1	0	1	0	1	1	0	1	5
8482: Articles of apparel and clothing accessories, of plastic	1	1	1	0	0	1	0	1	5
8745: Measuring, controlling and scientific instruments	1	1	0	1	0	1	1	0	5
8748: Electrical measuring, checking, analysing instruments	1	1	0	1	0	0	1	1	5

Source: Viviers and Pearson (2007)

3.4.2 Phase 2: The selection process using the identified trade indicators

This section determines the products meeting the requirements of a cluster regarding similarity of market attractiveness and export potential. The product with both similar market attractiveness for the most countries in the Middle East and the most favourable trade performance was regarded as the product with the most export potential to the Middle East (see section 2.3).

3.4.2.1 Phase 2.1: Converting the trade codes of the products

The DSM used import statistics at SITC four-digit level and the results were provided using the same SITC product classification. The thirty-four products from Phase 1 fall within the SITC product classification system. For purposes of the study, the trade analysis according to the HS product classification system was used, as the HS six-digit data is a more specific product classification compared to SITC, which allows for a more focused product selection. Another advantage of using HS codes is that all trade indicators and data are internationally gathered using HS codes (Trade Map, 2009), which means that trade data is more easily available in this format. Therefore, the first step of Phase 2 was to convert the trade codes from SITC codes into six-digit HS.

The conversion of SITC to HS was executed using the UNSD (2009) conversion for HS 2007 and SITC Revision 2. After this conversion, the number of product categories increased from thirty-four products at four-digit SITC to 387 products on six-digit HS. This meant that the number of products with export potential to the Middle East had increased and that the product description was more specific. The remainder of the chapter considers the 387 products on six-digit HS. The following sections present the analysis of the products to determine the similarity of market attractiveness and potential using export values and export growth.

3.4.2.2 Phase 2.2: Identifying products with a high export potential for a large number of Middle Eastern countries using export values

The second step of Phase 2 was to determine the export values of each product to each country in the Middle East. The trade statistics were gathered for each of the 387 products at six-digit HS level. Iran was removed as a possible import country because the data was not available in trade data sources such as Trade Map or Quantec for the period of this study. As a result, the number of countries being analysed was reduced from eight to seven.

Another product/market matrix was created for the products at six-digit HS code level using trade data collected from Quantec (2009) for the periods 1998 to 2008. The trade data was collected for all 387 products according to six-digit HS between South Africa and each of the Middle East countries in Rand. The purpose of this product/market matrix was to determine which products have been exported to the selected Middle East countries according to the required criteria.

A longer-term view in this first selection process was used because growth analysis perspectives formed part of a later filtering process (see Section 3.4.3). The sum of the each product's export value over the period from 1998 to 2008 for each country was used to construct the table. The product's export sum values formed the rows and the countries formed the columns of this matrix. Similar to the first SITC-level matrix (see Table 3.1), the HS code matrix had the criterion of a five-country minimum, i.e. a count of five or more. Products that have been exported to less than five countries were consequently eliminated. The result of this was that the product count was reduced from 387 products to eighty products. The eighty remaining products are given in Table A.1 in Annexure A.

3.4.2.3 Phase 2.3: Identifying products with a high export potential for a large number of Middle Eastern countries using export growth

The third step of Phase 2 was to create a short-term export growth product/market matrix. The growth between 2007 and 2008 was determined for each product for each of the seven countries using six-digit HS data. The purpose of this product/market matrix was to determine which products have been experiencing positive export growth to the most Middle East countries.

There were products for which the average growth across the countries was undeterminable, owing to no export values in either 2007 or 2008. Because of this, seventeen products had to be eliminated. Products with a determinable growth value for two or less countries were also eliminated, owing to the unattractive export potential for the region in the instance that so few countries exhibit determinable export growth for a specific product. As a result, twenty-four products were eliminated.

The process then determined the number of products that had positive growth in the most countries. Products for which there was positive growth in two or less countries were eliminated. Only four products had negative growth across all countries, twelve products exhibited positive

growth for one country and thirteen products exhibited positive growth for only two countries. The elimination process then identified ten products, which are listed in Table 3.2.

Table 3.2: List of products identified in Phase 2.3: Export growth 2007 to 2008

									Export growth 2007–2008; %		
HS product	Bahrain	Israel	Kuwait	Oman	Qatar	Saudi	UAE	Average growth	Number of countries with positive export growth in 2007–2008	Number of countries with export values in 1998–2008
200990: Mixtures of juices, not fermented or spirited	20.23	153200.00	40.17	283.29	111.13	67.37	28.51	21964.38	7	7
200980: Fruit and vegetable juice, not fermented or spirited	13.78	696384.62	89.85	336.28	69.98	16.23	180.30	99584.43	7	7
200919: Orange juice, not fermented, spirited, or frozen	-61.10	—	58.28	203.61	101.41	75.97	91.32	78.25	5	6
200929: Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter – grapefruit juice	-100.00	9.79	-19.06	197.54	133.99	-70.94	-27.18	17.73	3	7
200949: Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter – pineapple juice	-100.00	250.43	4.35	145.14	194.80	156.95	3.15	93.54	6	7
200969: Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter – grape juice (including grape must)	-100.00	—	25.19	309.26	89.72	250.63	15.79	98.43	5	6
200979: Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter – apple juice	-100.00	-100.00	88.41	376.71	48.34	1796.68	34.21	306.34	5	7
271290: Mineral waxes, n.e.s.	—	—	-78.26	53.32	-100.00	334.40	566.67	155.23	3	5
480256: Uncoated paper and paperboard, of a kind used for writing, printing or other graphic purposes, and non-perforated punch-cards and punch tape paper, in rolls or rectangular (including square) sheets, of any size (excluding paper of heading 48.01)	-80.50	—	64.58	76.36	11.59	33.86	21.46	21.22	5	6
903039: Ammeters, voltmeters, ohm meters and similar, non-recording	-100.00	129.54	—	—	—	0.33	384.46	103.58	3	4

Source: Quantec (2009)

The most prominent product group amongst the remaining products was fruit juices, which accounted for seven out of the ten products. Furthermore, two products were being exported from South Africa to all of the Middle Eastern countries and were experiencing short-term growth in exports to all of the Middle Eastern countries. These products were 200990: Mixtures of juices, not fermented or spirited, and 200980: Fruit and vegetable juice, not fermented or

spirited. Therefore, **fruit juice** was identified as the product with the most export potential to the Middle East.

The results of the analysis of fruit juice as a product group are given in Section 3.4.3 and will be in the country determination in the following chapter. The individual fruit juice types at six-digit HS that were eliminated in Phase 2.1 (see Section 3.4.2.2) and Phase 2.2 (see Section 3.4.2.3) will again be added in the analysis of the fruit juice product group. The reason for this was to ensure that the remainder of the analysis of fruit juices included all types of fruit juices.
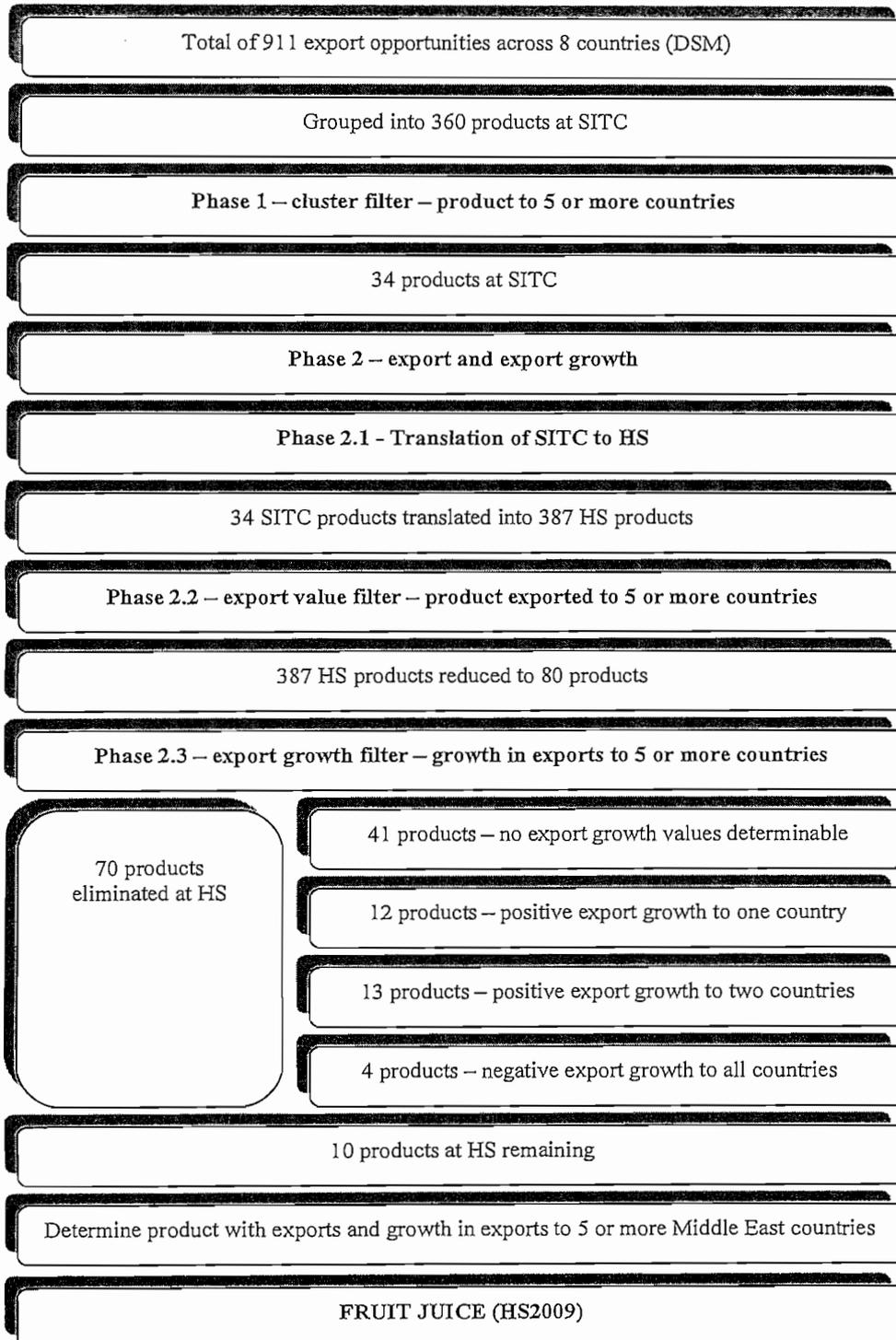
The filtering process in Phase 1 and 2 was complex and involved many processes. As a result, the next section will summarise the processes that lead to the identification of fruit juice as a product group with the highest export potential to the Middle East

3.4.2.4   Summary of Phase 1 and Phase 2 filtering process

This section is a brief summary of the filtering processes in Phase 1 (see Section 3.4.1) and Phase 2 (see Sections 3.4.2.1, 3.4.2.2, and 3.4.2.3) in order to indicate the analysis and narrowing down of the export opportunities identified in the DSM (Viviers & Pearson, 2007) for the Middle East to the final list of products. As the filtering processes in Phase 1 and Phase 2 were complex, it is necessary to summarise the results graphically, detailing the process leading to the identification of fruit juice as the product with the most export potential to the Middle East. The graphical representation of the filtering process of Phases 1 and 2 is given below in Figure 3.1.

From Figure 3.1, it is evident that the 911 potential export opportunities to the Middle East were grouped into 360 SITC products entering Phase 1. After the application of the filter criterion in Phase 1, the number of products was reduced to thirty-four products with export potential in the Middle East. In Phase 2.1, the products were classified into HS codes from the SITC codes, which increased the number of potential products into the Middle East to 387 products. After application of the filter criterion in Phase 2.2, the number of products was reduced to eighty products. Finally, the number of products with potential export to the Middle East was reduced to ten in Phase 2.3.

Figure 3.1: Filtering process of Phase 1 and Phase 2

Total of 911 export opportunities across 8 countries (DSM)
Grouped into 360 products at SITC
Phase 1 — cluster filter — product to 5 or more countries
34 products at SITC
Phase 2 — export and export growth
Phase 2.1 - Translation of SITC to HS
34 SITC products translated into 387 HS products
Phase 2.2 — export value filter — product exported to 5 or more countries
387 HS products reduced to 80 products
Phase 2.3 — export growth filter — growth in exports to 5 or more countries

70 products eliminated at HS	41 products — no export growth values determinable
	12 products — positive export growth to one country
	13 products — positive export growth to two countries
	4 products — negative export growth to all countries

10 products at HS remaining
Determine product with exports and growth in exports to 5 or more Middle East countries
FRUIT JUICE (HS2009)

Source: Viviers and Pearson (2009); Quantec (2009)

At the end of Phase 2.3 (see Section 3.4.2.3), fruit juice was identified as the product with the most export potential in the Middle East. The next section analyses fruit juice in order to determine which fruit juice types have export potential in the Middle East.

3.4.3 Phase 3: Identifying the type of fruit juice with the most potential

The aim of Phase 3 was to determine which of the fruit juice types hold the most export potential to the Middle East. An analysis was conducted on the fruit juice types across the countries collectively as a region. However, **this phase was not an elimination phase** but determined the fruit juice types holding the most export potential. Once the identified potential markets have been discussed in Chapter 4, these juice types will form the focus of discussion in Chapter 5.

This phase analyses the demand of fruit juice in the Middle East and evaluates the export potential to the Middle East using indexing methods. A composite index was developed to determine the type of fruit juice with the highest export potential to the Middle East.

3.4.3.1   Simplification of the Harmonized System classification of fruit juice

To prepare the data for the analysis in this section, the types of fruit juice were classified according to the relevant six-digit HS code. In the HS classification of fruit juice, the fifth digit of the HS code refers to the type of fruit juice and the sixth digit refers to the sugar content (Brix value) or the state (frozen or fresh) of the juice (European Commission, 2009). This study only concentrates on the type of fruit juice and not the sugar content or the state of the fruit juice, as this level of analysis is too detailed. The final digit in the six-digit HS classification was therefore left as zero. The hierarchy of the six-digit classification is given in Table 3.3. The simplified HS codes for the types of fruit juice were used in the analysis of the export potential of fruit juices in the Middle East, as detailed in the subsequent sections (see Sections 3.4.3.4 to 3.4.3.6).

Once the classification of the fruit juice was completed, the analysis of the export potential of fruit juice could take place. The next section discusses the evaluation of the export potential of fruit juice by using trade indicators and indices to identify the type of fruit juice with the most export potential in the Middle East.

Table 3.3: Hierarchy of fruit juices according to Harmonized System nomenclature

HS code		Product description
SECTION IV		PREPARED FOODSTUFFS; BEVERAGES, SPIRITS AND VINEGAR; TOBACCO AND MANUFACTURED TOBACCO SUBSTITUTES
2009		Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter
200910		Orange juice
	200911	-- Frozen
	200912	--Not frozen, of a Brix value not exceeding 20
	200919	-- Other
200920		Grapefruit (including pomelo) juice
	200921	--Of a Brix value not exceeding 20
	200929	-- Other
200930		Juice of any other single citrus fruit
	200931	--Of a Brix value not exceeding 20
	200939	-- Other
200940		Pineapple juice
	200941	--Of a Brix value not exceeding 20
	200949	-- Other
200950		Tomato juice
200960		Grape juice (including grape must)
	200961	--Of a Brix value not exceeding 30
	200969	-- Other
200970		Apple juice
	200971	--Of a Brix value not exceeding 20
	200979	--Other
200980		Juice of any other single fruit or vegetable
200990		Mixtures of juices

Source: European Commission (2009)

3.4.3.2 Evaluating the export potential

Freudenberg and Paulmier (2005:33) define the term *export potential* as the capacity to expand exports, holding that some products could be considered to have high potential owing to an established and proven export record. This becomes evident from high export values and/or high export growth rates for a certain period.

The methodology developed by the ITC to rank product groups according to their potential for growth was applied in this section of the study. Freudenberg and Paulmier (2005) conducted a study to determine product groups that hold export opportunities in Vietnam. The study considered various indicators focusing on Vietnam's export performance, global import demand for Vietnamese product groups and domestic production of goods in Vietnam.

The methodology of Freudenberg and Paulmier (2005), as well as Freudenberg, Paulmier, Ikezuki and Conte (2008a), was used in this study to determine which product groups hold export opportunities for a given market. The difference between the studies of Freudenberg and Paulmier (2005) and Freudenberg et al. (2008a) is that the former considered domestic production, while the latter only considered exports and global imports. The rationale for the exclusion of production data in this study is the unavailability of production data at a product level, particularly fruit juices (FAOSTAT, 2009). Therefore, the methodology of Freudenberg et al. (2008a) was used.

Freudenberg and Paulmier (2005) and Freudenberg et al. (2008a) used a variety of indicators to determine a country's export performance and to assess world imports of each product, which were developed into sub-indices. The sub-indices were the Export Performance Index and the World Imports Index. These sub-indices were compiled into a composite index in order to measure the overall export potential of a product. The composite index indicates the extent to which a country's export structure is adapted to world demand and determines which product groups hold the most export opportunities in world markets.

This study uses this methodology, focusing on the fruit juices product group, in order to determine the type of fruit juice with the most export potential to the Middle East. A composite index, namely the overall South African Export Potential Index, was developed in order to determine which fruit juice types have the most export potential to the Middle East. This composite index was comprised of two sub-indices, the South African Export Performance Index and the Middle East Import Index.

Freudenberg et al. (2008a:71–74) determined a European import index in order to assess specifically the potential opportunities in the EU 27 countries. This methodology was applied in this study in order to create the Middle East Import Index.

An export performance index measures the export performance of each product group by considering size, dynamism and trade balance (Freudenberg *et al.*, 2008a). The current export performance of a country for a given product can be measured using indicators such as its exports in value, the world market share, and growth rates of export (Freudenberg & Paulmier, 2005). The South African Export Performance Index determined the overall export performance of **each type of juice** using the following indicators for fruit juices at the six-digit HS level:

- South Africa's exports in value in 2008 in USD in thousand ('000);
- share of South Africa's exports in world exports in 2008;
- growth of South Africa's exports (%) in value between 2004 and 2008;
- growth of South Africa's exports (%) in value between 2007 and 2008, and
- South Africa's relative trade balance (%).

A Middle East Import Index measures the size, dynamism and market access conditions of each product (Freudenberg *et al.*, 2008a). It is important to measure the characteristics of the international environment, such as growth of world demand and a country's access conditions to international markets in determining the attractiveness of a product in the global market (Freudenberg & Paulmier, 2005). The Middle East Import Index used the following indicators for **each type of fruit juice** at the six-digit HS level for the Middle East:

- Middle East imports in value in USD in 2008 in thousand ('000);
- growth of Middle East imports (%) in value between 2004 and 2008;
- growth of Middle East imports (%) in value between 2007 and 2008;
- average tariff applied to South Africa for fruit juice (%);
- Middle East exports in value in USD in 2008; and
- Middle East's relative trade balance (%).

The trade indicators identified in this section need to be converted into indices in order to develop the composite index. The next section discusses the conversion of trade indicators into indices.

3.4.3.3   Converting the trade indicators into indices

Variables need to be standardised or normalised before they can be aggregated into a composite indicator in order to ensure that the different measurement units do not complicate the basis of comparison of the variables (Freudenberg *et al.*, 2008a). A normalisation method, in which each