

**A PROPOSAL FOR EGYPTIAN REGIONAL DISTRIBUTION CENTRES FOR
THE COMESA MARKET**

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**A thesis submitted in partial fulfilment of the requirements of Liverpool John Moores University
for the degree of Doctor of Philosophy**

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DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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ABSTRACT

The objective of this research was to assess the feasibility of establishing Egyptian RDCs in the Common Market for Eastern and Southern Africa (COMESA) in order to enhance Egyptian export flows to that economic bloc. The research hypothesis was that the volume of Egyptian exports within the COMESA market would be enhanced through the establishment of a network of RDCs.

Intensive analysis of COMESA imports was conducted in order to understand the nature of the demand in the COMESA market and explore the export potential for Egyptian products. To increase the competitiveness of Egyptian exports to the COMESA market the research proposes the establishment of an RDC network in COMESA. Two models were used to select the locations for the Egyptian RDCs network within COMESA countries. The first model was used to set the criteria for the location decision within COMESA countries from a logistics perspective. The second model was used to assess the selected locations through criteria pertaining to several external factors such as economic and political stability, local infrastructure and geographical locations. Kenya, Djibouti and Tanzania are the three countries which proved to be the optimal locations to establish a generic network of Egyptian RDCs for the COMESA market.

The factors which are adversely affecting the competitiveness of Egyptian exports to the COMESA countries were assessed based on three stages of export flows from the manufacturers' facilities in Egypt until reaching each country in COMESA via the RDCs. The first stage is from the Egyptian manufacturers' locations to the Egyptian seaports, the second from the Egyptian seaports to the seaport of the receiving country in which the RDC is located, and finally the third stage from the location of the RDC to the COMESA market for redistribution to the end users.

In order to test the results from these models, two questionnaires were conducted to target Egyptian exporters and COMESA importers to investigate their views regarding the establishment of the Egyptian RDC network to serve the COMESA market. The findings of the questionnaires revealed that the COMESA market is a good gateway for Egyptian exports, however, a number of problems render the benefits from such a market to be a challenge to achieve.

Therefore, the research has focused on recommended actions to be considered in potential implementation strategies through a schematic model to enhance the flows of Egyptian exports to the COMESA market and to overcome the hindrances in achieving a competitive position within this market.

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LIST OF ABBREVIATIONS

3PL	Third-party Logistics Providers
ACCE	American Chamber of Commerce in Egypt
ACHC	Alexandria Container Handling Company
ACIS	Advanced Cargo Information System
ADB	African Development Bank
AFREXIMBANK	African Export and Imports Bank
AGOA	African Growth and Opportunity Act
ASEAN	Association of Southeast Asian Nations
BIT	Bilateral Investment Treaty
BOT	Built, Operate and Transfer
BPR	Business Process Reengineering
BSOs	Broad Strategic Objectives
BTA	Bilateral Trade Agreement
CAPMAS	Central Agency for Public Mobilisation and Statistics
CARICOM	Caribbean Community
CDC	Central Distribution Centres
CEMAC	Central African Economic and Monetary Community
CEN-SAD	Community of Sahel-Saharan States
CEPGL	Economic Community of Great Lakes Countries
CGE&Y	Cap Gemini Ernst & Young
COMESA	Common Market of Eastern and Southern Africa
CSCMP	Council of Supply Chain Management Professionals
DC	Distribution Centre
DDC	Dealer Distribution Centre
DEPRA	Development Economic Policy Reform Analysis
DRP	Distribution Resource Planning
DSM	Dar es Salam
EAC	East African Community
EAC	East African Co-operation
ECCAS	Economic Community of Central African States
ECEG	Egyptian Corporation for Exports Guarantee
ECES	Egyptian Centre for Economic Studies
E-Commerce	Electronic Commerce
ECOWAS	Economic Community of West African States
ECS	Egyptian Commercial Service
EDBE	Export Development Bank of Egypt
EDI	Electronic Data Interchange
EEC	Export Enhancement Centre
EEPC	Egyptian Exports Promotion Centre
EGAC	Egyptian National Council for Accreditation
EMDB	Egyptian Maritime Data Bank
EMTSE	Ethiopian Maritime and Transit Services Enterprises
ERP	Enterprise Resource Planning
EU	European Union
EXPOLINK	Egyptian Exports Association
FDI	Foreign Direct Investment
FIFO	First-In First-Out
FTA	Free Trade Area
GDP	Gross Domestic Product
GOIEF	General Organisation for International Fairs and Exhibition Fairs
G-SCM	Green-Supply Chain Management

ICD	Land Container Depot
ICSID	International Centre for the Resolution of Investment Disputes
IDSC	Information and Decision Support Centre - Egypt
IGAD	Intergovernmental Authority on Development
IMF	International Monetary Fund
IMO	International Maritime Organisation
IOC	Indian Ocean Commission
IS	Information Systems
ISI	Import Substitution Industrialisation
ISO	International Organisation for Standardisation
IT	Information Technology
ITP	International Trade Point
JIT	Just-in-Time
KPA	Kenya Ports Authority
KPI	Key Performance Indicator
kWh	Kilowatt-hour
LDC	Local Distribution Centre
LIFO	Last-In First-Out
MCMPE	Marketing Centre of the Ministry of Public Enterprise
MDCBS	Management Development Center for Business Sector
MDGs	Millennium Development Goals
MFN	Most Favoured Nation
MFTI	Ministry of Foreign Trade and Industry - Egypt
MRCC	Maritime Research and Consultation Centre
MRU	Mano River Union
MTOE	Million Tons of Oil Equivalent
NAFTA	North American Free Trade Agreement
NEPAD	New Partnership for Africa's Development
NICs	Newly Industrialising Countries
NPV	Net Present Value
NTBs	Non-Tariff Barriers
OAU	Organisation of African Unity
OECD	Organisation for Economic Co-operation and Development
PC	Personal Computer
PPT	Composite Point
PTA	Preferential Trade Area
R&D	Research and Development
RDC	Regional Distribution Centre
RFID	Radio Frequency Identification
ROI	Return on Investment
RTA	Regional Trade Arrangement
RTRN	Regional Trunk Road Network
SACU	Southern Africa Customs Union
SADC	South African Development Commission
SCM	Supply Chain Management
SDI/DC	Spatial Development Initiatives / Development Corridors
SKU	Stock Keeping Unit
SMEs	Small and medium enterprises
SWOT	Strengths, Weaknesses, Opportunities and Threats.
TAZARA	Tanzania-Zambia Railway Authority
THA	Tanzania Harbours Authority
TTCANC	Transit Transport Co-ordination Authority of the Northern Corridor
UAPTA	Unit of Account of the Clearing House
UEMOA	West Africa the West African Economic and Monetary Union

UMA	Arab Maghreb Union
UNCTAD	United Nations Conference on Trade and Development
UNECA	United Nations Economic Commission for Africa
USAID	United States Agency for International Development
WMM	Weighed Marking Method
WMS	Warehouse Management System
WTO	World Trade Organisation

CHAPTER 1: INTRODUCTION

1.1 RESEARCH BACKGROUND

With the start of the new millennium, the international economy is orienting itself towards the development of a single market to be achieved through the liberalisation of trade and production with the aim of better allocation and fuller exploitation of resources. Globalisation is now associated with regionalisation, based on an understanding that globalisation can only be achieved by deepening trade relations among regions (World Bank, 2004: 4). Regionalisation is a particularly useful approach for developing economies, helping them to face fierce competition from European and American markets as well as facilitating Intra-regional trade (El-Fiqi, 1999). This has long been recognised by these nations, and consequently, by the end of the 1990s, almost all developing countries belonged to one or more sub-regional or regional grouping such as the Common Market of Eastern and Southern Africa (COMESA) (ACCE, 2000: 12).

As a significant part of the developing world, African countries have come to realise that no economy can achieve meaningful development without exposure to other economies (Ezzat, 2000a). Egypt is applying several economic reforms which aim at improving the overall economic and trade situations to expand its export markets.

Successful Intra-trade cannot be achieved without the existence of an integrative distribution system within the supply chain, which is the core strategy for implementing efficient export-led expansions (Ezzat, 2000b). Generally, a distribution system refers to the outbound movement of finished products, included here is inventory and warehouse management. Warehouses may be used as Distribution Centres (DCs), and Regional Distribution Centres (RDCs), which proved to have a strong impact on the time and place utilities of exporting and importing products for different countries (CSCMP, 2005: 35).

1.2 RESEARCH AIM AND OBJECTIVES

The hypothesis of this research was that the volume of Egyptian exports within the COMESA market would be enhanced through the establishment of a network of RDCs.

This research aims to model selected market characteristics in order to establish a generic outline of distribution principles such as the regional distribution centres, which can be applied to a specific case. The location of the Egyptian RDCs will be through proposing selected

countries within the COMESA market for the aim of facilitating the flow of the Egyptian exports to the COMESA market. The research attempted to promote learning and knowledge about the different problems facing the establishment of Egyptian RDCs in the COMESA market. Qualitative and quantitative approaches have been applied in this research, as well as inductive and deductive reasoning, with the support of analytical tools to investigate the volume of demand for Egyptian products, to select strategic locations for the RDCs, and to realise the prospective development. The research will model the required changes to make Egypt's foreign trade flow to the COMESA countries available and competitive in order to meet the African customer's needs.

The specific objectives of the research can be briefly described as follows:

- To examine the structure of the COMESA members trade volumes with particular emphasis on imports and trade relationships with Egypt;
- To describe the obstacles to trade with the COMESA countries;
- To define the location decision criteria for establishing Egypt's RDCs for the COMESA countries;
- To decide on the potential locations for Egypt's RDCs in selected COMESA countries;
- To examine the logistics factors affecting the competitiveness of Egyptian export flows in the COMESA market;
- To evaluate the practices and attitudes towards the selection of Egypt's RDCs in the COMESA countries by Egyptian exporters and COMESA importers;
- To recommend methods for enhancing the volume of Egyptian exports to the COMESA and design development strategies.

1.3 JUSTIFICATION FOR THE RESEARCH

Burns (2000: 22) recommends that any research is justified according to some criteria including the size of the industry, the gaps in the literature and the possible benefits of outcomes from the study for policy and practice. The first criterion refers to *the size of the industry*, Egypt's exports to COMESA countries totalled US\$ 436 million while its imports from COMESA totalled US\$ 239 million in 2006 (MFTI, 2006b: 77). Thus the size of trade is considered enormous for both Egypt and COMESA countries. As to the second criterion, which is *the gaps in the literature*;

this study is considered to be the first study of its kind in the Egyptian doctoral studies due to the apparent lack of studies concerning the implementation of the supply chain concept and in particular distribution management as a solution to facilitate the flow of trade with the COMESA market. Finally as to *the possible benefits of outcomes from the study* for policy and practice; the study proposes a model of efficient and effective Egyptian regional distribution centres within the COMESA countries supported by strategies and policies in order to enhance the status of the Egyptian exports.

This study aims at adding to knowledge in a way that has not previously been done before through applying the RDC concept to facilitate the flow of Egyptian exports to the COMESA market. Moreover, the study adopts a particular technique and applies it in a new area by using two questionnaires for Egyptian exporters and for COMESA importers to demonstrate the most important issues related to trade with the COMESA market, as well as, simulating RDCs network for Egypt's exports. Furthermore, several materials will be used but with a new interpretation by means of analysing published materials by governmental authorities and international organisations for examining the trend of trade exchange between Egypt and the COMESA market.

1.4 RESEARCH SCOPE

The research is devoted to analysing the Egyptian trade exchange with the COMESA market in particular and to emphasise the role of RDCs to support Egyptian exports by proposing strategies for its logistical activities. The study covers the period from the year 1998 until the recent available figures related to the topic of the research. The year 1998 was the start of the Egyptian movement towards enhancing trade with the COMESA market through joining the COMESA bloc and making trade agreements with several African countries.

After this remarkable movement, data and information were published and available for study and research. In addition, the questionnaires' responses will refer to the recent status of Egypt's exports to the market under study. The research is intended to emphasise the problems which face the Egyptian exports to penetrate the COMESA market. The economic and logistics situations in the COMESA market will be discussed only for the purpose of showing the economic environment in which the Egyptian RDCs can be operated the degree of the competition of market faces affecting the Egyptian products.

1.5 RESEARCH METHODOLOGY

A case-study methodology was used for this research in order to gain an understanding of the phenomenon being studied. Adopting this kind of methodology enables the development of a better understanding for how supply chain management could not only boost trade between Egypt and the COMESA countries but also to generate the advantages to support their market needs. The research was formulated and applied by combining a number of research methods.

The research utilised two questionnaires, and several unstructured interviews concerning trade and transport issues in order to examine the situation of the competitiveness of Egyptian exports to the COMESA market. The first stage of the research involved an empirical investigation into the structure of COMESA imports that was conducted by an intensive literature review to acquire updated and reliable data. The second stage of the research involved the application of a conceptual framework to select the appropriate locations of the RDCs, and this part, the simulation of Egypt's exports flows to the COMESA market through the selected RDCs has been adopted. The third stage of the research was conducted through the use of questionnaires that targeted the Egyptian manufacturers, exporters and freight forwarders to demonstrate the real situation of the logistics process of Egypt's exports. Another questionnaire targeted the importers from the COMESA market to determine their preferences regarding the Egyptian products. Moreover, this stage involved unstructured personal interviews to collect data to fill the gaps in the required fields. The final stage involves proposed actions and recommendations to operate these RDCs and to ensure a high level of efficiency to strengthen the trade flows from Egypt to the COMESA countries.

1.6 STRUCTURE OF THE THESIS

This thesis is divided into nine chapters, including this introduction. Chapter 2 reviews the literature relating to the supply chain, distribution principles and its impact on international trade with particular emphasis on Egypt and the COMESA countries. The purpose of this review is to present the relevant documents, whether they are published or unpublished, on the research topic that contain information, ideas, data and evidence written from a particular standpoint to fulfil certain views on the nature of the research and how it is investigated, and the effective evaluation of these documents in relation to the research being proposed.

Chapter 3 proposes a framework for the research methodology. It reviews the research design and method which have been used in order to meet the research aims and objectives; moreover, triangulation is discussed and used as a research technique for this study. In addition, methods of data collection such as the interviews and questionnaires have been explained and the ways in

which they are incorporated into the work. This chapter concludes with the different research methods used in the study.

Chapter 4 presents an examination of the structure of COMESA imports in order to track the types, volumes, characteristics, and developments of COMESA imports at two levels the Intra and Extra trade. Moreover, this investigation aims to determine the countries which export to COMESA to meet their market needs. In addition to a brief highlighting on the status of Egypt's trade relationships with the COMESA market is included.

Proposing the selected locations for the Egyptian RDCs for the COMESA countries has been justified in chapter 5. The selection process is based on a set of location decision criteria. Therefore, the top selected countries have been analysed and reviewed.

Chapter 6 examines the logistical factors which adversely affect the competitiveness of the Egyptian exports flows to the RDCs in COMESA countries at three levels; from the Egyptian manufacturers to the Egyptian seaports, from the Egyptian seaports to the RDCs seaports in COMESA countries and from the RDCs to the COMESA customers. In addition, it provides the issues affecting the logistics processes in the COMESA market.

Chapter 7 evaluates the Egyptian exporters' practices and attitudes towards the selection of Egypt's RDCs for the COMESA countries by analysing the feedback of the two questionnaires which have targeted the Egyptian exporters, and the COMESA importers.

Chapter 8 designs a proposed framework of development strategies and recommended actions to be taken in order to enhance the performance of Egyptian exports through the implementing of RDCs in the COMESA countries.

Chapter 9 concludes the thesis with a summary of the research and a discussion drawn from the study's main findings. In addition, this chapter presents the limitations and applicability of the research. Finally, the chapter closes with suggestions for future research.

1.7 THE CONTRIBUTION TO KNOWLEDGE

As competition is intensifying in the world market especially in the two major importing markets which are the EU and US, it became necessary for Egypt to search for other potential markets where the competition is less severe. Therefore, the COMESA is considered an appropriate gateway for Egyptian exports as Egypt has a number of benefits from its membership in COMESA and other bilateral trade agreements in the African continent. However, studies undertaken on Egypt-COMESA trade did not acknowledge the supply chain

management concepts and principles which highly impact trade flows from Egypt to COMESA. Thus, this research is stressing the distribution principles through the implementation of the RDCs concept, which contribute to strengthening Egypt's exports flows in terms of cost reduction, inventory control and quick response to the COMESA market.

It is anticipated that this research will be of significance to academics, exporting companies, and policy makers in areas such as trade, transport and logistics because the study probably provides an insight into the impact of the efficient management of Egyptian exports flows with regard to trade competitiveness not only for trade with the COMESA countries but also, trade with the rest of the world. Such information can:

- 1 Assist the manufacturers, exporters, freight forwarders in doing business with COMESA countries.
- 2 Demonstrate the barriers which hinder Egypt's trade with COMESA and the rest of the world especially the first stages relating to the movement of the exports to the exporting ports in Egypt. This could help policy makers and the government to improve this regional trade and to eliminate infrastructure and institutional impediments.
- 3 Encourage the Egyptian government to apply the proposed RDCs in order to fill the gaps between the volumes of exports and imports.
- 4 Increase the awareness of implementing proper supply chain and logistics principles to gain competitive advantages and being a vital player in the international trade process.
- 5 Assist governments and organisations in locating RDCs in the international markets through the use of an RDC location decision criteria model.
- 6 Provide reference for future researchers relating to Egyptian trade as well as logistics and supply chain concepts.

CHAPTER 2: REVIEW OF LITERATURE

RELATED TO TRADE LOGISTICS

2.1 INTRODUCTION

The first three chapters of this research aim at putting the work described into an appropriate academic and historical structure. The main purpose of this chapter is to review some of the key developments and research issues affecting the role of RDCs in supporting Egypt's foreign trade with the COMESA market to fulfil the aim of the research by developing a number of the key themes that will be examined later in this research.

The literature review in this chapter has been divided into two main parts. The first part reviewed the literature on theoretical concepts including definitions of supply chain management, distribution management, and related concepts. The second part reviews the competitive advantage in the international trade, in addition, reviewing the COMESA as a trading bloc as well as Egypt's export environment.

2.2 REVIEW OF THEORETICAL CONCEPTS

This part of reviewing literature undertakes the relevant theoretical concepts to the purpose of establishing a basic background for understanding the supply chain management, logistics, distribution concepts, by tracking the evolution, definitions and debates related to the subject and its practice from several books published on the concept in addition to substantial numbers of journal articles.

2.2.1 Development of the supply chain management concept

Supply chain management has generated a substantial amount of interest both among managers and researchers. Supply chain management is now seen as a governing element in strategy and as an effective way of creating value for customers. Supply chain management benefits from a variety of concepts that were developed in several different disciplines such as marketing, information systems, economics, system dynamics, logistics, operations management, and operations research. There are many concepts and strategies applied in designing and managing supply chains (Bamford, 1999: 302).

The expanding importance of supply chain integration presented a challenge to researchers to focus more attention on supply chain management. A structure of supply chains is composed

from potential suppliers, producers, distributors, retailers and customers etc. The units are interconnected by material, financial, information and decisional flows. Most supply chains are composed of independent units with individual preferences. Each unit will attempt to optimise its own preferences. Behaviour that is locally efficient can be inefficient from a global point of view. An increasing number of companies in the world subscribe to the idea that developing long-term coordination and cooperation can significantly improve the efficiency of supply chains and provide a way to ensure competitive advantage (Fiala 2005: 420).

The supply chain management concept evolves around a collection of primary and secondary functional activities that are repeated many times throughout the channel through which raw materials are converted into finished or semi-finished products, which results in adding value in the eyes of consumers.

As a discipline supply chain management first appeared in the literature in the mid-1980s Cooper *et al.* (1997: 61) and Chopra (2004: 4) suggested that it is based upon fundamental assumptions emanating from managing organisational operations, which in turn can be traced back to channels and systems integration research in the 1960s and in more recent work on information management and inventory control. Hugos (2003: 2) said the practice of supply chain management is guided by some basic underlying concepts that have not changed much over the centuries. He referred to a common saying of Napoleon “Amateurs talk strategy and professionals talk logistics”. This shows the importance of how to meet the day-to-day demands of providing an army with fuel, spare parts, food, shelter, and ammunition. It is the seemingly mundane activities of the quartermaster and the supply sergeants that often determine an army’s success (Hugos 2003: 4).

As Lambert and Stock (2000: 19) stated “Logistics was first examined in scholarly writing in the early 1900s, although as a human activity it is centuries old”. Borsodi (1927: 19) presented the early prediction for the supply chain management concept in his book *The Distribution Age* as:-

“There are two uses of the word distribution which must be clearly differentiated, first, the use of the word to describe physical distribution such as transportation and storage, second, the use of word distribution to describe what is better termed marketing”

Supply chain management represented the third stage of an evolution that started in the 1960s with development of the physical distribution concept and focused upon the outbound side of the firm's logistics system as said by Coyle *et al.* (2003:13).

The early stage was focused on the total system's cost among each detail concerning the transportation, inventory requirements, materials handling, packing, warehousing, and some other activities' cost centres in order to minimise the total cost of the physical distribution system. This stage is called the fragmentation stage.

The focus became wider in the evolving integration stage, i.e. the activities after the production stage, which is the outbound logistics or the physical distribution phase for managers in companies, academics and organisations. At the same stage, the focus has expanded to achieve integrated logistics management; this has been realised by adding inbound logistics to the outbound logistics of physical distribution.

In the total integration stage, all the concepts relating to costs, inbound, outbound activities and the value chain concept have been developed as a tool for competitive analysis and strategies. The value could not be achieved without the integration of the outbound and inbound logistics, which result in the supply chain management. The term of supply chain management as Hugos (2003: 2) stated arose in the late 1980s and came into widespread use in the 1990s.

Baker (2004: 111) agreed with the previous points of view regarding the development of the supply chain concept. He said that the concept has been characterised by the increasing degree of organisational integration that has been proposed. He summarised the development of the concept as being: physical distribution integration, internal linkage and then external linkage. On the other hand, he criticised most of the literature on supply chain management which did not mention the parallel development of warehousing with supply chain management. He said that it is only mentioned in passing, and literature on warehousing tends not to put warehousing concepts in the context of supply chain strategy.

Recently, the Council of Supply Chain Management Professionals (CSCMP 2007: 97) has provided an integrated definition of the supply chain management as:-

“Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies”

The CSCMP (2007: 98) has distinguished the boundaries and relationships among supply chain management by linking the major business functions and business processes within and across companies into a cohesive and high performing business model; it includes all of the logistics management activities, as well as manufacturing operations, and it drives coordination of

processes and activities with and across marketing, sales, product design, finance and information technology.

On the other hand there is another group of authors that have argued the existence of the supply chain concept. They consider the concept as a fad that will soon disappear and be replaced by another buzzword. Metz (1998: 1) and Ramadan (2002: 22) highlighted from various authors' points of views the possibility that supply chain management might become just a fad, such as the Business Process Reengineering (BPR) which appeared in the early 1990s and faded out in 1995 as one of its creators claimed that "it is effectively over". Obviously this could not happen because the supply chain management is the logical development of a lasting value. He contended that supply chain management is a sophisticated science at its core, by using advanced technology, information management, and operations research maths to plan, implement and control an expanding complexity of factors to better produce and deliver products and services in a customer-pleasing way by using sophisticated mixed integer programming, relational databases, concurrent engineering, and similar mysteriously technical tools.

In the last decade the term "supply chain" was changing into another direction towards demand chain. The CSCMP (2007) define the demand chain as another name for the supply chain, with emphasis on customer or end-user demand pulling materials and products through the chain. Langabeer and Rose (2001) took the argument a step further by looking at the demand chain as an entity in its own right making an interesting differentiation between the supply chain and the demand chain and between demand management and demand-chain management. They describe the demand chain as the complex web of business processes and activities that help firms understand, manage, and ultimately create consumer demand. They offer a useful comparison of the two approaches in Table 2.1.

Table 2.1: Supply and demand chains

Supply chain	Demand chain
Efficiency focus on cost per item	Effectiveness focus on product-market fit
Processes are focused on execution	Processes are focused more on planning
Cost is the key driver	Revenue is the key driver
Short term oriented, within the immediate and controllable future	Long term oriented, within the next planning cycles
Typically the domain of tactical manufacturing and logistics personnel	Typically, the domain of marketing, sales and strategic supply-chain managers
Focuses on immediate resource and capacity constraints.	Focuses on long-term capabilities, not short term constraints.
Historical focus on manufacturing planning and controls.	Historical focus on marketing and supply chain alignment.

Source: Langabeer and Rose (2001)

The authors went on to propose a demand strategy comprising a supply-chain strategy (focusing on manufacturing, distribution and network optimisation), customer strategy (customers and markets), a product and brand strategy (focusing on key product requirements and customisation needs), and a sales and marketing strategy (creating awareness and demand). They suggest that these, when coordinated, create a demand strategy that may be expressed as the direction that a firm pursues to attract and retain desirable customers and improve its product positioning in profitable markets. They expanded the argument with a model describing demand-chain management in some detail as a focus for creating a demand strategy and to manage the entire organisation to meet this demand.

Taking this into account, the above definitions of supply chain management have some common characteristics; firstly it involves multiple echelons, processes and functions like suppliers, purchasing, manufacturing, marketing/sales and customers. Secondly there is a clear focus on coordination and/or integration. Finally the main aim is to enhance profitability and create greater customer service.

To specify what the supply chain management term implied for research considerations, it is important to follow the development of its definition over time so that the investigation is based on sound theoretical grounds.

2.2.2 Logistics and supply chain management

The literature differentiates between logistics and supply chain management (SCM) which showed three different point of views; the first group considers supply chain management as a synonym to logistics. Copacino (1997: 7) stated that the supply chain management and logistics do the same performance to manage the flow of materials and movement of products from origin to the consumer.

The second group considers logistics as a subset of supply chain management. This could be clear from the CSCMP (2007: 64) definition of logistics management as follows:-

“Logistics management is that part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers’ requirements”

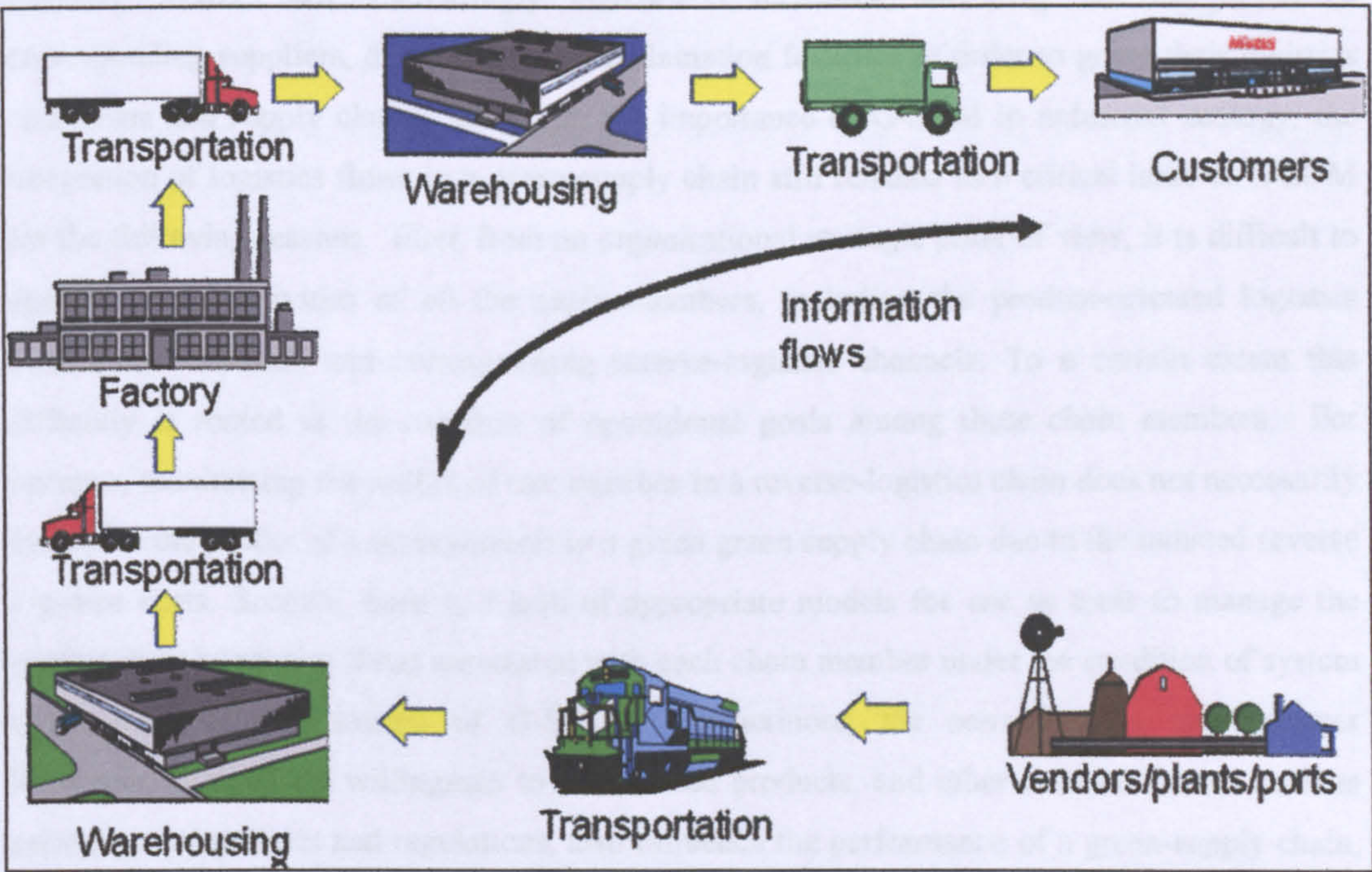
The CSCMP has highlighted logistics management activities as typically including inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfilment, logistics network design, inventory management, supply/demand planning, and

management of third party logistics service providers. To varying degrees, the logistics function also includes sourcing and procurement, production planning and scheduling, packaging and assembly, and customer service. It is involved in all levels of planning and execution: strategic, operational, and tactical. Christopher (1998: 4) supports this group by defining logistics as follows:-

“Logistics is the process of strategically managing the procurement, movement and storage of materials, parts and finished inventory (and related information flows) through the organisation and its marketing channels in such a way that current and future profitability are maximised through the cost-effective fulfilment of orders”

The third group considers the supply chain management as a logical progression of logistics management. This process takes place through stages, which have been presented in the supply chain concept development in the previous section in this chapter. Figure 2.1 presents the logistics activities within the supply chain management.

Figure 2.1: Logistics activities within the SCM



Source: Ballou (2004)

Goetschalckx *et al.* (2002: 20) and Hugos (2003: 6) differentiated between the concept of supply chain management and the traditional concept of logistics. They said that logistics typically refers to activities that occur within the boundaries of a single organisation, and that the supply chains refer to networks of companies that work together and coordinate their actions to deliver a product to the market. They added that the traditional logistics focuses on activities

such as procurement, distribution, maintenance, and inventory management. Finally they concluded that supply chain management acknowledges all of the traditional logistics and also includes activities such as marketing, new product development, finance, and customer service.

On the other hand, logistics and supply chain management have a significant role in the environmental aspects of the business. Sarkis (2003: 397) said with the increasing acceptance of ISO 14001 environmental standards there is a greater role for supply chain management in organisational environmental practice.

Sheu *et al.* (2005: 285) said with the increased environmental concerns over the past decade, that there is a growing recognition that issues of environmental pollution accompanying industrial development should be addressed simultaneously in the operational process of supply chain management, thus contributing to the initiative of Green Supply Chain Management (G-SCM). The management of the overall lifecycle of products should be integrated in a more comprehensive supply chain procedure. As well, globalised enterprises, e.g. IBM, Hewlett-Packard, Xerox, have increasingly undertaken measures, including the integration of corresponding suppliers, distributors, and reclamation facilities in order to green their logistics operations and supply chains. Although, the importance of G-SCM in industrial ecology, the integration of logistics flows in a green-supply chain still remains as a critical issue in G-SCM for the following reasons. First, from an organisational strategic point of view, it is difficult to coordinate the activities of all the chain members, including the product-oriented logistics distribution channels and corresponding reverse-logistics channels. To a certain extent this difficulty is rooted in the conflicts of operational goals among these chain members. For instance, maximising the profits of one member in a reverse-logistics chain does not necessarily maximise the profits of a manufacturer in a given green supply chain due to the induced reverse logistics costs. Second, there is a lack of appropriate models for use as tools to manage the corresponding logistics flows associated with each chain member under the condition of system optimisation in the process of G-SCM. Furthermore, the corresponding end-customer behaviour, such as the willingness to return used products, and other external factors such as governmental policies and regulations, also influence the performance of a green-supply chain, particularly in the reverse logistics distribution channels (Sheu *et al.* 2005: 290).

From the above, it can be concluded that logistics involves and oversees all the various functions and elements needed to move material from the raw material stage through to the point of consumption by the customer.

2.2.3 Characteristics of supply chain management

The purpose of supply chain management is to optimise the overall performance of a company. Whether companies are operating on a national or global basis, the competition is ever increasing, and offering products at the lowest possible cost with the best possible customer service is a way to ensure market share. Their needs are to share information in order to achieve visibility of all the activities across the supply chain and eventually obtain an optimised supply chain.

The supply chain has certain characteristics. These characteristics are issues that must be kept in mind to obtain the effective and efficient functioning of the supply chain. Coyle *et al.* (2003: 22) present important characteristics of the supply chain such as:-

- Maintaining the visibility of inventory throughout the entire supply chain pipeline and striving towards the minimisation of uncertainty. Uncertainty creates the build-up of safety stock inventory or non-optimal supply chain practices such as forward buying and is one of the major challenges of supply chain management.
- Coordinating inventory levels all along the supply chain in order to be able to minimise inventory investment and cost.
- The focus should be on total landed cost, as this optimises the supply chain. Landed cost refers to the final, total actual cost to the customer. Included in the initial purchase price and delivery cost, is inventory cost and other associated costs. Companies are accustomed to focus on their own inherent cost and may not be aware of how their business approach affects the vendors or suppliers downstream and the final landed price.
- The sharing of information is extremely important but still a thorny issue especially in cases where the vendor may also deal with the company's competitors.
- Risk is another concern as shared risk is a requirement from a supply chain perspective.
- Supply chain planning is becoming more popular in a number of industries, particularly in the automotive industry where both vendors and customers have become more involved in the process.
- Joint planning has created new organisational relationships such as strategic alliances and partnerships.

Moreover, Ofori (2000) summarised the features of the implementation of SCM as follows:

- Conclusion of long-term contracts between parties;
- Willingness among the parties to learn more about each other's business operations;
- Exchange of information on business plans and operations, as well as best practices among the parties;
- Involvement of suppliers in the customer's product development and design processes;
- Commitment of the supplier to pursue continuous improvement by monitoring technological trends;
- Reducing the supplier base;
- Continuous development of supplier by the customer;
- Development of trust among partners, with suppliers taking full responsibility for the quality of their products, leading to the elimination of inspections of supplied products.

The above characteristics serve as an indication that information sharing and integration of planning practices is necessary for effective supply chain functioning.

2.2.4 Difficulties in supply chain management

Schary *et al.* (2001: 23) stated that a major problem in the supply chain is that the various partners have different objectives and act accordingly. This is often a result of the supply chain becoming more complex. The need exists for the different stages in the chain to be integrated. Each stage is an independent entity with its own operations, controlling its own resources and setting its own objectives. These stages can each be seen as a supply chain on their own, thereby showing that a company may have several supply chains within the main supply chain.

A firm is usually involved in many supply chains and the difficulty lies in knowing whether to integrate or disassemble them. A manufacturer of food products may sell its products to grocery chains, institutional buyers, specialty firms (which may, for instance, use products in gift boxes) and industrial users (who use the product as an ingredient in another product they manufacture) or in an export market via different chains or channels. Each of these buyers in the chains has different expectations and the sales expertise needed to service these customers is also divided. The need exists to have special knowledge of the product if it is sold to another producer, and

knowledge of export/import regulations is a prerequisite when selling to customers overseas. The firm may choose how much of each chain it would like to own or what degree of control it would like to have, for instance, by contracting out some parts of the chain (Murphy and Wood 2004: 45).

Akkermans *et al.* (1999: 566) described the problem that exists with the various partners in the supply chain; the goals of the participants differ and neither party sees the need for information sharing. If timely information cannot be obtained, inefficiencies in supply chain performance are inevitable. Thus, a fact that is often overlooked is that the benefits of supply chain management take some time to materialise.

2.2.5 Simulation in supply chain management

Taniguchi *et al.* (2001: 29) said that simulation is a modelling technique for conducting experiments on a digital computer, which involves using mathematical relationships to describe the behaviour and structure of a complex real-world system over extended periods of time. It allows a realistic representation of the random components of a system to be constructed. They highlighted as well that simulation modelling involves breaking a system down into simple components and modelling each component as well as the interactions between components and then operating the model. Random phenomena can be represented using statistical distributions.

Supply chain performance can be improved by reducing the uncertainties. It is clear that there is a need for some level of coordination of activities and processes within and between organisations in the supply chain to reduce uncertainties and add more value for customers. This requires that the interdependence relations between decision variables of different processes, stages and organisations be established. These relations may change with time and are very difficult to analytically model. However, the simulation provides a much more flexible means to model the dynamic and complex networks. Simulation is considered the most reliable method to date in studying the dynamic performance of supply chain networks.

Simulation also provides an effective tool to evaluate supply chain re-engineering efforts in terms of performance and risk. Towill *et al.* (1992: 200) used simulation techniques to evaluate the effects of various supply chain strategies on demand amplification. The strategies investigated are as follows:-

- Eliminating the distribution echelon of the supply chain, by including the distribution function in the manufacturing echelon;

- Integrating the flow of information throughout the chain;
- Implementing a Just-In-Time (JIT) inventory policy to reduce time delays;
- Improving the movement of intermediate products and materials by modifying the order quantity procedures;
- Modifying the parameters of the existing order quantity procedures.

The objective of the simulation model is to determine which strategies are the most effective in smoothing the variations in the demand pattern. The just-in-time strategy and the echelon removal strategy were observed to be the most effective.

Bhaskaran (1998: 65) illustrated the magnitude of a supply chain re-engineering project, using simulation as the primary analytical tool. The paper describes the level of detail required to understand material and information flows and evaluates different system configurations to identify improvement. However, supply chain interactions typically involve more sophisticated control mechanisms. For example, when an important order comes in, it may have to be processed first, ahead of other orders. Also, processing of an item may involve more than just waiting at the service centre for some time.

Although there are advantages of simulation models, there are two major problems associated with building customised simulation models: 1) they take a long time to develop and, 2) they are very specific and have limited reuse. Swaminathan *et al.* (1998: 34) provided a supply chain modelling framework, which enables rapid development of customised decision support tools for SCM, for rapidly reconfiguring the supply chain based upon studies of several different supply chains.

They utilised a multi-agent paradigm for modelling and analysis of supply chain. Multi-agent computational environments are suitable for studying a broad class of coordination issues involving multiple autonomous or semiautonomous problem-solving agents. Swaminathan *et al.* (1998: 37) identified different agents in the supply chain and provide each agent with an ability to utilise a subset of control elements. The control elements help in decision making at the agent level by utilising various policies (derived from analytical models such as inventory policies, just-in-time release, and routing algorithms) for demand, supply, information, and materials control within the supply chain. Their analysis is based on discrete-event simulation of the various alternatives and control policies. Combination of analytical and simulation models makes the framework attractive to study both the static and dynamic aspects of problems.

2.2.6 Information technology and supply chain management

Information Technology (IT) such as Electronic Data Interchange (EDI), Radio Frequency Identification Technology (RFID), wireless internet, and Information Systems (IS) such as Electronic Commerce (E-Commerce) systems and Enterprise Resource Planning (ERP) systems have had a tremendous impact in education, healthcare, manufacturing, transportation, retailing, pure services, and even war (Ryzex Group, 2005) and (David, 2005).

The past decade has seen a number of developments that in combination enable the real-time e-supply chain concept to become a reality (Ware Systems, Inc. 2005). Recent technological breakthroughs, including connectivity and bandwidth enhancements, facilitate real time Internet connections among all partners in an extended enterprise (Schneider, 2003). Along with these developments is the improved ability for functional areas within a single organisation and for supply chain partners to share information through rapidly developing middleware, which allows organisations to keep legacy supply chain software systems but to share common data across applications (Thomas *et al.* 2003: 80).

Boyson *et al.* (2003: 1) said that IT could help to overcome the problems that plague many supply chains. Electronic exchange of information leads to reduction of errors and increased efficiency of the work processes (Granneman, 2003). In addition, Gunasekaran and Ngai (2003: 59) noted that common terms for business models using IT are e-commerce and e-business, the former relating commonly to web-based sales, and the latter to a more holistic use of IT; in many instances, however, e-business refers to the use of Internet (Chopra, 2004: 504). Simchi-Levi *et al.* (2003: 86) provided comprehensive outcomes for the role of new IT for SCM, which are:-

- Providing information availability and visibility.
- Enabling single point of contact of data.
- Allowing decisions based on total supply chain information.
- Enabling collaboration with supply chain partners.

The impact and benefits of IT in supply chain management are viewed to have great opportunities, ranging from direct operational benefits to the creation of strategic advantage. McFarlan (1984), Benjamin *et al.* (1985), and Porter and Millar (1985) already argued in the 1980s for the strategic possibilities of IT for business. Porter and Millar in particular advocated

that IT changes industry structures and rules of competition, creates competitive advantage, and creates new business opportunities.

A common view is that IT has a profound impact on managing supply chains. Bowersox and Daugherty (1995), Boyson *et al.* (2003: 4) and Kemppainen and Vepsäläinen (2003) argued that IT is, alongside specialisation and outsourcing, a key precondition for networking of organisations. One group of scholars argues that because of information technologies, supply chains become less integrated and more market oriented. Williams *et al.* (2002: 52) suggested that electronic SCM combines the structural benefits of SCM with the efficiency benefits of arms length approach, enabling, for example, lower cost through possibilities of selecting from a larger supplier base.

Heinrich and Betts (2003), WAER Systems (2005) and Data Support (2005) proposed that the value offerings through IT are electronic communication and electronic integration. They mentioned as well that IT seems to be particularly important in fast clock speed industries or when flexibility and agility are needed. Levary (2000) suggested that IT in SCM provides a reduction of cycle time, reduction of inventories, minimisation of the bullwhip effect, and improvement of the effectiveness of distribution channels. There are also a number of articles presenting empirical findings on the benefits of IT in SCM. The results of these articles are, unfortunately diminished because of the typically narrow focus of discussion. For example estimating the dollar value of EDI in automotive manufacturer - component supplier - relationship or the impact of ERP in order of completion performance under a period of one year after the implementation of the system. Reporting on a general level the benefits of IT in SCM is fraught with problems, as noted insightfully by Walton and Gupta (1999) and Lee and Whang (2001) in their discussion of the benefits of EDI:

- Some benefits are dyadic (or multilateral), dependent on both (or a number of) supply chain parties, and some individualistic.
- The magnitude of change differs from slight to significant process change to the creation of competitive advantage.
- Benefits depend on where (EDI) is implemented.

Thus, Laabs and Vandebusch (2004) and Lacy (2004) have presented that benefits of IT in SCM can be manifold and vary by the implementation context. Moreover, the use of IT is closely related to process changes. As such, SCM can be viewed as a process change that is

helped or enabled by IT. This makes it hard, or in many cases even a useless academic exercise to separate the origin of the benefit whether it comes from IT, process change, or both.

Another perspective of the information technology implementation within the supply chain and logistics operation is RFID. Finkenzeller (2003: 7) and Ware Systems, (2005) noted that RFID is an emerging technology that has been increasingly used in logistics and SCM in recent years. RFID technology can identify, categorise, and manage the flow of goods and information throughout a supply chain. Basically, it is made up of two components:- the transponder, which is located on the object to be identified, and the reader which depending upon the design and the technology used, may be a read or write/read device.

Singh (2003: 246) and Ryzex Group (2005) stated that RFID is an emerging technology to support supply chains. As the concept of RFID based SCM evolves, systems that integrate the whole chain that provide instant visibility across the supply chain are likely to emerge. With the growing importance of logistics to the economies of many countries it is vital that local logistics companies come to implement the issues concerning the adoption of RFID technology (Brooke, 2005a). They need to proactively raise their level of awareness of the strategic advantages of, and of their competence in, applying this disruptive technology.

Yagi *et al.* (2005: 480) stated that an RFID system is a unique identification system, where the RFID tag can carry information as simple as a pet owner's name and address or the cleaning instruction on a sweater to complex instructions on how to assemble a car (Brooke, 2005b).

2.2.7 The readiness of the Egyptian market for RFID

It is necessary to describe the situation of logistics and IT implementation in the field. Until recently, the word logistics was a mysterious word to the Egyptian market (El-Nakib, 2006: 109). With the intrusion of foreign logistics companies and the growing need for production optimisation to increase the level of exports, the Egyptian market has come to realise the importance of logistics as a means of economic stimulation, therefore, the logistics industry in Egypt is considered to be in its infancy (El-Zarka, 2006: 341). It is being strengthened by the increasing number of companies that offer logistics services and also the increasing number of educational institutions that offer logistics and supply chain programs. If few people have moderate knowledge about logistics and supply chain management, then fewer people know about RFID (Nathan Associates, 1999: 41). This is attributed mainly to the primitive IT use in logistics and supply chain management areas. If compared with developed economies, logistics services in Egypt are supported by primitive, if not outdated, software applications that are responsible for the significant gap in the field between Egypt and other developed

markets (El-Zarka, 2006: 79).

Kamel and Hussein (2002: 149) expressed their opinion by stating that Egypt is not yet ready for RFID for several reasons such as the beginning stages of the logistics and supply chain management fields, the recent implementation of bar coding systems, poor IT involvement in logistics and supply chain management practices and lack of financial capacity to invest in RFID technology. They add that being unready to implement RFID at the moment does not mean that Egypt should not consider its implementation in the near future.

As a matter of fact, Egypt can use the theory of Gerschenkron's economic development that deals with the advantages of backwardness. When less developed nations, such as Egypt, develop, they have the advantage of choosing the very latest available technologies, jumping ahead of other economies that had been less recently developed. Moreover, Egypt will have a better opportunity to learn from the other nations' experiences and overcome the errors they have encountered (El-Nakib, 2006: 111). Another important issue that should not be ignored is the source of the materials involved in RFID technology, which refers to RFID chips, radio transmitters, etc. These materials constitute the high costs relating to RFID. As a matter of fact, they are already considered costly in the countries where they are manufactured. Consequently, they will be even more expensive if they are imported (ACCE, 2004: 15). Therefore, Kamel and Hussein (2001: 120) mentioned that the studies and strategic plans should be designed to facilitate the manufacturing of these materials in Egypt. This can be achieved through encouraging Foreign Direct Investment (FDI) and offering incentives to RFID producing companies to establish production plants in Egypt to take advantage of the incentive offers and the cheap labour.

As a result, Egypt would benefit by having RFID materials manufactured locally with the same quality as abroad and with lower prices. At the same time, RFID manufacturers will also benefit by producing relatively low cost products and having better competitiveness in the world market through their suitable prices.

2.2.8 Distribution management concept

Distribution management has been an important feature of industrial and economic life for many years. This importance has been recognised through the growth of supply chain management and logistics activities within the business and economic environment. Rushton *et al.* (2000: 4) describe the distribution activity as a function made up of many sub-functions and sub-systems each of which has been, and may still be, treated as a distinct management operation.

The CSCMP (2007: 36) present a clear understanding concept of the distribution role in the industrial fields, which refer to activities associated with the movement of materials, usually finished goods or service parts, from the manufacturer to the customer. These activities encompass the functions of transportation, warehousing, inventory control, material handling, order administration, site and location analysis, industrial packaging, data processing, and the communications network necessary for effective management. It includes all activities related to physical distribution, as well as the return of goods to the manufacturer. In many cases, this movement is made through one or more levels of field warehouses.

Moreover, Prescott (2004) mentioned that the distribution is considered fundamental to the manufacturing, storage and movement of goods and products. The distribution role within the logistics system has a vital function as it now plays a major part in the success of many different operations and organisations; it supports logistics and the supply chain in trade-off analysis, value chains and systems theory together with their associated techniques (Rushton *et al.* 2000: 6).

2.2.8.1 Distribution strategy

Christopher (1998: 145) and Linford (2003: 61) explained that many companies have recognised the need to develop more formal approaches to planning. This enables the business to anticipate change rather than react to it, and assists in the identification of risk in alternative strategies. The basis for the development of viable distribution strategies rests upon the recognition of customer service requirements and the costs of providing that service, combined with an understanding of high-level corporate goals. Christopher (1998) concluded that not much has changed over the last seventy years, what is being saved in production, is lost in distribution.

However, the activities performed by a distribution channel fall into three categories:- First, activities concerned with changes in ownership - that is negotiation, buying and selling; the trading channel.

Secondly, activities concerned with the physical supply of the product including transportation and storage; the physical distribution network. Finally, activities that are auxiliary to or facilitate either of the above such as collecting, disseminating and sharing information, risk-taking, financing and promotional activities are collaborative in nature.

2.2.8.2 Network design

Another aspect that influences supply chain and distribution configurations, apart from their commercial viability, is the network design. Network design is about the physical infrastructure in relation to the location of the raw material sources, and the location of markets. Lambert and Stock (2000: 90) mentioned the following factors that management must consider in this selection process: market coverage objectives; product characteristics; customer service objectives and profitability.

The concept of centre of gravity analysis is used during the determination of the ideal location of factories, process plants, mines, refineries, central distribution centres, regional distribution centres or retail outlets. Moreover, a centre of gravity analysis is also called the grid technique by Coyle *et al.* (2003, p. 457), which is usually covered in detail under heuristic modelling as part of network design and facility location. However, many qualitative factors have to be considered to accommodate the complexities of the real world. Bowersox and Closs (1996: 407) described some typical location factors used to complement the theory. The authors' expanded the list of qualitative factors that ought to be considered to the following list, for the purposes of the study: availability of trained/trainable labour; affordable labour rates; productivity of local labour; local management/trade union relations; access to main markets; access to linked manufacturers; access to production/manufacturing plants; utilisation of existing infrastructure or stakeholder investments; ready built factories/facilities; rental, rates and taxes; fully served sites, public transport for staff; local technical education /support facilities; attractiveness of local environment for transferred key workers and management; and local authority co-operation.

Although the qualitative factors are important, according to Lambert and Stock (2000: 311) the centres of gravity provided at least a starting point for working towards the ideal location. Sweeney (2000) and Fearon (2005) suggested that transport cost minimisation was the most important location determinant. Agricultural production would take place where the farmer would maximise profits and as locations further from the market would incur greater transportation cost, low value products should be produced near the market.

Finally, Ballou (2004: 345) showed the guideline principles which are useful to logistics planning in designing a good logistics network: differentiated distribution: not all products should be provided at the same level of customer service. On the other hand, Bowersox *et al.* (2002: 96) presented some applications within the distribution channels which are summarised in Table 2.2.

Table 2.2: Applications within the distribution channels

Applications	Description
Mixed strategy	A mixed distribution strategy will have lower costs than a pure or single strategy. It allows an optimal strategy to be established for separate product groups, which often has lower costs than a single global strategy that must average across all products.
Postponement	Logistics postponement is about postponing the risk to pick or label the final assortment into its final sales unit. For example, the final labelling or packaging of medicines and especially prescription drugs are only done once the pharmacists sell it over the counter.
Speculation	Speculation would be to assume the risk of less than optimum sale units by final packing and labelling prescription drugs into packages of ten tablets per package.
Cost trade-offs	The concept of total logistics cost is widely known and published. Suffice it to say that balancing conflicting cost patterns is at the very heart of logistics management and is essential to strategic planning.
Consolidation	Creating large shipments from potentially small ones is a powerful economic force in logistics planning. Potentially reduced customer service due to increased delivery time must be balanced with the cost benefit of order consolidation. The smaller the shipment size, the disproportionately greater will be the benefits of consolidation, due to lower economies of scale.
Standardisation	Devising interchangeable parts, modularising products, and labelling the same products under different brand names create standardisation in production.
Specialisation:	This is about intermediaries that specialise for example only in long haul full truckload transportation. These intermediaries can offer attractive tariffs, due to their specialisation as professional outsourced carriers. Specialisation is a fundamental driver to economic efficiency and thus also critical to collaboration with the view to achieve better economies of scale.

Source: Bowersox et al. (2002)

2.2.8.3 Distribution planning

The most important part of distribution planning consists of the preparation of a suitable distribution plan. This plan is the implementation phase of the distribution management cycle. Christopher (1998: 149) stated that the distribution plan must consist of the following four strategies, namely. Inventory strategy including service level policy, replenishment strategy, differential deployment (ABC concept), stock-turn targets and stock location. Warehousing strategy comprises the number of stockholding points, location of depots, use of public warehouses, warehouse design and layout and materials handling methods. Transport strategy comprises own account/third party split, lease/buy decisions, customer pick-up/direct delivery/other options, vehicle utilisation targets, routing flexibility and modal split.

Lambert and Stock (2000: 724) suggested that the distribution plan should include sections on corporate objectives, marketing strategies and customer service strategies as well as specific detail on inventory, warehousing, and transport and customer communications strategy. Once the distribution plan is in place, much opportunity exists for creating collaborative arrangements, also during the implementation phase of the distribution management process. One example of such opportunity is the level of agility in the supply chain. The only way to

develop an agile supply chain would be to compress the pipeline by partnership programmes with collaborated suppliers, reduced non-value internal activities, and vendor managed inventory Christopher (2002).

Christopher (1999: 159) concluded with the following description of the agile organisation by saying that it focuses on understanding customer and consumer value preferences and re-engineers processes around them; uses performance measures that are market facing and process related, e.g. time to market, cost to serve, customer retention; encourage cross functional, team based working; and seeks to manage the "extended enterprise".

2.2.8.4 *Distribution centres*

There has been a change in international trade patterns. Expanding mass markets for uniform, common and standardised products has resulted in the steady growth of international trade, and created a different transport demand with new commercial conditions. Thus, the role of distribution centres as home bases for merchandise transportation and distribution has become increasingly important. The global world of logistics and materials handling is dependent to a large extent on the simple, ubiquitous wooden pallet. Although pallets are common and inexpensive, they continue to be a significant factor in warehousing operations (UNCTAD, 1995) and (Carlson and Yaob 1996: 102).

Murphy *et al.* (2004: 103) said the term distribution centre is virtually synonymous with the warehouse, since most goods in a warehouse are in somebody's distribution system. In distribution channels, warehouses can also represent storage facilities between suppliers and the manufacturer and the manufacturer and industrial customers. Olson (2003: 145) concluded the role of the distribution centre in the supply chain by a single word: *availability*. That having the seven rights which are: right material, place, price, quantity, condition, time and customer. He said that there are different terms used to describe the distribution centre operations throughout the supply chain such as: store-room, stock-room, depot, warehouse, sequencing and mixing centre, logistics centre, customer service centre and transportation hub.

Shan Lu (2003: 50) and Carter & Burgess (2005) presented several aspects regarding the distribution centres, which provide several value added activities in an integrated logistics system, e.g. consolidation, packaging, labelling, assembly, economic processing, contingency protection, and smoothness of operation. Moreover, Baker (2004: 112) showed some concern about this role by stating that it is a tool which eliminates supply chain waste that could manifest itself in terms of excess resources, and high levels of inventory or unnecessary long lead times, the DCs takes advantage of volatile market places and the ability to respond rapidly

to market opportunities is a critical factor, as well as it is combined effectively to offer a high volume lean supply chain pipeline supported by an agile pipeline for surges in demand and for special products when taking in consideration the cost and service of the inventory and the customer lead times.

Carter & Burgess (2005) said that distribution centre operators and managers constantly ask questions that should be considered when building a distribution centre: Is the space inside the facility being used efficiently? How can labour costs be reduced? How can throughput be increased? Whether a company sells pharmaceuticals or ketchup or microchips, the importance of managing an efficient distribution centre is undeniable. Best (2001: 46) presents another set of questions that should be considered as well: how many DCs should exist? Where should the DCs be located? How much inventory should be stocked at each DC? What customers each DC should serve? How should the customers order from the DC? How should the DCs order from vendors? How frequently should shipments be made to each customer? What should the service levels be? What transportation methods should be utilised?

Kengpol (2004: 61) suggested that after all potential new DCs have been identified; the quantitative analysis needs to be performed. He stated that there are three main elements that should be considered, First, the Transportation Model is used to calculate and compare each potential new DC in terms of “Transportation Cost” from major manufacturers to retailers based upon demand/supply. Secondly, combine “Management Cost” of each potential new DC with each transportation cost to be the “Operating Cost” and after that integrate with each “Capital Investment Cost” to achieve Net Present Value (NPV) of each potential new DC. Finally, the Aggregation Model can be applied to utilise its strength in combining qualitative criteria with quantitative analysis from NPV and then recommend the most appropriate new DC.

Hwang (2002: 297) and Baker (2004: 115) present the distribution centres structure among supply chain system should undertake design decisions include the following: 1) deciding the minimum number and locations of the DCs to supply with a required level, 2) optimal delivery route and for each DC, finally, 3) deciding the demand of product at the plant to supply all the DCs and demanders needs with a certain service level. Saenz (2000: 3) showed some operational examples that should be undertaken within the distribution centres design, which are summarised in Table 2.3.

Table 2.3: Classification of distribution centres design

Areas	Description
Reserve Storage Area	The storage operation is the first area designed when developing a DC concept design. Equipment requirements and solutions are typically separated into deep lane, single deep and small storage options. Space standards may be used to estimate square footage requirements, but layout drawings are required to effectively select the best storage solution.
Forward Picking Area	The products primary storage location is the first option for picking orders. A profile of customer orders is required to define the different picking types, including piece, case, and pallet picks. The cubic velocity of the products within these different pick types is used to establish the need for a forward pick area. An economic and qualitative analysis is required to make the final decision.
Dock Operations	Receiving products and shipping orders in the dock area is a key design consideration for the efficient flow of a facility. In addition, the application of cross-dock activities impacts the space required in the warehouse.
Material Handling:	The application of industrial vehicles and conveyor systems impacts of the overall DC concept design. The selection of material handling equipment is determined by the product characteristics and throughput requirements. When conveyor systems are involved, a layout is created to simulate the most efficient material flow
Warehouse Systems / Technologies	Warehouse management system (WMS) is the backbone of an efficient DC operation. From task interleaving to system directed operations, a WMS can drastically impact the labour requirements of a DC operation. An effective WMS increases availability of information, increases labour utilisation, improves inventory accuracy and reduces data entry errors. The application of warehouse technologies such as voice and pick to light systems should be evaluated to further enhance operations. Selecting the right technology requires a comparison of the system investment versus the potential savings

Source: Saenz (2000)

Nozick and Turnquist (1998: 175) said that one key question in designing a production-distribution system is locating DCs. There is a rich history of analytical work on facility location problems and one of the prime motivations for such analyses is locating distribution centres. However, it is generally assumed that demand is known with certainty, and thus inventory costs are either neglected or assumed to be unrelated to the DC location decision. However, the optimisation of the location decision requires careful attention to the inherent trade-off among facility costs, inventory costs, transportation costs, and customer responsiveness. In addition, Klote (2001: 2) stated that the goal of cost reduction provides motivation for centralisation of inventories. On the other hand, the goal of customer responsiveness provides motivation for having goods as near to the final consumer as possible. Thus, there is a basic conflict between these objectives, and locating DCs is a critical decision in finding an effective balance between them. Location decisions for DCs also affect transport costs.

2.2.8.5 *Regional distribution centres*

There are a number of terms relating to distribution centres, which should be distinguished in order to recognise the role that each term plays within the distribution process. A regional distribution centre refers to the distribution centres which are located in certain areas in order to serve a number of places. Regional distribution centres provide a number of services attributed to shippers, such as storage, cargo tracking, inland transport service, customs clearance service, consolidation, packaging, labelling, assembly and documentation services. Some of these attributes can be expected to be more important than others to customers, and not all customers will attach the same importance to any particular attribute. To develop a distribution centre service responsive to customer needs it is necessary to determine the individual importance of service attributes. DS Smith (2005) stated that in Germany and Spain manufacturers deliver products direct to the RDCs. whereas, in the UK and France, manufacturers supply products to Central Distribution Centres (CDCs). The CDCs replenish goods stocked at the regional distribution centres (RDCs) on a daily basis, which in turn provide a same or next day service to office product dealers in their geographic area. Within the RDCs, dealers provide a service that reduces their stockholding and delivery costs. In the UK a Dealer Distribution Centre (DDC) provides a service whereby products are picked, wrapped and dispatched on behalf of a dealer and sent directly to their customers via an independent delivery service.

Oum and Park (2004: 102) recognised from their survey on the location of the multinational RDCs that in order to have an effective response to intensified global competition, the multinational companies have been steadily reducing the number of warehouses located in different foreign countries and consolidating them into regional distribution centre that can serve a much wider geographic region. Oum and Park continuing their explanation of the companies' regional distribution centre by that defined as a base for providing raw materials, components, and/or finished goods to its surrounding region, in connection with the rest of its global logistics system.

In addition, Cowman (2005) said that if any partner in the supply chain has manufacturing plants that ship to regional distribution centres and then from the RDC to local distribution centres (LDC), then a function that the internal Enterprise Resource Planning solution must have is multi-level Distribution Resource Planning (DRP). Without this function, Master Production Scheduling (MPS) cannot be utilised properly and the supply chain breaks down.

2.2.8.6 *Operating the regional distribution centres*

The RDCs operations should be classified in order to ensure an effective management for the

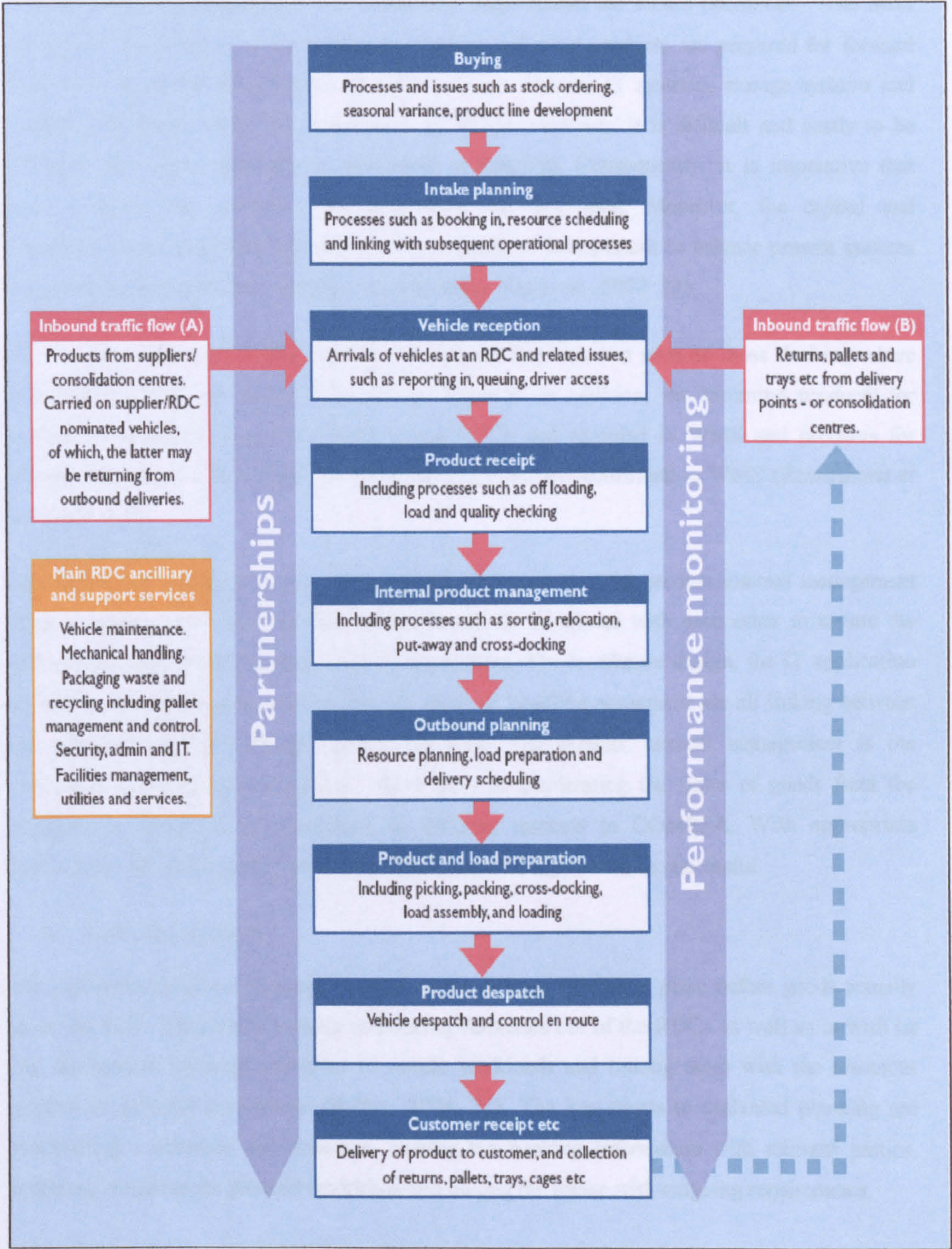
RDCs operations in general. Transport Energy Best Practice Programme (2005: 5) stated that there are three key operational stages of RDCs; these three stages are relevant in most operational settings. However, before exploring the details of each stage of the RDCs operations, there are three factors that should be considered when implementing these key stages in order to have efficient and effective operations of the RDCs as explained by Javalgi and Reisenwitz (2001: 45-47); *meeting customer service levels*, is one of the factors which aim at offering an appropriate and achievable service levels in partnership with others in the supply chain stages. Simultaneously, *the maximising of effectiveness while minimising costs*, is the second factor. All RDC users consider it as a cost rather than a profit centre, for instance, the critical upgrades and improvements to the WMS to improve the RDCs efficiency might be denied, due to the capital investment necessary. Finally, *minimising the environmental impact of operations* is the third factor, although the environmental performance may not be a priority of every RDCs operation, it is increasingly becoming a part of everyday business life as well as being a key government policy area. Figure 2.2 illustrates the key operational stages of RDCs.

- *Inbound activities*

At the inbound stage, when the RDC only sourced its products from one location, it would probably be quite easy to manage inbound deliveries. However, most RDCs tend to consolidate deliveries from many different suppliers; consequently, this could make the inbound operations complicated (Oum and Park, 2004: 105). However, this sounds to be positive in case of the RDCs of Egypt in the COMESA countries, due to their purpose in serving the COMESA countries from one location which is Egypt. However, the inbound movements are just one operation in a greater flow and are often driven by outbound operations, i.e. customer orders. Basically, the effectiveness of outbound operations will determine how much product can be brought into the RDC in the first place (Chopra and Meindl, 2004) and (Bruce, 2003).

As discussed before, the first stage of the RDCs operations which is concerning the inbound movement was determined and highlighted. This kind of managing the inbound activities requires a high level of proficiency and accuracy, otherwise the main objective of the RDC would not be achieved. The idea of the Egyptian RDCs is to make the exported Egyptian products close to the COMESA market at the first stage, and due to the high level of competition by both the African and foreign competitors, issues such as the intake planning should be precise, the vehicles reception is important to avoid any mismanagement regarding the right places for these vehicles to park and to be prepared for the unloading operation or the products receipt. The unloaded goods must be carefully transferred to the appropriate storage place to guarantee the quality and the condition of the products.

Figure 2.2: Key operational stages of RDCs



Source: Transport Energy Best Practice Programme (2005)

- *Internal product management*

Internal product management is the second key stage within the RDCs operations. The main purpose at this stage is to set processes in which unloaded products are prepared for forward movement, or placed into storage. The RDC design, internal IT systems, storage systems and handling equipment affect the performance of RDCs. However, it is difficult and costly to be modified once these elements are developed or installed. Consequently, it is imperative that these elements are carefully considered from the beginning. Moreover, the capital and infrastructure are long term investments. Accordingly, it is important to balance present systems costs and benefits with more strategic considerations (Gu *et al.*, 2007: 23).

At this stage, there are several activities which are implemented such as cross docking where incoming products are already prepared for dispatch. In addition, the incoming products for storage are allocated to specific areas in the RDCs and recorded in WMS and products for storage are put away by mechanical handling equipment and confirmed in WMS (Rowenhorst *et al.*, 2000: 520).

Concluding the second key activities of the RDCs operations, the product internal management stage is adding four vital activities which should be integrated with each other to ensure the effectiveness and competitiveness of RDC operations. The warehouse design, the IT application of WMS, the storage system forms and the material handling equipment are all linking between the inbound and the outbound bound activities. The product internal management is the systematic chronological procedures, which aims at accelerating the flows of goods from the suppliers in Egypt to the customers in different markets in COMESA. With appropriate performance monitoring and partnerships this essential stage would be successful.

- *Outbound activities*

The outbound activities planning involved is the process that takes place before goods actually leave the RDC. This could be done as booking deliveries out of the RDCs as well as in with its end destination, planning resources to handle workloads and linking these with the resources needed for inbound movements (Ballou, 2004: 34). The key stages in outbound planning are establishing a schedule and bookings, sharing the booking information with relevant parties, preparing resources for planned workloads and linking the intake with outgoing requirements.

Any time spent in developing the best specification for a vehicle is time well spent. Furthermore, the decisions which are relating to the vehicle specification could be made on several levels. Vos and Van den Berg (1996: 70) said that at a strategic level for instance, the vehicle specification involves making sure that the vehicle that is purchased or leased is the

most appropriate for the required work in addition to the RDCs objectives. This involves considering a wide range of factors, including purchase price, maintenance costs and running costs. Guiffida and Nagi (2006: 30) said that a cheap but poorly specified vehicle, unfit for its intended purpose, could end up costing more in fuel over its service life than an initially more expensive vehicle, but one which is more appropriate to its intended use.

Goetschalckx and Ratliff, (1988: 260) considered the distances delivery vehicles can drive each week over the course of a year, and concluded that it is best to maximise the loads in outgoing vehicles. Fewer part loaded vehicles mean fewer deliveries and lower costs. It might be possible to make improvements by modifying the units of distribution or by better vehicle specification. Customers should be involved to understand how often they actually need to receive deliveries. In addition, it might also be possible to reduce transport costs simply by encouraging customers to switch from daily to weekly deliveries (Vos and Van den Berg, 1996: 77). Bernon *et al.* (2003: 351) said that a more efficient use of a transport fleet could be made by scheduling deliveries and planning routes to minimise the journey times as well as to reduce the overall distance travelled. At the same time, the computerised routing and scheduling packages such as vehicle tracking systems and on board navigation units could help the transport operators to optimise the use of the transport fleet resource and enable it to react more quickly to events requiring changes to your operation (Byrne and Heavey, 2006: 421).

Concluding the three vital stages of operating the Egyptian RDCs in COMESA, it should be considered that the proposing of such type of classifying operations is subject to change due to several issues such as the strategic plans for the RDCs in the COMESA markets, market demands, availability of funds, marketing of Egyptian products, the general business environment, infrastructures difficulties etc. Therefore, the researcher presented the best practices that should be implemented when operating the RDCs in a certain region. This should be up to the international standards in order to serve the desired market, i.e. COMESA, thus ensuring the competitiveness in the region. This would not be the only factor to manage such RDC with this level of proficiency, it needs more strengthening factors such as partnerships between the Egyptian exporters and the importers or the traders from COMESA who are involved with such business. As well, the overall progress should be measured and monitored. The following section explores these factors in detail.

2.2.8.7 Strategic considerations in RDCs operations

The RDCs operations are influenced by other operations from both suppliers and customers among the supply chain. The entire system will be most successful when different parties are

integrated together in order to maximise efficiency. It is imperative to comprehend the different issues that could face the different parties involved with the RDCs in a supply chain i.e. suppliers, manufacturers, RDCs operators, retailers and customers. Thus, three main critical issues should be considered at the strategic level when managing the RDCs operations:- reliability, costs and information. These issues are summarised as follows:-

- *Reliability*

Hatton (1990) and Oslon (2003) agreed that all the parties or users who are dealing with the RDCs, such as suppliers and transport operators, would like their vehicles to be handled promptly upon arrival at the RDCs locations. In addition, those parties would like to unload their vehicles quickly in order to carry more goods (Christopher and Lee, 2001: 8). However, the RDCs operators expect vehicles from suppliers and sub-contractors to arrive at the agreed estimated time, with only the correct products on board and the necessary accurate documentation readily available. In this way the reliability issue could be successfully implemented and the RDCs operations effectively managed. Conversely, Snyder and Daskin (2005: 410) have stated there is a need for a uniform set of procedures to allow the RDCs users to manage the varied products in a controlled and traceable way.

- *Costs*

Burstein *et al.* (2003: 1190) said that the RDCs operations aim to minimise costs, however, the complicated nature of supply chains mean that one party may minimise their own costs at the expense of others. For instance, a large customer may minimise inventory costs by using JIT, but this may force a supplier to produce in smaller, more uneconomical batches that require more frequent transportation. According to the Transport Energy Best Practice Programme (2005) good practice in RDCs operations involves understanding the whole supply chain costs, not only by each member of the RDCs supply chain working at the expense of others (Mattsson, 2003: 420). However there are several financial aspects that should be considered such as: capital investment cost, possible residual or resale value, operating costs, costs relating to training staff, energy consumption maintenance, cost of consequential loss through equipment downtime and savings resulting from the use of the equipment.

- *Information*

Ensuring a high level of communication by sustainable notification of suppliers and transport operators with the up to date problems or delays, would make the RDCs operator able to reduce the level of queuing at the RDCs gate as mentioned by Nyberg (1994: 107). Information helps to guarantee that different parties involved in RDCs operations work towards the same goals.

For example, advance notice of difficulties from one party will help another adjust their schedules and minimise disruption to their activities. It is significant to understand the different objectives of the various parties that deal with the RDCs operations and to realise that by sharing information with all the RDCs users, this could make effective improvements to the RDCs operations (Gadde, 2001: 2645).

2.2.8.8 *Partnerships with the regional distribution centres*

The Egyptian RDCs in COMESA countries could be managed with many different organisations, which make partnerships an essential ingredient of any system. Close collaboration with other organisations up and down the supply chain, such as suppliers, customers and contractors, is ensuring efficient day to day operations, and might enable these RDCs to identify other areas where changes can be made (Johansson *et al.*, 2000: 149). However, the idea of partnerships could be extended to the staff within the organisation. The performance in an organisation improves when its employees have a feel valued by management and have a sense of ownership of what they are doing (Chopra and Meindl, 2004). Thus, three phases of partnerships could be utilised in order to justify the efficiency of the RDCs operations as recommended by Transport Energy Best Practice Programme (2005) and Kobrin (1991: 20) which are as follows:-

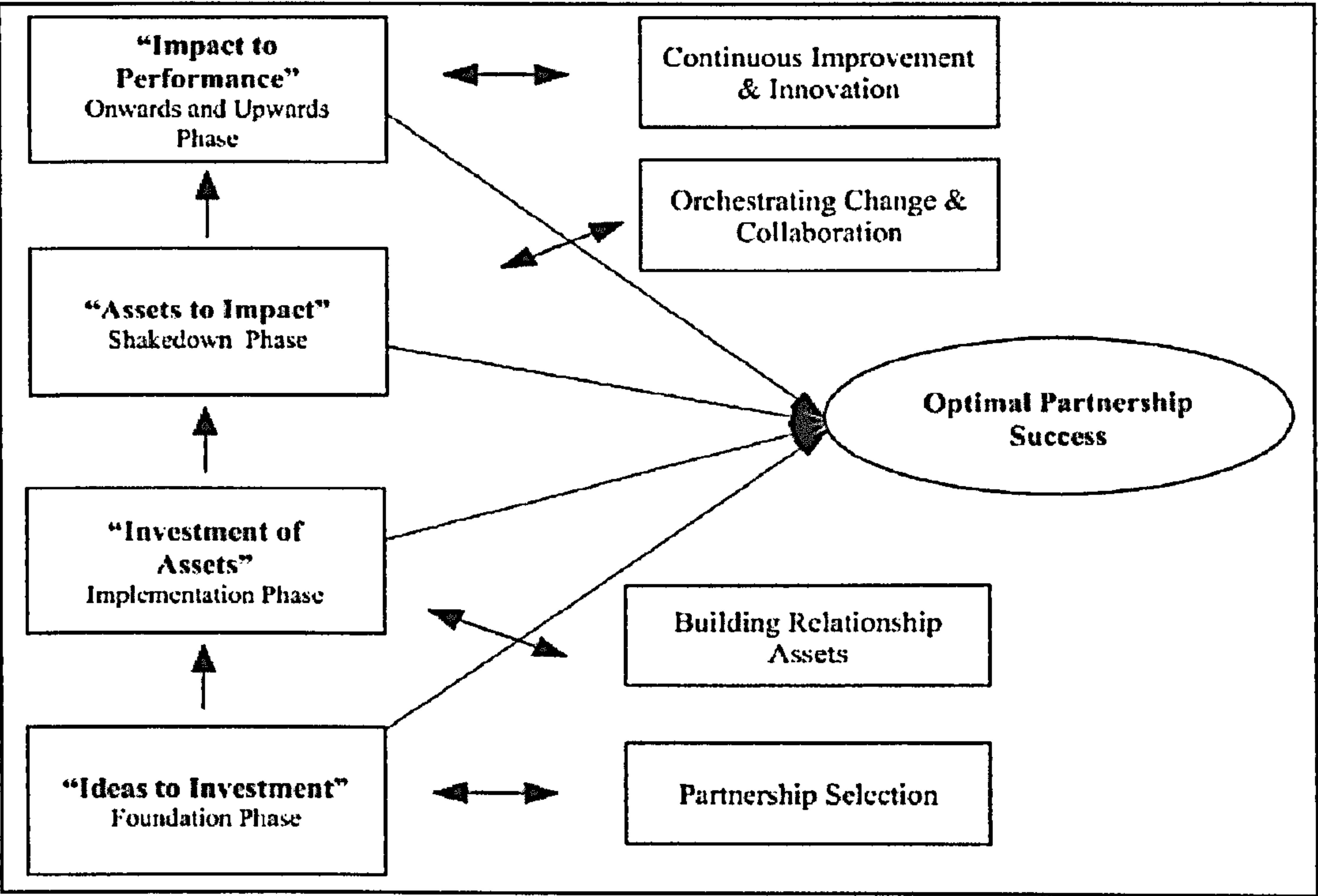
- *Internal partnerships*, which mean the human resources at the organisations, the recruitment and retention, have a tendency to be problems for most RDCs operators. Regardless of the recent advances in technology, most physical processes in the RDCs are actually performed by people, which means that employees are the most valuable asset. Due to the RDCs tending to operate together in clusters at strategic locations, employees can easily move from one facility to another when the market is strong.
- *External partnerships*, which mean the suppliers, customers and contractors. Due to the RDCs being simply one link in a greater supply chain, the efficiency of the operations would depend to a large part on the efficiency of other parties they work with. It could overcome many of the problems that are experienced in the RDCs operations, simply by improving communication with suppliers and customers.
- *RDC freight quality partnerships*, which mean the partnerships between the freight industry, local government, business, community groups and other relevant stakeholders. Javalgi and Reisenwitz (2001: 44) said that the main aim of a partnership in this case is to develop an understanding of freight transport issues and problems, and to promote constructive solutions that take into account certain issues such as

environmental and social concerns. However, there have been a relatively small number of partnerships developed to date, and there is clearly a range of issues that are of common interest to RDCs operators, local authorities and the general community, such as traffic congestion and deliveries at unsocial hours (Coyle *et al.* 2003:419).

Partnerships provide an ideal forum in which to explore these issues and find solutions to problems that may affect operations as well as the other members in the supply chain (Lambert and Stock, 2000: 239).

Therefore, Maheshwari *et al.* (2006: 282) have provided a framework for optimal partnership success. Figure 2.3 shows that it is a series of four linked models that correspond to the phases of partnership lifecycle: foundation, implementation, shakedown, and onwards and upwards. The outcomes of one phase become starting conditions for the next. Thus, decisions and actions in a phase may subsequently increase or decrease the potential for optimal success.

Figure 2.3: The optimal partnership success framework



Source: Maheshwari *et al.* (2006)

The framework is based on several key issues that are essential to the understanding of the success of partnerships and are summarised as follows: the necessity for successful outcomes are not always sufficient for success such as creating a high quality partnership “assets”, a partnership on track for success can be derailing by an external event like competitor responses

or changing external conditions like recession. Each phase generally involves different groups of people the framework directs attention to the communication difficulties that accompany the handoffs from one phase to the next. The framework draws attention to how, when, and why innovation investment is converted to favourable performance.

This partnership framework could be implemented with the Egyptian RDCs in the COMESA by considering several issues related to each phase within the framework.

In the foundation phase, determining the suitability of partnerships is primarily based upon the analysis of benefits and risks of the proposed initiative. While determining the feasibility of partnerships is based upon factors such as the level of trust that can exist between partners which determines whether the partnership would be feasible, e.g. reputation, mutual goals, two way information sharing, social bonds, and interdependence. In the implementation phase issues such as creating mutual trust, commitment and physical infrastructure as well as standardising and integrating processes. The shakedown phase concerns issues such as providing leadership, managing asymmetry, building partnering skills, managing conflicts and managing performance. The last phase onwards and upwards concerns continuing relevance, building on partnership experience, and enhancing partnering capabilities.

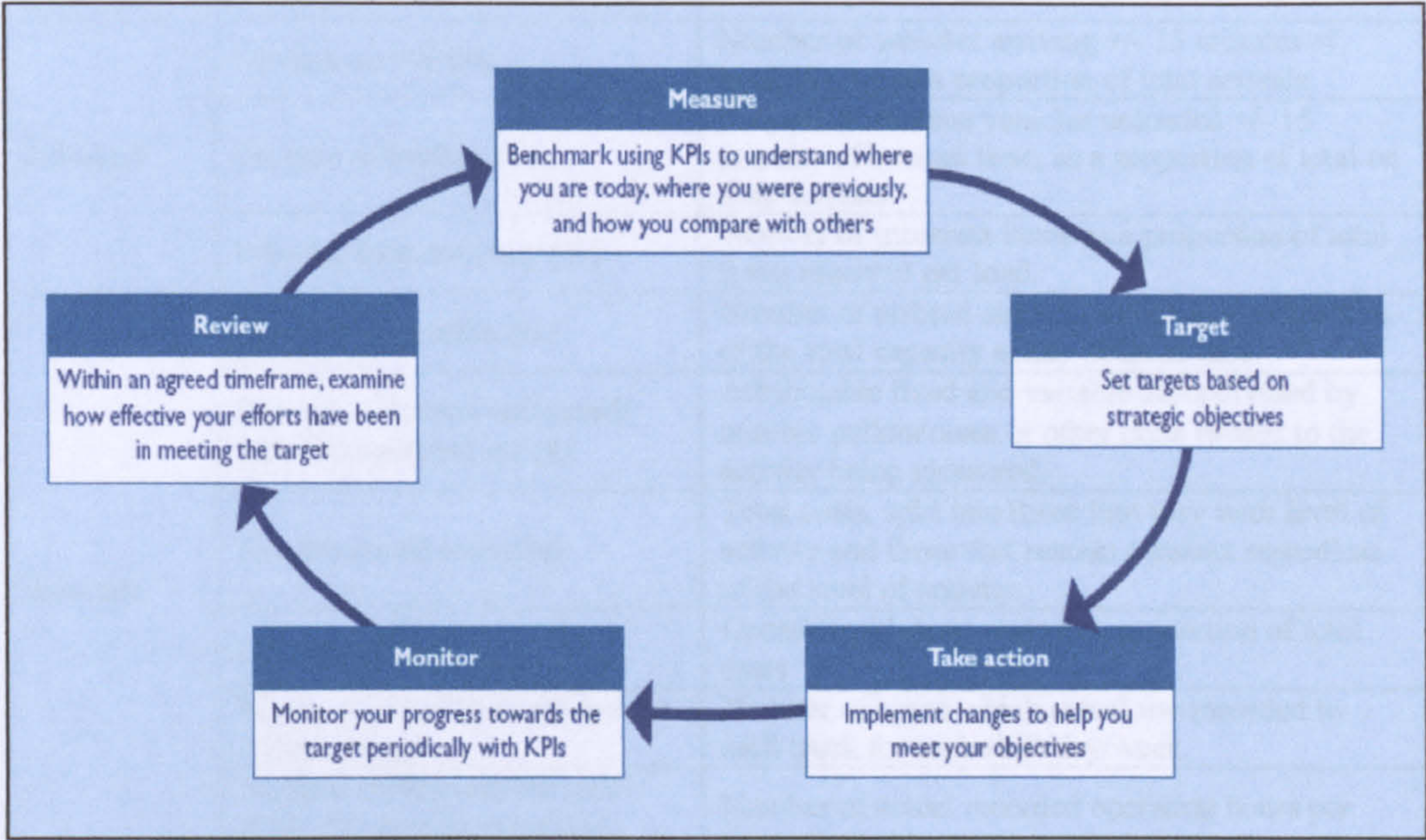
Optimal partnership framework is about approaching optimal success in four broad phases. Therefore, the business organisations could significantly improve the realisation of partnering benefits by focusing on the critical issues in the partnering process. In addition, organisations aware of the critical issues in the various phases of supply chain partnerships can make systematic efforts to manage them better by providing training, incentives, leadership, and an overall environment that facilitates partnering and the realisation of partnering objectives (Maheshwari *et al.* 2006: 289).

2.2.8.9 Monitoring the performance of regional distribution centres

It is important to measure the RDCs performance (Johnson 2006: 191). There are several methods for conducting performance monitoring. Benchmarking, targeting, monitoring and reviewing are the methods which allow building on the positive changes to the RDCs operations (Rosenzweig, 2003: 437).

The starting point for any performance monitoring system should be internal benchmarking (Chow *et al.*, 1995: 307). In addition, it is preferable to compare the RDCs operations with others. Figure 2.4 shows the key processes in a benchmarking and performance monitoring system.

Figure 2.4: The key processes in a benchmarking and performance monitoring



Source: Transport Energy Best Practice Programme (2005)

The Key Performance Indicator (KPI) is an effective management tool (Jabnoun and Sahraoui, 2004: 77). It is to support the RDCs operators to run the operations properly. However, in case there are many KPIs developed and selected, it is very complicated to measure reliably, and then it starts to lose its real usefulness to the operation. KPIs need to be kept simple and be easy to measure as mentioned by Frohlich and Westbrook (2001: 191).

Careful consideration should be given to the type of KPIs that should be chosen to measure and monitor the RDCs performance. In addition, operational staff need to see the real value in monitoring performance levels, if they become absorbed in recording many unclear individual KPIs, they are likely to lose sight of the wider operational benefits (Rosenzweig, 2003: 435). Thus, Table 2.4 presents the contents of a range of KPIs that are commonly used by RDC operators.

Table 2.4: The commonly used KPIs by RDCs operators

Inbound	On time arrival (%)	Number of vehicles arriving +/- 15 minutes of booked time as a proportion of total arrivals.
	On time unloading (%)	Number of on time vehicles unloaded +/- 15 minutes of booked time, as a proportion of total on time arrivals.
	Inbound load accuracy (%)	Number of incorrect items as a proportion of total items received per load.
Internal	Capacity utilisation (%)	Number of utilised stock locations as a proportion of the total capacity at any point in time.
	Cost per unit received/stored/picked/dispatched etc (£)	Attributable fixed and variable costs divided by number pallets/cases or other units related to the activity being measured.
	Fixed/variable costs (%)	Total costs, split into those that vary with level of activity and those that remain constant regardless of the level of activity.
	Labour costs (£)	Operational labour costs as a proportion of total costs
	Mechanical handling equipment utilisation (n)	Number of hours which actual use recorded by each truck for each shift/day/week.
	Number of very narrow aisle truck movement cycles (put away and retrievals) per hour (n)	Number of actual recorded operating hours per truck divided by number of movements
Outbound	Picking productivity (n)	Number of pallets or cases picked in each hour devoted to picking activity (This can be measured by operator or as a total)
	Picking accuracy (%)	Number of incorrect items picked as a proportion of the total picked.
	On time dispatch (%)	Number of on time loads completed +/- 15 minutes of scheduled time as a proportion of total loads.
	On time in full deliveries (%)	Number of deliveries made on time with exact load as a proportion of total deliveries.
Inbound/ Outbound	Pallets/unit throughput (n)	Number of pallets/units received and/or dispatched per hour/shift/day/week/month/year.
	Case or other individual throughputs (n)	Number of cases or other individual units received and/or dispatched per hour/ shift / day/ week/month / year.
	Loading bay utilisation (n)	Total number of vehicles unloaded/loaded per shift/day divided by number of bays.

Source: Transport Energy Best Practice Programme (2005)

As is shown in Table 2.4, once the KPIs have been selected and a way of measuring them has been established, the next step is to set targets for improvement. This is where the external benchmarking could be very useful especially when comparing what other similar organisations/operations are achieving. While it might not be possible to know what the direct competitors are doing, it might be useful to visit RDCs that are of similar size and have a similar range of products. This can at least give the RDCs operators an idea of the possible aims to be achieved. Rather than comparing absolute numbers, it might want to aim for general improvements to the RDCs operations in percentage terms (Gunasekaran *et al.*, 2004: 333). In addition, targets don't need to be perfect; however, it is actually the act of setting one and

monitoring the RDCs progress towards achieving the expected performance of the RDCs operations.

Furthermore, monitoring and reviewing is an ongoing process (Stevens, 1990: 27). Gunasekaran *et al.* (2004: 335) adds that in the case where the target was met very easily, there is a need to go back and look at the planned benchmarking, and increase the target. On the other hand if it falls short of the target, there should be another try to understand the reason and adjust the future target levels.

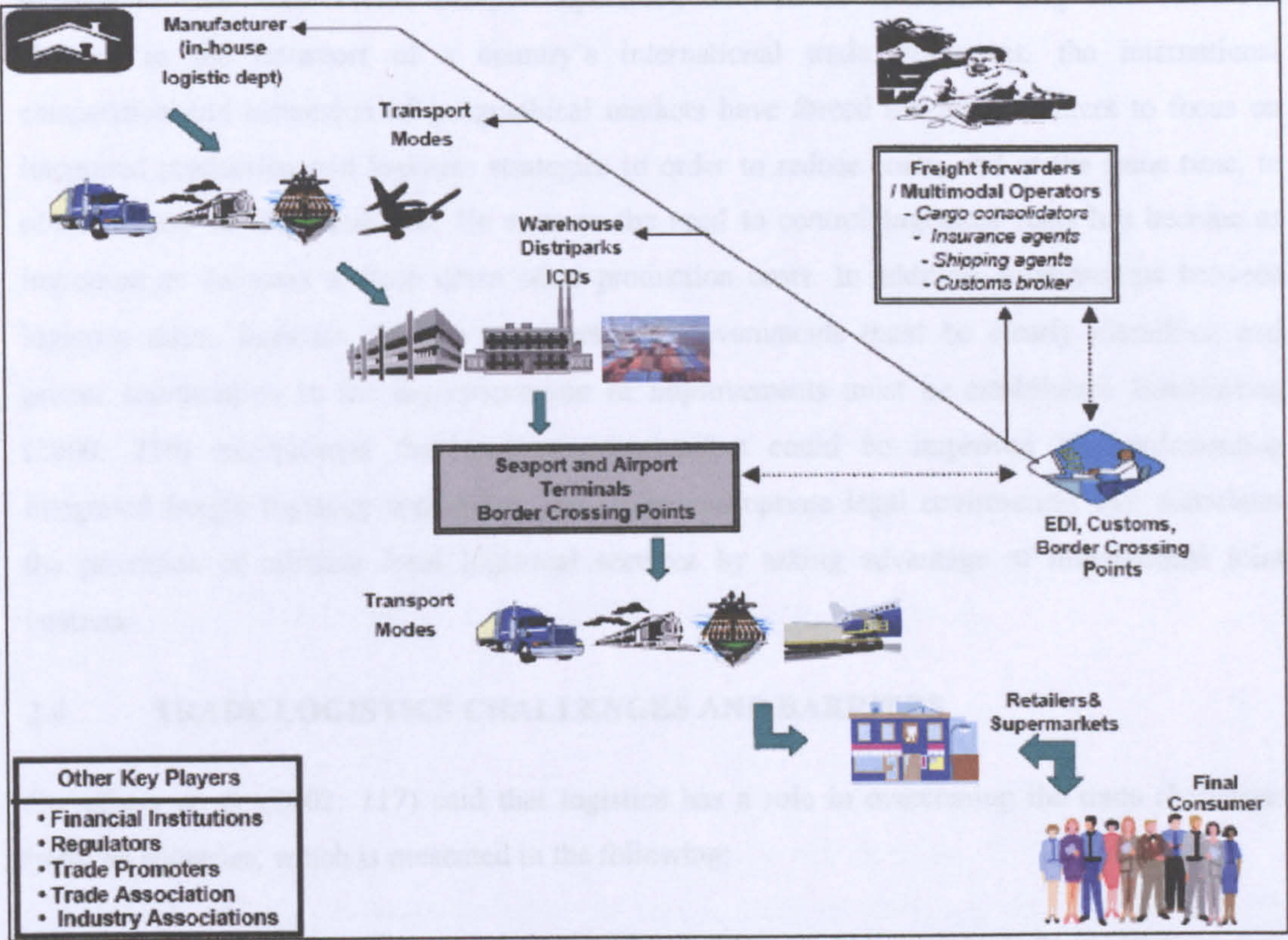
2.3 THE ROLE OF LOGISTICS IN SUPPORTING INTERNATIONAL TRADE

Trade is crucial to the countries' economies where logistics plays an important role in facilitating the trade for industries and markets (Fisher, 2002: 7). In this process, logistics activities are considered as trade intermediaries as they constitute a vital link between the industries and its market and supply sources. They are outlining an integral element of the country's trade competitive strategy (Branch, 2000: 49). For this strategy to succeed however, all potential barriers hindering the competitiveness of trade must be tackled and reduced to the minimum possible (Roberts and Tybout, 1997: 5).

This is especially true in the era where information technology applications make it possible for instant communication, payment for goods and services are increasingly negotiated and orders are handled electronically. This in turn has led to the enormous pressure on logistics to ensure efficient delivery (Christopher, 1998: 56).

The benefit of logistics and supply chain management excellence is enormous for the national economy (Ballou, 2004: 21). Apart from maintaining cost competitiveness of business operations, it attracts foreign direct investors to establish importing, production and distribution facilities therefore increasing employment opportunities and income levels. This should be in line with the government's objective of making the country the procurement centre/distribution centre for the entire region (Hugos, 2003: 105). Competitive advantage acquired by efficient logistics management also serves the interest of the general public. It has the potential to minimise import and export prices and inflation as well (Chopra and Meindl, 2004: 36). This in turn gives exporters a fair opportunity, reliable, rapid delivery and relatively cheaper prices in an increasingly competitive world market. Figure 2.5 illustrates the logistics flows role that supports the international trade transactions.

Figure 2.5: Logistics role in international trade



Source: Nesathurai (2003)

As illustrated in Figure 2.5, logistics values depend on geography, time and value. This is clear from the journey of the products from their origin to the final destination where freight and transportation connect buyers and sellers. However, there are a number of stages involved. Freight and transportation particularly, encompasses many modes including truck, sea, rail and air, all with varying issues, costs and levels of service.

The essence of supply chain management is managing flows across departments and often companies (Prahinski and Kocabasoglu, 2006: 520). However, the advancement in technology and I.T. enables coordination between different modes and nodes (Rodrigue *et al.*, 2006: 162). Consequentially, a high degree of management integration is vital. This concept is increasingly replacing traditional fragmented approaches to buying, storing and moving goods. Given the complexity of logistics processes that involve multiple players, exporters/shippers must evaluate various options that can ultimately minimise their overall cost and increase the competitiveness of their products (Nesathurai, 2003). Their choice depends on several factors such as: type of industry, nature of product (light or heavy, fragile or sturdy, perishable or durable), high or low in value per cubic metre, distance to be shipped, available means of transportation and relative freight cost (Branch, 2000: 76).

Therefore, Boey (2003) states that a coherent integrated logistics approach can bring short term benefits to local traders and transport operators, as well as consistent long term structural changes in the transport of a country's international trade. Moreover, the international competition and expansion of geographical markets have forced the manufacturers to focus on integrated production and logistics strategies in order to reduce costs, and at the same time, to obtain higher service standards. He stresses the need to control logistical costs has become as important as the need to keep down other production costs. In addition, relationships between logistics users, logistics services providers and governments must be clearly identified; and proper coordination in the implementation of improvements must be established. Banomyong (2000: 210) recommends that trading opportunities could be improved by implementing integrated freight logistics operations, and by an appropriate legal environment that stimulates the provision of efficient local logistical services by taking advantage of international joint ventures.

2.4 TRADE LOGISTICS CHALLENGES AND BARRIERS

Carruthers *et al.* (2002: 117) said that logistics has a role in overcoming the trade challenges between countries, which is presented in the following:

“Reducing the cost and improving the quality of logistics systems improves international market access and leads directly to increased trade and through this to higher incomes and the scope for significant reductions in poverty”

However, this objective could face several barriers that affect the efficiency and the effectiveness of implementing a proper logistics system within the international trade process.

Recent studies and books such as Branch (2000), Rushton *et al.* (2000), Devlin and Yee (2005), PwC Global (2006) and US Export.gov (2006) have indicated several barriers and challenges of international trade logistics, these challenges are presented in the globalisation of industries worldwide, increasing customer service expectations, compressing time and place utilities within the supply chain, maximising revenues, mergers and acquisitions within the traded industries.

These challenges are considered important issues facing the logistics and supply chain of international trade. In addition, there are other external challenges, which are increasing the pressure on logistics, such as deregulation, and other challenges deriving from changes within logistics, such as improved handling or information technology as stated by Rushton *et al.* (2000: 73). However, there are trade barriers that are affecting the flows of trade logistics as

well. It is possible to determine these challenges and barriers at various points along trade logistics.

2.4.1 Logistical challenges

2.4.1.1 Outsourcing logistics activities overseas

Companies are seeking out new markets and cheaper sources of raw materials and components throughout the world. For logistical support they rely on 3PLs. In many cases, due to the unique capabilities of 3PLs in specific geographical areas, companies end up working with different logistics service providers in different areas for different logistics activities (PwC Global, 2006). In order to efficiently manage operations across all their global facilities, companies now feel the need for a single logistics service provider that can handle all of their logistics needs. This has been the driving force behind a number of 3PL mergers in recent years.

2.4.1.2 Maximising revenues

Business logistics activities face significant challenges in recording and collecting all of the revenue to which they are entitled. This is especially true because of the high volume of transactions and the decentralised nature of service delivery (PwC Global, 2006). However, incentives and discounts are not always communicated accurately between sales, operations and finance, resulting in errors and customer disputes. Moreover, failure to resolve order-specific information results in unbilled revenue or costly loss-related claims. And finally, unclear or inaccurate terms result in disputes between parties; third-party carriers often have no incentive to work with originating shippers to clear disputes over volume discounts and surcharges (US Export.gov, 2006).

2.4.1.3 The external logistics environment

The external logistics environment is portrayed in the development of a number of different economic blocs such as the EU, NAFTA, COMESA, SADC and ASEAN, which have to change their political and economical practices to suit the deregulation within their markets that imposes a particular impact on the logistics strategies to cope with it. Some examples of these changes could be transport deregulation, harmonisation of legislation across different countries, reduction of tariff barriers and eliminating of cross-border customs requirement and taxes and the respect of quality standards of products or services trade to these countries (Rushton *et al.*, 2000: 81). This challenge has led to reassessing the overall logistics strategy from the national approach to embrace a non-national structure.

Moreover, the increasing concern of green logistics or environmental issues in Europe is imposing a challenge to this market. This has affected road freight movements at weekends, the design of products to facilitate repair and recycling packing, and added to this the rapid changes in technology and the quality of labour available (Viswanadham *et al.*, 2001: 4).

2.4.1.4 Physical supply

The inbound logistics or physical supply have challenges to be undertaken, which appeared on offering a new manufacturing technology that can accommodate more complex production requirements and more products variations (Ballou, 2004: 9). These challenges affect the product range by shortening the product life cycle and increasing the demand for time sensitive products such as the fresh and prepared foods. All these challenges impact the stock levels especially the speed of delivery required which may strongly influence the flows of trade between international markets.

2.4.1.5 Transport /distribution

Distribution plays a significant role in logistics, which is shown by the means of transport that carry the products to the final destination. Costs, risks and generating profits are among the significant issues in distribution and transport. Therefore, the third party distribution or the outsourcing of distribution operations is considered a challenging issue for the outsourcer (Devlin and Yee, 2005: 441).

2.4.1.6 Retailing

As retail management aims to maximise selling space at the expense of stockrooms, a reduction in depots stock-holding due to cost saving policies, the JIT philosophies, and the vendor managed inventory policies are all impacting the trade logistics arrangements (Rushton *et al.*, 2000:86). Consequentially, the logistics operations must perform with greater efficiency but with fewer safeguards.

2.4.2 Trade barriers

Trade barriers generate a serious impediment to the logistics process, which is responsible for the flow of trade between nations. Nations impose various policies, which represent barriers to other nations wishing to enter these markets, for different reasons. The most popular reason is to protect the domestic industries or range of industries from imported goods to ensure the competitiveness of local production and to preserve employment levels. Some nations tend to

restrict or control the level of imports, thereby managing the trade balance on a bilateral or multilateral country basis (Branch, 2000: 174).

In addition, Nathan Associates Inc. (2003:21) stated that the trade barriers for foreigners to enter local markets include the tariffs imposed by the different countries on imported products in order to ensure that they are not priced more competitively than domestic manufacture. Moreover, nations enforce import tariffs and higher taxation on overseas companies resident in the country to increase the government's revenue.

Some countries maintain product standards and specifications or develop more difficult measures for imported products than for domestically produced goods to impede foreign producers to enter the local markets (Burrell and Ghoneim, 2004: 9).

Moreover, some countries discourage foreign exporters from entering their markets by providing a tedious administrative customs entry examination system, which is inadequate in terms of resources to cope with the import volume, thereby generating delays and complexity by having all the documentation in the domestic market language. Therefore, foreign traders will not be willing to trade within these countries and bear all the routine and tedious procedures.

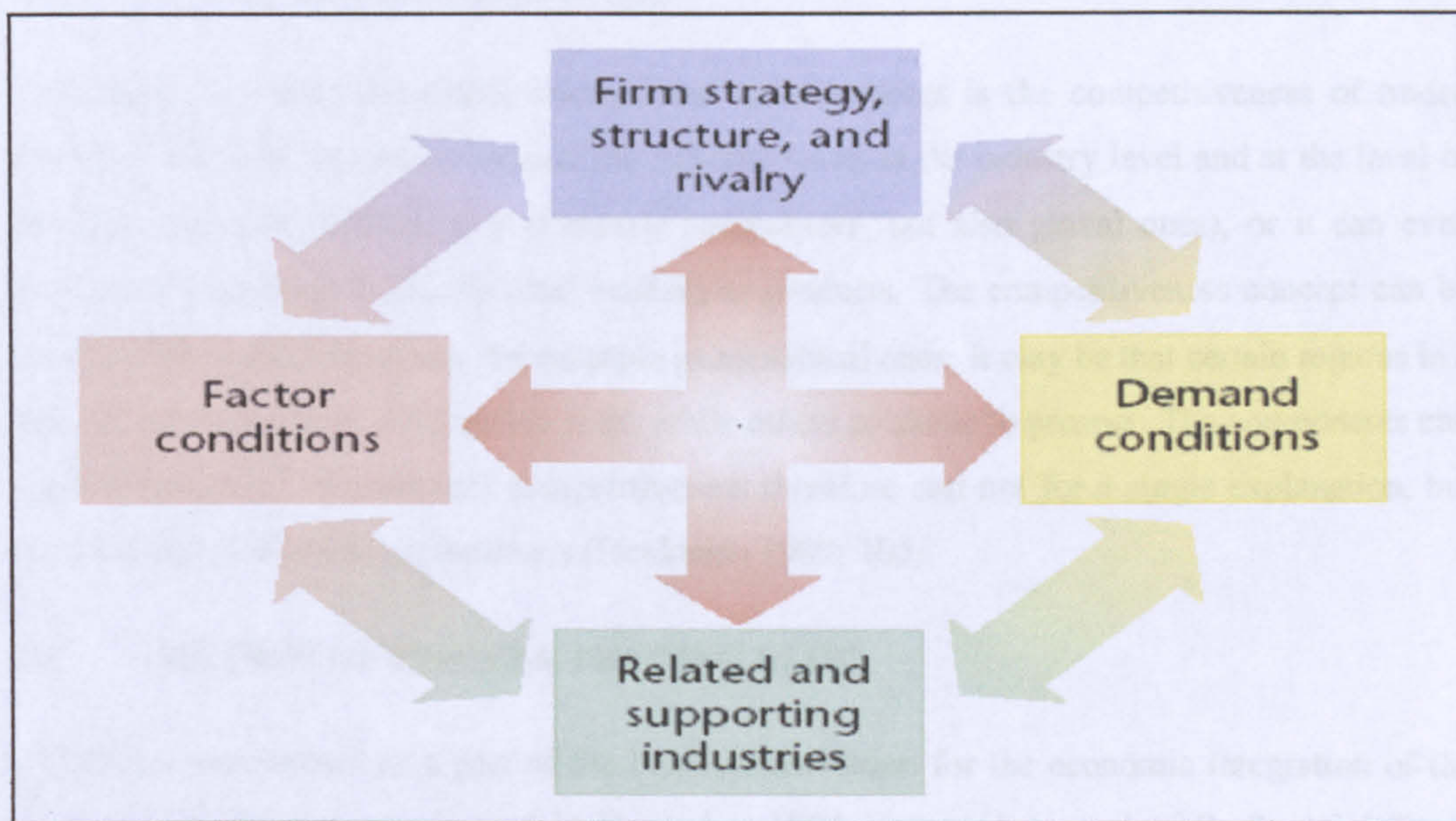
2.5 COMPETITIVE ADVANTAGE IN INTERNATIONAL TRADE

Foreign trade is an age-old phenomenon (Deardorff, 1998: 19). Obviously, international trade is the exchange of goods and services across international boundaries or territories. In most countries, it represents a significant share of GDP. Industrialisation, transportation, globalisation, multinational corporations, and outsourcing are all having a major impact as well on the international trade among countries as mentioned by Dixit and Norman (1980: 10). Thus, increasing international trade is the usual primary meaning of globalisation. Janeba (2007: 781) stresses the benefits of international trade which allow a country to concentrate on the manufacture and export of products that can be produced most efficiently in that country. In addition, he added that the gain from trade theorem is one of the most fundamental principles in international trade theory, and perhaps in economics more generally. Certainly, trade involves distributional effects, but the gain in a country's aggregate output can often be used to make all individuals better off (Fujita *et al.* 1990: 40). Therefore, there are many descriptive and prescriptive theories associated with the international trade, beginning with Mercantilism, the concepts of absolute and comparative advantage, country similarity theories and Porter's determinants of national competitive advantage.

Regardless of the advantages a country may gain by trading, international trade will not ordinarily occur unless companies within that country have competitive advantages and perceive that international opportunities are greater than domestic ones (Porter, 1998b: 19). Porter (1998b: 14) identifies two basic types of competitive advantage: cost advantage and differentiation advantage. A competitive advantage exists when the firm is able to deliver the same benefits as competitors but at lower cost (cost advantage). Or deliver benefits that exceed those of competing products (differentiation advantage). Therefore, a competitive advantage enables the firm to create superior value for its customers and superior profits for itself.

Therefore, Porter has presented four determinants of national competitive advantage as represented in the Porter diamond. The roles of chance and government are also critical. Usually all four determinants need to be favourable if a given national industry is going to attain global competitiveness. Figure 2.6 illustrates Porter's diamond regarding gaining competitive advantages among international trade.

Figure 2.6: Porter's diamond



Source: Porter (1998a)

Demand conditions refer to the nature and size of demand in the home market that lead to the establishment of production facilities to meet that demand. A factor condition is the resource availability (inputs, labour, capital and technology) that contributes to the competitiveness of both firms and nations that compete in particular industries. A related and supporting industry refers to the local presence of internationally competitive suppliers and other related industries that contribute to both the cost effectiveness and strategic competitiveness of firms. A firm's strategy, structure and rivalry are the creation and persistence of national competitive advantage

requiring leading-edge product and process technologies and business strategies. However, the existence of the four favourable conditions often represents a necessary but not a sufficient condition for the development of a particular national industry. Even when abundant, resources are ultimately limited, thus firms must make choices regarding their pursuit of existing opportunities. Further, given the ability of firms to gain market information and production inputs from abroad, the absence of any of the four conditions within a country may be overcome by their existence internationally.

Therefore, international trade occurs because of the completion of mutually satisfactory transactions between or among importers and exporters (Markusen 2002: 79). The strategic advantages of exports include the utilisation of excess capacity (that in turn leads to improved economies of scale and cost competitiveness), the potential profitability due to the nature of demand and government policies found in foreign markets, as well as overall business risk minimisation. Strategic advantages of imports include lower-cost, higher-quality products, product line differentiation, expansion opportunities and overall business risk minimisation (Porter 1998a and Choi and Harrigan 2003).

Concluding the main issue that international trade requires is the competitiveness of traded products. There is competitiveness at the national level, at the industry level and at the level of the firm (not just in relation to domestic competitors, but also global ones), or it can even theoretically be limited to individual markets or products. The competitiveness concept can be divided into other dimensions, for example geographical ones. It may be that certain regions in a country are losing their competitive edge, while others continue to prosper. The components and various aspects of international competitiveness therefore call not for a single explanation, but for a variety of possible explanations (Hokkanen 1989: 105).

2.6 REVIEW OF COMESA TRADING BLOC

COMESA was formed as a part of the Pan-African vision for the economic integration of the continent. COMESA was formed in December 1994, as a replacement of Preferential Trade Area (PTA) which had existed since 1981. It has 19 members at present which are: Burundi, Comoros, the Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Seychelles, Sudan, Rwanda, Swaziland, Uganda, Zambia, and Zimbabwe (COMESA, 2007). The total annual trade is around US\$ 222 billion in 2006. The import bill is around US\$ 98 billion and an export volume is US\$ 123 billion. Moreover it has a combined GDP of over US\$ 674 billion, and the population of over 380 million growing at an average of 2.5 % per annum. The total COMESA land area is almost 13

million km2, with a remarkable mineral wealth represented in oil, copper, phosphate, iron, uranium, nickel, and cobalt (IMF, 2006).

The member states of Djibouti, Egypt, Kenya, Madagascar, Malawi, Mauritius, Sudan, Zambia and Zimbabwe agreed to eliminate tariffs on goods which conform to the COMESA Rules of Origin. Burundi, Rwanda, Libya and Comoros joined the FTA, following an earlier decision by Swaziland to seek the approval of the Southern Africa Customs Union (SACU), of which it is also a member, to join COMESA. The Congo DR., Eritrea, Ethiopia, Seychelles, Uganda and Comoros are yet to join the FTA (ECA, 2004b) and (COMESA, 2006). Figure 2.7 presents the COMESA countries (See Appendix 1).

Figure 2.7: Map of COMESA



Source: COMESA (2006)

On the other hand, Lesotho, Mozambique, Tanzania, Namibia and Angola withdrew from COMESA in 1997, 1998, 2000, 2003 and 2007 respectively. These five countries have withdrawn from COMESA because of duplication between COMESA and SADC regarding trade policies in the region (Daya, 2007). Angola in particular was considered as a COMESA member during the period in which the researcher has undertaken his study, however, in March 2007, Angola has withdrawn its membership from COMESA and consequently the researcher has recalculated all the statistics, volumes of trade as well as its Intra and Extra COMESA trade, in order to update this study to follow up the structural changes in COMESA bloc.

The aims and objectives of COMESA have been designed so as to remove the structural and institutional weaknesses in the member states by pooling their resources together in order to sustain their development efforts either individually or collectively. These are as follows:

- To attain sustainable growth and development of the member states by promoting a more balanced and harmonious development of its production and marketing structures;
- To promote joint development in all fields of economic activity and the joint adoption of macroeconomic policies and programmes; to raise the standard of living of its peoples, and to foster closer relations among its member states;
- To co-operate in the creation of an enabling environment for foreign, cross-border and domestic investment, including the joint promotion of research and adaptation of science and technology for development;
- To co-operate in the promotion of peace, security and stability among the member States in order to enhance economic development in the region;
- To co-operate in strengthening the relations between the Common Market and the rest of the world and the adoption of common positions in international form; and
- To contribute towards the establishment, progress and the realisation of the objectives of the African Economic Community.

On the other hand, there are four organs of COMESA which have the power to take decisions on behalf of COMESA, these being: the Authority of Heads of State and Government; the Council of Ministers; the Court of Justice; and the Committee of Governors of Central Banks. The Intergovernmental Committee, the Technical Committees, the Secretariat and the Consultative Committee make recommendations to the Council of Ministers, which in turn make recommendations to the Authority (COMESA, 2006).

Moreover, Abdel-Baki (2003: 23) said that the COMESA has several achievements regarding the member states which could be summarised as follows (COMESA, 2006):

- COMESA, as well as its predecessor the PTA, has achieved a lot in the area of trade, customs, transport, development finance and technical co-operation. Impressive progress has also been made in the productive industry and agriculture sectors.

- Trade facilitation and trade liberalisation measures are bearing fruit. Intra-COMESA trade has grown to US\$ 9.7 billion in 2006, and studies indicate that this can increase to about US\$ 4 billion annually. The challenge facing COMESA is to exploit this potential further.
- As a result of COMESA traffic facilitation measures, transport costs have been reduced by a factor of about 25% and efforts are underway to reduce them further.
- In the sector of telecommunications, special emphasis has been placed on network development to enable direct telecommunication links through more reliable infrastructure in order to avoid third country transit systems, which prove to be very costly.
- COMESA has established several important institutions including the PTA Trade and Development Bank, the COMESA Clearing House, the COMESA Re-insurance Company and the COMESA Leather and Leather Products Institute.
- A number of decisions have been taken to make the COMESA Clearing House more responsive to the current needs of member States, especially the private sector, including the introduction of the COMESA Dollar to replace the UAPTA as the new Unit of Account of the Clearing House.
- The Re-Insurance Company has, since its establishment in 1992, been able to carve out a reasonable share of the regional insurance business and is now transacting business in 19 countries. The share capital has risen to US\$ 16.07 million. This shows the great business potential of the COMESA region in terms of re-insurance.
- COMESA now recognises that in order to increase levels of intra-regional trade, there is a need to address the regulatory and policy aspects of transport and communications to make the movement of goods, services and people between countries in the region easier and cheaper; to create a legal framework and enabling environment within which private sector business can operate effectively in the region, and to harmonise macroeconomic and monetary policies.
- COMESA also recognises the need to promote investment in the region and addresses this issue through facilitation of bilateral agreements; promoting export drives by individual member States, and identifying specific projects which have the potential to act as growth poles between two or more member States.

However, ACCE (2006: 19) mentioned that the COMESA bloc is playing a remarkable role in supporting the African economies in the eastern and southern of Africa. As long as the plans of COMESA are implemented slowly but the positive outcomes of these plans are effectively worked to help in assisting the COMESA countries to achieve its goals.

2.7 REVIEW OF EGYPTIAN EXPORT ENVIRONMENT

Egypt is a large and fast expanding economy in Africa. It is the largest in the Arab world, the second largest in the Middle East and North Africa, and is in the process of positioning itself to become one of the fastest growing emerging trades in the world by the year 2010 (MFTI, 2004: 28). Merrill Lynch (2005) expressed their belief that Egypt's reforms had proved successful in several significant aspects. They said that the outcome places Egypt among the best performers in the emerging markets of Eastern Europe, the Middle East and Africa. Capel (2004) stated:

“This country represents a giant consumer market that could become one of the biggest markets in the region, and one of the main links between the Arab market and those of the Asian and African continents” .

The World Bank (1994), Fawzy (1998), Ghoneim (2000), Srinivasan (2005), World Economic Forum's (2005) and ACCE (2006) have presented analytical studies on the importance of Egyptian export performance on Egypt's economy. Thus, Egypt has an overall ranking of 27 out of 49 countries that are covered, a very favourable position when it is noted that the total includes the 25 most advanced OECD economies. The report presented that major strengths are seen to be the country's manufacturing base, industrial location and fast growing services sector. Egypt also ranks first in import coverage of reserves and export coverage by imports. The UNCTAD's World Investment Report (2004b) mentioned according to which Egypt numbered ninth in the ranking of host developing economies to FDI flows in the decade 1994 -2004, with a cumulative value of \$7.8 billion. In 2006, Egypt was the top recipient of FDI in the Middle East and North Africa with a flow of \$3 billion, and the stock of FDI had reached \$16.5 billion (UNCTAD, 2006: 42)

In addition, Egypt's export trade pattern has evolved considerably over the last decade, due to a number of factors including changes in trade opportunities, regional instability, and competitive pressure (Yasser 1999: 54). Before the collapse of the former Soviet Union and other Eastern Bloc countries, Egyptian products entered these markets in large volumes through supply, barter, and other contracts. The rapid collapse of the command economies, to which Egypt had previously shipped large quantities of agricultural products, foodstuffs, and textiles and from which it had imported heavy equipment and machinery, forced Egypt to find new markets (Cassing 1998: 4). At the same time, the increase in number of private sector exporters and the

development of non-traditional exports contributed to a shift in overall export patterns (World Bank 2005a: 99). Sea and air freight services from Egyptian ports to foreign destinations, in particular, underwent major changes in order to cope with this shift.

In recent years the export pattern has stabilised, within some geographical export regions despite the steep annual fluctuations in the demand for Egyptian goods. Egypt’s export pattern continues to change annually due to circumstances affecting the countries’ primary export commodities. Raw cotton, yarn, textiles, and ready-made garments, which make up a large percentage of Egyptian exports, are subject to high tariffs and yearly quotas in most of their export markets which can change dramatically from year to year (Michel 1993: 15).

Fresh fruits and vegetables also face steeply fluctuating demand depending on weather conditions in other producer countries. For example, bad weather in southern Europe or other North African countries can result in high increases in demand for Egyptian strawberries in Northern Europe during one growing season, and in the next season the same importers may source all their strawberries from Spain (El-Fiqi 1999). Export volumes of certain commodities such as sugar cane and cotton have also been affected by domestic price policies which may make it difficult for exporters to compete in foreign markets (MFTI 2006a: 210).

Finally, Egyptian exports are facing greater competition as sea and air freight rates fall worldwide, enabling products from more distant sources to compete in the same markets with Egyptian products. Such is the case for sweet potatoes, which Egypt used to export.

Demand for Egyptian sweet potatoes virtually evaporated when South Africa was able to access European markets, selling higher quality sweet potatoes at competitive prices (Ramadan, 2002).

Table 2.5 represents the regional geographical distribution of exports and imports between Egypt and the world regions.

Table 2.5: Egypt's regional geographical distribution of exports and imports

Regions	Imports (%)			Exports (%)		
	2004	2005	2006	2004	2005	2006
Western Europe	41.6	38.7	40.9	30	30	30
North America	19.6	20.9	14.0	32.9	31.7	31.8
Asia	14.3	13.6	14.6	9.6	9.5	9.5
Eastern Europe	9.9	10.3	10.8	6	10.5	9
Africa	10.8	12.6	14.5	5.8	4.2	4.9
Others	3.8	3.9	5.2	15.7	14.1	14.8

Source: MFTI (2006b)

The variations in Egypt's exports are the most pronounced in Europe and in Arab countries where Egypt exports the bulk of its agricultural produce (MFTI 2006a: 24). The fact that many southern European countries grow similar produce and the proximity of other Mediterranean producers gives importers a wide choice of sources, and price, quality, and preferential trade arrangements are deciding factors at sale time (ACCE 2005: 37). Given the recent situation of Egyptian exports, a number of competing exporting countries were chosen for their overlap with Egypt in both commodity mix and destination markets using trade data published in the International Trade Statistics Yearbook, by the US Census Bureau, and by the European Community (World Bank 2005a: 129). Commodities were cross matched for the major export destinations to identify Egypt's primary export competitors. The primary export competitors identified are used in this study as the comparison countries for freight rates for the different modes of transport. These are Cyprus, Greece, Israel, Jordan, Lebanon, Syria, Tunisia, and Turkey. For North American markets, France, Italy, and Spain can also be considered export competitors (MFTI 2006a: 30).

2.7.1 Egyptian exports development strategy

Egypt has an anticipated growing export potential in a large number of sectors due to the competitive advantage in many manufacturing industries and its lucrative geographical location. The export potential is well illustrated in numerous service sectors including commercial services, especially tourism, transportation, business services and professional services. The Egyptian trade partners are equally highly diversified; the major trade partners include the EU and the USA with shares exceeding 30% and 10% respectively of total Egyptian exports (MFTI 2006). Other trade partners include South East Asia and Arab Countries. Trade with other developing countries such as those belonging to the African continent has vastly increased during the last period.

The Egyptian government's clear vision is focused on the future of its exports and is on its comparative and competitive advantages. The government has identified a plan to achieve its goal of enhancing and promoting the Egyptian exports during the coming decades. Impediments preventing exports from flourishing were transparently and objectively addressed and constructive systems to mitigate such impediments have been initiated.

The Ministry of Foreign Trade and Industry issued a new Law No.55 for 2002 (MFTI 2006). This law stimulates the competition of the Egyptian products by overcoming the impediments facing Egyptian exports. It focuses on financing the research, marketing and training centres and facilitating the communication between the Egyptian exporters and their counterparts in foreign

markets. The new law supports cost efficiency for exporting to ensure fair competitiveness for the Egyptian Exports in global markets.

Additionally, the Law No. 1283 for 2002 issued by the Prime Minister approved the establishment of a Ministerial Committee to enhance the competitive ability of the Egyptian Exports. This committee includes Minister of Agriculture, Minister of Foreign Trade, Minister of Industries and Promoting Technologies, Minister of Finance, Minister of Transportation and Minister of Civil Aviation. This law entails resolving all export impediments through members of committee (MFTI, 2004: 17).

Moreover, a new law is being drafted to unify different customs systems like Tax Rebate, Temporary Release and Drawback System into one system to enable exporters to reclaim their previously paid customs on raw materials used in manufacturing products for Exports.

2.7.2 Egyptian exports strategy towards Africa

Africa is hindered from fuller participation in the global economy by a “standards divide” a combination of inadequate capacity to meet world trade standards for goods and limited opportunities to help shape these standards to ensure that they are consistent and fair (World Bank report 2004: 20).

The top five economies in Africa of South Africa, Egypt, Morocco, Nigeria and Algeria contributed 79 % to Africa's Gross Domestic Product in 2004. North Africa contributed 41 % to the African GDP against 17 percent for Western Africa, 5.3 % for Central Africa, 8.4 % for Eastern Africa and 28.3 % for southern Africa. According to the Addis Ababa-based Commission, GDP growth slowed down in North Africa in 2004 because of the fall in oil prices and drought. The economic growth in Africa remains dependent on oil revenues, UNECA lamented, noting that certain countries in African managed to contain inflation through a rational macro-economic management. UNECA also deplored the persistence of conflicts in certain sub-regions, which contribute to worsening economic conditions and aggravating poverty (UNECA, 2004).

The Egyptian exports to African markets were facing difficulties. African businessmen and investors are aware of the Egyptian products, noting that the Egyptian commodities enjoyed high quality and cheap prices. But on the other hand there are impediments including poor transportation, lack of banks for processing trade transactions and failure to provide a viable insurance system. Although, Egypt has now given due attention to the means of tapping African markets, there is a program for presence of Egyptian products to African markets, especially in

West Africa. Egyptian exports to African markets include engineering industries, chemicals, fertilisers, medicine, furnishings and foodstuffs. Egypt's Foreign Minister Ahmed Abul-Gheit said:

“The African Continent highly ranked in the agenda of the Egyptian foreign affairs, Africa was and is still a non supportable part of the whole Egyptian diplomatic heart and mind, some bilateral high committees are under preparation between Egypt and a number of African states, such as Senegal, Guinea and South Africa”

Abdel-Fadil (2000) said that the trade relationship between Egypt and the COMESA is growing stronger this is because Egypt has the additional advantage of possessing the strategic location, human capital and infrastructure necessary to allow multi-national firms access to the COMESA market through a variety of joint ventures. The enormous potential of the COMESA market should prove highly attractive to multi-national corporations. By establishing branches in Egypt, they will be able to benefit from the customs exemptions granted COMESA member nations. Thus, for example, it would be possible to use foreign investments in Egypt such as an advanced industrial centre within COMESA to establish assembly plants for high-technology products that would be re-exported to other countries in the association. We already have a model for such a project in the Mercedes plant in Egypt.

2.7.3 Assessing the performance of Egyptian exporting parties

In order to survive and thrive in a global market, the operations or enterprises of any organisation should adopt a broad strategy (Reuer and Arino, 2007: 315). This would provide the organisation with a sustainable competitive advantage within its business. Moreover, the application of strategy within the process of a modern operations organisation can be referred to as the application of strategic management (Champy and Hammer, 1993: 51). Consequently, the direction and scope of an organisation in the long term, which achieves advantage in relation to the process of operations, could be referred to as the process strategy. Thus, the objective of the process strategy is to establish the direction and path the operation must follow in order to successfully actualise the corporate goals which have been set (Hill, 1993: 89).

Therefore, the proposed Egyptian RDCs network should apply such a comprehensive strategy in order to ensure the prospective performance of these RDCs to achieve its objectives which are mainly to facilitate the flows of Egyptian exports to the COMESA countries and to support the overall performance of the Egyptian export industry towards the COMESA countries.

Consequently, there are several governmental and non-governmental organisations besides the Ministry of Foreign Trade and Industry (MFTI) that are involved in following up the Egyptian

trade and exports performance. However, the following section deals with assessing some of these organisations' roles which could be directly or indirectly affecting the exportation process in order to provide a comprehensive idea about the benefits or hindrances that these organisations have in the Egyptian export industry.

2.7.3.1 The export promotion agencies

There are two types of export promotion agencies: governmental and non-governmental. The governmental agencies include commercial representative offices abroad, Egyptian Exports Promotion Centre (EEPC), International Trade Point (ITP), Marketing Centre of the Ministry of Public Enterprise (MCMPE), General Organisation for International Fairs and Exhibition Fairs (GOIEF), the Management Development Center for Business Sector (MDCBS), Egyptian Commercial Service (ECS) and the Egyptian Corporation for Exports Guarantee (ECEG). Non-governmental agencies include Egyptian Exports Association (Expolink) and different business associations. Therefore, the researcher has investigated the roles of these agencies to assist the Egyptian exports to gain better market access to the COMESA countries through gathering valuable information about foreign markets and to market the Egyptian products in the right markets.

However, there are several significant studies, such as World Bank (1994), Fawzy (1998), Ghoneim (2000), Srinivasan (2005) and ACCE (2006) which show that the Egyptian business community faces problems in exporting. Among the problems identified by the World Bank (2005b: 57) that are related to market access, were the ability to penetrate foreign markets, keeping track of consumer needs, achieving the required high standards for products and packaging, the absence of marketing and distribution agencies and identifying business opportunities abroad.

The key point in the previously mentioned problems is acquiring accurate information about the size of population, culture, level of income, consumer tastes and competitors in order to be able to successfully penetrate the targeted markets. As information is often scarce to acquire, it is advised that exporters could establish business partnerships in the targeted markets to facilitate the process of getting the information required for moving Egyptian exports to the market. Consequently, and based on the results of these studies, it could be emphasised that there is an urgent need for export promotion agencies that aim to constantly gather dynamic and up-to-date information about foreign markets in general and COMESA in particular and be capable of marketing the output of exporters (Fawzy, 1998: 9).

Moreover, Ghoneim (2000: 40) who focused his survey on the Egyptian exporting community showed that the need for export promotion agencies is limited to fulfilling the aims of information gathering and product marketing. For instance, in order to gather information on trends in foreign markets, the survey showed that exporters mainly depend on personal contacts and international exhibitions whereas the use of non-governmental and governmental agencies is almost absent.

In addition, Srinivasan (2005: 19) showed that a number of exporters have reported to governmental agencies requiring help but the agencies did not follow up on their contacts. This led exporters to lose trust in all agencies whether governmental or non-governmental. Thus, in this case, the potential exporters would not need such agencies except in the start-up stage of their exporting activity when they are completely unaware of the process. Once they pass this stage, traditional importing agencies and personal contacts replace the role of such export promotion agencies in providing information on export markets and marketing their exports because they lost the credibility of such agencies (ACCE, 2006: 57).

Thus, it could be assumed that the role of export promotion agencies is ineffective regarding the access to COMESA markets which could be the reason of Egypt's uncompetitive position in COMESA despite the benefits and strengths that Egypt has in other areas.

2.7.3.2 Integration among producers

According to the World Bank (1994: 26) and Ghoneim (2001: 19) the Small and Medium Enterprises (SMEs) play a key role in Egypt's industrial structure. They represent more than 98% of the firms in the private sector and 75% of the total private jobs. Nevertheless, their contribution to exports has been almost nil (UNCTAD, 2004b: 34) and hence they had no role in enhancing the market access of the Egyptian exports in the COMESA market. The contribution of SMEs as one of the drivers that could support the enhancement of the Egyptian exports market access has been weak due to the absence of an effective subcontracting scheme that aims at the enrollment of SMEs in the exporting process (ACCE, 2006: 46).

However, few large firms undertake subcontracting with SMEs. Among the reasons for the failure of SMEs to develop forward links with large firms are the quality of their products, where it is claimed by large firms that it has been the major impediment in dealing with SMEs and absence of business brokers and trade houses with sufficient information and ability to integrate the demand of large firms with the supply of SMEs (Ministry of Finance, 2004: 57).

Moreover, the rejection of extension of the duty draw back system for indirect exporters, i.e. that is producers of intermediate goods producing for exporters of final goods but import some of their inputs which do not enjoy the benefits of duty draw back, puts the SMEs and all producers of intermediate goods at a relative disadvantage with their competitors outside Egypt, reinforces the weak production linkages in the economy, and hence keep the role of the SMEs marginalised in the exporting process (Nathan Associates, 2003: 10).

Therefore, one of the main reasons for the weak supply response of the Egyptian exports to penetrate the COMESA market is attributed to the absence of efficient integration among producers. Prospects for better utilisation of the role of SMEs are promising and easily achievable if the right organisations and policies to deal with them are established.

2.7.3.3 The Egyptian government's role towards exports

The role of the Egyptian government towards the export industry is minimal, even with the recent reforms which have been undertaken to enhance exports. The absence of an efficient incentive structure due to the over valuation of the Egyptian pound, makes selling in the domestic market more profitable than selling in foreign markets (Ghoneim, 2001: 21).

Consequently, it is not expected that slowly implemented policies to enhance exports will have a substantial positive effect on the promotion of exports as long as the main incentive measures that make selling in the domestic market more profitable than in foreign markets remain untracked (Abdel Latif and Nugent, 1996: 12).

However, according to Ghoneim (2000: 19) the Egyptian government has made remarkable efforts in removing direct Non Tariff Barriers (NTBs) relating to imports that affect the production of the exported products which has been successful to a large extent. Exporters depend on imported inputs in their production process especially if they are exporting manufactured products.

However, he adds that impact of indirect NTBs, such as the progress on simplifying bureaucratic procedures on the imports side, has been slow. Administrative procedures and requirements associated with importing still remain oppressive, increasing the cost of imports substantially, and thereby lowering the competitiveness of Egyptian firms in world markets in general. Positive developments have been recently implemented by the Egyptian government regarding the direct NTBs that affect exports. However they remain less important than indirect NTBs with special emphasis on import procedures.

The Egyptian government should devote more effort to overcome the remaining NTBs especially those related to quality control and customs procedures concerning imports. Exports cannot grow if customs procedures of imported inputs are cumbersome (Ghoneim (2000: 21). Exporting in many cases heavily depends on importing. As long as the latter is hindered by awkward procedures it will negatively affect the former. This point still seems to be missing in the export oriented strategy that the Egyptian government is adopting (Lee, 1997: 8).

Moreover, it is crucial to remove the competitive disadvantage of domestic suppliers being denied access to duty free inputs as is the case with other international suppliers in the world markets and it is likely to partially solve the problem of chronic merchandise trade balance by increasing the domestic value added of exports (Wild and Wild, 2008: 44).

2.7.3.4 The role of Egyptian research and development centres

The need for technical personnel and research and development (R&D) is a vital part within enhancing the exports performance. The importance of training programs is highly emphasised in this case. The COMESA, the Egyptian government and the Egyptian exporting community should collaborate to finance such kind of programs.

The role of R&D seems to be neglected from the agenda of Egyptian export strategy. Databases of business associations as well as export promotion agencies are incomplete, outdated or contain inaccurate information (Radwan, 2006).

According to ACCE (2005: 85) the market studies of foreign markets are rare. R&D departments are absent and if present then their role is marginalised and is confined to cut and paste from international reports. In addition COMESA, the Egyptian government and Egyptian exporting community should devote financial resources for upgrading R&D departments in export promotion agencies.

The government should delegate the mission of exports promotion to non-governmental organisations which do not suffer from bureaucratic procedures and loss of credibility. The role of the government can be confined to making part of the financial resources available for running those agencies, training the personnel, and subsidising the attendance of international exhibitions for small exporters and potential ones and collecting data that is hard to obtain without governmental authorisation (Lederman and Maloney, 2003: 18).

However, it should be mentioned that there are some emerging non-governmental research agencies that are undertaking research on the Egyptian market and economy as well as potential markets for Egyptian exports in the light of international trade agreements. Some of these

agencies are the Egyptian Center for Economic Studies and the American Chamber of Commerce in Egypt.

2.7.3.5 *Labour market competitiveness*

The labour factor is considered as the main factor among the Egyptian exporters. Labour is influencing several aspects of Egypt's exports by direct and indirect ways. However, the assessment of the labour market is significant among the assessment of the main key issues which are involved within the performance of exports.

Therefore, four major issues would be possible to assess: the availability of a different kind of labour, the importance of training labour and the labour market laws and regulations. According to Ghoneim (2001: 12) classification of the different labor categories, the availability of low skilled labour, medium skilled labour, medium level management and high level management have been remarkably improved.

However, the abundance of low and medium skilled labour represents no constraints for the time being but medium and high level management are still not sufficiently abundant despite the improvement in their availability and continue to have a negative impact on the working environment of the exports industry. Therefore, there is still scarcity of high skilled labour, which indicates the reduction of the availability of this kind of labour within the next 10 years, which would negatively affect the performance of the Egyptian exports.

The importance of training labour and its impact on the export industry has been positively changed. However, the absence of the government and private labour training centres has still only moderate influence on the business of exporters (ACCE, 2006: 71).

Labour market rules and regulations were not perceived to have a major negative effect on the exporters. The existing labour conditions do not represent a main impediment from the perspective of the exporting industry. Thus, this is not a strong fact to be able to confirm any particular trend, though it still shows that exporters do not have a major problem with the law and regulations regarding the labour force (Fosu, 2002: 251).

In order to conclude the assessment of the labour market, the most urgent institutional obstruction which faces the exporting industry regarding the labour market does not lie in the way the labour market is regulated. However, it seems that the exporting industry is satisfied with the current demand for improvements in the way profits are distributed among the labour and the social security benefits are channeled.

The lack of high skilled labour and middle management should be recovered at least by the provision of training centers which will be vital as a short term solution and reorientation of the educational system to meet the market needs in the long term.

2.7.3.6 Dynamic process of the Egyptian exports

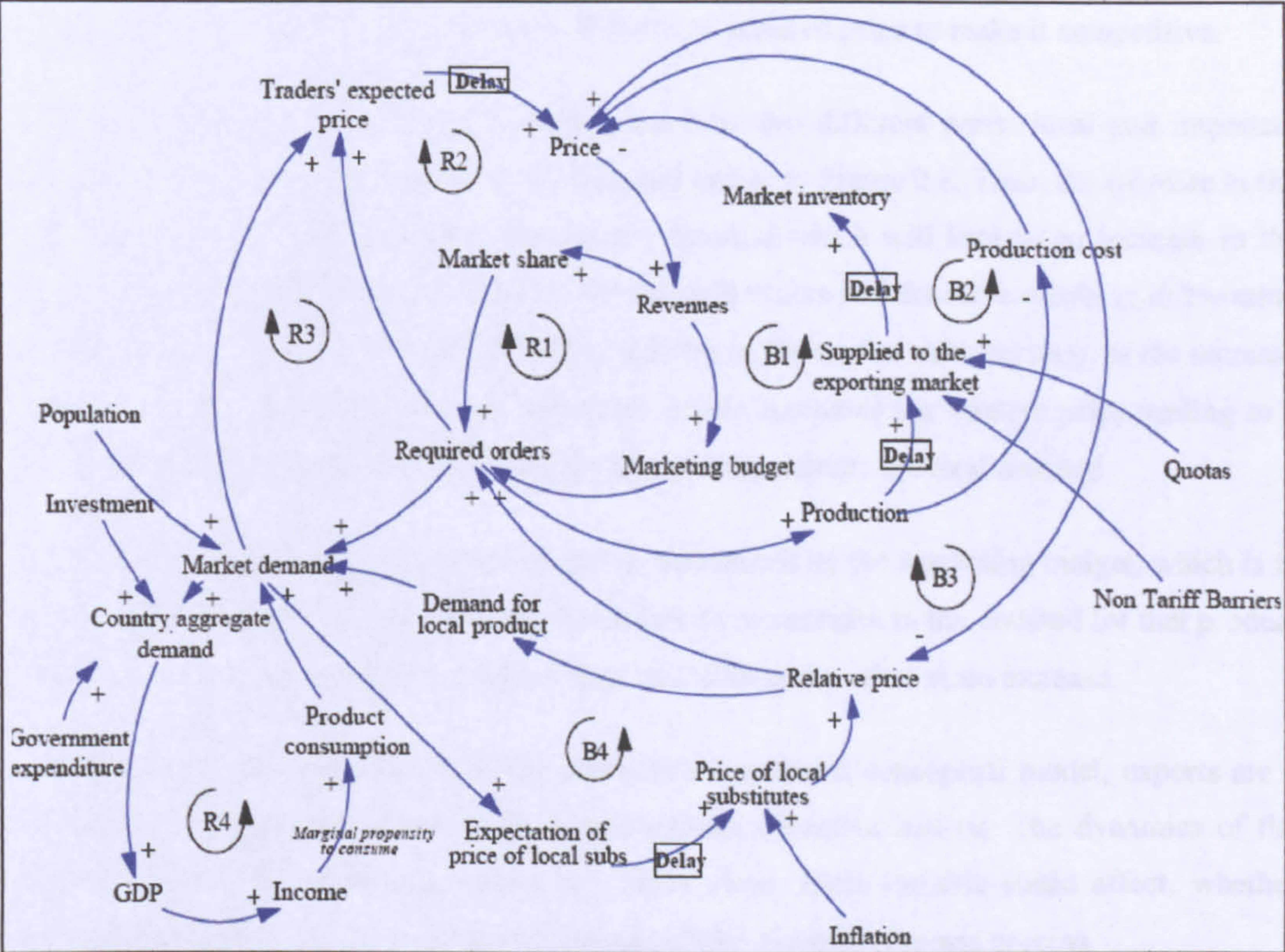
The Egyptian economy has faced several challenges along the way to recovery. Among these challenges comes the deficit in the balance of trade; although a lot of effort was dedicated to this area, the gap between exports and imports forced the value of Egyptian Pound to deteriorate continuously. Egyptian exports are not proportional to the efforts exerted to increase it or to the potential of the Egyptian economy.

Most effort targets the laws and regulations related to export issues, which alone is not enough as there is a lack of effort towards increasing the base of Egyptian exporters as well as their effectiveness.

There is a reluctance to engage in export business among a major part of the Egyptian producers while a smaller part engaged in export business lack the up to date knowledge and tools needed to maximise the export benefits, as they just react to spontaneous orders from international markets.

Therefore, a conceptual model has been developed by Azim and Wahba (2004: 9) to explore the full dynamic process of Egyptian exports, in order to activate the flows of these exports to the proposed RDCs in the COMESA countries. Figure 2.8 presents a conceptual model for the Egyptian exports dynamics.

Figure 2.8: Conceptual model of the dynamic process of Egyptian exports



Source: Azim and Wahba (2004)

Notes:

Required orders:	Demand on products
Market inventory:	Inventories of the products
Market share:	The share of the products in the COMESA market
Production:	The production of the products in Egypt
Market demand:	Total demand on the products in the COMESA market
Relative prices:	Prices of the local substitute products in the COMESA market

As shown from the previous figure, this conceptual model demonstrates the situation of the Egyptian exports dynamics which apply to the COMESA case. This conceptual model reveals the influences and the effects of several variables within the exporting process and its linkage with the economy in Egypt.

Therefore, the GDP affects the income of the enterprise and any increase in the GDP would affect the consumption of a certain product according to their marginal propensity to consume leading to an increase in the demand of that product which would increase the country's aggregate demand.

In addition, the supply would affect production in Egypt and the market inventory increase in production due to the increase in required orders which will lead to the increase of market

inventory. Accordingly, the price will decrease too, and the increase in production will lead to a reduction in the unit cost, which in turn will lead to a reduced price to make it competitive.

However, market demand can be disaggregated into two different parts: local and imported. The market demand is represented by the required orders in Figure 2.8. Thus, the increase in the required orders will be reflected in the market demand which will lead to an increase in the price. However, when the price increases, the required orders will decrease resulting in lowering the price. In addition, the effect of substitute appears in the market demand loop, as the increase in demand will increase the price of substitute, which increases the relative price leading to a decrease in the demand for the substitute for this reason, reduces the total demand.

The market growth in this conceptual model is maintained by the marketing budget, which is to be increased upon the increase in revenues leading to an increase in the demand for that product which is the required orders in the figure, thus, the sales and market share increase.

Concluding the main findings from the previously mentioned conceptual model, exports are a vital issue for Egypt, and should follow professional proactive actions. The dynamics of the variables within the exporting process are fairly clear. Each variable could affect, whether positively or negatively, the overall performance of the Egyptian exports process.

In the case of RDCs in the COMESA countries, the goals of the Egyptian exports are oriented and directed to such markets. Issues such as required orders, market demand, prices of products, and market share are highly influencing the products and therefore the exported products to the COMESA market.

In addition, there are several factors that will be investigated in Chapters Four, Five and Six regarding the political, economical, social and technological factors of the COMESA countries and its impact on the proposed idea of establishing Egyptian RDCs in COMESA countries.

Fortunately, the picture does not look very pessimistic according to the model. However, a lot of effort should be made to cope with the proposed network of RDCs in COMESA. If there were not proper scientific and practical plans undertaken by the designated authorities to fully utilise the idea of the RDCs like other countries e.g. Germany and the Netherlands, UK, USA, China, and Singapore for instance, the Egyptian exports performance would take the Egyptian - African or the COMESA trade in particular to another level.

2.7.3.7 Several restrictions of the Egyptian exporting progression

As was clearly demonstrated in the previous sections, there are different barriers that affect the performance of the Egyptian exports to the COMESA market. Therefore, there are several restrictions which belong to different bodies relating and influencing the Egyptian exports' performance to the COMESA market.

- *Lack of direct shipping lines to the COMESA countries*

This problem is considered by most exporters as the main obstacle to trade with COMESA. Currently, there are some exporters in Egypt that export to COMESA or even African countries through Europe as there are direct shipping lines between Egypt and most of the European ports (ACCE, 2006: 68), instead of shipping from Port Said or Suez directly to the main African or COMESA ports. The cargo proceeds along the following route: Port Said to Gioia Tauro port in Italy for instance, where it stays a week or more, until the mother vessel arrives, loading cargo and starts its voyage to the African ports where the voyage could take about 20 days. Therefore, this leads to a cost increase, delays and in many cases, damage and loss due to mishandling.

ACCE (2006: 42) stated that via this tangled trip, the shipping of one TEU container from Alexandria port to Mombasa port in Kenya would cost US\$ 1600 and takes about six weeks, whereas a direct trip would last three weeks and cost US \$900. There are numerous examples of spoilt shipments received by the end customer after this long trip. This in turn leads to a delay of capital circulation and the cancellation of future deals with the Egyptian exports. In addition, the high cost of air shipment from Egypt to COMESA is another bottleneck facing exporters.

- *Unacquainted COMESA markets with a wide range of Egyptian products*

COMESA is unacquainted with the wide range of the Egyptian products, and with their competitive quality and price. This is mainly due to the poor promotional techniques of Egyptian products. Unfamiliarity with simple ways to display products is another factor. One example of this is attractive brochures informing the COMESA customers about specific products. The lack of permanent or annual exhibitions for Egyptian products and representatives from Egyptian companies are also contributing factors (Ibrahim, 2002: 97).

- *Uninformed Egyptian business community about COMESA's potential*

Egyptian business communities are still not well informed about the COMESA and Africa's potential as a fertile alternative market (El-Nakib, 2003: 159). Ministries and business associations may use the media to inform the business communities that in the light of current

international events and after the changes in Eastern Europe and the enlargement of the EU, the only fertile alternative markets for Egyptian exports are COMESA and Africa.

- *Receiving extended credit to finance the COMESA imports*

Due to insufficient foreign currency liquidity, most of the COMESA importers are used to long term credit, ranging between 60-180 days. This provides the chance to recoup their money and then pay their debit. This is the policy adopted by most Asian countries which have been able to penetrate the COMESA market (Khandelwal, 2005: 52).

There are many weaknesses and challenges facing the process of the Egyptian exports in general which cooperated with exports to African and COMESA markets. These challenges are considered as the majority of the actual causes which affect the performance of the Egyptian exports. Each party within the exporting industry has particular weaknesses which should be prevented and corrected. Otherwise, losing competitiveness and market shares could be some of the expected results of such weaknesses and this is basically what the Egyptian exports are facing in several international markets (Ibrahim, 2002: 104).

2.7.4 Managing the Risk of Egyptian RDCs operations in COMESA

The trend towards globalisation has meaning to both Egypt and host COMESA countries of the proposed RDCs. Therefore, Egypt is taking a global view of its strategies to support its exports, whereas host COMESA countries are beginning to recognise the importance of global dimension in their economic development planning.

Therefore, several studies such as D'Arcy (2001), Marshall and Alexander (2005), World Economic Forum (2005), and Mboweni (2007) have showed that firms who have a higher preference for investment entries are sensitive to investment attributes. Hence the government of host countries will not only have to develop policies that make it attractive for foreign firms to invest in their markets, but more importantly, will have to reduce their risk perceptions through regulations that permit repatriation of profits, majority ownership and control, patent protection and enforcement of contracts. From the government's perspective, it should be noted that regardless of the stage of economic development of the country policy variables that reduce the risk will have a positive impact on inward foreign direct investment. Thus, the following subsections highlight external factors which could face the business of the Egyptian RDCs in COMESA and reviewing the effective risk management of the projects. However, these factors should be considered and expected when doing business in COMESA in particular. In addition, these major risks should have careful contingency plans for quick recovery.

2.7.4.1 *Factors which affect the RDCs business in COMESA*

Recent trends indicate a move by developing countries towards encouraging foreign investments in their countries, whereby conditions are being created for a more favourable investment climate through relaxation of investment controls and provision of investment incentives including better protection of property rights and enforcement of contracts (Mboweni, 2007: 5).

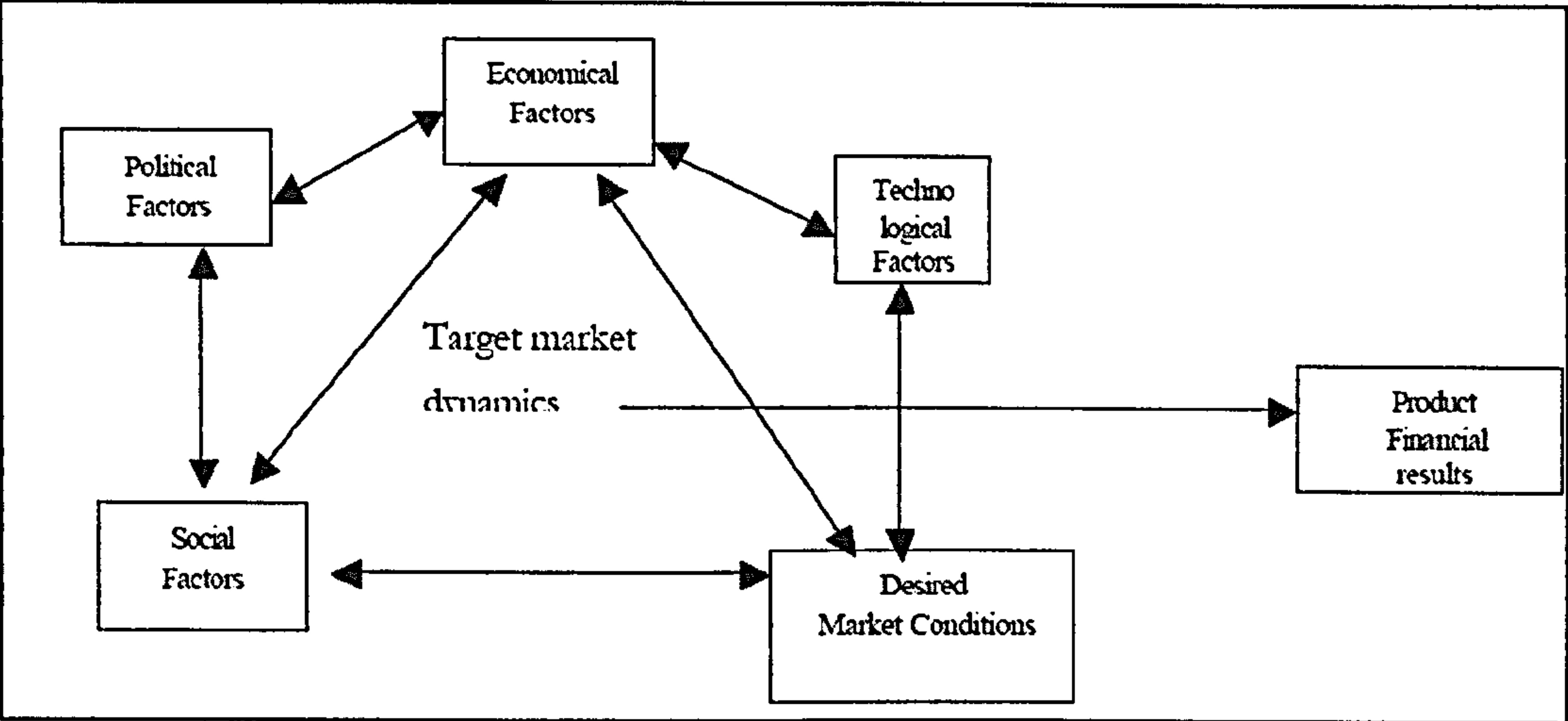
Firms with higher ownership advantages under the mentioned circumstances are enthusiastic to enter these countries and enjoy the benefits and advantages as the first mover. Therefore, in order to guarantee safe and beneficial projects, there are several risks that can affect the business directly or indirectly and thus they should be well considered. Therefore, Table 2.6 highlights the expected risks which could face the business of the Egyptian RDCs in COMESA countries. In addition, Figure 2.9 illustrates the relationships between the four relevant factors which reflect on each other within the exportation environment.

Table 2.6: Expected risks in RDCs business in COMESA

Political <ul style="list-style-type: none">– Ecological/environmental issues– Current legislation home market– Future legislation– COMESA/international legislation– Regulatory bodies and processes– Government policies– Government term and change– Trading policies– Funding, grants and initiatives– Home market lobbying/pressure groups– International pressure groups– Wars and conflict	Economic <ul style="list-style-type: none">– Home economy situation– Home economy trends– Overseas economies and trends– General taxation issues– Taxation specific to product/services– Seasonality/weather issues– Market and trade cycles– Specific industry factors– Market routes and distribution trends– Customer/end-user drivers– Interest and exchange rates– International trade/monetary issues
Social <ul style="list-style-type: none">– Lifestyle trends– Demographics– Consumer attitudes and opinions– Media views– Law changes affecting social factors– Brand, company, technology image– Consumer buying patterns– Fashion and role models– Major events and influences– Buying access and trends– Ethnic/religious factors– Advertising and publicity– Ethical issues	Technological <ul style="list-style-type: none">– Competing technology development– Research funding– Associated/dependent technologies– Replacement technology/solutions– Maturity of technology– Manufacturing maturity and capacity– Information and communications– Consumer buying mechanisms/technology– Technology legislation– Innovation potential– Technology access, licensing, patents– Intellectual property issues– Global communications

Source: Author, based on Wild and Wild (2008)

Figure 2.9: Relationships among the external factors



Source: Azim and Wahba (2004)

Based on the previous risks or the relationship among the external factors that could either directly or indirectly affect the business of the RDCs network in the COMESA market that were presented in Table 2.6 and Figure 2.9, a Bilateral Investment Treaty (BIT) and Bilateral Trade Agreement (BTA) between Egypt and each hosting country(s) of RDCs, should be set up in order to guarantee an effective solution for such risks or disputes among the trade between Egypt and the COMESA countries through the proposed RDCs under the umbrella of the COMESA trade agreement.

D'Arcy (2001: 20) said that the BIT is an agreement establishing the terms and conditions for private investment between the Egyptian government and the three host governments of the RDCs. Moreover, a BIT would be able to protect the RDCs business from several risks and outlining contingency plans and both parties should implement it.

Thus, most BITs grant investments made by an investor a number of guarantees, which typically include fair and equitable treatment, protection from expropriation, free transfer of means and full protection and security (Alexander and Sheedy, 2004: 19). The distinctive feature of many BITs is that they allow for an alternative dispute resolution mechanism, whereby an investor whose rights under the BIT have been violated could have recourse to international arbitration, often under the auspices of the COMESA Court of Justice or the International Centre for the Resolution of Investment Disputes (ICSID), rather than suing the host country in its own courts.

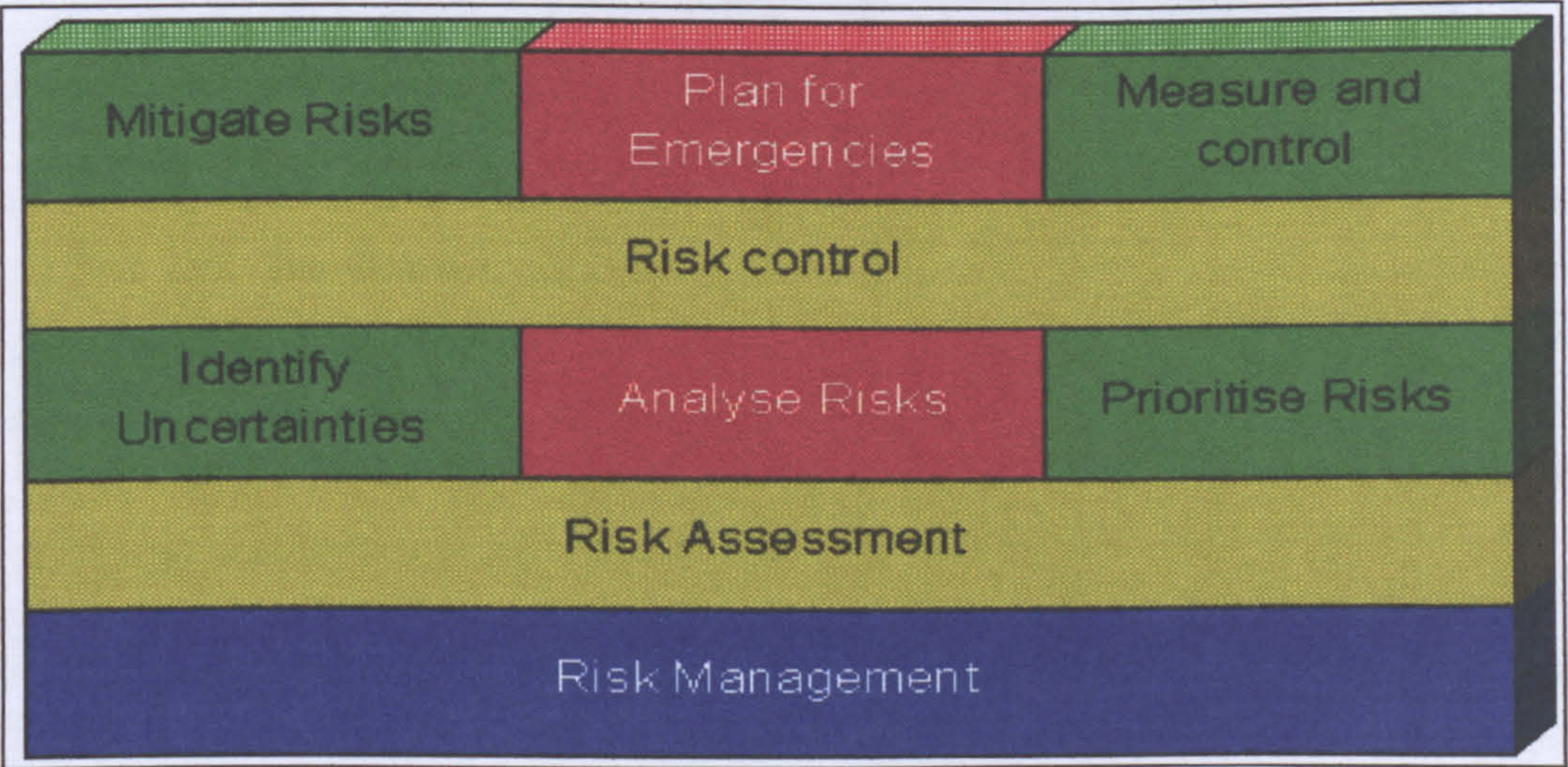
Therefore, the RDCs management should conduct an effective risk management in order to recognise and to reduce different risks related to the business. In addition, the RDCs' strategies

should consider avoiding the risks, reducing the negative effect of the risk, and accepting some or all of the consequences of a particular risk. The next section deals with the effective risk management framework which is suggested to deal with the expected risks when operating Egypt's RDCs in the COMESA countries.

2.7.4.2 *Effective risk management*

In order to manage risks, the concept of risk, this is a combination of constraint and uncertainty. Should be fully understood (Tusler, 1996). Constraints and uncertainty appear in any business. Thus, risks are could be minimised in the project either by eliminating constraints or by finding and reducing uncertainty. Therefore, Figure 2.10 presents a comprehensive view of the effective risk management which could be implemented to face the risks or the external factors which could face the RDCs business in COMESA.

Figure 2.10: Effective risk management



Source: Tusler (1996)

According to Tusler (1996) in Figure 2.10, there are two stages in the process of project risk management, *risk assessment* and *risk control*. Risk Assessment can take place at any time during the project, though the sooner the better. However, Risk Control cannot be effective without a previous Risk Assessment.

Thus, the risk assessment has three elements which are as follows, *Identify Uncertainties*: which is to explore the entire project plans and look for areas of uncertainty. *Analyse Risks*: that specify how those areas of uncertainty can impact the performance of the project, either in duration, cost or meeting the users' requirements. And *Prioritise Risks*: establishing which of those risks should be eliminated completely, because of potential extreme impact, which should

have regular management attention, and which are sufficiently minor to avoid detailed management attention.

Similarly, risk control has three elements as well which are: *Mitigate Risks*: taking action is possible in advance to reduce the effect of risk. It is better to spend money on mitigation than to include contingency in the plan. *Plan for Emergencies*: for all risks which are deemed to be significant, have an emergency plan in place before it happens. And *Measure and Control*: tracking the effects of the risks identified and manage them to a successful conclusion.

Therefore, risk management is a discipline that can assist in the success of the RDCs. Like anything that pays dividends, it takes knowledge, commitment and support to provide the greatest benefits to the RDCs. The greatest reward should be a shift from reacting to crisis to being aware of and managing risk. Being in control, having structure, being organised, allows for a business environment that is empowering and permits taking advantage of opportunities. It also allows for a knowledgeable and learned personnel and governance body.

2.8 KEY FINDINGS

This chapter has summarised the relevant literature relating to the supply chain management in its first part. The distribution concept is considered a secondary activity within logistics management, however, logistics is part of the supply chain and therefore it was imperative to demonstrate the features of the supply chain with reviewing the essential issues relevant to the research objectives. This has been done by reviewing the literature on the development of the supply chain management concept and its relations with the logistics concept.

In addition, highlighting the characteristics and difficulties of supply chain management was important to discuss in order to undertake it within the operation of the RDCs. Moreover, the role of information technologies and its usage is directly related to the competitiveness of supply chain. Certain issues regarding distribution management such as distribution strategy, networks design, distribution planning and the differentiation between the distribution centres and the regional distribution centres as well as its operational stages partnerships and performance monitoring have been discussed to support the research scope with the possible updated literature in the research area.

The second part of this chapter has reviewed the relevant literature on the international trade issues. It has started with the competitive advantage theory by Michael Porter. Consequently, the Egyptian exports strategy has been highlighted with a particular emphasis on the Egyptian exports towards Africa and COMESA. In addition, to the assessment of the Egyptian exports

parties that are involved with Egypt’s trade. Moreover, recommended risk management procedures have been highlighted with some of the expected risks that could possibly face the RDCs business in COMESA. Therefore, Table 2.7 shows the literature reviews used in supporting the research aims.

Table 2.7: Classification of literature supporting research aims

Literature	Chapter (s)	Aim
Review of supply chain management and distribution theoretical concepts	5 and 7	This part of the literature has supported chapter 5 in strengthening the location of RDCs as well as simulating the Egyptian exports flows to each COMESA country though the proposed RDCs. Moreover, the literature has helped chapter 7 in the analysis of the questionnaires which have tested the results from the location decision criteria of the RDCs by the Egyptian exporter and COMESA importers and determining the main issues related to the research surveys.
The role of logistics in supporting the international trade challenges and barriers	6	Chapter 6 has benefited from this part of the literature by demonstrating the obstacles and barriers of logistics operations within Egypt to assist the exportation process to get in to each COMESA country through the RDCs.
Competitive advantage in international trade	4,5 and 8	Achieving a competitive position in the COMESA market is the principal goal for Egyptian exports and thus reviewing the concept of competitive advantage assisted the study in understanding its principles.
Review of COMESA trading bloc	4, 7 and 8	The literature has supported these chapters on the case study of the research in order to get clear updated status of the COMESA group in order to be analysed and utilised to the research purpose.
Review of Egyptian Export Environment	4,7 and 8	As a part of the case study the literature has reviewed and analysed the current situation of the Egyptian export industry and has assessed the parties involved in the exportation process in order to build the output of this research on an accurate bases and release recommended actions to be taken regarding development of the Egyptian export strategies towards the RDCEs in the COMESA market.

Source: Author.

This literature review is not exhaustive, and other references that were not included in this chapter will be used in the succeeding chapters as appropriate.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

The purpose of this chapter is to present the research methods used to investigate the establishment of a generic network of Egyptian RDCs in the COMESA market to facilitate the flow of the Egyptian exports to this market. The first part describes the research design and the reasons for employing it. The second part includes a framework for research methods with a particular emphasis on case study research strategy. The third part explores the methods of data collection which have been employed in this research such as interviews, questionnaires and field visits. The chapter concludes with the different research methods used in this case study.

3.2 RESEARCH DESIGN

The research design is the overall plan for relating the conceptual research problem to relevant empirical research (Ghauri et al., 1995: 26). Research design is the overall strategic choice made to come up with an approach that allows for answering the research problem in the best possible way within the given constraints (Lee, 1991: 323). The hypothesis of this research – that the volume of Egyptian exports within the COMESA market would be enhanced through the establishment of a network of RDCs – was based on a number of observations made by the researcher. The first observation is about the Egyptian trade volume with COMESA. Although Egypt is a COMESA member, the trade volume with the bloc's members is not the anticipated level that should arise from such a trade agreement. Moreover, COMESA members tend to import products from non-COMESA members including European and Asian countries although these products are available in Egypt. Another observation made by the researcher is that the Egyptian products meet the COMESA market preferences in terms of product quality, features and characteristics.

Thus, the research aims at answering two main questions: why COMESA members import products from non-COMESA members? And how to increase and facilitate the flows of Egyptian products to the COMESA market? Therefore, the research hypothesizes that the establishment of a network of Egyptian RDCs would facilitate the Egyptian exports' flow to the COMESA market.

In such case, an exploratory research design is appropriate. Joope (2007) defined the exploratory research as follows:

"Exploratory research is often conducted because a problem has not been clearly defined as yet, or its real scope is as yet unclear. It allows the researcher to be familiarised with the problem or concept to be studied, and perhaps generate hypotheses (definition of hypothesis) to be tested. It is the initial research, before more conclusive research (definition of conclusive research) is undertaken. Exploratory research helps determine the best research design, data collection method and selection of subjects, and sometimes it even concludes that the problem does not exist"

The research uses two different approaches: the inductive and the deductive approaches. Burns (2000: 8) stated that some scientists prefer to begin their research with collecting data concerning the research topics, where the patterns of explanations will be feasible afterwards. For that purpose, the nature of this research implies doing intensive investigations concerning the concepts, theories, and possible practices within the role of distribution centres among the supply chain progress, especially when it is applied on a regional or international basis. Gathering appropriate data will support the hypothesis of the research to explore the potential of enhancing the volume of Egyptian exports to the COMESA market through the establishment of a network of RDCs. Consequently, the inductive approach could be described as one in which facts are pulled together in clusters to form manageable sets of generalisations which act as theories.

Hadi (2003: 19) stated that the inductive approach is based on examining and describing the facts and information which are related to the investigated areas and this could be conducted through the stage of a literature review. On the other hand, this approach has a vital weakness where each observer perceives and interprets what is seen in subtly different ways from with past expectation, personality, and experience influencing the constructing of the event.

The deductive approach is the conversed way, but in this research it will be conducted after the inductive approach stage. The deductive approach is based on assumptions related to the research area, which could be implemented on the time or place. This approach cannot be processed without accurate and adequate data, which has been gathered from using an inductive approach. Testing the deductive contents and resulting series of recommendations and actions to be taken are considered the real contribution of this research which is hypothesised in 'whether the volume of Egyptian exports within the COMESA market would be enhanced through the establishment of a network of RDCs.

The intent of this part is not to discuss these approaches in detail, but to justify the combination of the quantitative and qualitative methods in order to conduct the research progress.

3.3 RESEARCH METHOD

It is generally accepted that for inductive and exploratory research, qualitative methods are most useful as they can lead to hypothesis building and explanation. According to this view qualitative and quantitative methods are suitable at different stages of research. At the first stage of research, the problem is of an unstructured nature and qualitative methods are suitable. Qualitative research involves the use of qualitative data to understand and explain social phenomena (Myers, 1997). Examples of qualitative methods include historical review, group discussion and case studies (Ghauri *et al.*, 1995: 86). The most common qualitative data collection techniques include conversations, unstructured and structured interviews. Qualitative research methods are described by their interpretive perspective, which assumes that methods of natural science are inadequate to study social reality (Lee, 1991: 340). Studies based on the interpretive approach assume that people create and associate their own subjective meanings of reality as they interact with the world around them. Depending upon the underlying philosophical assumptions of the researcher, qualitative research may or may not be interpretative.

This research has applied two different qualitative methods: historical review and case study. The historical review was undertaken to gather all the relevant information concerning the COMESA market and trade levels. Then the COMESA market was applied as a case study focusing on understanding the dynamics present within single settings (Eisenhart, 1989). Yin (1994) proposed that the case study is an empirical enquiry that investigates a contemporary phenomenon within a real-life context when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used.

Ghauri *et al.* (1995: 86) said there are many scholars claiming that the quantitative and qualitative approaches are complementary and cannot be used in isolation from each other. Therefore, the quantitative approach will also be applied in this research. Quantitative research is generally characterised by a methodology of formulating hypotheses that are tested through controlled experiment or statistical analysis (Kaplan and Duchon, 1988: 580). Examples of quantitative methods include questionnaire methods, laboratory experiments, formal methods (e.g. econometrics) and numerical methods such as mathematical modelling (Myers, 1997).

The underlying assumption in quantitative research is that research designs should be based on the positivist approach. Positivism assumes an objective reality, which can be described by measurable properties that are independent of the researcher and research instruments.

Positivist approaches “have their origins in a school of thought within the philosophy of science known as ‘logical positivism’ or ‘logical empiricism’ (Lee, 1991: 343). Logical positivism advocates a research approach that satisfies the standards of the natural science model of scientific research, dealing with positive facts and observable phenomena.

The quantitative method used in this research was an online questionnaire administered by the researcher to target Egyptian exporters and COMESA importers to test the feasibility of establishing the RDCs network in selected COMESA countries. In addition the researcher made an unstructured interview with different personnel working in the fields of trade as well as the field of transport to gather the relevant information relating to the factors which might affect the operation and success of the Egyptian RDCs network in COMESA countries.

The use of both the qualitative and quantitative methods is referred to as ‘triangulation’. *Triangulation* refers to the combination of methodologies in the study of the same phenomenon. Through triangulation the accuracy of judgments and results by collecting data through different methods can be improved. The main advantage of triangulation is that it can produce a more complete, holistic and contextual portrait of the object under study. Moreover, it is quite useful to use qualitative methods in a pilot study to build hypotheses or propositions, and then to use quantitative methods to test these hypotheses (Ghauri *et al.*, 1995: 93).

3.4 METHODS OF DATA COLLECTION

Sources of information can be classified into two main types, primary and secondary. Burns (2000: 29) explains the distinction between them as follows: "primary sources are documents written by a witness to the event, whereas secondary sources are second hand versions". Preece (1994: 51) states, "The essence of primary source of information is that it involves the researcher in direct experience and observation of the real world". Whereas, he describes secondary information as " those where the information has already been sifted as structured by someone else". Accordingly questionnaires, field observations, structured and unstructured interviews, are considered techniques for collecting primary sources, while reviewing the statistical reports, research papers, documents policy statements, books, articles in journals, magazines and newspapers are considered as secondary sources.

The primary sources are collected from different sources including structured and unstructured interviews, questionnaires and field visits that are outlined as follows:

- Unstructured interviews with exporters, freight forwarders, shipping lines managers, government and ports officials as well as university professors and researchers to the

export industry and trade between Egypt and COMESA countries to outline the status of Egyptian exports in COMESA countries and to determine the barriers which adversely affect the flows of Egyptian exports to the market, as well as to reveal the main exporting countries to COMESA. In addition, these interviews have helped the researcher to revise the questionnaires and test the relevance of the posed questions.

- Online structured questionnaires have targeted the possible parties who are dealing with the transport and trade of Egyptian exports from the Egyptian exporters and COMESA importers in order to investigate the actual performance of the Egyptian exports in COMESA market and reveal the COMESA importers preferences of the Egyptian exports. Moreover, these questionnaires are used to review the opinion of both Egyptian exporters and COMESA importers about the main suppliers and competitors in COMESA market and the proposed location of the Egyptian RDCs network and its benefits to support trade between Egypt and the COMESA market.
- Field visits have been conducted to ports, manufacturing and exporting companies in Egypt in order to gain insight in its logistical performance. In addition, a field visit to distributors for the purpose of comparison and to gain further knowledge of operating and managing the distribution centres and the obstacles that could face its role in participating in the exportation process. Ports such as Alexandria, Damietta, Port Said, East Port Said and Sokhna ports were visited as well as their logistics hubs and distribution centres to investigate and increase the insight and information on the co-ordination and operation within the exportation process from Egyptian ports.

Due to the interdisciplinary nature of the research topic, statistical reports, electronic documents, books, articles in journals, magazines, research papers and newspapers that cover a broad range of topics have been used. These topics include supply chain management, distribution centres operation, logistics management, networking design, competitive advantage, international trade, research methodology, air, road, and maritime transport, regional economic blocs, African trade agreements and policies. Therefore, the secondary sources are gathered as follows:

- Raw statistics data collected from Ministry of Foreign Trade and Industry (MFTI), the Central Agency for Public Mobilisation and Statistics (CAPMAS), the International Trade Point (ITP), African Development Bank (ADB), American Chamber of Commerce in Egypt (ACCE), African Studies Institute, National Bank of Egypt, Egypt Central Bank. United Nations Conference on Trade and Development (UNCTAD)

statistics, World Trade Organisation (WTO) statistics, and International Monetary Fund (IMF) statistics, Export Development Bank of Egypt (EDBE), Egyptian Company for Export Guarantee, El-Nasr Company for Export and Import, the Information and Decision Support Centre (IDSC), Export Enhancement Centre (EEC), International Associated Cargo Carrier, and the COMESA secretary. In addition, the data on the maritime sector will be collected from the Egyptian Maritime Data Bank (EMDB), and the Maritime Research and Consultation Centre (MRCC).

- Information has been collected from a series of workshops and conferences conducted by the Ministry of Transport - the Maritime Transport Sector in Egypt on developing the infrastructure of transport and communication systems and trade and logistical barriers to exportation to the COMESA market, as well as the trade volumes and types of COMESA trades, and a seminar on the economic and commercial features and characteristics of the African and COMESA countries conducted by the Ministry of Foreign Trade and Industries (MFTI) in co-ordination with the COMESA secretary.
- Reports by the Development Economic Policy Reform Analysis Project (DEPRA) and working papers by the Egyptian Centre for Economic Studies (ECES), Organisation of African Unity (OAU), Egyptian and African information centres and research centres, Liverpool John Moores University's library and electronic journals and database, trade Egyptian journals and weekly magazines, and African and COMESA market reports.

All the previous primary and secondary sources of information assisted the researcher to construct an appropriate background for proposing the network of Egypt's RDCs in the COMESA market to facilitate and accelerate the flows of Egyptian exports.

This part of the research is considered as an original contribution that adds to the academic understanding of the RDCs role in the Egyptian exports to the COMESA market. The following sections will demonstrate these sources of information in detail.

3.4.1 Interviews

The interviews whether structured or unstructured are the primary means of accessing the experience and subjective views from the industry (Rees, 1998: 19). The purpose of the interview is to extract answers that are relevant to the research hypotheses. In this case the hypothesis relates to the selection of the location of these Egyptian RDCs in COMESA as well as proposing recommended actions to be implemented in order to manage these RDCs properly and to expose development strategy to enhance the Egyptian exports to this particular market.

Interview formats vary. At one extreme is the highly structured type where questions are asked in a fixed form and sequence as said by Joope (2007). The aim of these interviews is to produce quantifiable results from a set sample, which may provide general findings (Cooper and Emory, 1995). The systematic collection of interviews with a number of respondents is the basis of a questionnaire. At the other end of the scale is the open or unstructured interview; it is particularly useful where subject matter is sensitive and especially during the interviewing. Many problems arose with the high-ranking official respondents during the research as access had to be negotiated and a schedule submitted before the interviews. The objective of this is to give the fullest opportunity for views and values of the respondents to become known. Interviews of this kind are based on lists of themes or key issues rather than set questions.

There are real advantages and clear limitations to interviews. The greatest value lies in the depth and detail of information that can be secured. The interview also provides maximum interviewer flexibility for meeting unique situations. Cooper and Emory (1995: 52) said that the interviewer can also do more things to improve the quality of the information than with other research methods. Interviewers can note conditions of the interview investigate with additional questions and gather supplemental information through observation. The interviewers also have better control over the process.

Limitations of the interview method comes from the cost of conducting large scale interviews and also the change in the social climate that have made interviewing more difficult as people are more wary of strangers. Interviewer bias cannot be totally controlled even with a standardised questionnaire interview. All interviewers are instructed to remain objective but the flexibility of this data collection method makes interviewer bias possible Ghauri *et al.* (1995: 56). On the other hand, the unstructured interviews are the most appropriate tool to collect information from the high-ranking government officials in Egypt. The respondents were selected based on their involvement in Egypt's foreign trade with COMESA, and transport facilitation. The sampling method was non-probabilistic because of limited access, time, and available resources.

Rees (1998: 9) said the most efficient way to collect data from high-ranking officials is through the use of unstructured interviews. This is a very important method as high-ranking officials do not like to feel guided or pressured during interviews. In this study, it was noticed that the less formal the interview, the more open the respondent. Nachmias and Nachmias (1992: 35) stated that this type of interview has four characteristics:

- It takes place with the respondent known to have been involved in a particular experience.
- It refers to situations that have been analysed prior to the interview.
- It proceeds on the basis of a loose interview guide related to research hypotheses.
- It is focused on the subjects' experiences regarding the situation under study.

Nachmias and Nachmias (1992: 42) said there are no pre-specified sets of questions, nor are questions asked in a specified order. Furthermore, no schedules are used. With little or no direction from the interviewer, respondents are encouraged to relate their experiences to describe whatever seems significant to them, to provide their own definition of situations, and to reveal their opinion and attitudes as they see fit. Rees (1998: 31) said the interviewer has a great deal of freedom to probe various areas and to raise specific queries during the course of the interview. This means that the same broad topics will be introduced during each interview but the questions may change over time. Although the encounter between the interviewer and respondent is structured and the major aspects of the study are explained, respondents are given considerable liberty in expressing their definition of a situation that is presented to them.

Fink and Kosecoff (1998: 56) said that the advantage of using this technique is that the interviewer may be able to establish better rapport with the respondent as he has more flexibility. The interviewer can answer questions concerning the research area, probe for answers, use follow up questions, and also gather information by observation. This will lead to less formal interaction between the interviewer and the respondent, thus making the respondent more comfortable and informative. In contrast there are disadvantages. High implementation cost seems to be a common denominator but for an unstructured interview, there is also a need for trained interviewers, especially if the researcher himself is unable to conduct the interviews. This will most probably increase the final research cost. Another sensitive area is that questions may be altered or respondents coached by interviewers (Ghauri *et al.*, 1995:60). This may be due to the nature of the questions as they are open-ended. This is because an unstructured interview allows the testing of hypothesis, to follow up on unexpected results and to discover the deeper motivation of respondents. A structured interview is unable to provide this sort of flexibility and data depth even when certain questions are open ended. The type of data collected from this technique will be more exploratory, explanatory and confirmatory of certain situation or hypotheses on transport infrastructure, transport policy, freight modal choice, multimodal transport corridors, trade facilitation, etc (Nachmias and Nachmias, 1992: 45) .

In an unstructured interview, the interviewer seeks to explore and understand a particular matter through casual, unstructured conversation. There is a need for specialised and highly trained interviewers for this interview technique. If the interview is mishandled, the respondent may feel interrogated. The balance between casual conversation and unstructured data collection is very hard to maintain. Nevertheless, this technique provides a very good understanding of the social context where trust is an important issue as the respondent will provide 'secrets'. It is also more costly than any other type of interview technique as it is rarely a one-off affair. This technique requires an ongoing process.

3.4.2 Questionnaires

Questionnaire information is one way for managerial leaders, companies, and researchers to gather information, prompt discussion and communication, and identify areas that need attention and modification or total change (Fink and Kosecoff, 1998: 51) thus, the following sub-sections will demonstrate the main considerations that should be taken into account when conducting questionnaires.

3.4.2.1 *Questionnaire philosophy*

Questionnaires in general, are run by most of the marketing research agencies, Research and Development (R&D) centres in companies and the researchers as well. The primary purpose of any questionnaire is to provide information (Bounds and Stahl, 1991: 40). In an age of information explosion, exporters, importers, traders, officials must prepare through the abundance of available information and the infinity of potentially relevant information. They must focus their limited resources on strategically important information (Rima, 1995: 84).

Ideally, the questionnaire should be used in conjunction with a change initiative intended to ensure that managers engage in the prescribed activities of determining what customer's value and improving systems to provide that value (Arsham, 1994). In this context, Grizzle and Trivellore, (1995: 55) mentioned that the questionnaire can be used to provide exporters / importers with information about demand perceptions of the market, establish a baseline understanding of current export practices and compare the baseline with norms. Feedback results to participants to encourage communication and interaction regarding changes needed, facilitate discussion and interaction between and among traders on the content of the questionnaire, and assess progress over time. The questionnaire can be used to determine a baseline measure of the present state of the market (Grizzle and Trivellore, 1995: 60).

This first step provides both informational and educational benefits to those completing the questionnaires. However, the benefits of this first step of data collection are only one directional, exposing the participant to the concepts. Information flows from the questionnaire designers to the respondents, pointing to general issues and factors involved in managing trade logistics. Data collection initiates the flow-back of information from respondents, but this flow remains incomplete if it does not reach the managers (Bowersox *et al.*, 1996: 57).

Fink and Kosecoff (1998:11) mentioned that the information flow becomes bidirectional when the results of the questionnaire are fed back to trade ministries and officials within Egypt and COMESA countries. The data must be analysed and summarised into a meaningful form before being fed back to officials and top authorities. Once analysed and summarised, the questionnaire provides information about perceptions of individuals in the market. Perceptions are important because they are powerful determinants of attitudes and how people behave (Rima, 1995: 76).

The feedback informs traders of the current state of the market, as perceived by the respondents, in terms of the factors important to managing logistics. Bowersox *et al.*, (1996: 59) have discovered the perceptions of top trade administrators are often quite different from those of managers in other positions. Logistics officials tend to have a more positive view of the conditions of their exportation flows. They often appear blind to conditions within their organisations which act as barriers to managing logistics.

3.4.2.2 Structuring the questionnaires

A well-constructed questionnaire is a valuable tool for measuring the elements of a logistics system, especially if supplemented by interviews and participant observation methods (Fink and Kosecoff, 1998). This instrument can provide an assessment of critical values, beliefs, and attitudes in a very efficient manner (Carson and Mitchell, 1989: 69). The resulting statistical profile can also be utilised as a baseline measure against which changes in this important intermediate level of corporate culture can be monitored through subsequent administration of the instrument (StatPac, 2005).

Questionnaire data provides a statistical profile that can be used not only for gaining insight into the culture, but as an instrument of the change process as well. Indeed, administering questionnaires is an obtrusive process that may alter subsequent data-gathering activities. Completing a well-structured instrument requires that respondents confront beliefs and values that may be somewhat suppressed (Sekaran, 2000: 234). For this reason relatively unobtrusive

participant observation work should be initiated prior to implementation of a questionnaire and formal interviewing.

Trandel-Kornechuk (1998: 70) said that any questionnaire instrument is limited in that it only provides measures of the specific constructs on which it is based. The value structure of a culture can be conceptualised in terms of a variety of different frameworks (Nesbary, 2000: 20). More specifically, the questionnaire includes individual, cultural, structural, and control variables useful for diagnostic purposes. Other methods will identify additional cultural factors important to understanding the organisation. Hence, while administration of a questionnaire is a useful tool for tapping level two data, it is critical that it be combined with other methods.

As said by Williams (2003: 247) questionnaires have become a common way of scholarly research. As a convenient method of polling respondents, they have acquired foremost significance in measuring attitudes, demographic factors, behaviours, and many other variables. However, to make the questionnaire an effective tool of research, the scientist needs to design adequate questions, evaluate the pros and cons of various types of responses, and use strategies to rule out obvious conclusions. An effective questionnaire has in the first place to correspond to the stated objectives of the study (Sekaran, 2000: 235). The researchers have to agree on the type of information they are going to collect as there can be misunderstandings. If this has been accomplished, it is also important to realise if the questionnaire is valid, that is, “whether the questionnaire or survey measures what it intends to measure” (Evensen Web Design, 2005). The questionnaire also has to be tested for reliability. Reliability refers to the possibility to yield consistent results from repeated samples and different researchers over time (Boynton and Greenhalgh, 2004: 32). Thus, if the results of the study are confirmed by other research, it can be considered to have been carried out with a high level of reliability.

Regarding the question quality, it is obvious that both questions and suggested answers if any should be clear to the respondent and contain no ambiguities. The answers had better be as specific as possible. For example, testing frequency, it is best to provide the answer “Every Day or More” rather than “Often” (Georgia Tech College of Computing, 1997). The answers have to be mutually exclusive; for instance, the respondent does not have to choose between farm and country. Each question “asks for an answer on only one dimension” (StatPac, 2005). Thus, a question that would test the attitude to both the flavour and the look of the product would fail to provide information as to whether consumers really like each of these two aspects. Questions should also avoid unwarranted assumptions. Thus, asking someone “Are you satisfied with your current auto-insurance?” envisages that a person has auto-insurance. The question should not be

begging the answer as it may push the respondent into giving the answer that had been begged by the question (Jacob *et al.* 2005).

On the other hand, an effective method for obtaining consistent survey responses is to use a Likert scale (see Fink 1995: 24) for example). A Likert Scale allows a participant to provide feedback that is slightly more expansive than a simple closed-ended question, but which is also much easier to quantify than a completely open-ended response.

A Likert Scale lists a set of statements (not questions) and provides a scale on which the respondent can rate his/her level of agreement or disagreement. An odd number of possible responses (most commonly five or seven) has the disadvantage that respondents may select the 'easy', neutral option. With an even number, the respondent is forced to choose a non-neutral option around the mean in such circumstances. The more points that are used, the greater the sensitivity in possible responses.

Williams (2003: 248) advises using relatively simple questions to encourage completion and also explains the good practice of providing an opportunity for respondents to elaborate on answers if they feel that they have comments additional to those covered by the scale points. With a limited number of responses, each can be translated into a numerical value that can be used for easier statistical data analysis. For example, a "Strongly Agree" response may be assigned the value of 1, "Agree" as 2, and so forth. Care should be taken to avoid the problem whereby participants often settle into a pattern and subsequently select the same response for a sequence of different questions.

3.4.2.3 Analysing the questionnaires

The feedback on the questionnaire responses can be a useful means of bringing reality to the typically optimistic view of top managers. The profile analysis and feedback lead traders to a more honest appraisal of market conditions and encourage exploration of trade conditions. Initial feedback of the questionnaire information may also provide a baseline against which to measure future progress (Alpar, 1989:17).

This feedback could be part of a structured learning experience within a training or educational programme. One potential danger needs to be pointed out. Feeding back results to participants may raise expectations about what will be done to remedy deficiencies or to redress enduring, recognised problems, which have now been confirmed with data. Thus, this information may send the signal that managers intend to "do something about it." (Bigras and Gelinas, 2004: 263) stated that raised expectations may lead to disappointment and resentment when the

expectations are not met. On the other hand, raised expectations may lead to inspired action and commitment to change when the expectations are met. Rather than do harm to the organisation, for example, raising and then dashing expectations, managers should boldly decide to pursue continuous improvement (Hippler and Schwarz, 1987).

Officials must realise that the above two steps of questionnaire feedback represent only the starting point in a change process. Feedback information tells managers a summary picture or profile of "where our unit stands on these issues," in terms of data distributions and average responses on the familiar Likert five-point scale, agree-disagree scales (Bigras and Gelinas, 2004: 269). These profiles increase managerial awareness and indicate perceived problems, strengths, confidence, and complacency. But the information provided by questionnaire feedback is seldom conclusive; thus, leaders must investigate further to achieve more understanding. The specific details needed for real improvements are not provided in questionnaire feedback. The power and opportunity for change lie with these details. Managers must work out these details within the organisation, in light of individual, environmental, and organisational needs (Alpar, 1989: 19).

Evaluation of pros and cons in various response types is another important factor to consider in questionnaire design. Yes/no answers are the easiest to process when analysing the data, which makes the research a quick and inexpensive undertaking. However, they do not allow the reader to gradate the answers on a scale. Scaled answers are slightly more revealing as they offer more options, but in general fixed response questions may draw misleading conclusions because the respondent cannot qualify responses (Sekaran, 2000: 258) and (Web Surveyor, 2004). In this sense, narrative text responses have an advantage as they permit the respondent to express all he or she wants to say on the subject. However, the downside is that the researcher has to code the answers in order to arrive at a statistical evaluation of responses, and this is both time-consuming and can lead to incorrect interpretation (Hippler and Schwarz, 1987).

One of the pitfalls of the questionnaire usage is that "the sources of information may be biased" (Arsham, 1994). To avoid such obvious conclusions, a researcher has to ascertain that the sample is broad enough to contain individuals with varying perceptions of the issue (Sekaran, 2000: 248). Consequently, questionnaires are a useful and effective way to collect information about many issues that warrant research. However, merely putting a few questions together will not result in any meaningful results. To make the questionnaire a valid instrument for information collection, the research team has to undertake considerable effort in the preparation of the questionnaire and follow distinct rules.

3.4.2.4 Online questionnaires

One of the benefits of using the online or the web-based questionnaires is that the same questions can be given to many people at the same time. Questionnaires are also relatively inexpensive to distribute and analyse, particularly web-based questionnaires, which are becoming increasingly common. Web-based questionnaires also have the advantage that data can be stored directly into a database for analysis (Nesbary, 2000).

The online questionnaire is built around highly responsive short online questions. This is achieved by designing the questionnaire easily. Moreover, it is easy to customise the questionnaire's look and behaviour as well as preview, test and check results of the respondents, and activate and distribute by either e-mailing the questionnaire's link or entering it into own web site's HTML for the targeted sample of respondents and prevent the loss of results. As for the monitoring and analysing of results, the online questionnaires are fairly easy to manage and to get up to date analysis until reaching the appropriate sample of respondents in order to prevent collating the responses individually and supporting the research aims and objectives. All participating responses have been saved into Microsoft Excel, which provided a clear organised formatting for each section and question. In addition, by presenting the responses as tables and charts with percentages and ranking made the analysis process of these questionnaires very simple.

In addition, several easy features have been considered when designing these online questionnaires. The questionnaire website was protected by passwords to control and monitor the respondents, skipped questions based on answers to other questions, allowed respondents to return back to their previous answers, and only showed the choices that were either made or not made in a previous question it also randomised answer and question choice order, and combined online questionnaire answers with previous information from the same people.

Therefore, the researcher preferred to implement such type of questionnaires in order to ensure the reliability, validity, efficiency, and time sensitivity of the research progress in order to follow up for the questionnaires' feedback. This tool of research was very useful for the researcher due to the remoteness of COMESA importers. Sending the questionnaires by regular mail was avoided as the respondents i.e. COMESA importers and Egyptian exporters are unaware of the value of answering and returning the paper based questionnaires back to the researcher. Using the internet also proved to be very effective in supporting the research aim following the time schedule of the research. This would certainly affect the time schedule. Thus,

the idea to implement online questionnaires, and to follow the technology to develop such a research and manage it on the bases of time and cost effectiveness.

3.5 KEY FINDINGS

This chapter has described in detail the research strategy, techniques and methodologies proposed for this study and the rationale behind them. First, the research design strategy is developed. Secondly, triangulation as a research technique is justified. Thirdly, the reasoning behind the sample selection has been described, as well as the different methods of data collection. Therefore, Table 3.1 shows the research techniques used to fulfill the aims and objective of the research.

Table 3.1: Summary of research techniques

#	Research Objectives	Chapter	Research Methods	Research Techniques
1	To examine the structure of COMESA members trade volumes with particular emphasis on imports and trade relationships among the members and Egypt;	Four	Literature review and case study	Reviewing industry reports, trade statistics, etc.
2	To describe the obstacles of trade with COMESA countries;	Four	Literature review and case study	Reviewing trade reports and unstructured interview
3	To define the location decision criteria for establishing Egypt's RDCs in COMESA countries;	Five	Case study	Unstructured interview and developing the location decision criteria model
4	To decide on the potential locations for Egypt's RDCs in selected COMESA countries;	Five	Case study	Literature review and model for location assessment
5	To examine the logistics factors affecting the competitiveness of Egyptian exports flows in COMESA;	Six	Literature review and case study	Unstructured interviews and literature review
6	To evaluate the practices and attitudes towards the selection of Egypt's RDCs in COMESA countries by Egyptian exporters and COMESA importers;	Seven	Questionnaires	Structured online questionnaires, unstructured interviews and literature review
7	To recommend methods for enhancing the volume of Egyptian exports to COMESA and design development strategies	Eight	Literature review and case study	Schematic model, unstructured interviews and literature review

Source: Author.

CHAPTER 4: THE STRUCTURE OF COMESA IMPORTS

4.1 INTRODUCTION

This chapter aims to examine the trade structure of COMESA which consists of two levels; the intra and extra trade imports. It is imperative to track the types, volumes, characteristics, and developments of these imports which will assist in describing the real situation of the imports' structure in the COMESA market. In addition, this chapter will reveal the main foreign countries which export to COMESA to meet the market's needs. However, in order to demonstrate comprehensively the situation of COMESA's import structure, it is first necessary to fully describe the features of the African market in which these exports are traded, with a particular emphasis on the COMESA market by determining the main commercial and economical indicators of both the African and COMESA countries, distinguishing the trade agreements and the regional economic blocs in Africa, and recognising the obstacles which hinder trade with COMESA market. In addition, a brief highlight will be included about the trade relationships between Egypt and COMESA countries, which particularly emphasises the most important Egyptian exports to each COMESA country as well as the development of Egyptian trade with COMESA countries.

4.2 THE FEATURES OF THE AFRICAN TRADE

The overall African market including the COMESA market is considered one of the weakest markets worldwide with respect to the value of exports, which amounted to US\$363 billion in 2006, i.e. 2.9% of the world export, whereas the imports amounted to US\$ 280 billion in 2006 (IMF, 2006). Therefore, the following sub-sections will demonstrate the commercial and economic indicators for both the non-COMESA and COMESA countries, in addition to a review on the trade agreements and regional economical blocs in Africa, and a presentation of the obstacles of trade with COMESA countries in order to reveal the overall African trade features (See Appendix 1).

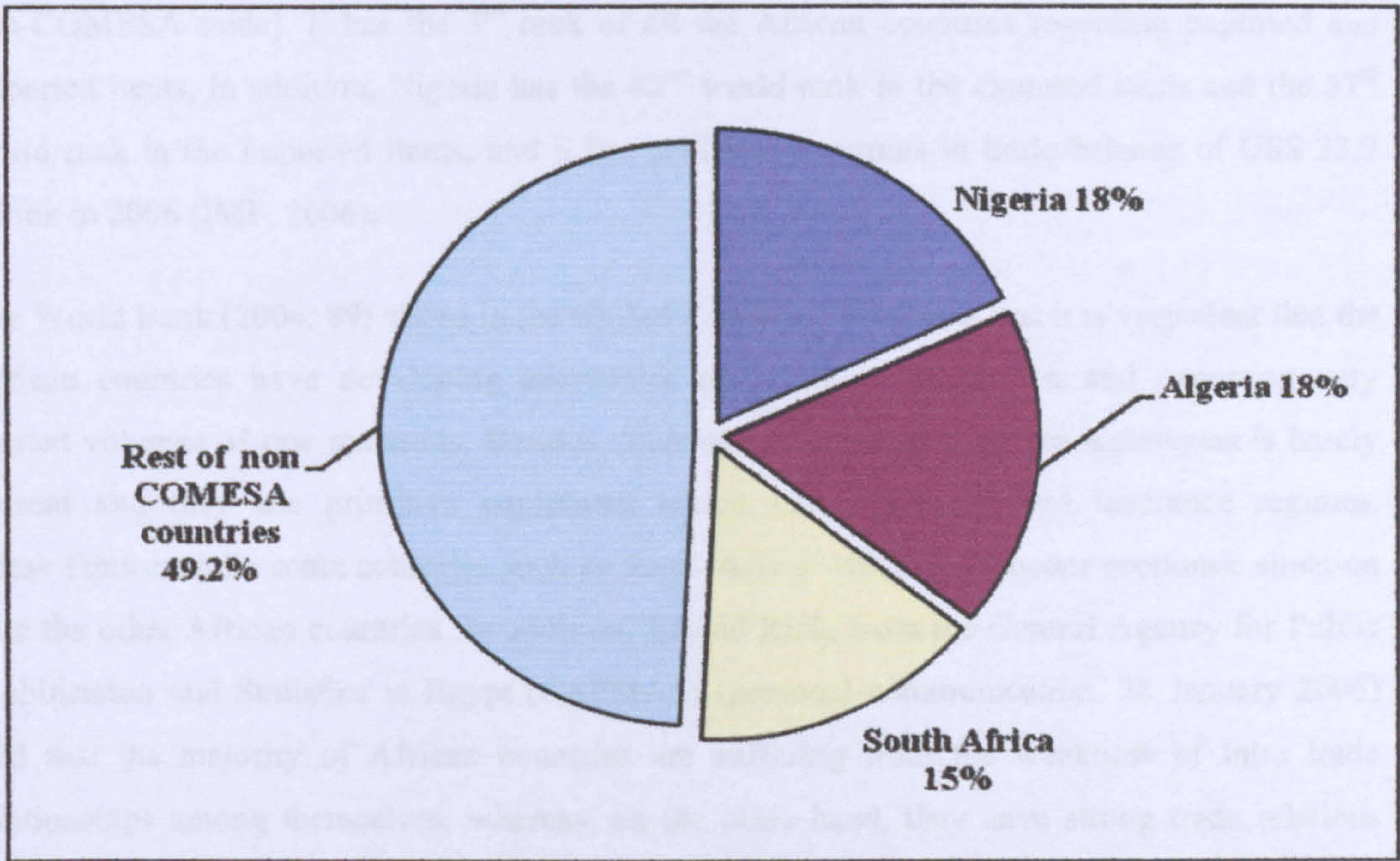
4.2.1 The commercial and economical indicators

The following sections will illustrate the commercial and economic indicators of both non-COMESA and COMESA countries. Studying the commercial and economical indicators would assist in understanding the import trends and behaviours in Africa's foreign trade.

4.2.1.1 Non-COMESA countries

The WTO statistics (2006) stated that 60% of African exports consist mainly of mineral resources and energy, while the agricultural exports account for 13% and the other 27% is comprised of different commodities such as oil, textiles, cement, and fertilisers from the total African exports. Appendix 2 illustrates the economic figures relating to export and import activities, and population of non-COMESA members. Figure 4.1 presents the top three countries of non-COMESA trade.

Figure 4.1: Top three countries of non-COMESA trade



Source: Author, based on IMF (2006)

As shown from the previous figure and Appendix 2, there are three dominating economies governing the economic activities of non-COMESA members. The first dominating economy is the South African economy, which had a GDP of US\$ 576.4 billion in 2006, and a total trade value amounted to US\$ 70.6 billion. (That constitutes 15% from the total non-COMESA countries' trade). South Africa has the 2nd rank among the African countries regarding export, and the 5th rank in Africa regarding import. Moreover, South Africa has the 41st world rank in the exported items and the 39th world rank in the imported items. This implies that South Africa is strongly playing a vital role in the trade and economic development in the African continent. It is worth mentioning South Africa achieved a surplus in the trade balance of US\$ 2.8 billion in 2006 (IMF, 2006).

The second dominating economy is the Algerian economy, which had a GDP of US\$ 253.4 billion in 2006, and total trade value amounted to US\$ 83 billion. (That constituted 18% from the total non-COMESA trade). Algeria has the 2nd rank among the African countries regarding exports, and the 5th rank in Africa regarding imports. Moreover, Algeria has the 45th world rank in exported items and the 54th world rank in imported items. Besides, Algeria has achieved a surplus in trade balance of US\$ 28.2 billion in 2006 (IMF, 2006).

The third dominating economy is the Nigerian economy, which had a GDP of US\$ 188.5 billion in 2006, and total trade value amounted to US\$ 84 billion. (That constitutes 18% from the total non-COMESA trade). It has the 3rd rank of all the African countries regarding exported and imported items, in addition, Nigeria has the 42nd world rank in the exported items and the 57th world rank in the imported items, and it has achieved a surplus in trade balance of US\$ 33.9 billion in 2006 (IMF, 2006).

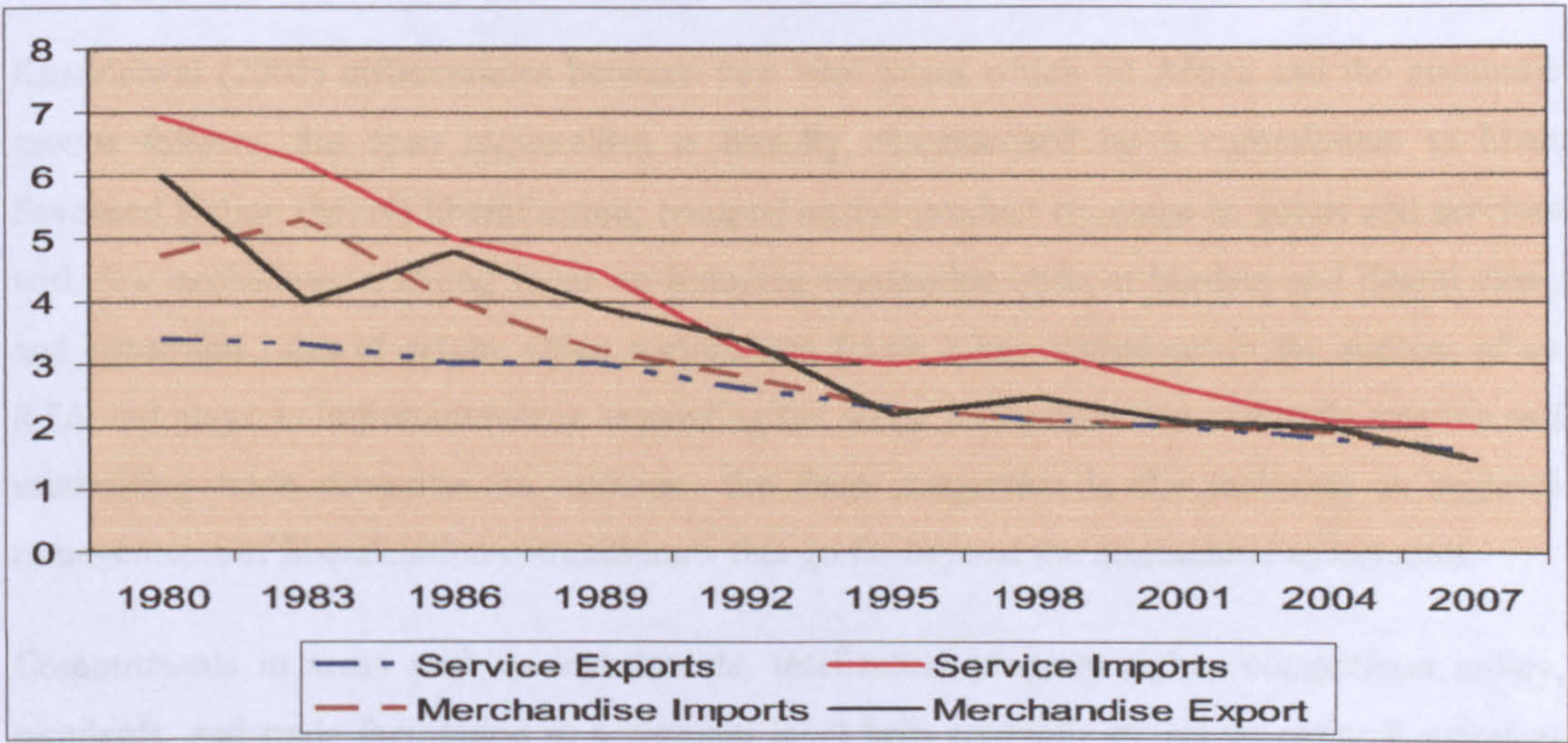
The World Bank (2004: 89) stated in the Global Economic Prospects that it is very clear that the African countries have developing economies operating in production and exporting very limited volumes of raw materials. Besides, their use of proper production techniques is barely present and they use primitive equipment which lacks financial and insurance regimes. These facts exclude some countries such as South Africa which has a better economic situation than the other African countries. In addition, Rashid Rizk, from the Central Agency for Public Mobilisation and Statistics in Egypt (CAPMAS) (personal communication. 28 January 2006) said that the majority of African countries are suffering from the weakness of Intra trade relationships among themselves, whereas, on the other hand, they have strong trade relations with the outside world. Many multinational companies are located in the African countries particularly European companies, due to the fact that some African countries have been colonies to these countries. France for instance, has a large share of imports from the African trade where it imports the African raw materials as well as minerals then it exports the finished products to the African markets such as finished goods, transport equipment, machines, communication devices, etc. This result reflects the weakness and limitation of the African production bases and the great similarity in the formation of their own commercial products. This condition creates possible opportunities for the Egyptian exports to penetrate this region. However, this depends on Egypt's competitive advantage to export the needed products in these African countries (MFTI, 2004: 3).

The UNECA (2004a: 156) highlighted that the African countries have not yet benefited from the increases in international trade. Their poor performance is partly due to high transaction costs, which significantly contribute to the cost of tradable goods and consequently determine

the degree of integration of a country into the world economy. These costs generally fall into two categories: direct costs, which include transportation and the cost of compliance associated with the collection and processing of information; and indirect costs or time-sensitive costs, which are brought about by administrative and customs procedures that delay goods, leading to increased transportation fees and inventory charges. As liberalisation continues to reduce the trade barriers, transaction costs are becoming higher than the cost of tariffs. For instance, the effective rate of protection provided by transport costs is now, in many cases, considerably higher than that provided by tariffs (Amjadi and Yeats, 1995). For some countries, such as Chile and Ecuador, transport costs exceed by more than twenty times the average tariffs they face with US markets, and in many instances, the cost of complying with customs formalities has been reported to exceed the cost of the tariffs to be paid (Micco and Pérez, 2002).

Khandelwal (2005: 8) said that regional integration has long been seen in Africa as a mean of achieving industrialisation and modernisation through encouraging trade and securing economies of scale and market access. Consequently, regional arrangements have sprung up all over Africa (Aryeetey, 1997: 10). These have, however, done little to halt the marginalisation of Africa in world trade. Africa's share of world trade in goods and services dropped from more than 5% in 1980 to an estimated 2% in 2007 as it is shown in Figure 4.2.

Figure 4.2: Share of Africa in world trade, 1980 -2007 (in percent)



Source: World Trade Organisation (2004)

Although, the general picture demonstrates the declining growth of Africa's market share, there are some African economies witnessing a slow and steady growth rendering them unnoticed in the overall declining situation of Africa's market share. The decline in Africa's share in world trade has happened simultaneously with an increase in the overall share of developing countries

indicating that the growth of African countries' trade has lagged behind that of developing countries in Asia and Latin America. The weak performance of African trade is a particular concern. Iqbal and Khan (1997: 9) have pointed out that African trade has been hindered by distorted trade regimes and high transaction costs owing to inadequate transport, information, and communications infrastructure (Iqbal and Khan, 1997: 12). Hinkle and Schiff (2004: 12) presented that African countries have the most restrictive trade regimes among all groups of countries, with high tariffs, a large number of often specific and seemingly arbitrary exemptions, and significant degrees of tariff escalation. Even though formal non-tariff barriers (NTBs) are not very common any more there continue to be informal barriers such as non-acceptance of rules of origin certificates and cumbersome and inconsistent customs procedures (Mattoo and Subramanian, 2004: 21).

Regional integration efforts have also been marked by a lack of political commitment and policy reversals in implementing harmonisation provisions, multiple and conflicting objectives of overlapping regional arrangements, and limited administrative resources (Iqbal and Khan, 1997: 14). As a result, even though Regional Trade Arrangements (RTAs) have been in place over the last few years such as: South African Development Commission (SADC) in year 1992, Common Market for Eastern and Southern African (COMESA) in year 1982, Economic Community of West African States (ECOWAS) in year 1975, they do not appear to have been successful in generating a trade expansion in Africa (World Bank, 2004).

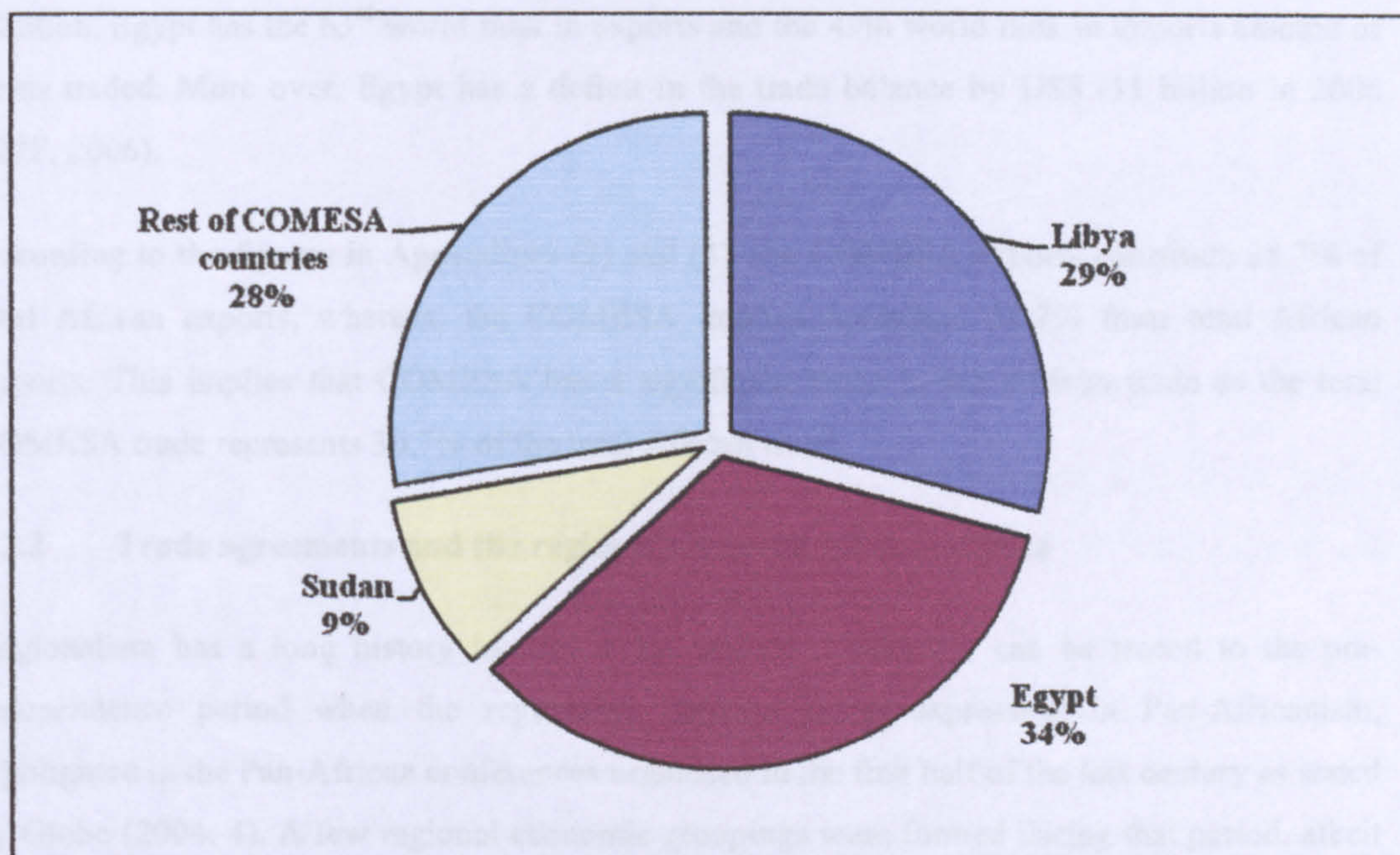
Khandelwal (2005) differentiates between two vital terms which all Africa and the economic groups follows, the open regionalism is broadly characterised by a commitment to Most Favoured Nation (MFN) liberalisation; comprehensive product coverage in goods and services with few exclusions, a strong focus on reducing transaction costs at borders and liberal clear, and consistent rules of origin. Open regionalism forms a key ingredient in the success of an RTA and plays an important role in expanding the scope for competition and trade creation and minimising trade diversion. In addition, the deep integration is the inclusion in regional arrangements of liberalisation commitments that go far beyond the multilateral agreements.

Commitments in areas such as investments, intellectual property rights, competition policy, standards, and trade facilitation at a regional level help reconcile divergent national practices and can create supranational implementation mechanisms. When deep integration is tailored to the level of development of a country, it has the potential to improve institutions and impart credibility to trade reforms beyond what would be possible in the multilateral context (World Bank 2004: 110). In addition, regional cooperation has the potential to alleviate trade development and supply constraints (Lawrence, 1997: 13).

4.2.1.2 COMESA countries

As mentioned in section 2.6, the COMESA countries have remarkable economic performance within this economic bloc. Therefore, Figure 4.3 presents the top three countries of COMESA trade.

Figure 4.3: The top three countries of COMESA trade



Source: Author, based on IMF (2006)

As shown from the previous figure and referring to Appendix 3, the top three economies in COMESA are Libya, Zambia, and Egypt. The Libyan economy; had a GDP of US\$ 74.97 billion in 2006, and total trade amounted to US\$ 51.4 billion. (That constitutes 29% from the total COMESA trade). Libya is a new member of COMESA, joining in July 2005 in order to benefit from COMESA advantages and to support the concept of regionalisation in Africa. It has the 4th rank among all the African countries regarding the export's trade, and the 7th African rank regarding import trade. In addition, Libya has the 54th world rank in exports and the 70th world rank in imports. Moreover, Libya has achieved a surplus in the trade balance of US\$ 22.5 billion in 2006 (IMF, 2006).

The Sudanese economy had a GDP of US\$ 96.1 billion in 2006, and total trade amounted to US\$ 16.1 billion. (That constitutes 9% of the total COMESA trade). It has the 14th rank among all the African countries regarding export trade, and the 9th African rank regarding import trade. In addition, Sudan has the 86th world rank in exports and the 90th world rank in imports.

Moreover, Sudan has achieved a surplus in the trade balance by US\$ -1.1 billion in 2006 (IMF, 2006).

The Egyptian economy had a GDP of US\$ 328.1 billion in 2006, and total trade value amounted to US\$ 60 billion where 34% is the total COMESA trade. Egypt has the 6th rank among all the African countries regarding export trade, and the 2nd African rank regarding import trade. In addition, Egypt has the 63rd world rank in exports and the 49th world rank in imports amount of items traded. More over, Egypt has a deficit in the trade balance by US\$ -11 billion in 2006 (IMF, 2006).

According to the figures in Appendices (2) and (3), the COMESA exports constitute 28.7% of total African exports, whereas, the COMESA imports constitute 32.7% from total African imports. This implies that COMESA has a significant share in the African trade as the total COMESA trade represents 30.7% of the total African trade.

4.2.2 Trade agreements and the regional economic blocs in Africa

Regionalism has a long history in Africa. Its earliest appearance can be traced to the pre-independence period when the regionalist impulse found expression in Pan-Africanism, highlighted in the Pan-African conferences organised in the first half of the last century as stated by Otobo (2004: 4). A few regional economic groupings were formed during that period, albeit in a colonial context. Two prominent examples dating from that period are the East African Community (Ndung'u, 2003: 17) and the Southern African Customs Union, the world's oldest customs union (Jenkins, 2003: 6). Regionalism and trade can have an important influence on growth and development. Whilst the role of trade as an engine of growth and development is well acknowledged, the place of regionalism in international trade is sometimes suspected.

The reason for this attitude, Otobo (2004: 8) stated that regional integration could result either in trade diversion or trade creation, and trade diverting regionalism undercuts the usual gains associated with free trade. An important measure of the economic efficacy of regionalism is its contribution to promoting intra-regional and external trade. One might suppose that the existence of several regional economic groups in Africa would result in significant intra-regional trade. This has proved not to be the case.

Furthermore, Intra-African trade remains rather low. The share of Intra-African trade as a percentage of its overall trade was 10.5% for exports, and 10.1% for imports in 2006. It is often argued that these ratios do not take into account informal trade between the countries of the region. Even so, the informal trade is unlikely to be as high as the formal trade. The weakness of

Intra African trade is attributable to a variety of reasons as stated by Salwa Shafik, MFTI (personal communication. 14 January 2006).

One major factor is that African countries remain mainly producers of primary commodities rather than manufacturers. Other reasons for the low Intra-African trade include the lack of coordination in domestic economic policies of member states, the disruptive effect of civil conflicts on formal trade and the prevalence of technical barriers such as inefficient transport systems and the substitution of non tariff barriers for tariffs (UNCTD 2004: 35).

As a result from regional integration Africa currently has 14 regional integration groupings, with two or more in almost all sub regions. Appendix 4 classifies the African countries within the RTAs. In West Africa the West African Economic and Monetary Union (UEMOA) and the Mano River Union (MRU) coexist with the ECOWAS.

Central Africa has three groupings: the Economic Community of Central African States (ECCAS), the Central African Economic and Monetary Community (CEMAC), and the Economic Community of Great Lakes Countries (CEPGL).

East and Southern Africa share six regional economic communities: COMESA, EAC, IGAD, IOC, SADC, and SACU. North Africa hosted only the Arab Maghreb Union (UMA) until the Community of Sahel-Saharan States (CEN-SAD) emerged, although CENSAD's membership straddles other economic communities and sub regions.

As indicated from UNCTAD (2004a), the World Bank (2004), and ECA (2004a) the following is a brief highlighting of the RTAs: The Sub-Saharan Africa remains weakly integrated with the global market. Although exports as a share of GDP in Sub-Saharan Africa increased in 2000, the region's exports as a share of world exports remained flat through the last decade, and are lower than in the early 1980s. GDP growth has also been slower than earlier decades. Many countries are dependent on a few commodities with volatile prices. Most face high transport costs and have weak institutions to facilitate trade. In Sub-Saharan Africa, RTAs are common and reflect an aspiration to overcome the limitations of small states. These include the SACU, CEMAC, COMESA, ECOWAS and the EAC. Although half since the 1990s has cut the MFN tariffs, non-border barriers restrict internal trade. The recent regional trade agreements have had more impact on outward looking MFN trade liberalisation, and thus on external trade, than on intra-regional trade. The economic impact of these agreements appears to have been small, especially compared to pre independence arrangements that essentially validated existing economic links SACU, UEMOA, and CEMAC.

Some South-South agreements do better in focusing on merchandise trade, minimising exclusions and adopting less restrictive rules of origin. For example, CARICOM (the Caribbean Community) and COMESA have also lowered costs of crossing borders, but in general, these have fared less well in respecting implementation schedules. They suffer from the disadvantages of small market size and economic similarity, and rarely provide for temporary movement of labour.

Many regional organisations in Africa moved aggressively to intensify trade liberalisation during the 1990s. The COMESA Treaty signed in 1993 to replace the Preferential Trade Area, calls for a free trade area by 2000 and a customs union by 2004. SADC started in the 1980s, and has shifted emphasis to creating a free trade area. Some observers note that African customs unions and free trade areas are as active in conflict resolution as in trade liberalisation. As it is noticed from Appendix 4 again, there are many African countries, which are members of more than one regional grouping. In East and Southern Africa some countries are members of SACU and SADC or both COMESA and SADC. In West Africa many countries that belong to ECOWAS also belong to UEMOA. The overlapping membership of large groups and the existence of smaller groups within large groups has sparked a debate over what is sometimes referred to as the “variable geometry approach”. Some argue that the overlap contributes to progress; Lyakurwa *et al.* (1997: 31) contends,

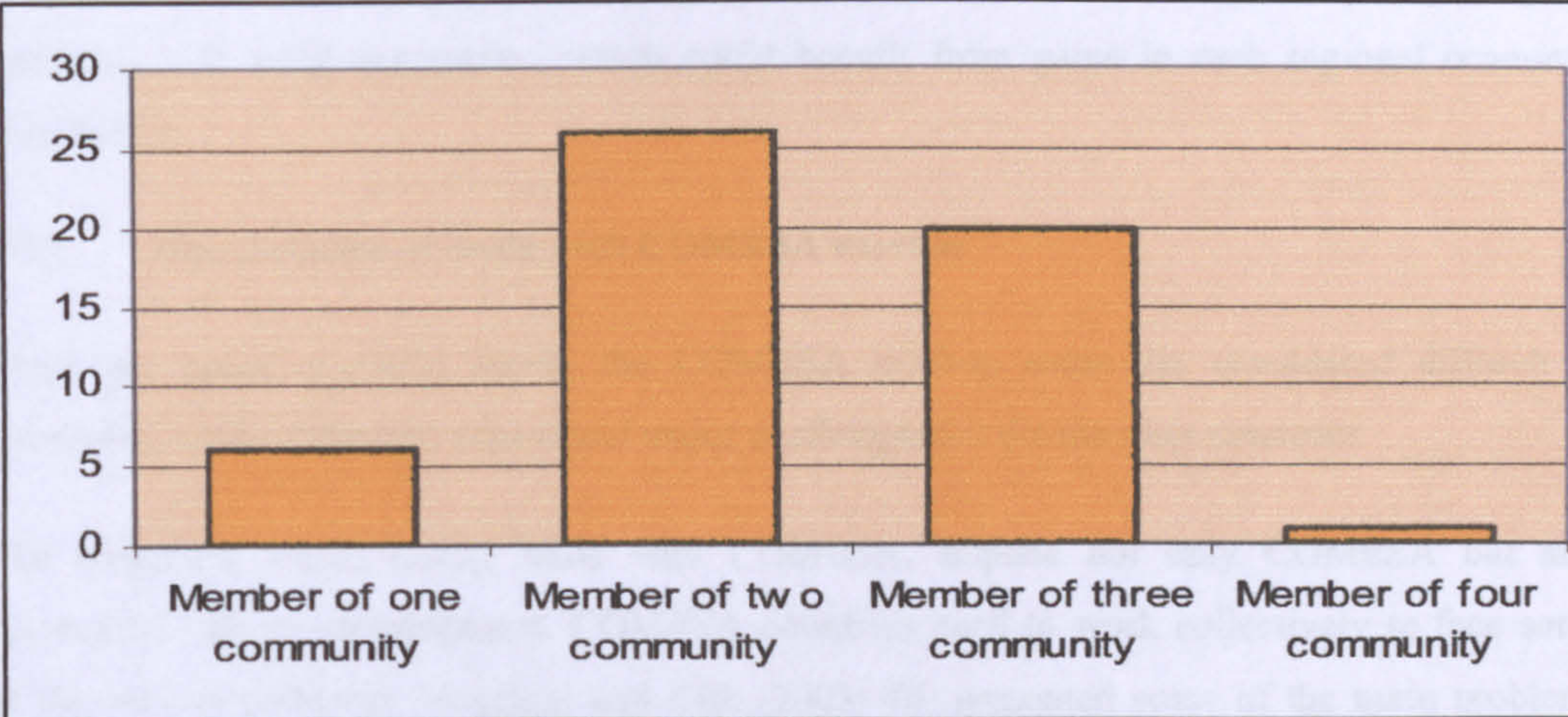
“In the African context, such an approach of variable geometry could, for example, mean making genuine progress at ECOWAS level while maintaining the achievements and benefits of UEMOA. In a similar manner, the concepts of variable geometry and subsidiary could also be useful in Southern Africa in relation to the PTA of COMESA, SADC, and SACU”

But others argue that multiple memberships hinder regional integration by, among other things, leading to duplication of effort. Aryeetey and Oduro (1996: 11) quote McCarthy as arguing that

“It is difficult to envisage how SADC and COMESA, given their convergence to both sectoral cooperation and trade integration, can live and prosper with the overlapping membership of the Southern African countries”

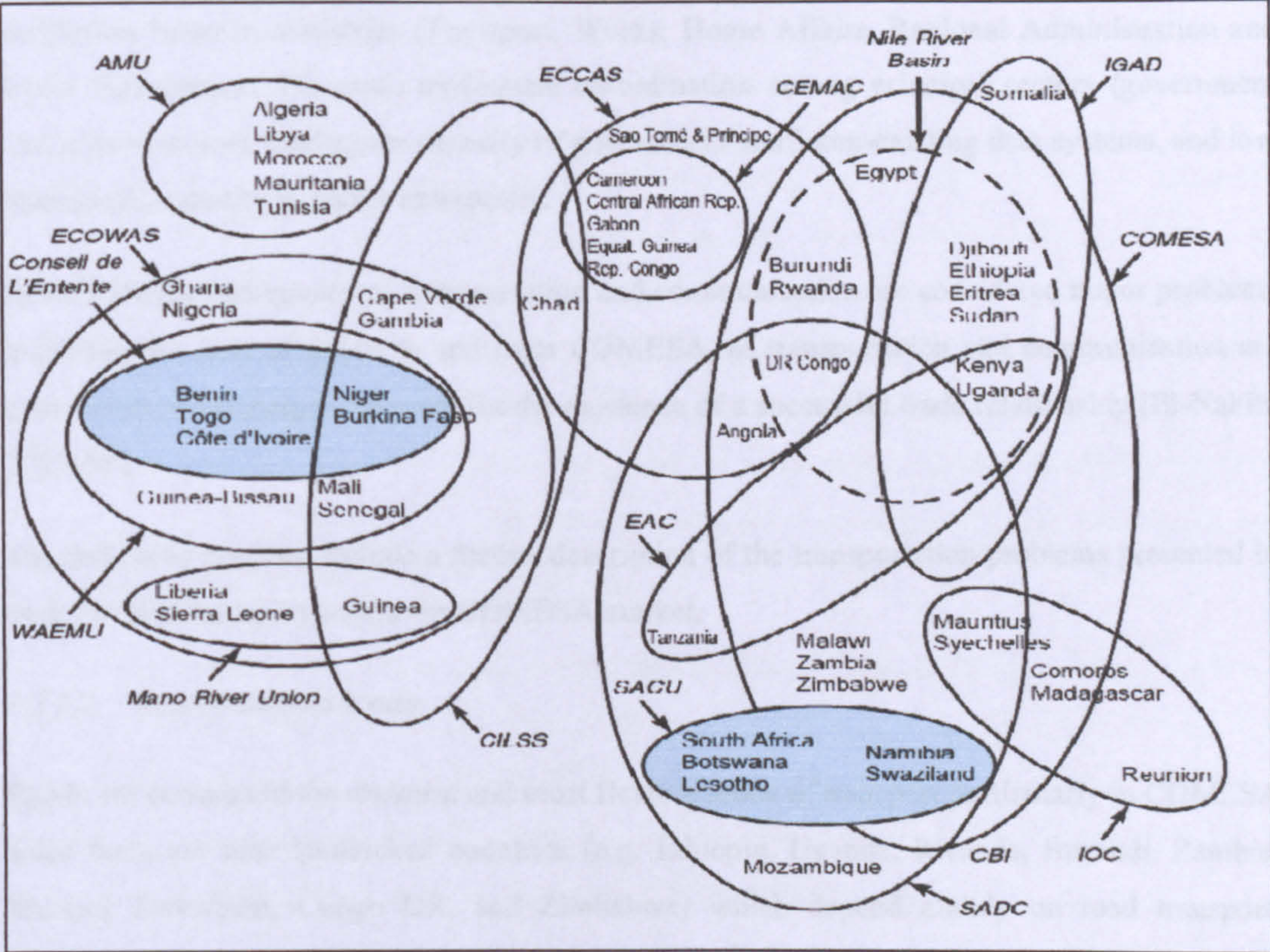
This line of thinking, premised on rationalising membership, seems more consistent with the Abuja Treaty, which aims at continent wide integration. The overlap extends to the country level, of the 53 African countries, 26 are members of two regional economic communities, and 20 are members of three, Figure 4.4a illustrates the overlapping between African agreements. The Democratic Republic of Congo belongs to four. Only 6 countries maintain membership in just one regional economic community. African countries chose to belong to two or more regional economic communities to pursue integration on multiple tracks.

Figure 4.4a: The overlapping between African trade agreements



Source: Economic Commission of Africa (2004a)

Figure 4.4b: The overlapping between African trade agreements



Source: Economic Commission of Africa (2004a)

Some members of a large bloc could proceed at a faster pace in a separate, smaller grouping. Smaller groupings could also make coordinating and harmonising national policies and strategies more manageable and could work towards sub regional, and eventually regional,

convergence. Moreover, membership in several communities could maximise the benefits of integration and minimise the losses by spreading risks. This could be especially important for countries with weak economies, which could benefit from gains in each regional economic community.

4.2.3 The obstacles of trade with COMESA market

There are many obstacles facing the COMESA market; some are considered difficult to overcome, while others are considered major challenges for the member countries.

The obstacles, which hinder trade with COMESA, impede not only COMESA but also the overall African development. COMESA countries need to work collectively to face some of the serious problems. Vogelaar and Dijk (2003: 40) presented some of the main problems which are obstructing trade within the COMESA market, such as: the protectionist policy, inadequate environmental pollution control policies, inefficient information exchange, poor competitiveness, production and consumer costs, poor economic performance, inadequate co-ordination between ministries (Transport, Works, Home Affairs, Regional Administration and Local Government, Finance), inadequate co-ordination among principal sectors (government and private sector), inadequate capacity of government staff, non-existing data systems, and low managerial capacity in public enterprises.

In addition the inadequacy of transportation and communication are considered major problems hindering the flow of goods to and from COMESA, as transportation and communication are considered two principal elements for the existence of a successful trade relationship (El-Nakib, 2003: 99).

The following sections include a further description of the transportation problems presented in each mode of transport within the COMESA market.

4.2.3.1 Road transport issues

Roads are considered the cheapest and most flexible mode of transport particularly in COMESA since there are nine landlocked countries (e.g. Ethiopia, Uganda, Rwanda, Burundi, Zambia, Malawi, Swaziland, Congo DR, and Zimbabwe) which depend mainly on road transport. There are numerous problems with this mode of transport. These problems are centered on one principal issue: infrastructure.

El-Nakib (2003: 104) mentioned that the infrastructure of roads in COMESA countries is significantly poor, as well as the inferior condition of vehicles used and the inadequate driver

training available. COMESA countries have inadequate legislation and enforcement to enhance road safety, and they lack a regionally established policy framework under which governments and the private sector should deliver road infrastructure and related services.

Moreover, there is inadequate expenditure on the reconstruction of road infrastructure and slow processes for the creation of road agencies and boards to manage road funds and to ensure co-ordinated road development and maintenance (El-Nakib, 2003: 105). The private sector in many economies could play a significant role in the development of some sectors in a country. However, in COMESA countries the private sector has an almost non-existent participation in road infrastructure development.

In addition, the requirements (documentation) may change from time to time without operators being given adequate notification of changes. There is always a high tendency towards diversion of cargo and delays, which automatically results in high transport costs. The taxes of the road transport sector (fuel, import duties on vehicles and parts, license fees) are well in excess of the maintenance costs of infrastructure (El-Nakib, 2003: 107).

4.2.3.2 Rail transport issues

Rail transport is one of the most popular modes of transport in COMESA countries. However, not all the COMESA countries have railways such as: Burundi, Comoros, Mauritius, and Rwanda (COMESA, 2006). Rail transport is known for its low transportation cost i.e. economies of scale (high volume and long distance), which reduces unit cost. However, in COMESA countries the situation is different because the rail transportation is characterised by its high transportation costs (long distance and low volume). Unfortunately, COMESA countries are known for their failure of national railway operators to provide a reliable, predictable and cost-efficient service (Abdel-Monem, 2005: 5).

The principal reasons for not realising the low cost of railway transportation are attributed to the massive delays, which are mainly caused, by general inefficient management, derailments, unavailability of rolling stock, unreliability of locomotives and lack of effective operating systems. Moreover there is a rapid decline in the condition of the railway infrastructure and at the same time there is inadequate maintenance of these infrastructures.

In COMESA countries, there is a remarkable lack of integration in the train tracking and management system between the various railways, and inadequate support and enhancement of implementation of transport policy.

4.2.3.3 *Maritime transport issues*

Maritime transport is considered the main gate used to export and import products from/to COMESA. But, like the other modes of transport, the maritime transport sector also suffers from a number of problems.

Congestion in ports like Dar es Salaam (DSM) and Mombassa is due to inefficient management, inadequate (no standardised) exchange of information between ships and ports, as well as the lack of coordination in the processes of cargo and ship documentation and long and delaying cargo clearing procedures (Sardar, 2005).

According to Mohamed Tawfik, MRCC (personal communication. 10 June 2006) nearly all corridors (except South Africa) operate well below their installed capacity as a result of inefficient management. High costs arise due to the delay of goods in ports (DSM & Mombassa), which results in the pilferage and damage costs of goods in the ports. The high level of port state controls also lead to bureaucratic approaches, inadequate security and hence poor safety, leading to high insurance premiums.

Sardar (2005) stated that the issue of communication and information exchange in ports is the central problem in the maritime transport sector. The information systems used by ports in the COMESA region are neither complete nor known for quality; he added that there is an inadequate data interface between port operators and customs, police, railways and haulers. Due to the inefficiency of information systems, there is also an inability to track empty containers.

As to the infrastructure, COMESA countries have inadequate investment in port infrastructure, and Djibouti port still lacks mobile cranes and is under-utilised.

Eritrean and Ethiopian state enterprises monopolise the transit forwarding and shipping agent roles, which is reflected in the inefficiency of the operation. Moreover, many COMESA countries' ports have custom procedures which are cumbersome and time consuming, (like in Ethiopia) which add extra cost to the trading partners (El-Nakib, 2003: 112 and ACCE, 2005:31).

4.2.3.4 *Inland waterways transport issues*

Although COMESA countries have major lakes and rivers, which could be utilised considerably for the wealth of the region, the inland lakes and rivers are unfortunately not well employed. Low port efficiency, inadequate shipping services and capacity in major lakes and rivers are the features which distinguish this mode of transport in COMESA members. In addition, there is

high cost of handling containers involved due to overstay and demurrage charges. Low cargo availability in the region due to inability to consolidate available cargo is another problem. Moreover there is an apparent lack of forums to promote regional shipping lines in partnership with major international lines and low private sector participation in the industry of inland waterways transportation (El-Nakib and Roberts, 2006).

4.2.3.5 Air transport issues

Air transport is the fastest and most expensive mode of transport. Developed nations have taken the lead in the efficient operations of air transport. However in under developed nations like the COMESA members, the status of air transport is not the same. A series of drawbacks is involved in this transportation sector (COMESA, 2005), as there are constant delays in the clearance of goods and high storage costs.

High taxation on equipment and facilities is another burden, which should be confronted. The cost of domestic or regional air transport versus international air transport is quite remarkable. This is due to the underutilization of the available capacity. Finally, as to the information exchange, the air cargo movement information is not disseminated to the users, which results in making incorrect decisions, which is then results in a higher cost.

4.2.3.6 Pipeline transport issues

For pipeline transport, the state of ownership affects the service costing for the commodities delivered. There is an apparent competition between the different modes of transport, which is in favor of the other modes of transport and not the pipelines (COMESA, 2005: 59).

This fact is due to safety reasons. There is a significant lack of maintenance and control over the physical parts of the pipelines which constitutes a level of risk. For example, the pipeline between Nairobi and Mombasa in Kenya is limited; this pipeline was extended to Kisumu and Eldoret in Kenya from where the landlocked countries of Uganda, Rwanda, Burundi and Eastern Congo DR access their fuel supplies. The pipeline will however require expansion and extension to at least Kampala, in order to effectively meet the fuel demand of these countries (TTCANC, 2004: 6).

Moreover, there is a lack of coordination with the other modes of transport i.e. lack of modal interfaces at terminals due to small commodity range and vulnerability.

4.2.3.7 Information and communication technology issues

In COMESA countries, restrictive government policies either inhibit or make it very expensive to procure and/or deploy the infrastructure (Marawa, 2005). Moreover, there is inadequate access to capital to support Information and communication technology infrastructure. As to the human skills needed to support these technologies, there is an insufficiency in key technical skill areas to support the design, deployment, installation, operation, maintenance and utilisation of the infrastructure networks and the systems built on the network. As businesses around the world are taking advantage of the communication technologies and the use of the Internet to conduct business, COMESA members lack information and a communication technology regulatory environment (in most countries), which is not conducive to transacting business over the Internet. Even if the Internet is available in a certain country, it suffers from poor connectivity and other technical problems (Marawa, 2005).

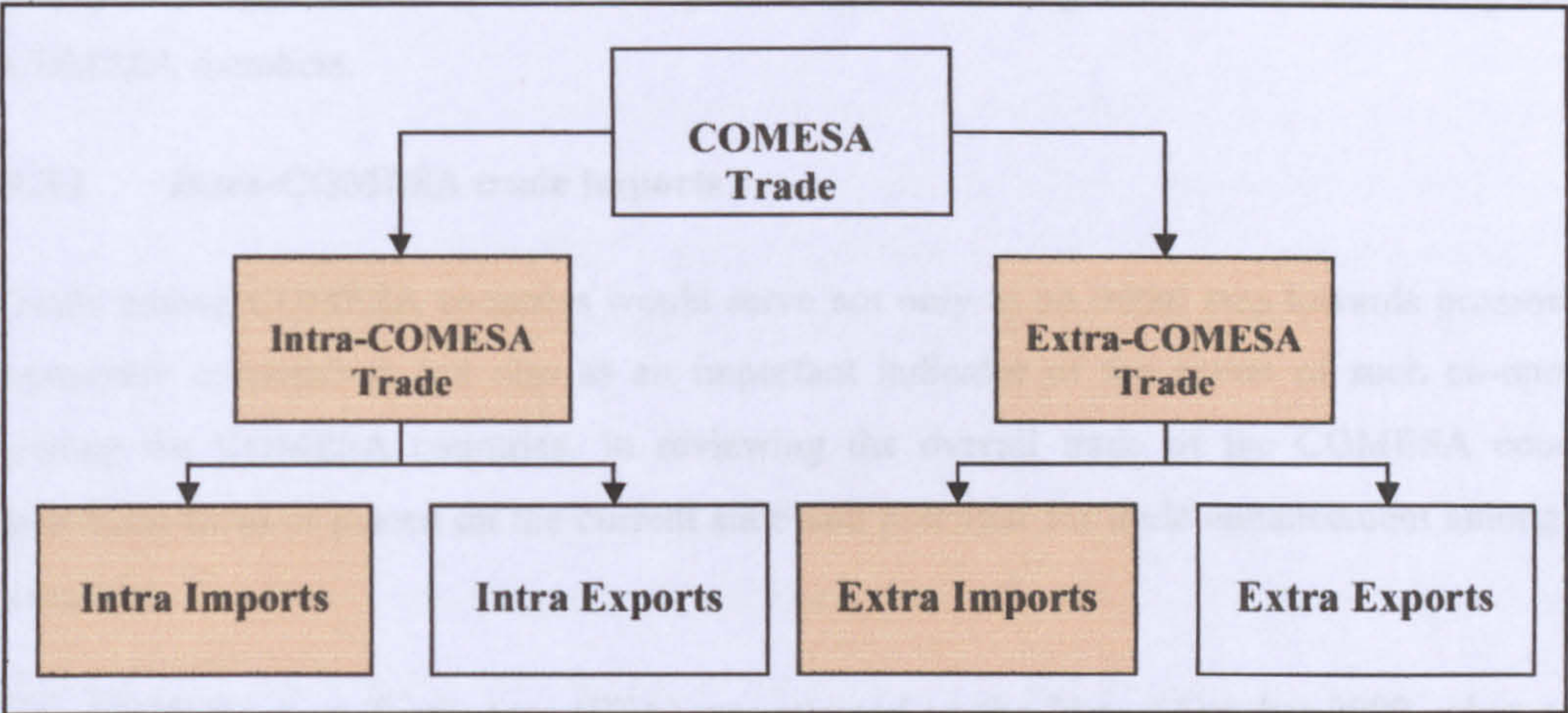
Magdy Abo-Elvoud, MRCC (personal communication. 29 May 2006) criticised the COMESA countries which have a poor understanding of the opportunities for economic growth, which could be available through information and communication technology at public and private sectors. The poor access to data and information of use to decision makers, entrepreneurs, traders, investors and other stakeholders dramatically impacts on the regional economic development.

4.3 COMESA TRADE IMPORTS

Trade is not only necessary for growth of the national economy, but also it links the economies of the trading partners, which supports their overall economic development. Thus, production structures change to trigger further trade expansion and output growth. This, in turn, leads to further dynamic linkages through new investments, organisation and management, international capital flows and rapid progress in information technology, etc.

The COMESA trade is consists of Intra-COMESA trade and Extra-COMESA trade. Intra-COMESA trade refers to the trade of commodities and services among COMESA members, whereas Extra-COMESA trade refers to all the trade transactions taking place between the COMESA members and the rest of the world i.e. Non-COMESA members. Figure 4.5 shows the structure of COMESA Trade.

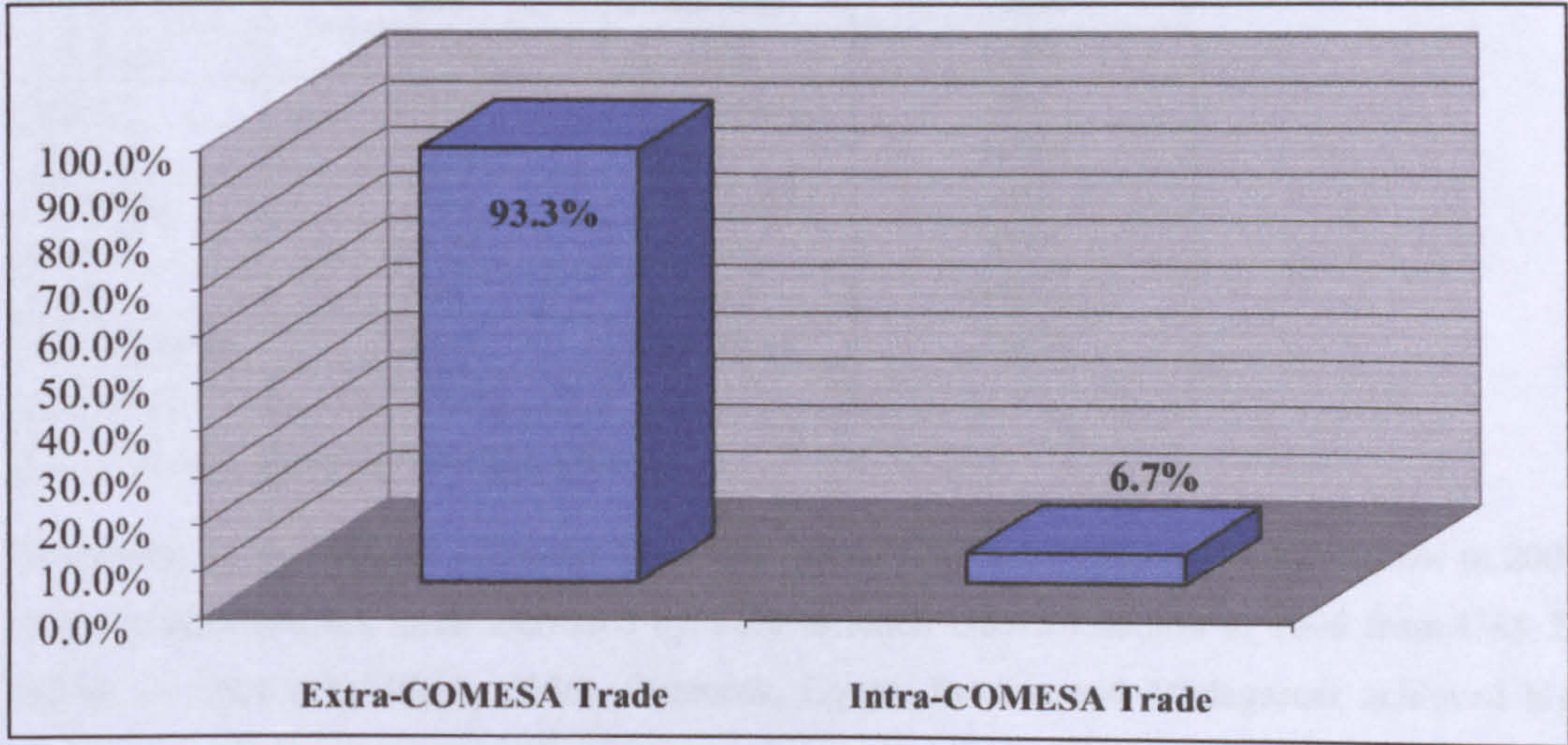
Figure 4.5: The structure of COMESA Trade



Source: Author.

As shown in Figure 4.5, the structure of COMESA imports consists of two levels; the first level, which will be examined, is the Intra-COMESA trade imports, which refers to the imports of COMESA countries from other COMESA members. In 2005 the Intra-COMESA trade imports amounted to US\$ 3 million (COMESA, 2006). It is worth mentioning that one of the purposes behind forming an economic bloc such as COMESA is that each nation looks to complement its needed resources from the other member nations. Therefore, each Intra COMESA countries' imports will be different. The second level to be examined will be the Extra-COMESA trade imports, which refers to the products and services imported from non-COMESA members to COMESA countries, e.g. France, United Kingdom, China, Germany, Tunisia and South Africa. Figure 4.6 shows the COMESA trade structure.

Figure 4.6: COMESA Trade Structure



Source: Author, based on COMESA (2006).

With the purpose of continuing the description of the situation of the COMESA imports, it is imperative to provide quantitative and qualitative data relating to the trade relationship between COMESA members.

4.3.1 Intra-COMESA trade imports

Trade among COMESA countries would serve not only as an initial step towards promotion of economic cooperation, but also as an important indicator of the extent of such co-operation among the COMESA countries. In reviewing the overall trade of the COMESA countries, particular focus is placed on the current state and potential for trade enhancement among these countries.

The COMESA Free Trade Area (FTA) was attained on the 31st of October 2000, when nine of the member States, namely, Djibouti, Egypt, Kenya, Madagascar, Malawi, Mauritius, Sudan, Zambia, and Zimbabwe completed the tariff reduction process to zero on COMESA originating products. Burundi and Rwanda joined the FTA on 1st January 2004, bringing the number of member states participating in the FTA to eleven (Rojid, 2006: 947).

Table 4.1 shows the status of tariff reductions on COMESA originating goods by all the member states. However, these rates do not show the other tariffs that the member states charge on various items and have a significant effect on intra-regional trade.

Table 4.1: Status of tariff reductions among COMESA member states

Country	Tariff reduction	Country	Tariff reduction
Burundi	100%	Malawi	100%
Congo DR	0%	Mauritius	100%
Djibouti	100%	Rwanda	100%
Egypt	100%	Seychelles	0%
Eritrea	80%	Sudan	100%
Ethiopia	10%	Swaziland	0%
Kenya	100%	Uganda	80%
Libya	N/A	Zambia	100%
Madagascar	100%	Zimbabwe	100%
Comoros	100%	-	-

Source: Author, based on COMESA (2006).

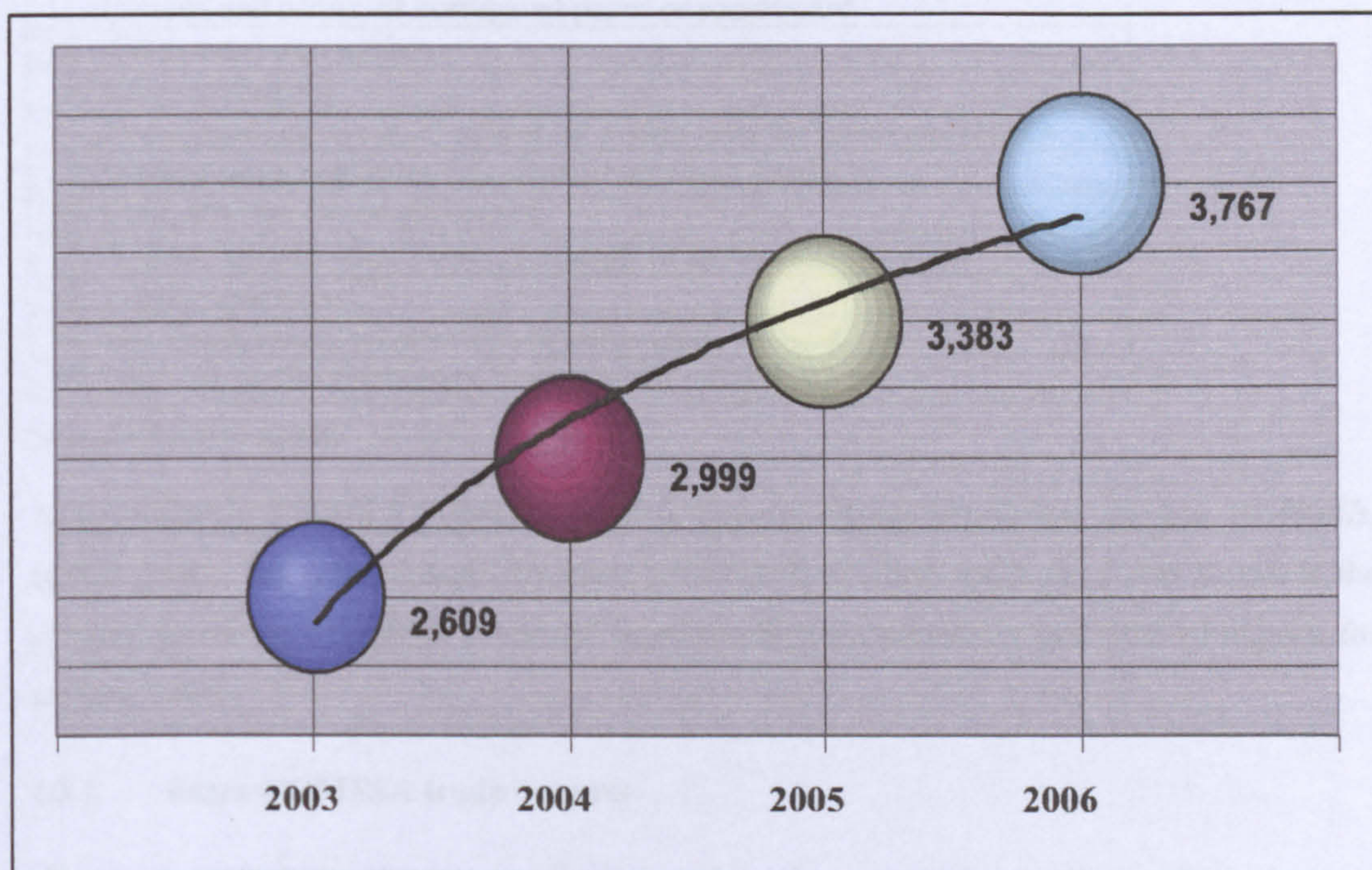
Moreover, the provisional estimates show that Intra-COMESA trade continued to grow in 2006. Total Intra-COMESA trade increased by 12% to reach US\$ 3.7 billion in 2006 from US\$ 2.9 billion in 2004 (COMESA, 2006). Comoros, Egypt, Eritrea, and Madagascar achieved high

growth rates of exports to the region, along with other countries such as Kenya, Malawi, Rwanda, Uganda, Zambia and Zimbabwe.

On the Intra COMESA imports side, Egypt, Democratic Republic of Congo, Malawi, Sudan and Zambia had substantial increases in their imports from the region. Appendix 5 presents the Intra-COMESA trade imports from 2002 - 2006; COMESA member states continue to support their trade whilst benefiting from the advantage of tariff reduction and the trade agreements protocols (DECE, 2006: 5).

The Intra-COMESA trade imports have 12.8% from the total COMESA imports, the development of total Intra-COMESA trade imports from 2003 - 2006 could be summarised in Figure 4.7 as follows:

Figure 4.7: Total Intra-COMESA trade imports from 2003 - 2006 (Billion US \$)



Source: Author, based on COMESA (2006)

Appendix 5 shows again that Egypt, Congo D.R, Malawi, Sudan and Zambia had substantial increases in their imports from the region.

Intra-trade among the FTA countries rose from US\$ 2 million in 2004 to US\$ 2.7 million in 2006, which constitutes a growth of 31.7%. In 2006, the top 20 Intra-COMESA import products included tea, sugar, beverages and cement. Petroleum oils, cement, odoriferous substances and tea were among the top Intra-COMESA imports.

Based on the 2006 trade developments, the outlook for 2007, based on data available, indicates that Intra-COMESA trade will continue to increase (COMESA, 2006). Table 4.2 shows the top 20 products traded among the COMESA countries.

Table 4.2: Intra-COMESA top 20 import products 2002 - 2006

Product Description
1. Petroleum oils and oils obtained from bituminous minerals
2. Portland cement
3. Mixtures of odoriferous substances and mixtures
4. Black fermented tea and partly fermented tea
5. Raw cane sugar
6. Malt
7. Coffee
8. Tobacco, not stemmed or stripped
9. Cane or beet sugar and chemically pure sucrose, in solid form
10. Salts, including table salt and denatured salt, and pure sodium chloride
11. Cartons and boxes, of corrugated paper or paperboard
12. non roasted iron pyrites
13. Cement clinkers
14. New pneumatic tyres, of rubber, of a kind used for buses and lorries
15. Medicaments consisting of mixed or unmixed products
16. Coal, whether or not pulverised
17. Aeroplanes and other powered aircraft of an non laden weight
18. Food preparations.
19. Bituminous coal, whether or not pulverized
20. Palm oil and its fractions, whether or not refined

Source: COMESA (2006)

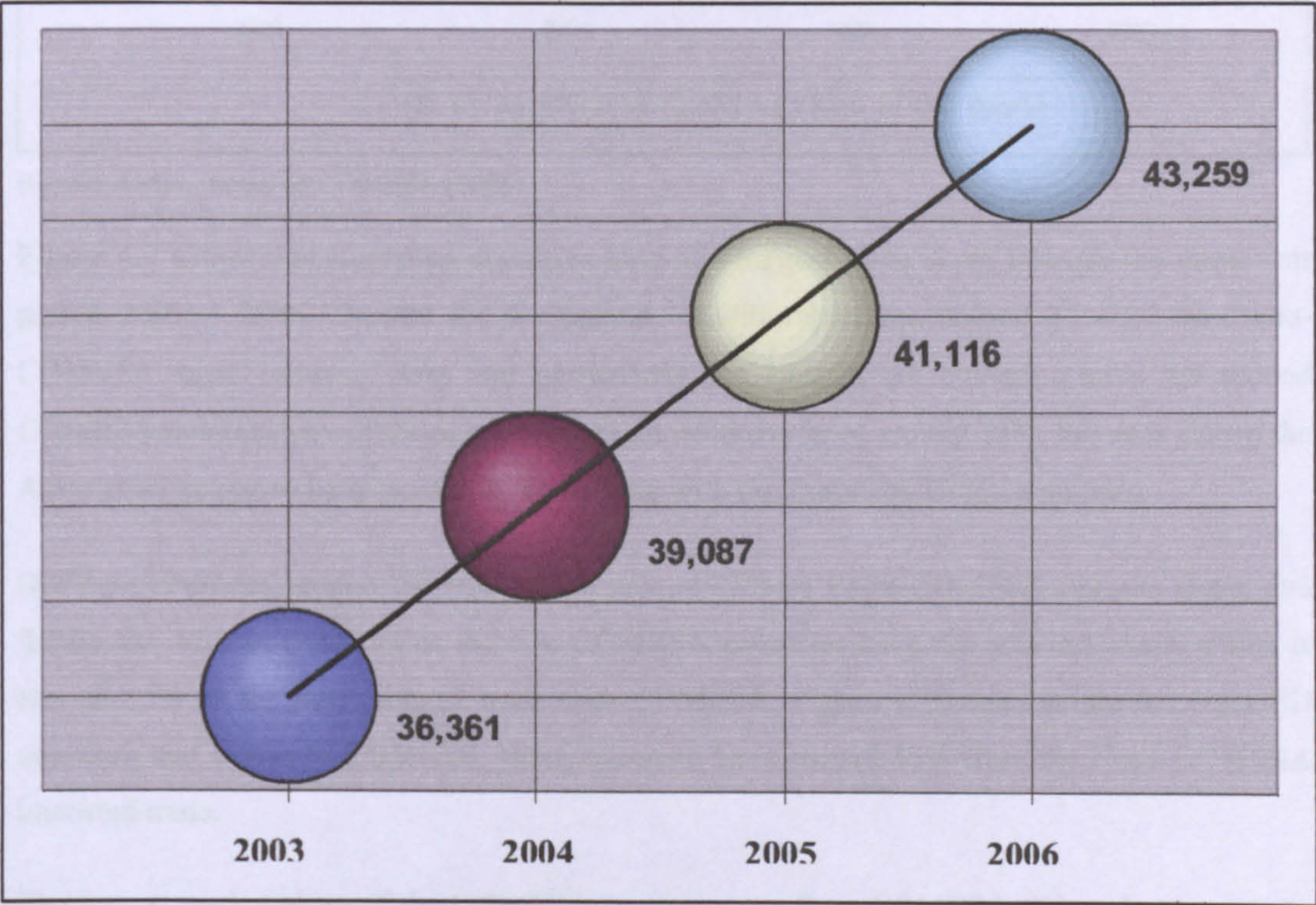
As presented in Table 4.6 COMESA primary imports include petroleum, vehicles, foodstuffs, capital goods, and other industrial-related products. It is worth mentioning that Kenya is the primary source for COMESA countries' imports which accounted for over 30% of imports for the year 2006.

4.3.2 Extra-COMESA trade imports

This section will highlight the main features of the Extra-COMESA trade imports, which will demonstrate the main exporting non-COMESA countries to COMESA countries in order to continue the examination of the structure of COMESA imports. The Extra trade is more dynamic compared with the Intra trade. Kotschwar (2005) stated that the increasing globalisation and liberalisation of trade witnessed over the past few decades has been especially marked in developing economies. She presented the East Asian Newly Industrialising Countries (NICs) as an early success of liberalisation of formerly firmly inwardly-oriented economies which have changed their policies of import substitution industrialisation to more liberal,

export-oriented economies this has, in turn, led to a trade explosion in the developed world, and this example can be applied as well to the economies of COMESA countries because the majority of COMESA countries depends on the import substitution industrialisation policy rather than being export oriented economies. Figure 4.6 shows the remarkable gap between the Intra trade and the Extra trade where the Extra trade constitutes 93.7% from the total COMESA trade compared with the Intra trade, which constitutes 6.7% only. The poor trade relation between the COMESA countries reflects two issues: the huge dependence on the import substitution industrialisation policy which is formatted to recover the needs from COMESA market and the strong control of the foreign countries which import the raw materials from COMESA and then export the finished products to this market again. Figure 4.8 highlights the situation of Extra-COMESA trade imports volumes between 2003 and 2006.

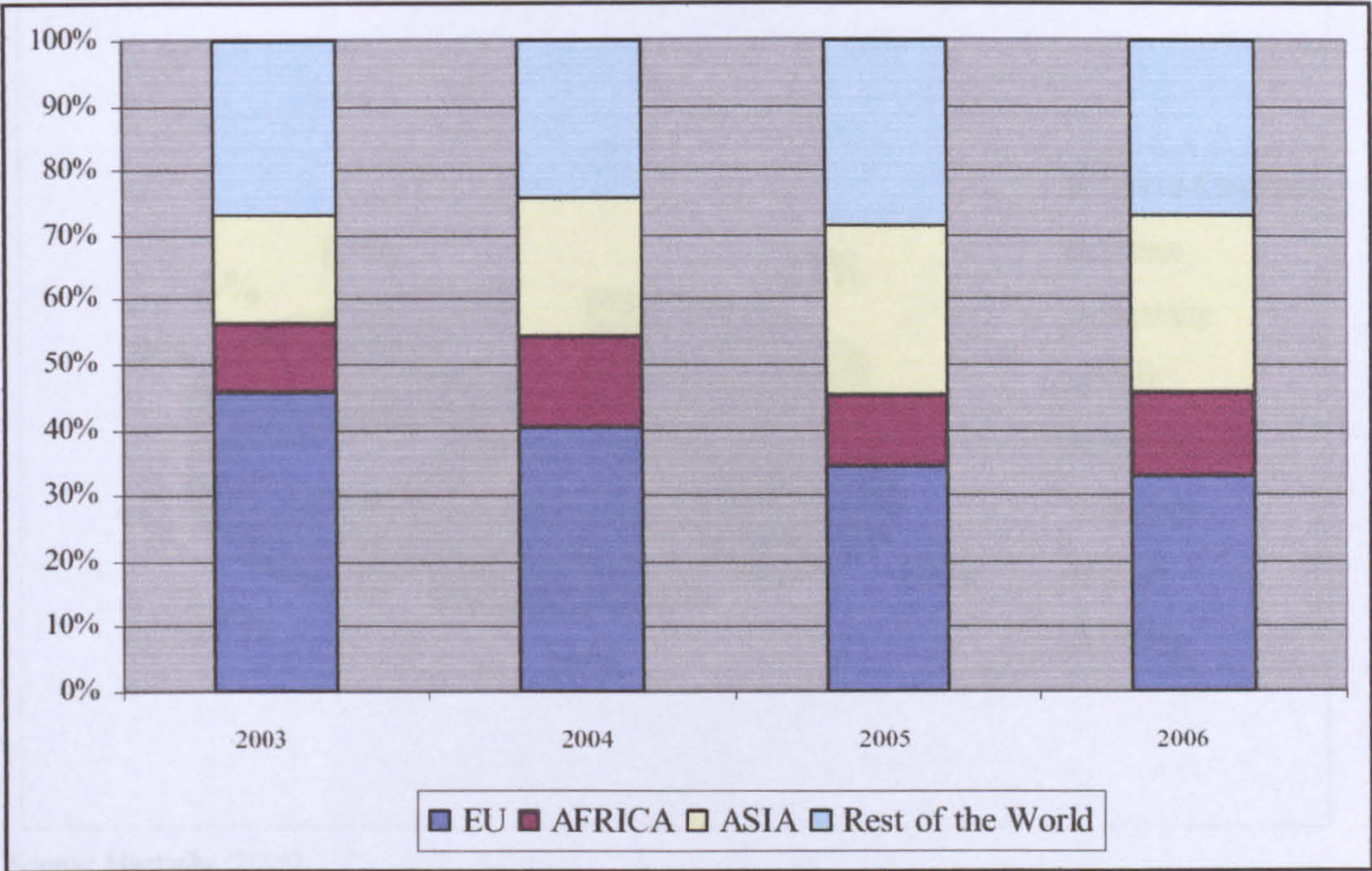
Figure 4.8: Extra-COMESA trade imports from 2003 – 2006 (Billion US \$)



Source: Author, based on COMESA (2006)

Appendix 6 shows that Egypt, Kenya, Sudan and Mauritius have the highest ranks for importing from non-COMESA members. The Extra imports amounted to US\$ 41 million in 2005 and were expected to be US\$ 43.2 million in 2006. The main trade partners exporting to COMESA are shown in Figure 4.9.

Figure 4.9: Trade partners of COMESA



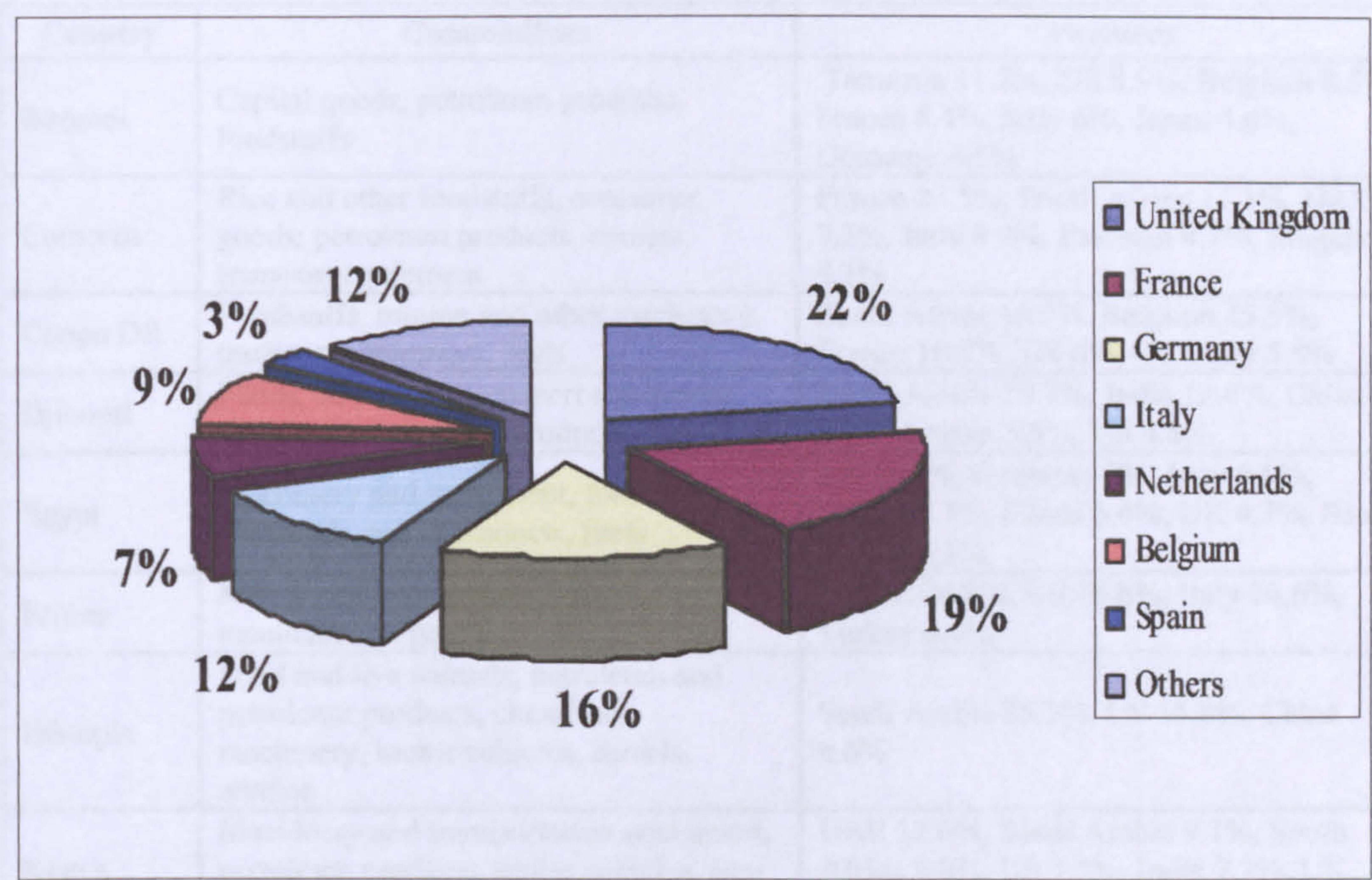
Source: Author, based on COMESA (2006)

Figure 4.9 shows that European countries have the biggest trade share through the three year period 2003 – 2006. Despite the fluctuation, it still represents around 35% of the Extra-COMESA trade imports. Asia and particularly the East Asian countries have the second COMESA market share of Extra imports. Asian countries have around 25%, but as is shown the Asian share seems to be increasingly competing with the European Union countries.

Different countries around the world have around 25% of Extra-COMESA imports share, and finally the African countries or the non-COMESA countries have the smallest share, which is around 15% of the Extra import trade with COMESA. Figure 4.10 summarises the main EU countries that export to COMESA, these countries have around 35% from the Extra-COMESA imported trade.

The largest market share of the COMESA imports came from COMESA-EU trade agreements, which represent the level of trade that is diverted from the rest of the world, particularly the COMESA countries, to the benefit of EU producers. Moreover, the most efficient producers of the EU are favoured in comparison to the most efficient producers from the rest of the world.

Figure 4.10: The top EU exporters to COMESA countries



Source: Mustapha (2005)

As a whole, EU countries could increase their exports to COMESA countries by US\$ 1.15 billions. Table 4.3 shows the main Extra-COMESA imports for each county with its main trade partners.

Table 4.3: Top Extra-COMESA trade imports

Country	Commodities	Partners
Burundi	Capital goods, petroleum products, foodstuffs	Tanzania 11.2%, US 8.9%, Belgium 8.5%, France 8.4%, Italy 6%, Japan 4.6%, Germany 4.5%
Comoros	Rice and other foodstuffs, consumer goods; petroleum products, cement, transport equipment	France 23.5%, South Africa 11.1%, UAE 7.2%, Italy 4.9%, Pakistan 4.7%, Singapore 4.1%
Congo DR	Foodstuffs, mining and other machinery, transport equipment, fuels	South Africa 18.5%, Belgium 15.5%, France 10.8%, US 6%, Germany 5.8%
Djibouti	Foods, beverages, transport equipment, chemicals, petroleum products	Saudi Arabia 19.7%, India 12.4%, China 8.1%, France 5.6%, US 4.8%
Egypt	Machinery and equipment, foodstuffs, chemicals, wood products, fuels	US 12.2%, Germany 7%, Italy 6.6%, France 5.7%, China 5.4%, UK 4.7%, Saudi Arabia 4.1%
Eritrea	Machinery, petroleum products, food, manufactured goods	Ireland 26.6%, US 18.6%, Italy 16.6%, Turkey 6.4%
Ethiopia	Food and live animals, petroleum and petroleum products, chemicals, machinery, motor vehicles, cereals, textiles	Saudi Arabia 25.3%, US 15.8%, China 6.6%
Kenya	Machinery and transportation equipment, petroleum products, motor vehicles, iron and steel, resins and plastics	UAE 12.6%, Saudi Arabia 9.1%, South Africa 8.8%, US 7.7%, India 7.2%, UK 6.7%, China 6.4%, Japan 5%
Libya	Machinery, transport equipment, semi-finished goods, food, consumer products	Italy 25.5%, Germany 11%, South Korea 6.1%, UK 5.4%, Tunisia 4.7%, Turkey 4.6%
Madagascar	Capital goods, petroleum, consumer goods, food	France 17.2%, China 9.7%, Hong Kong 6.6%, Iran 6.4%, South Africa 5.6%
Malawi	Food, petroleum products, semi manufactures, consumer goods, transportation equipment	South Africa 37.3%, India 8.1%, Mozambique 7.7%, Tanzania 4.6%, Germany 4.1%
Mauritius	Manufactured goods, capital equipment, foodstuffs, petroleum products, chemicals	South Africa 11.3%, China 9.4%, India 9.3%, France 9.2%, Bahrain 5.3%, Japan 4.1%
Rwanda	Foodstuffs, machinery and equipment, steel, petroleum products, cement and construction material	Kenya 24.4%, Germany 7.4%, Belgium 6.6%, France 5.1%
Seychelles	Machinery and equipment, foodstuffs, petroleum products, chemicals	Saudi Arabia 15.5%, Spain 13.3%, France 10.3%, Singapore 7%, South Africa 6.8%, Italy 6.7%, UK 4.7%
Sudan	Foodstuffs, manufactured goods, refinery and transport equipment, medicines and chemicals, textiles, wheat	China 13%, Saudi Arabia 11.5%, UAE 5.9%, India 4.8%, Germany 4.5%, Australia 4.1%, Japan 4%
Swaziland	Motor vehicles, machinery, transport equipment, foodstuffs, petroleum products, chemicals	South Africa 95.6%, EU 0.9%, Japan 0.9%, Singapore 0.3%
Uganda	Capital equipment, vehicles, petroleum, medical supplies; cereals	UAE 7.3%, South Africa 6.5%, India 5.8%, China 5.6%, UK 5.1%, US 4.8%, Japan 4.8%
Zambia	Machinery, transportation equipment, petroleum products, electricity, fertilizer; foodstuffs, clothing	South Africa 46.2%, UK 14.2%, UAE 7.1%,
Zimbabwe	Machinery and transport equipment, other manufactured goods, chemicals, fuels	South Africa 46.9%, Botswana 3.6%, UK 3.4%

Source: Author, based on IMF (2006)

It can be concluded from the previous discussion in this chapter, that the Intra-COMESA trade is very small compared to the Extra COMESA total commercial transactions with the rest of the world. This confirms that the vast majority of the regions formal trade is with the rest of the world and not within the COMESA region. Obviously the reason for this is as diverse as the African and COMESA problems, but definitely tariffs and non- tariff barriers and lack of awareness and preparedness by COMESA's business community are the main ones.

Regional economic integration schemes as COMESA help to expand intra-regional trade by gradually removing tariffs and non-tariff barriers helping to smoother and then free movement of goods, services, and factors of production across national borders. But this does not mean that equity of benefits from free trade arrangements will be secured easily.

Some of the questions concerning participation in a regional free trade arrangement are the effects of trade liberalisation, its effect on the government revenue and industrial competitiveness and whether realising trade creation than trade diversion will be possible for a given member country. For instance, Kenyan traders complain that the elimination of duty on goods from Egypt, Zimbabwe and Sudan has caused intense debate lately due to these countries comparative advantage in sugar production. Their Industries have been seen as a threat to Kenya's battered sugar industry (The East African, 2001).

In addition to that, developing trade infrastructure and creating awareness about the schemes has to be dealt with. If the African business community is largely unaware of the existing regional trading opportunities, treaties and protocols do not solely bring about regional trade expansion since it requires the dynamic participation of the business community. However, research undertaken by the International Trade Centre of the UNCTAD/WTO in cooperation with COMESA Secretariat has revealed a considerable diversity of tradable products and provided evidence, through a trade flow analysis of an Intra-COMESA trade potential exceeding several times the existing levels. This potential is an important basis for developing economic cooperation among African countries based on mutually beneficial trade and investment opportunities.

4.4 INVESTIGATING THE PERFORMANCE DEVELOPMENT AND MARKET SHARE STATUS OF THE EGYPTIAN EXPORTS IN COMESA

In order to investigate the performance development and the market share of the Egyptian exports in COMESA countries, it is noteworthy to emphasise the special characteristics of the Egyptian exports in the COMESA market and investigate whether they are different from features of the Egyptian exports in other international markets. In addition, it is imperative to

highlight the actual trade flows between Egypt and COMESA countries to determine the qualitative and quantitative nature of this trade.

4.4.1 Characteristics of the Egyptian exports in the COMESA countries

As a first step, investigating the characteristics of Egyptian exports to COMESA countries would be based on two main factors; the geographical distribution of the Egyptian exports and the development of market shares. The geographical distribution of the Egyptian exports is considered a real indicator of the performance, as well as the development of the Egyptian exports of international market shares. Table 4.4 traces the development of the regional distribution of the Egyptian exports over the period 1999 - 2006. This specific time period has been selected due to the year that Egypt joined the COMESA in May 1998 (MFTI, 2005: 31).

Table 4.4 reveals that Egyptian exports have shifted towards industrialised countries in general and to the EU countries and USA specifically and diverted away from developing countries from the period of 1999 until 2006. However, the development of Egyptian exports to Africa and to COMESA in particular has been remarkably increased from 1% of the total Egyptian exports in 1999 to 2 % in 2006 which justifies the Egyptian export strategy toward COMESA countries which are considered as one of the potential markets for Egypt.

On the other hand Asia and the Arab countries share of the Egyptian exports to these markets are steady. However, the competition in the Asian market in particular is very high as most of the Asia markets are considered leading exporting countries in the world. Therefore, Egypt exports raw materials and construction materials where they will be remanufactured for export (MFTI, 2006a: 130).

The Egyptian strategies regarding the exports are to enhance the potential opportunities for Egyptian exports towards Africa and COMESA particularly improving the competitiveness of Egyptian exports in EU, USA, and the Asian markets (ACCE, 2006: 4).

The products' quality, price and varieties of these markets are competitive compared with the Egyptian products. However, in the African and COMESA markets the quality and, in certain cases, the prices of Egyptian products are competitive but need marketing and promotion campaigns.

Table 4.4: Geographical distribution of the Egyptian exports 1999 - 2006

(in Billion US \$)

Regional markets	1999		2000		2001		2002		2003		2004		2005		2006	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
Total exports	4.928	100	6.609	100	7.392	100	7.559	100	8.92	100	11.255	100	14.583	100	24.22	100
EU	1.777	36.1	2.042	30.9	2.329	31.5	2.477	32.7	3.173	35.6	4.047	36	5.901	40.5	7.25	30
Federal Russia	0.045	0.9	0.012	0.2	0.016	0.2	0.044	0.6	0.036	0.4	0.065	0.6	0.057	0.4	1.06	4
USA	1.708	34.7	2.893	43.8	2.889	39.2	2.621	34.7	3.056	34.3	3.701	32.8	4.625	31.6	6.1	25
Arab countries	0.511	10.3	0.444	6.7	0.816	11	0.942	12.5	0.934	10.4	1.273	11.3	1.557	10.7	2.8	12
Asian countries	0.492	10	0.955	14.4	0.765	10.4	0.836	11	0.859	9.6	1.077	9.6	1.379	9.5	1.5	6
African countries *	0.099	2	0.13	2	0.245	3.3	0.325	4.3	0.525	5.9	0.65	5.8	0.611	4.2	2.93	12
COMESA countries	0.047	1	0.095	1.4	0.114	1.5	0.181	2.4	0.267	3	0.372	3.3	0.32	2.2	0.436	2
Other countries	0.249	5	0.038	0.6	0.218	2.9	0.133	1.8	0.07	0.8	0.07	0.6	0.133	0.9	2.148	9

Source: Author's calculation from MFTI (2006b)

Note: * African countries volumes include COMESA countries

However, such development was not translated in increased market shares of the Egyptian exports in all industrialised countries, but the market shares of Egyptian exports have remarkably increased in the African and COMESA countries as shown in Table 4.5.

Table 4.5: Development of the market share of Egyptian exports in different regional markets 1999 - 2006

Regional markets	1999	2000	2001	2002	2003	2004	2005	2006
EU	0.35	0.30	0.28	0.20	0.18	0.16	0.15	0.14
Federal Russia	0.03	0.02	0.01	0.02	0.01	0.00	0.01	0.00
USA	0.38	0.42	0.38	0.39	0.35	0.37	0.37	0.38
Arab countries	0.09	0.05	0.05	0.09	0.07	0.07	0.07	0.07
Asian countries	0.09	0.13	0.14	0.17	0.20	0.22	0.25	0.24
African countries	0.03	0.03	0.05	0.06	0.07	0.09	0.10	0.21
COMESA countries	0.02	0.03	0.03	0.04	0.06	0.07	0.08	0.11
Other countries	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06

Source: Author's calculation from MFTI (2006b)

A comparison of Table 4.4 and 4.5 reveals similar developments in the share of exports directed to regional markets as a percentage of total Egyptian exports and the market shares of Egyptian exports in different markets with a notable exception of the COMESA countries. On the one hand, exports directed to the COMESA countries have been increasing at a sustainable rate as a percentage of the total Egyptian exports and, on the other hand, Egyptian exports have been losing market share in federal Russia, EU. The loss of market share in the EU has surpassed the gain of market share in USA and resulted in an increase of the market share of Egyptian exports in African and COMESA countries.

4.4.2 Nature of the Egyptian trade to COMESA countries

Of all African inter-state groupings, COMESA brings together the biggest combination of large African economies. Egypt is one of the largest economies in the group. COMESA includes all the African states engaged in significant trade with Egypt, with the exception of South Africa and, to a lesser extent Ivory Coast. In 2006, Egyptian exports to COMESA totalled \$436 million, accounting for 2% of the total Egyptian exports and 44.4% of Egyptian exports to Africa. Imports from COMESA totalled \$239 million, or 1.7% of total Egyptian imports and 73% of imports from Africa (MFTI, 2006b: 57).

The most important imports are agricultural products and raw materials, specifically tea, coffee, cocoa, ferroalloys, base metals, refractory raw material, chromate, graphite and precious metals (gold, silver and platinum), and precious and semi- precious stones. On the other hand, Egypt's exports to COMESA are more diverse. Table 4.6 shows Egypt's exported products to each COMESA member country.

Table 4.6: The most important Egyptian exports to COMESA

Countries	Egyptian Exported Products
Burundi	Medical equipment, tyres, pharmaceuticals, shoes, chemicals.
Comoros	Ceramic tiles, pharmaceuticals, dairy products, chemicals.
Congo DR	Tires, sanitary ware, plastic pipes, ceramic tiles.
Djibouti	Razors, shoes, vegetable fats, tyres, oils.
Eritrea	Cement, electric cables, electric switches, ballpoint pens
Ethiopia	Iron and steel angles and shapes, pharmaceuticals, wooden furniture, shoes, electric switches, floorings (Canaltex).
Kenya	Steel, cement, chemicals, pharmaceuticals, household appliances, aluminium, transformers, oranges, gypsum, carbon, clinker, onions, garlic, rice, fruits, matches, shoes confectionery, transportation equipment, ceramic tiles.
Libya	Dairy products, grains, cement, cotton, textiles, ceramic tiles, pharmaceuticals, tyres.
Madagascar	Sanitary ware, aromatic oils, chemicals, foodstuffs, agricultural products, pharmaceuticals, rice, steel, plastic pipes, ceramic tiles.
Malawi	Shoes, marjoram, lubricating oils, chemicals, ceramic tiles.
Mauritius	Pharmaceuticals, chemicals, tyres, paints, spraying kits.
Rwanda	Wooden and metal furniture, shoes, rubber, pharmaceuticals, tyres.
Seychelles	Petroleum products, pharmaceuticals, ceramic tiles.
Sudan	Foodstuffs, transport equipment, petroleum products, pharmaceuticals.
Swaziland	Cotton garments, textiles, rice, chemicals, ceramic tiles, tyres.
Uganda	Tyres, leather products, chemicals, fabrics, clothes, foodstuffs, pharmaceuticals, ceramic tiles, aluminium products.
Zambia	Aluminium pellets, tyres, pharmaceuticals, Egyptian handicrafts, ceramic tiles, aluminium products.
Zimbabwe	Pharmaceuticals, mineral oils, Formica sheets, glass containers, cables, carpets, tyres, ceramic tiles, chemicals.

Source: MFTI (2006a)

The previous table shows the most important exported Egyptian products to the COMESA member countries. These products are not all the exported products from Egypt to COMESA countries, but it has been summarised according to the top exported products by volume to these countries. Therefore, it's clearly noticed from the previous tale that there are similarities among the Egyptian exports to COMESA countries. Table 4.7 presented the total trade volumes between Egypt and COMESA countries.

Table 4.7: Egypt's trade with COMESA (Value in US\$ Million)

	1996	1997	1998 *	1999	2000	2001	2002	2003	2004	2005	2006	2007**
Imports	131	137	123	139	189	178	190	200	238	287	239	310
Exports	27	36	44	47	95	114	181	267	372	320	436	533

Source: ACCE (2005) and MFTI (2006b)

Note: * Egypt joined COMESA

** Values are provisional

As shown in Table 4.7, Egypt's trade with COMESA has significantly increased after Egypt's signing of the COMESA treaty. In 1999, the year after signing the COMESA treaty, Egypt's exports and imports to/from COMESA have increased 6.3% and 11.5% respectively from the previous year. In 2005, and after seven years of being a COMESA member, Egypt's exports to COMESA have greatly increased to 87.4% and its imports from COMESA have also increased to reach 51.5%. This implies that Egypt has a remarkable trade relationship with COMESA countries (DECE, 2006: 13).

Thus, a few general guidelines can be followed to work towards the ultimate goal of increasing and enhancing Egypt's exports to COMESA countries. Ibrahim Ezz, professor in Ein Shams University - Egypt (personal communication. 30 December 2005) highlighted the most common difficulties in doing trade with Africa in general. He said that marketing, financing, and high transaction costs are the most challenging issues.

However, African consumers are often unaware of the Egyptian products due to an absence of these products at fairs and trade exhibitions. This can be partially overcome through use of the display spaces and warehouses / distribution centres which could exist in COMESA countries. There is also a need for more frequent marketing and business missions to explore opportunities in COMESA markets. Egyptian company representatives must be ready to exploit market demand for products and to follow up on bids and tenders, which are sometimes more lucrative than sales. Another problem requiring attention is the high level of transaction costs in COMESA. High costs are mainly due to inadequate physical infrastructure and inadequate stock of human capital, expensive and sometime unreliable transportation because of monopolistic, cartelised and/or subsidised sea, airlines and rail links, and difficult contract enforcement due to malfunctioning of courts and low density of the telecommunication system (COMESA, 2006).

Rashid (2006: 204) said that joining COMESA has produced benefits for Egypt that are already clearly visible. Five of the commercial representation offices in COMESA countries have cited a significant increase in the flow of exports since Egypt joined the treaty. A remarkable rise has been in Kenya, Ethiopia, Djibouti, Zambia, Uganda and Zimbabwe, where export flows have climbed to eight times what they were before Egypt becomes a member of COMESA.

4.5 KEY FINDINGS

A few significant findings can be drawn from the above investigation of the structure of COMESA imports. COMESA countries have been experiencing considerable progress in their economic development and reform programs, such as Libya, Sudan, Egypt, Kenya and Mauritius. However, the economies of most of COMESA countries remain fragile, as in

Zimbabwe, Rwanda, Eritrea, and Congo, DR. Purchasing power is still weak, political disruptions are commonplace, and social unrest and ethnic rivalries continue to constrain development in several countries. The traditional import basket does not differ much from one COMESA country to another, with manufactured articles being the primary component.

Likewise, for a typical COMESA or even African country's exports, primary goods and natural resources form the dominant categories.

Many of COMESA members are part of other trading blocs in Africa, however, the benefits of these memberships are not effectively implemented which render them pointless.

Trade with COMESA faces some logistical challenges such as in road, rail, maritime, air and pipelines transport. This resulted in the unavailability of efficient logistics support for trade flows to and from COMESA resulting in the underutilisation of COMESA trade benefits.

The analysis of Intra and Extra COMESA trades supported this study in identifying the potential for Egyptian export products, and the key competitors in the COMESA market.

This situation presents Egypt with both a problem and an advantage. The problem is that for many manufactured commodities, Egypt will find it difficult to penetrate markets that developed countries have already raced to fill. At the same time, Egypt as a COMESA member has the advantage of preferential treatment over these countries, which creates opportunities for a wide range of Egyptian exports. COMESA and African countries are likely to be more willing to increase Egypt's share in their imports when there is likely to be mutual benefit, and this means that Egypt should work towards relocating its own source of imports of raw materials and primary goods to favour COMESA countries. Reduced raw material costs and low priced access to important food crops like coffee, tea and corn will improve the competitiveness of Egypt's manufactured exports. Active participation in trade fairs is an important priority while enhancing export supporting services is another must.

CHAPTER 5: PROPOSING THE NETWORK OF EGYPT'S RDCS FOR THE COMESA COUNTRIES

5.1 INTRODUCTION

The purpose of this chapter is to explore the possible optimal locations for the Egyptian RDCs network in COMESA countries, which aims at boosting the Egyptian exports to the region through improving the distribution process. The location decision criteria for the Egyptian RDCs in this study are not addressing specific products or their characteristics which might influence the location decisions. Moreover, this chapter will review some theoretical and conceptual frameworks regarding the RDCs locations selection. However, the location decision criteria has been adopted from the Duijvendijk *et al.* (2003) model regarding European distribution centre structures of the EU enlargement, which will be applied in the COMESA case. In addition, the selected locations of the Egyptian RDCs within the COMESA market will be defined, examined and analysed according to a set of criteria and a proposed checklist. Finally, the chapter concludes with the simulation of the Egyptian export flow to reach the markets served by each RDC.

5.2 REVIEWING THE THEORITICAL AND CONCEPTUAL FRAMEWORKS FOR THE RDC LOCATION SELECTION

The term regional distribution centre refers to a warehouse for the receipt, storage and dispersal of goods among customers within a certain region (Douglas and Lambert, 2002). Regional distribution centres provide many benefits to support the Egyptian exports in the COMESA market due to several important reasons. Firstly, an RDC serves as an operational prerequisite for fostering strategic alliances under the COMESA convention to support the competitiveness of the Egyptian exports in the COMESA market. Secondly, the purpose of locating RDCs in certain geographical regions aims at minimising freight costs to all customers. Finally, the RDCs will provide consistency in Egyptian products by stocking quality ingredients at reasonable prices.

In addition, the purpose of the proposed RDCs network is to receive the exports from Egypt to be delivered to certain countries within COMESA region, in order to facilitate the dispersion of the Egyptian products to achieve the above mentioned benefits and the time, and quick response factors. The RDCs will facilitate the supply chains flow from Egypt to COMESA market

because the RDC concept primarily supports the time factor, which is translated into cost as to the concern of the supply chain activities. Moreover, as it is stated by the Transport Energy Best Practice Programme (2005: 7), the RDCs exist for either or both of the following reasons:

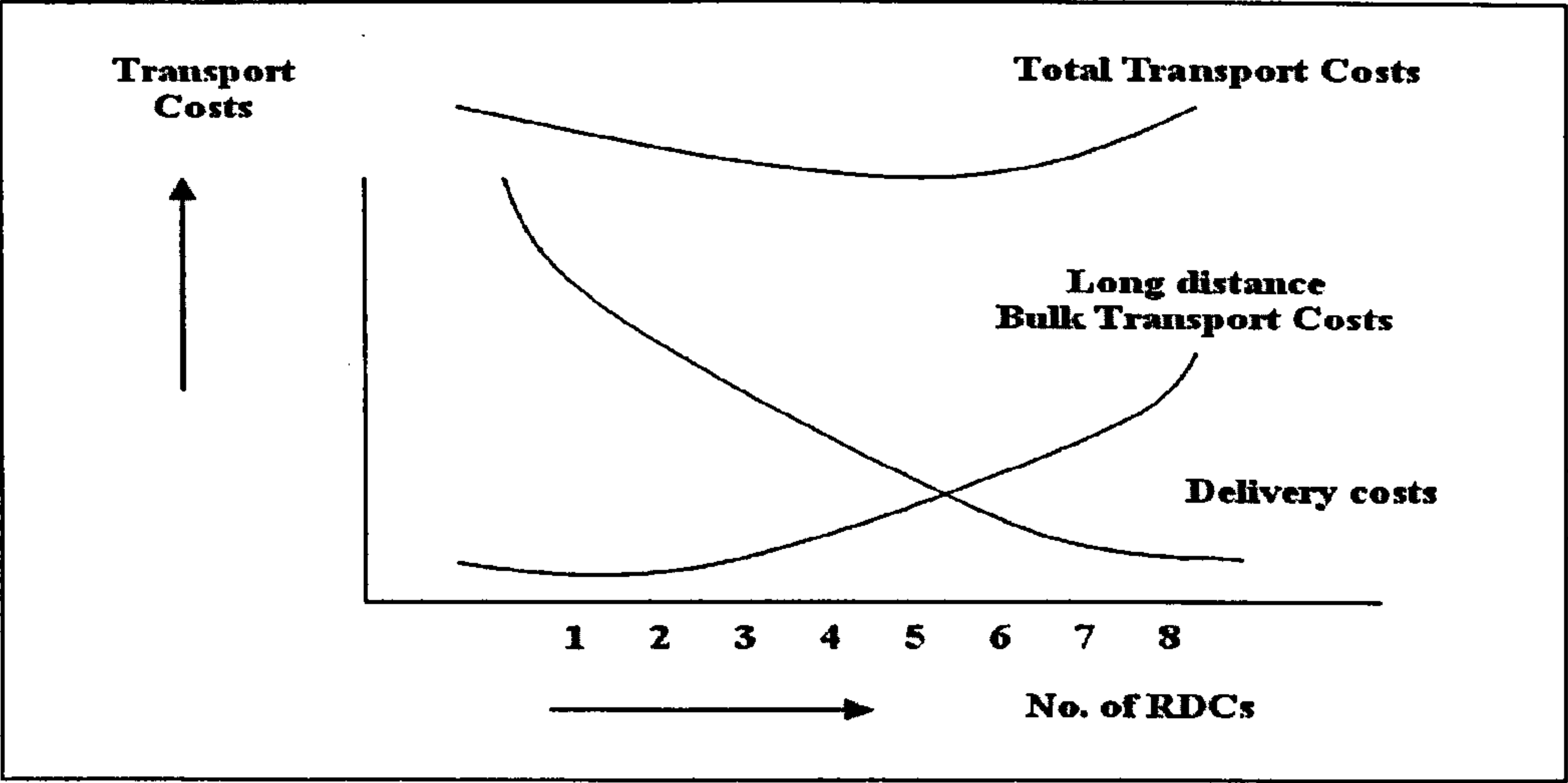
- *To provide a buffer between supply and demand.* There are certain kinds of products (for example groceries) that have a fluctuating demand. It makes sense to have a small stock of these products so that when customer demand rises, they can be supplied more quickly. With the advent of JIT manufacturing and other 'lean' systems however, companies are finding ways to make this buffer smaller and smaller
- *To allow consolidation and sorting of products.* Suppliers tend to produce large volumes of a small range of goods, whereas retailers, like supermarkets, tend to demand smaller volumes of a large range of goods. RDCs allow many different types of products to be consolidated and delivered in a cost-effective way.

On the other hand, Benson and Whitehead (1985) and Olson (2003) have agreed on the importance of designing proper distribution operations for the supply chain excellence, to bridge the gap between the producer and the consumer it is previously mentioned. Thus, locating a number of Egyptian RDCs within the COMESA countries is a difficult task. Hatton (1990: 177) said that:

“There are clearly benefits in having the distribution centres adjacent to each of the principal markets: however, the purchasing costs and the cost of shipping goods may well be significantly lower if they are located nearer to the source or sources of supply”

This implies that the selection process considers locations which provide the lowest costs and greatest efficiency while meeting operational and strategic needs. In this respect, an appropriate location for a RDC could perform a good linkage role between up stream suppliers and down stream customers in the supply chain. In addition, the benefit of an optimal or near-optimal location for a RDC is not only to reduce the transportation costs, but also to improve business performance, to increase competitiveness and profitability (Bhatnagar *et al.* 2003:151). Waller (1983: 71) and Hatton (1990: 177) stated that the total distribution costs must be quantified in order to determine the ideal number of distribution centres. Hatton (1990: 178/179) illustrated in two graphs the variation of transport and distributions costs with the number and locations of the RDCs. The first graph in Figure 5.1, represents the variation in total transport costs in relation to the number of RDCs and, the second graph which is presented in Figure 5.2, shows the variation in total distribution costs in relation to the number of RDCs.

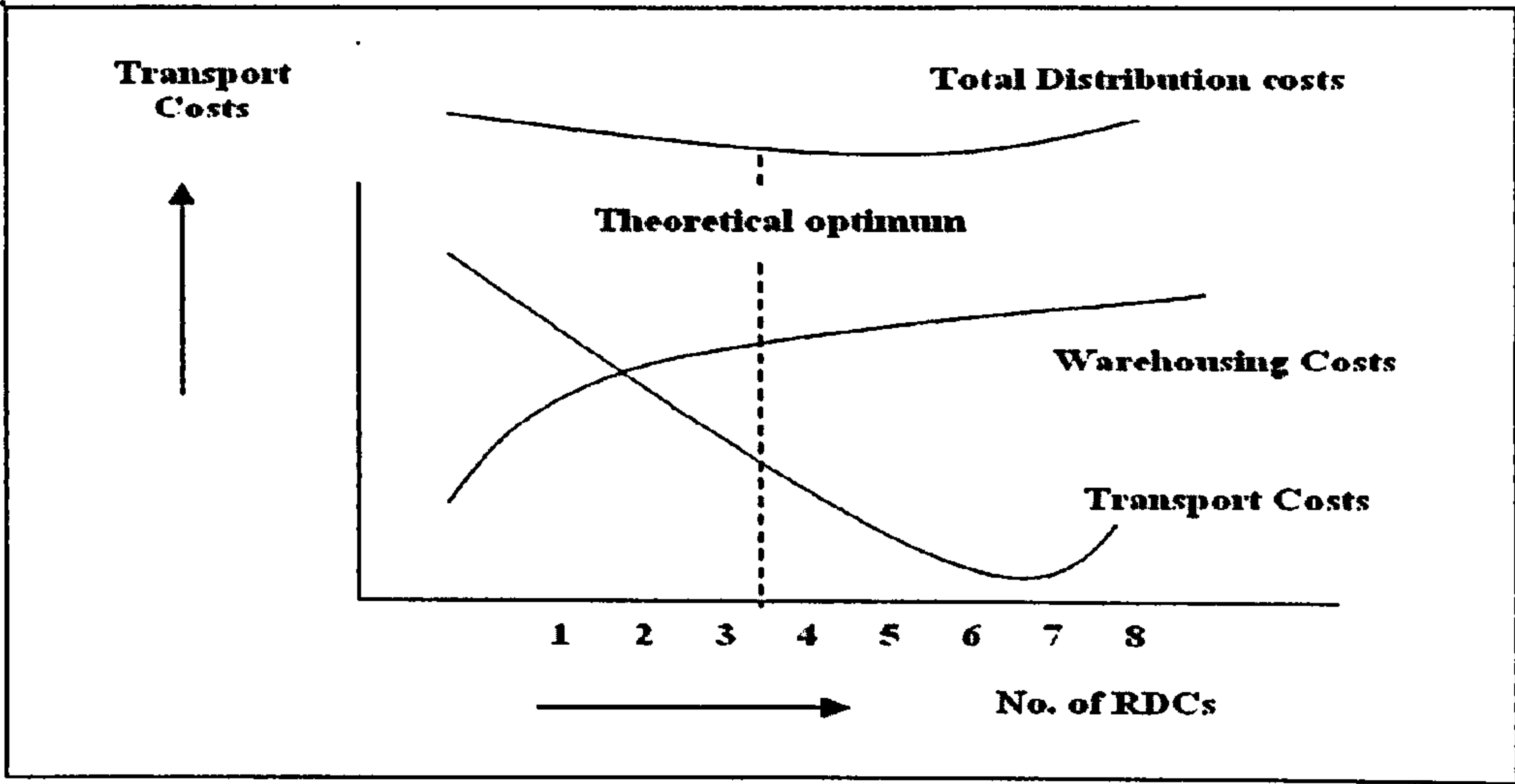
Figure 5.1: Transport costs vs. number of RDCs



Source: Hatton (1990)

As shown Figure 5.1, the delivery costs are reduced with an increased number of RDCs, while the bulk transport costs are increased. This means that the increasing number of RDCs is reflected on the transport costs from the main supplier to these RDCs locations, which affects the business performance and consequently the competitiveness and profitability of the enterprise.

Figure 5.2: Distribution costs vs. number of RDCs



Source: Hatton (1990)

Figure 5.2 shows the relationship between the warehousing and transport costs. The transport costs increase with the increasing number of RDCs, while the warehousing costs also increase but in a steady rate.

On the other hand, Waller (1983: 76) recommended that the theoretical optimum location of the RDCs will be the one that minimises the warehousing and the transport costs associated with the trade flows through the RDC, with respect to customer allocations. He added that the RDC location could be located at any geographical point, or in large towns.

5.3 LOCATION DECISION CRITERIA FOR EGYPT'S RDCS FOR THE COMESA COUNTRIES

This section will explore the criteria for determining the location of the Egyptian RDCs in COMESA countries. The location decision criteria are adopted from Duijvendijk *et al.* (2003), a CGE&Y report which represents the role of RDCs within the EU enlargement by emphasising the most important location decision criteria for the corresponding type of investment which is compared with data of the current and future EU countries. In addition the report has analysed the aspects involved with the EU case and drawn conclusions. Therefore, the author found that these criteria could be applied in the case of research in order to assess the best countries among the different COMESA countries to host the Egyptian RDCs. Table 5.1 shows the location decision criteria for the selection process. These criteria are covering the main aspects involved in the selection of the RDCs in particular.

The level of importance which is mentioned in Table 5.1 regarding each location decision criteria is based on CGE&Y experiences. The existing transport infrastructure and the wages and benefit costs are the important factors for locating distribution centre functions. Moreover, it is significant to demonstrate the proximity of each of the following factors: to seaports where most of the raw materials and volume goods are transported by sea; airports used to transport the expensive small volume goods; the existence of rail hubs to receive and distribute chemicals and raw materials; customers; and suppliers / sources. Since the RDCs are relatively labour-intensive, labour availability and labour flexibility are important. However, most RDCs need a lot of space; therefore, making real estate costs an important decision criterion. In addition, incentives offered by central and local governments often play a key role in locating distribution centres. Multilingualism is also important since a lot of RDCs also contain customer service or call centre functions. As well as the congestion risk, which highlights the traffic jam probability in the country and the utility infrastructure which would ensure the efficient and effective performance of the RDCs. However, the researcher has applied only 13 criteria rather than the 16 criteria proposed by Duijvendijk *et al.* (2003: 17). This is due to the lack and unavailability of data regarding the incentives, labour flexibility and the real estate costs in COMESA countries. Therefore, applying the 13 criteria will be demonstrated in the next subsections.

Table 5.1: Location decision criteria

#	Location decision criteria	Explanation	Level of Importance *
1	Transport infrastructure	How good is the road and inland waterway infrastructure within each country?	5
2	Wages and benefits	What are the labour costs within each country?	5
3	Proximity to seaports	How well is the country aligned with major seaports?	4
4	General business environment	How easy is it to do business in each country?	4
5	Proximity to airports	How well is the country aligned with major airports?	3
6	Proximity to rail hubs	How well is the country aligned with major rail hubs?	3
7	Labour availability	How easy is it to find employees for a facility / operation?	3
8	Labour flexibility †	How easy is it to adjust employee numbers to the volatile marketplace?	3
9	Proximity to customers	How close is the country situated to major COMESA customer areas?	3
10	Proximity to suppliers / sources	How close is the country situated to major COMESA industry supplier areas?	3
11	Real estate costs †	What are the total costs of real estate?	3
12	Incentives †	How many incentives does each country provide to companies in this industry?	3
13	Corporate taxes	How many corporate income taxes need to be paid in each country?	3
14	Multilingualism	How multi-lingual are the country's inhabitants?	2
15	Congestion risk	What is the congestion risk in each country?	2
16	Utility infrastructure	How good is the utility infrastructure (gas, water, electricity) within each country?	1

Source: Duijvendijk *et al.* (2003)

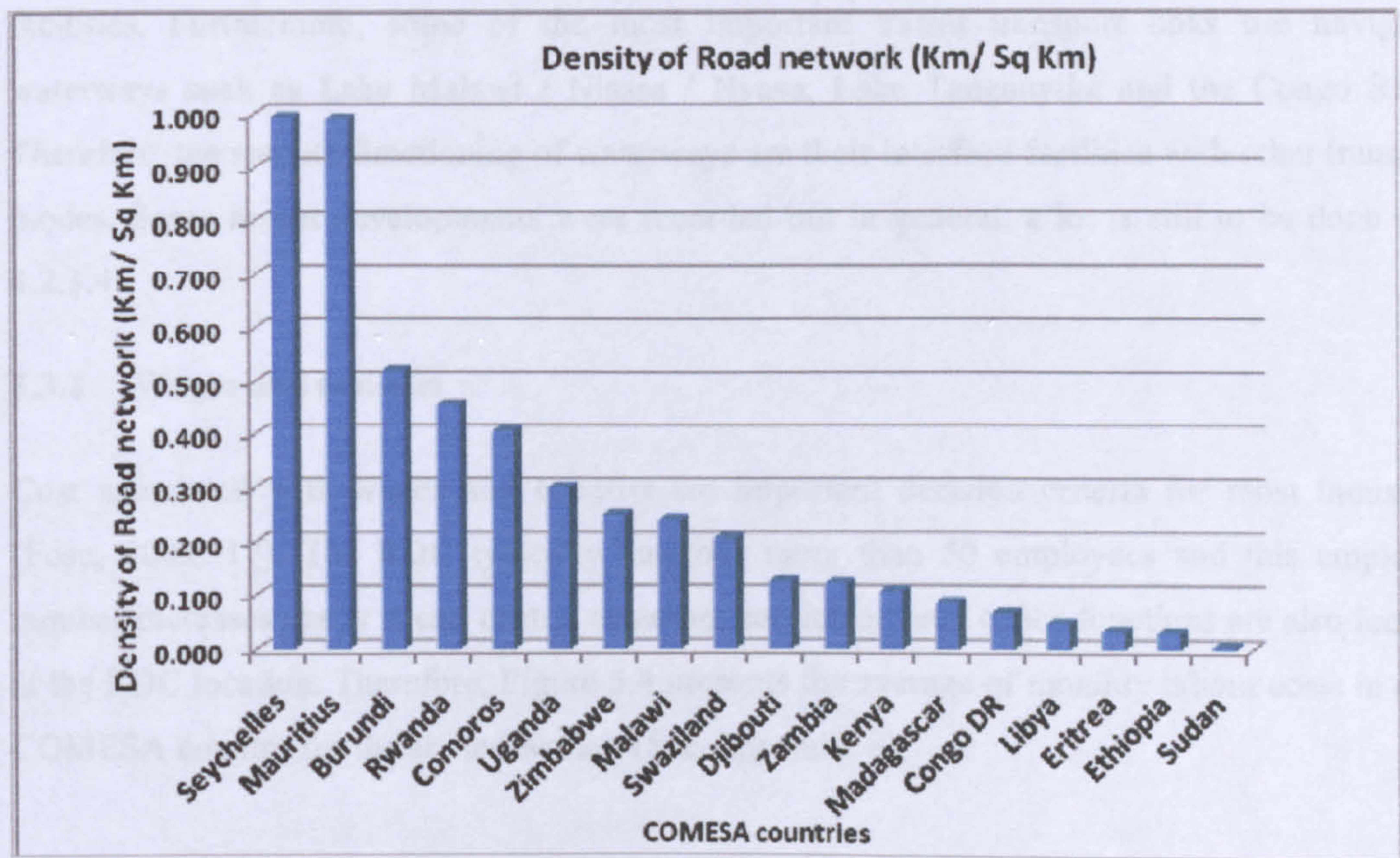
Note: * Level of importance (1 = low, 5 = high)

† The shaded rows are the unapplied criteria

5.3.1 Transport infrastructure

The significance of transport infrastructure has changed considerably over the last few decades to fulfil the international trade objectives and requirements (Limão and Venables, 2000: 1). International transportation of goods is increasingly carried out on a door-to-door basis, involving more than one mode of transportation. While there is little information on the overall proportion of cargo transported by multiple modes, data on the development of containerised traffic provide some highly significant indications, as containers are designed for transportation by different modes (UNCTAD, 2003a: 4). Consequently, it is imperative to test the capability of transport infrastructure in order to indicate the possibility of these transport infrastructures to support the flows of domestic or international trade within the country. However, in this criterion, the transport infrastructure is considered as the most essential factor considered when selecting the location of the RDCs in COMESA. It investigates two main elements which aim at highlighting whether each county in COMESA has a good, moderate or poor transport infrastructure. This could be applied by assessing the density of the road network which is calculated as the total kilometres of road network per country divided by the country’s geographic area in square kilometres. In addition, the density of the inland waterway network which is calculated as the total kilometres of inland waterway network in use divided by the country’s geographic area in square kilometres. Figure 5.3a presents the evaluation of the road network density (See Appendix 7).

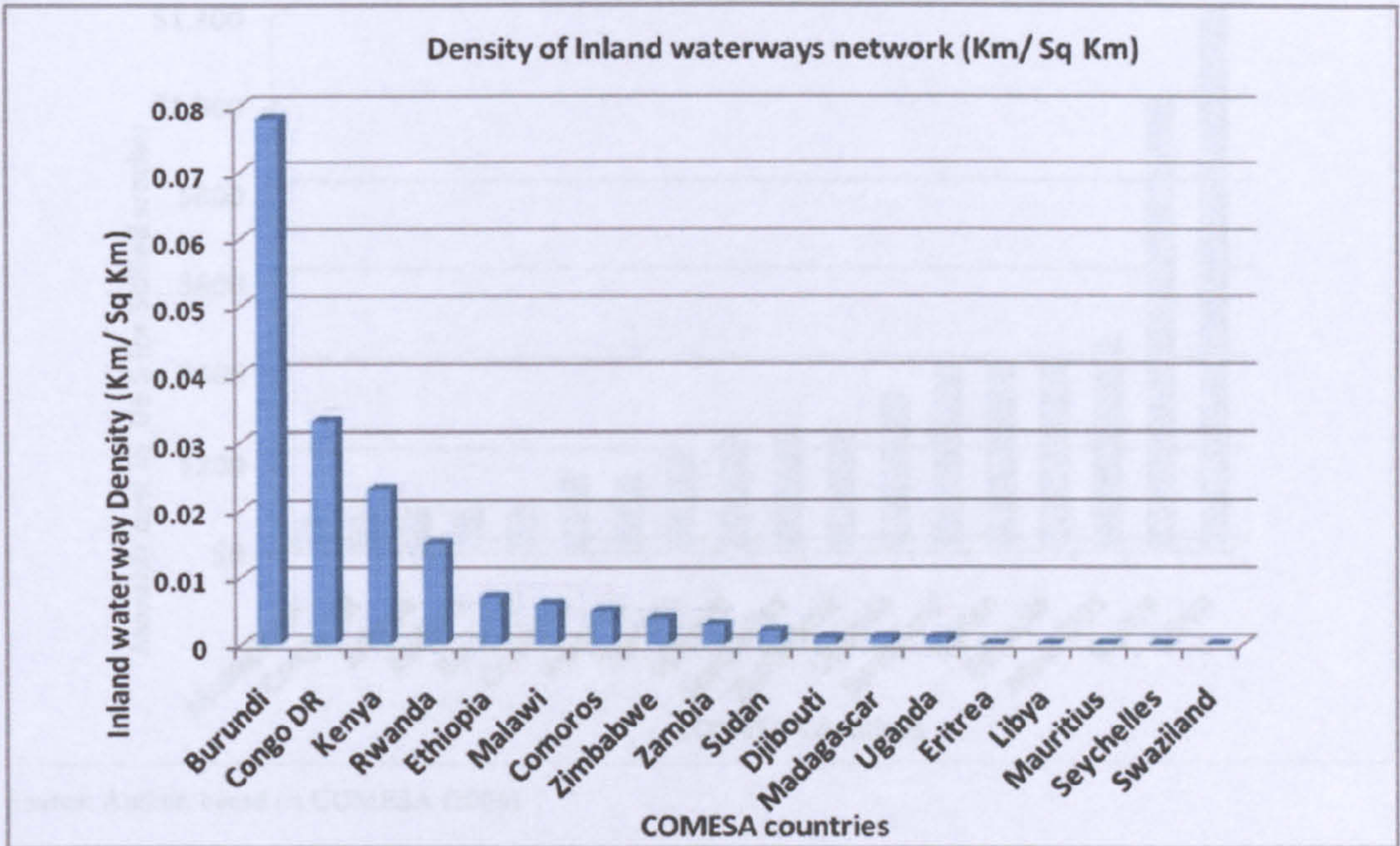
Figure 5.3a: Assessing the road network density in COMESA countries



Source: Author, based Source: COMESA (2006) and MFTI (2006a)

On the other hand, Figure 5.3b shows the evaluation of the inland waterway network density.

Figure 5.3b: Assessing the inland waterway network density in COMESA countries



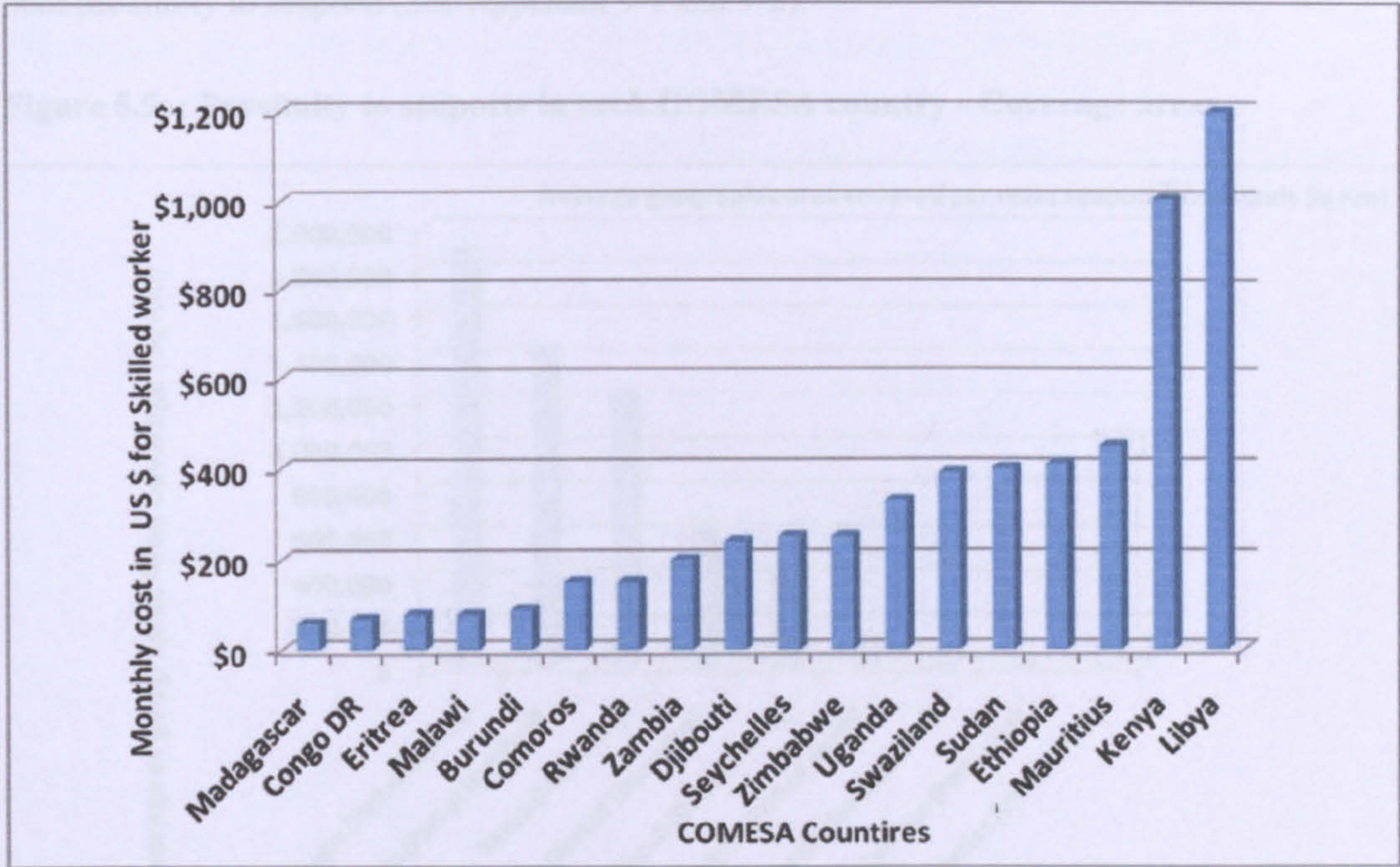
Source: Author, based Source: COMESA (2006) and MFTI (2006a)

It is worth mentioning that inland waterways in COMESA are not suitable to facilitate trade compared with the inland waterways in Europe. However, the UNCTAD (2003b:11) declared important investments to be made in COMESA to provide for port, navigation and other facilities. Furthermore, some of the most important transit transport links use navigable waterways such as Lake Malawi / Niassa / Nyasa, Lake Tanganyika and the Congo River. Therefore, the smooth functioning of waterways are their interface facilities with other transport modes. Some recent developments were recorded but in general, a lot is still to be done (See 4.2.3.4).

5.3.2 Wages and benefits

Cost associated with wages and benefits are important decision criteria for most industries (Fosu, 2002: 17). The RDC typically employs more than 50 employees and this employee number increases easily if call centre, customer service or head office functions are also located at the RDC location. Therefore, Figure 5.4 presents the average of monthly labour costs in each COMESA country for the skilled worker (See Appendix 8).

Figure 5.4: Average of monthly labour costs per country in COMESA



Source: Author, based on COMESA (2006)

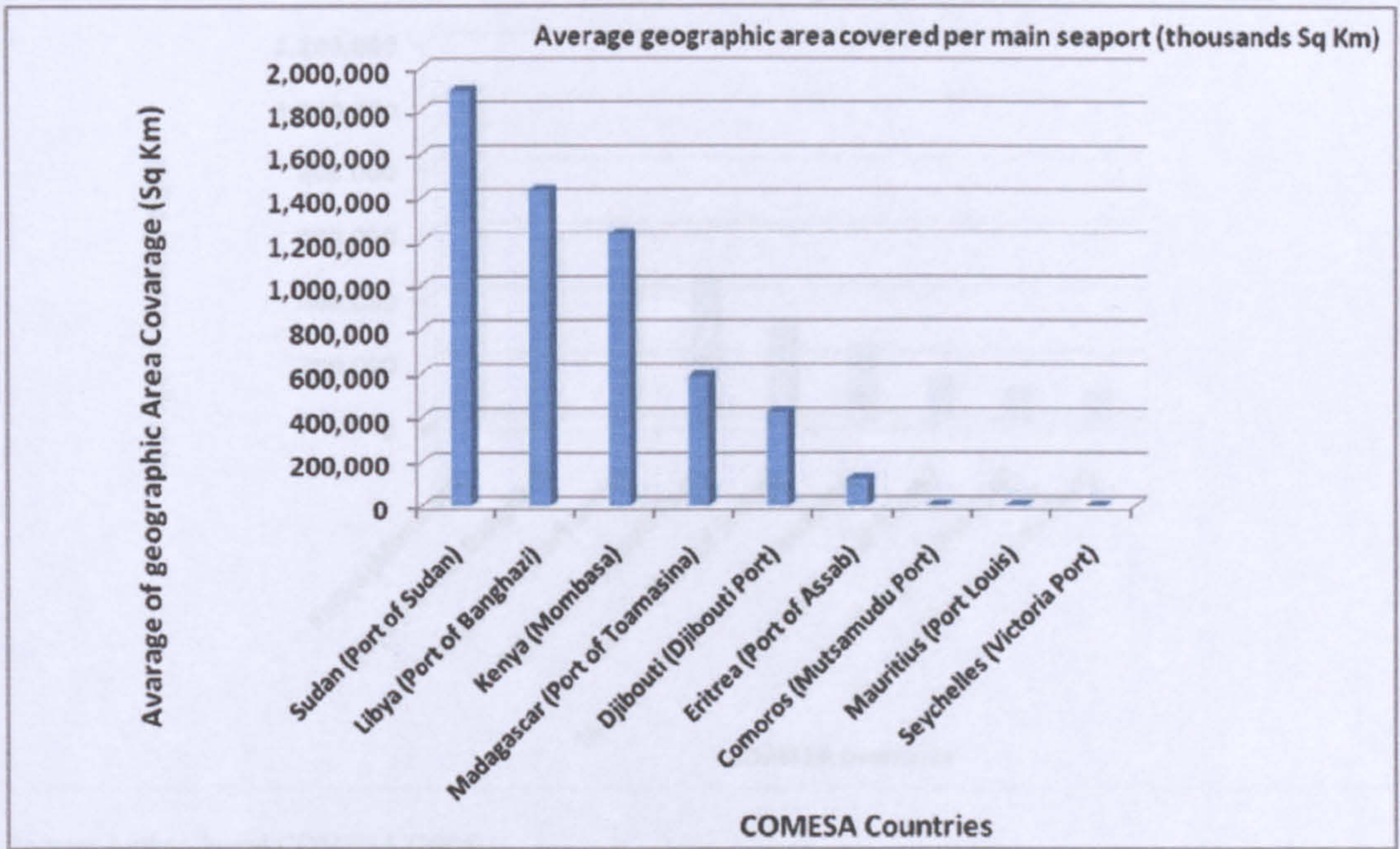
There is a large difference between the wages and benefits in the COMESA countries. Madagascar, Congo DR., Eritrea, Malawi, and Burundi have the lowest wages and benefits, while Libya and Kenya have the highest monthly labour costs. This criterion could be measured on several bases such as the top managers or the medium management staff, but in this assessment it was built on the regular skilled worker as this was the only available information about the labour costs as stated by the COMESA annual report (2006).

5.3.3 Proximity to seaports

Maritime transports with its essential elements such as ports, vessels, cargo, equipment, labour and technologies are considered as one of the significant requirements of international trade. Moreover, as 75% of the world trade is seaborne; this could justify the importance of considering the proximity to seaports within any country or region (UNCTAD, 1995: 107). Therefore, in this criterion, the assessment of each of the COMESA main seaports would be undertaken to examine the proximity to seaports by considering two issues, firstly, the average geographic area served per main seaport in each COMESA country, which is expressed in thousands of square kilometres per main seaport, this indicator identifies the density of seaports in a country (hinterland). Secondly, the average gross weight of goods handled per main seaport in each COMESA country, expressed in millions of tonnes per main seaport, which identifies the infrastructure for handling large volumes of goods at seaports.

Therefore, Figures 5.5a and 5.5b illustrate the countries in COMESA which have a good and poor proximity to seaports (See Appendix 9-1 and 9-2).

Figure 5.5a: Proximity to seaports in each COMESA country - Coverage areas



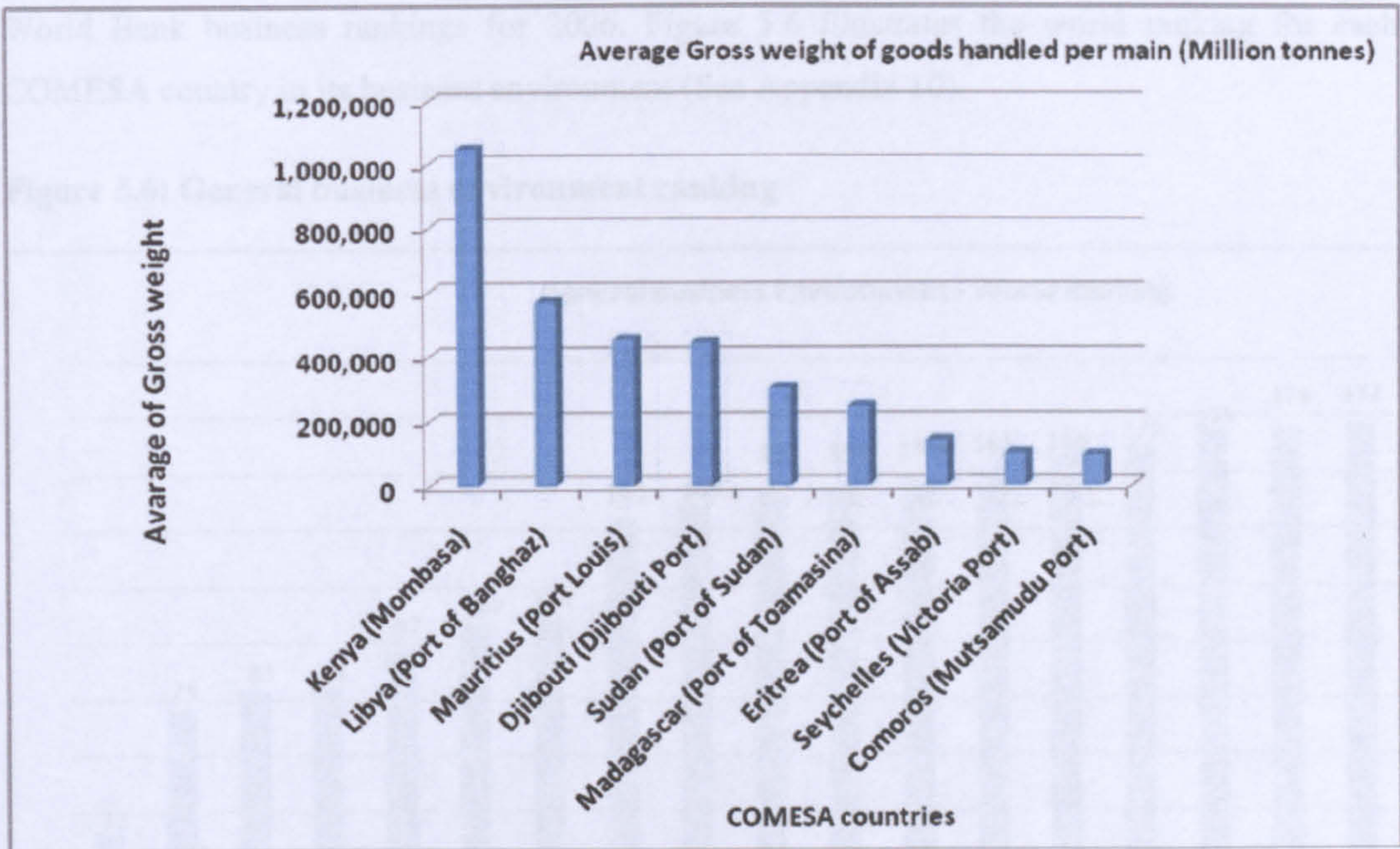
Source: Author, based COMESA (2006)

Basically, there are eleven COMESA countries, including Egypt, which have a proximity to seaports. Although some COMESA countries have seaports, their competitiveness is quite low and cannot be relied upon for international trade like Banana port in Congo DR for instance (COMESA, 2006: 201). As it is clearly shown in the previous figure, port of Sudan has the largest hinterland because Sudan is the largest geographical area in Africa and it serves Chad, which is a landlocked country (COMESA, 2004: 130). Then, Libya serves Chad and Niger - which are not COMESA members – through port of Benghazi. However, Kenya is the COMESA country which serves many landlocked countries and even the islands in the Indian Ocean. Uganda, Rwanda, Burundi and Malawi are served from the port of Mombasa. In addition, the Port of Toamasina in Madagascar serves only the country and as a large island it comes in fifth place. The Port of Djibouti serves Ethiopia and Eritrea as well as the country of Djibouti. Finally, Eritrea, Comoros, Mauritius and Seychelles have limited hinterland; to their counties.

The second part of this criterion is concerned with the handling of goods through the main seaports in each COMESA country which is illustrated in Figure 5.5b.

Therefore, no matter how good a country score on logistics related criterion, it is equally important to investigate the possibility of doing business in a specific country.

Figure 5.5b: Proximity to seaports in each COMESA country -Handling of goods



Source: Author, based COMESA (2006)

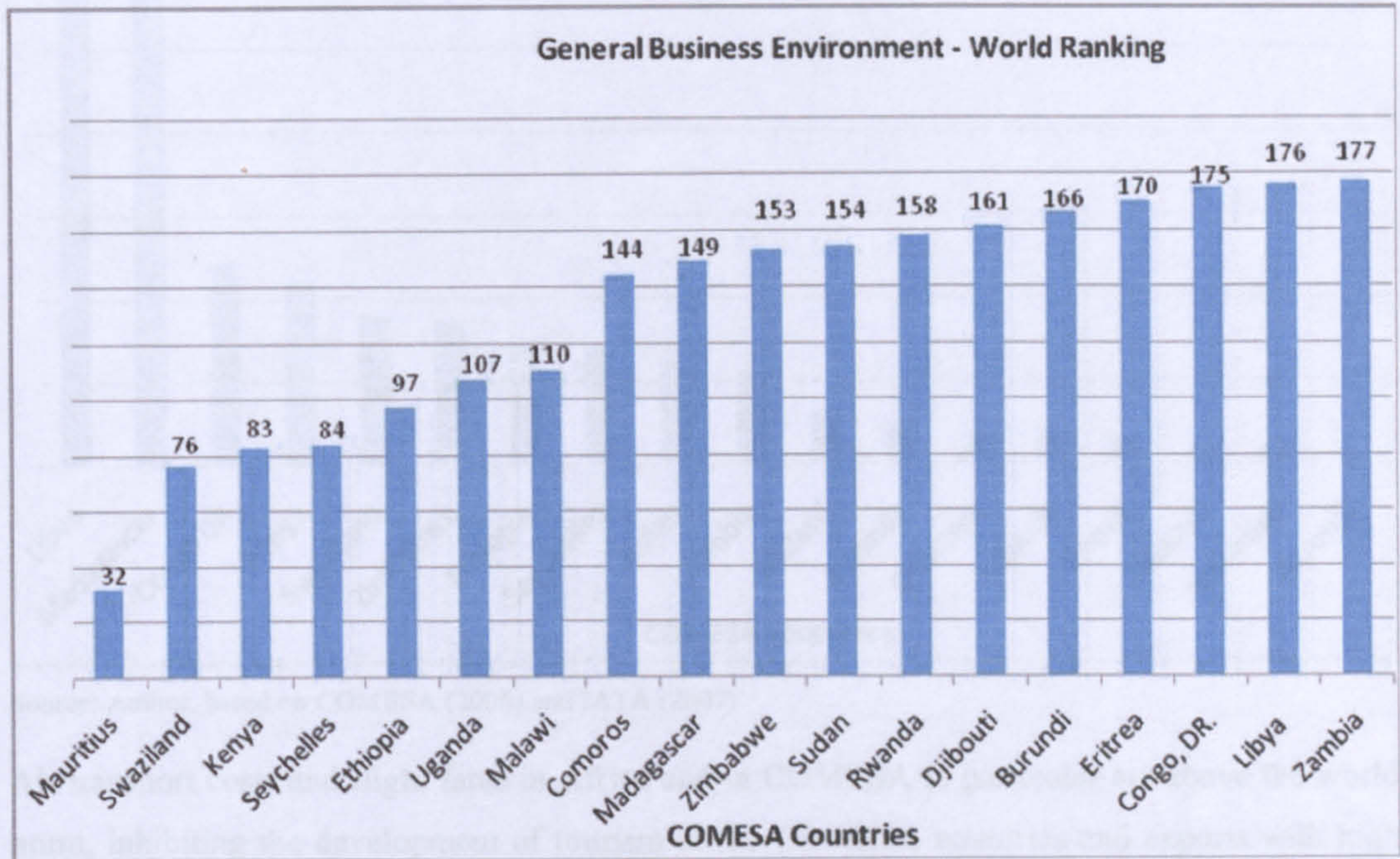
Therefore, concluding from Figures 5.5a and 5.5b scores the highest with its proximity to main seaports because of the average gross weight of goods as well as the average of geographical area served by Mombasa port due to the dependency of many landlocked countries on this port. Djibouti with Djibouti port came second, as the geographical area served by the port is smaller than that covered by Mombassa port. In addition, Sudan and Libya scored less with their good proximity to seaports.

5.3.4 General business environment

The business environment is considered as a very significant issue to be considered before selecting the appropriate location of any RDC. In this criterion, the ranking of the business environment in the country should cover several issues as stated by The Economist Intelligence Unit (2006) such as: the political environment, the macroeconomic environment, market opportunities, policy towards free enterprise and competition, policy towards foreign investment, foreign trade and exchange controls, taxes, financing, the labour market and infrastructure. All these considerations are detecting the actual evaluation of each country and consequently ranking it among other regional or international scales (Klapper *et al.* 2004: 7).

Therefore, no matter how good a country scores on logistics related decision criteria, it is equally important to investigate the possibility of doing business in a specific country. Therefore, the general business environment in each COMESA market has been based on the World Bank business rankings for 2006. Figure 5.6 illustrates the world ranking for each COMESA country in its business environment (See Appendix 10).

Figure 5.6: General business environment ranking



Source: Author, based on World Bank (2006)

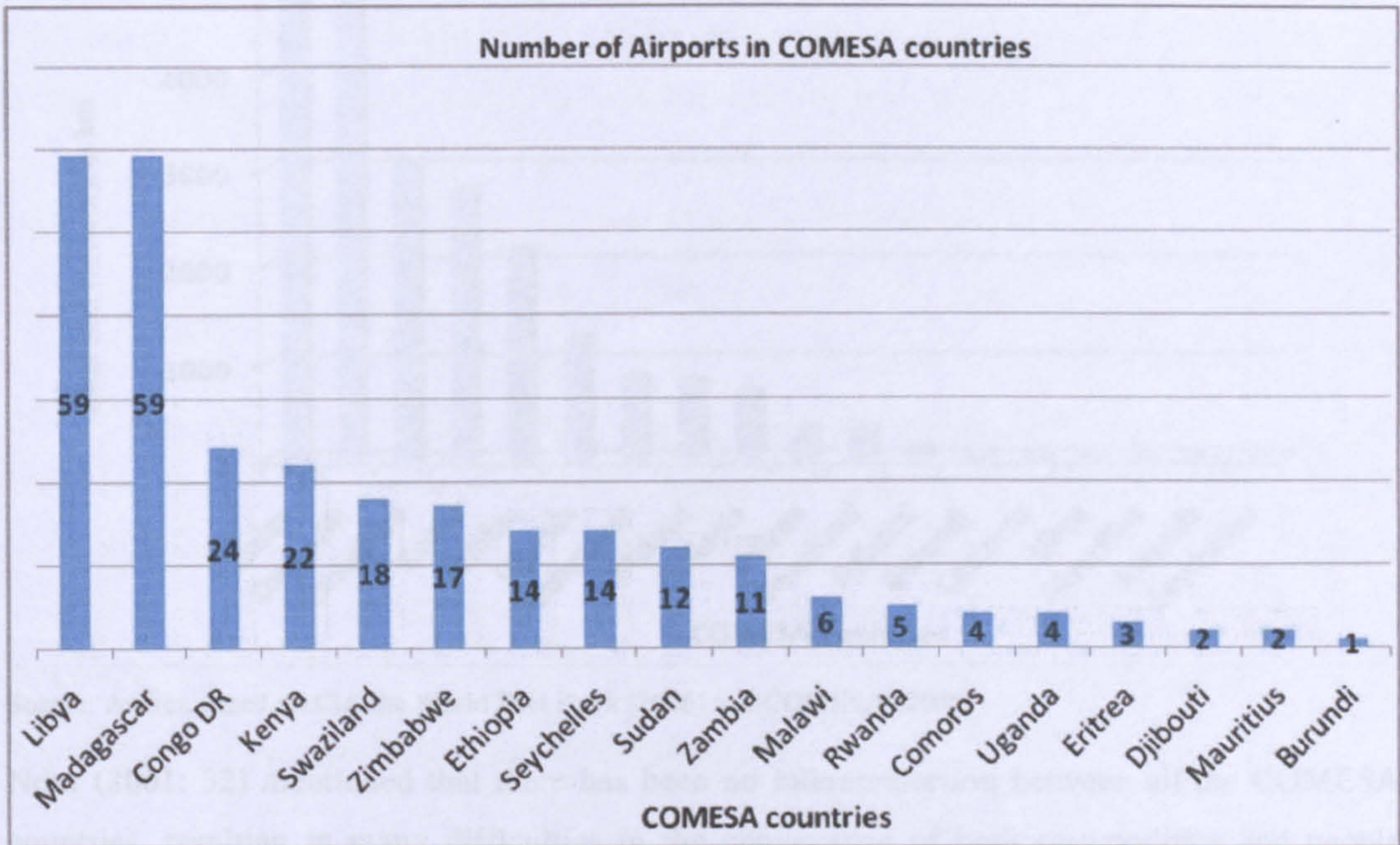
Mauritius is ranked the 32nd in the world and the first ranked COMESA country which has a good business environment followed by Swaziland, Kenya, and Seychelles; whereas Congo DR., Libya and Zambia have achieved lower scores.

5.3.5 Proximity to airports

Regarding the significant improvements in COMESA countries towards adopting an export-led growth strategy, the general situation in these countries is one of underinvestment and underdevelopment, particularly in domestic air transport. However, the low level of demand for air services in COMESA is also reflected in the level of employment and investment at airports (Evaristus, 2001: 15). Therefore, in order to assess each country in COMESA as regards their proximity to airports, an indicator of the number of commercial airports for each COMESA country is considered in this criterion which is integrated with other criteria, focusing on

transportation modes in the region. Figure 5.7 illustrates the proximity to airports in each COMESA country (See Appendix 11).

Figure 5.7: Proximity to airports in each COMESA country



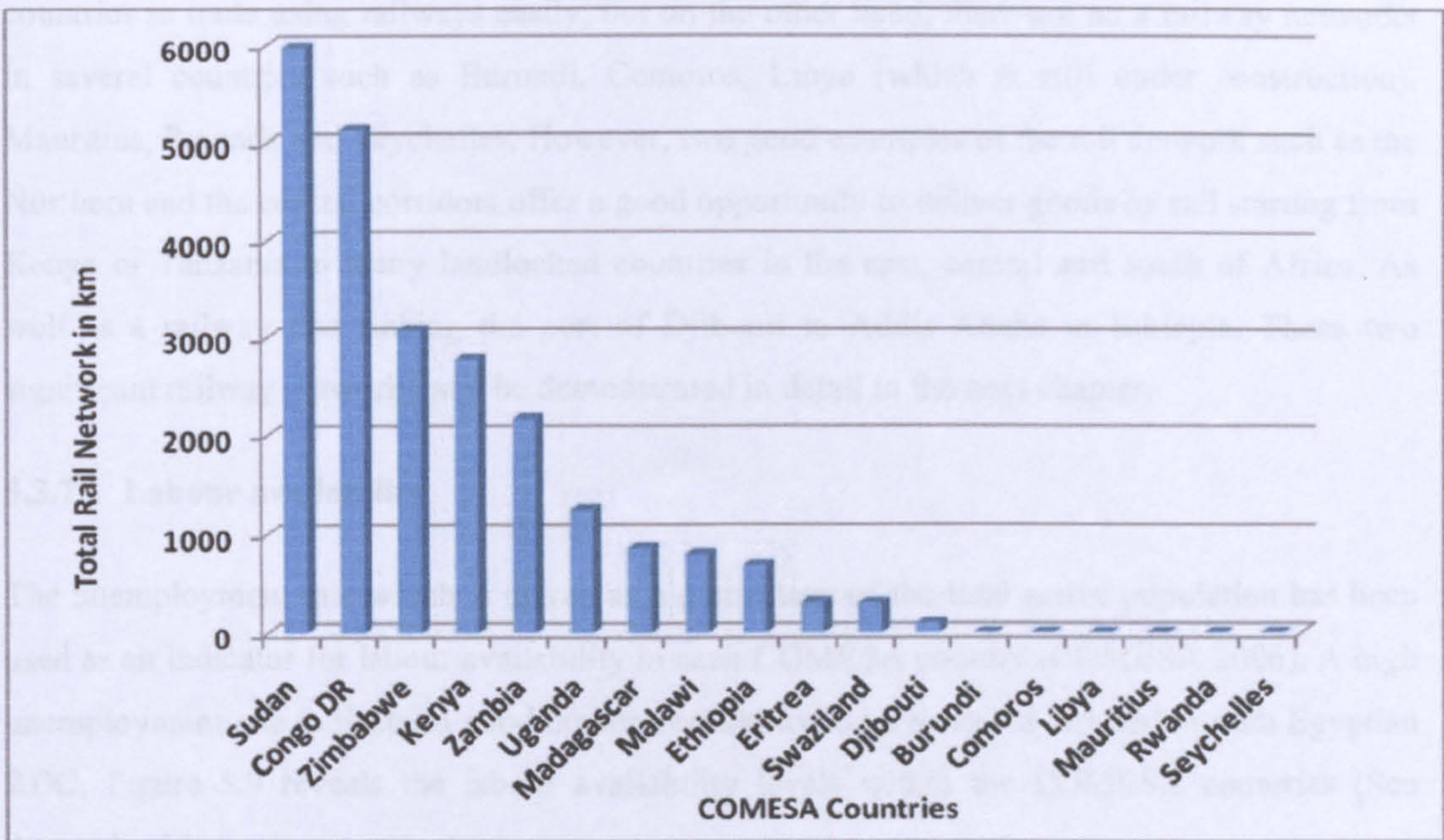
Source: Author, based on COMESA (2006) and IATA (2007)

Air transport costs and flight fares in Africa and in COMESA in particular are above the world norm, inhibiting the development of tourism in the COMESA countries and exports with high value added (Mbuthia 2002: 13). According to Airports Council International (2002: 40) there is also evidence that fuel tends to be significantly more expensive in COMESA countries than in other regions. For instance, fuel prices are often 40% to 50% higher in Africa than in Europe. High and rising costs of airport services have a direct impact on the cost of air transport to the region. Therefore, air transport could be a last option for transporting trade between the COMESA countries, which is limited to precious and time sensitive goods; otherwise it could not be fully reliable because of the high cost of air transport.

5.3.6 Proximity to rail hubs

It is a significant criterion which aims at assessing the proximity to rail hubs in COMESA countries. Therefore, it is based on the density of the rail network which is expressed in the number of rail network kilometres in each country. Figure 5.8 presents the results of such assessment (See Appendix 12).

Figure 5.8: Rail networks in COMESA country



Source: Author, based on CIA the World Fact Book (2006) and COMESA (2006)

Nour (2001: 32) mentioned that there has been no interconnection between all the COMESA countries, resulting in many difficulties in the conveyance of both commodities and people between them. The railways in COMESA were characterised as having limited network compared with other world countries. Six COMESA countries have no railways at all; in addition, the different characteristics of technical specification for the railways in the region and the infrastructure specifications were of a very low standard, thus, enabling no room for high speed and heavy axle loads and low share in the transport market compared with other modes. In addition, the rail gauge is one of these technical specifications considered an obstacle towards having one COMESA railway network. Table 5.2 presents the different rail gauges within the COMESA countries.

Table 5.2: Rail gauges in COMESA countries

Country	Rail gauge	Country	Rail gauge
Burundi	N/A	Malawi	1067 mm
Comoros	N/A	Mauritius	N/A
Congo DR	1067 mm	Rwanda	N/A
Djibouti	1000 mm	Seychelles	N/A
Egypt	1435 mm	Sudan	1067 mm
Eritrea	950 mm	Swaziland	1067 mm
Ethiopia	1000 mm	Uganda	1000 mm
Kenya	1000 mm	Zambia	1067 mm
Libya	N/A	Zimbabwe	1067 mm
Madagascar	1000 mm		

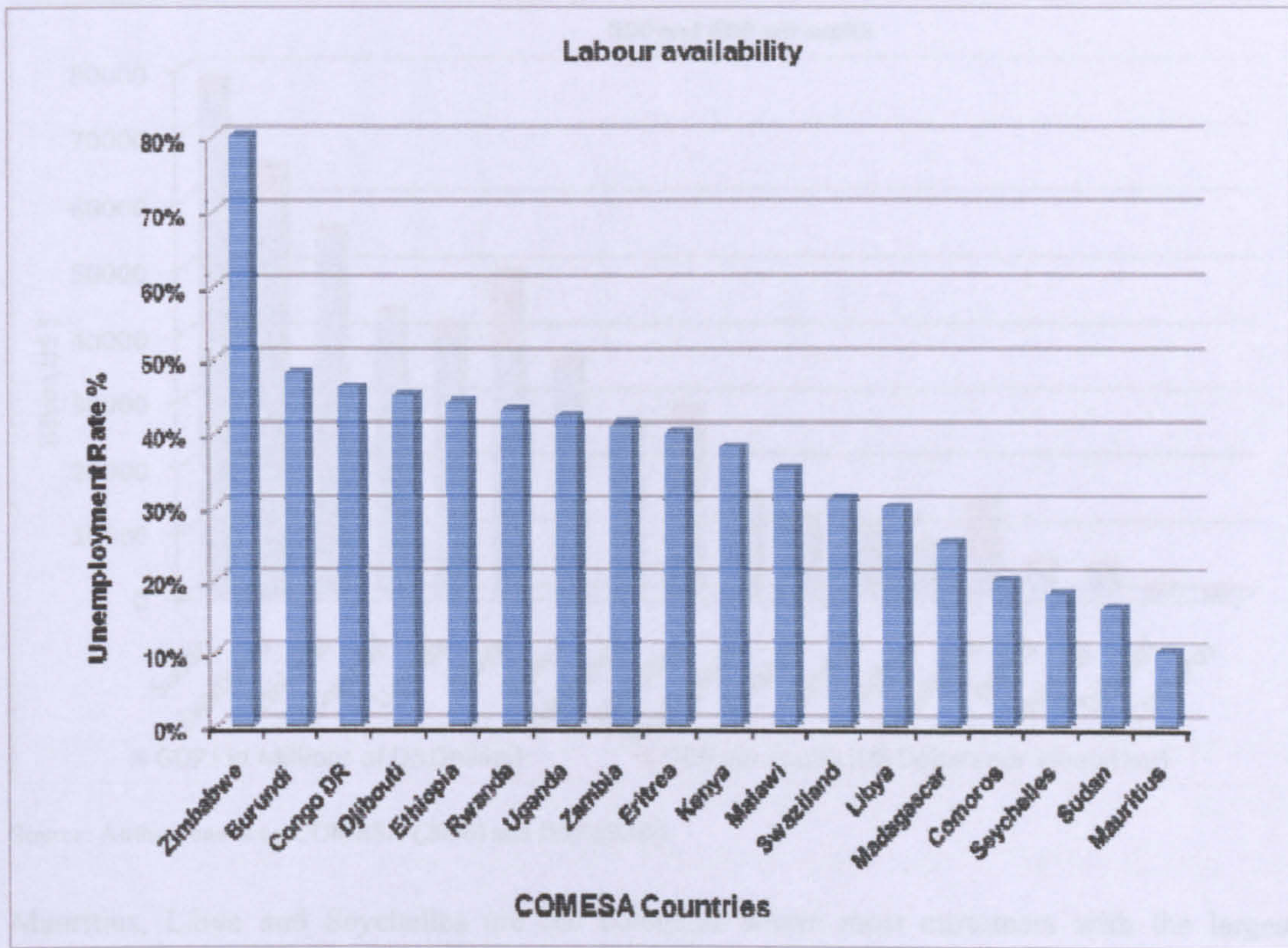
Source: COMESA (2006)

Therefore, some COMESA countries could have a standard rail gauge which could help these countries to trade using railways easily, but on the other hand, there are no a railway networks in several countries such as Burundi, Comoros, Libya (which is still under construction), Mauritius, Rwanda and Seychelles. However, two good examples of the rail network such as the Northern and the central corridors offer a good opportunity to deliver goods by rail starting from Kenya or Tanzania to many landlocked countries in the east, central and south of Africa. As well as a railway line linking the port of Djibouti to Addis Ababa in Ethiopia. These two significant railway networks will be demonstrated in detail in the next chapter.

5.3.7 Labour availability

The unemployment rate which is driven as a percentage of the total active population has been used as an indicator for labour availability in each COMESA country (COMESA 2006). A high unemployment rate indicates a good labour availability to be recruited or hired in each Egyptian RDC. Figure 5.9 reveals the labour availability levels within the COMESA countries (See Appendix 13).

Figure 5.9: Labour availability per COMESA country



Source: Author, based on COMESA (2006)

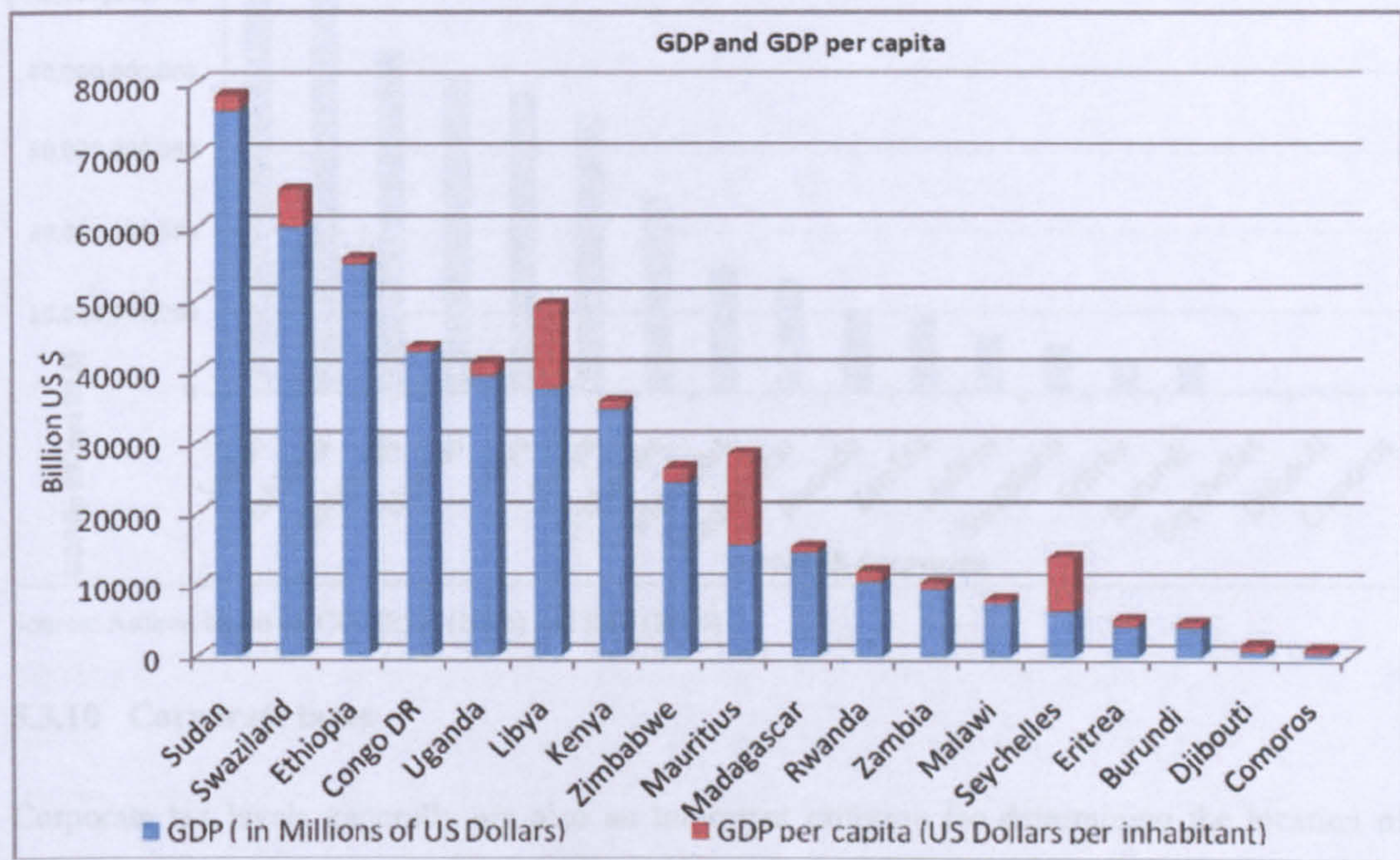
5.3.8 Proximity to customers

In determining a distribution structure it is always necessary to achieve a balance between customer service levels and costs (Duijvendijk *et al.*, 2003: 24). To achieve high customer service levels it is necessary to be as close to the customers as possible (Stanley, 1997: 39). Proximity to customers is therefore an important criterion to determine the location of Egypt's RDCs in COMESA countries.

Therefore, in order to assess each COMESA country's proximity to customers, two major issues should be considered. The first indicator which is the GDP is expressed in billions of US dollars, and it is considered a good indicator of the total market in a specific country.

The second indicator which is the GDP per capita is expressed in US dollars per capita. The GDP per capita is considered a good indicator of the purchasing power of the country's inhabitants. Figure 5.10 shows the proximity to customers with purchasing power in each COMESA country (See Appendix 14).

Figure 5.10: Proximity to customers with purchasing power



Source: Author, based on COMESA (2006) and IMF (2006)

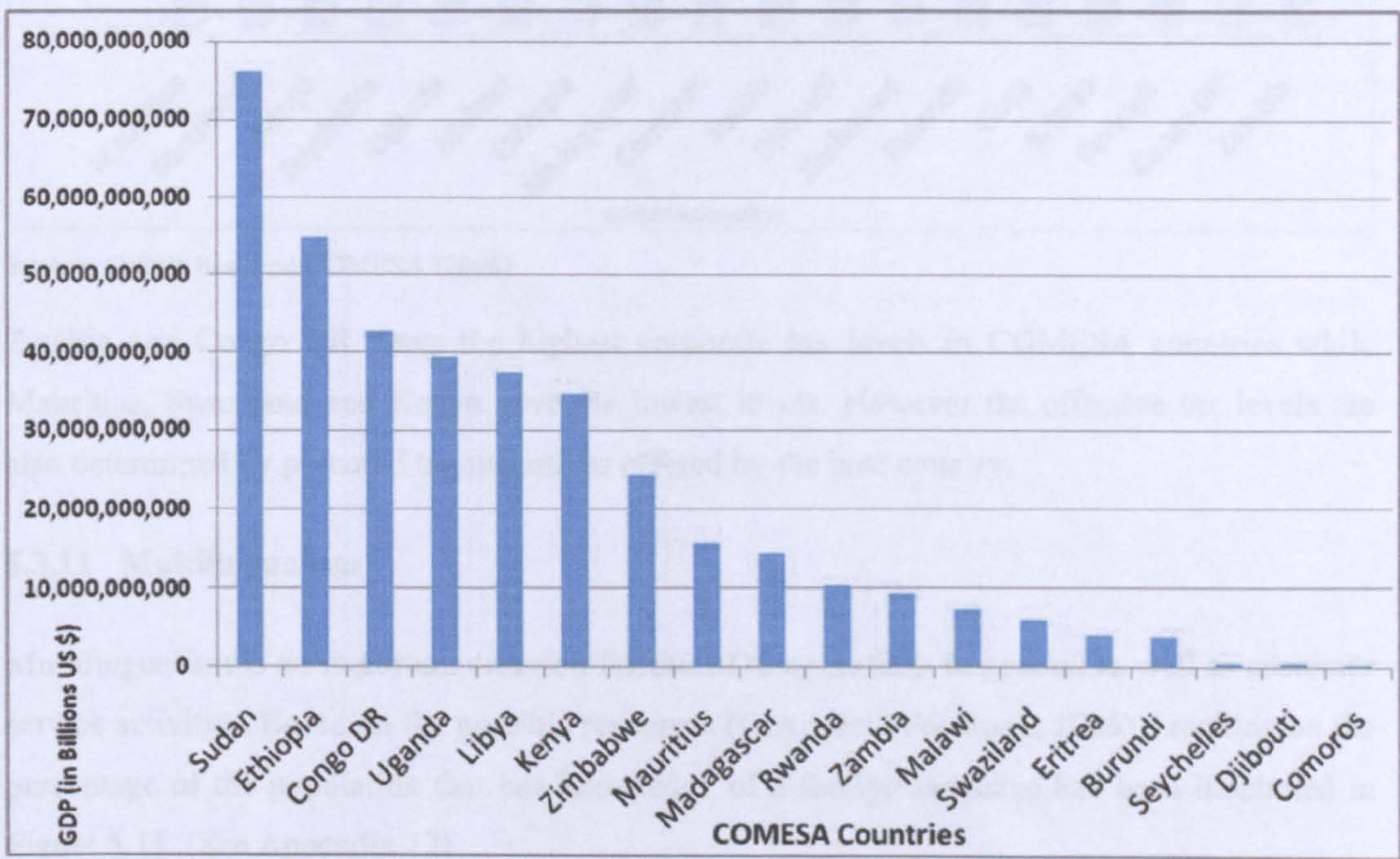
Mauritius, Libya and Seychelles are the countries where most customers with the largest purchasing power are found. On the other hand, countries like Comoros, Malawi, Burundi and Congo DR. are far from customers with purchasing power.

5.3.9 Proximity to suppliers / sources

While it is important that RDCs are situated close to the most important customer regions, it is also important that the RDC should be close to the suppliers or sources of the products that need to be distributed to avoid unnecessary high transport or in-transit inventory costs. Thus, GDP of each country has been used as a general indicator of where factories or other sources are located. Figure 5.11 illustrates the GDP per each COMESA country (See Appendix 15).

In this case, Egypt is the main supplier for the RDCs in COMESA countries, and the selected RDCs should consider this issue to serve the appropriate markets surrounding the RDC location to avoid the unnecessary high transport or in-transit inventory costs.

Figure 5.11: GDP per each COMESA country

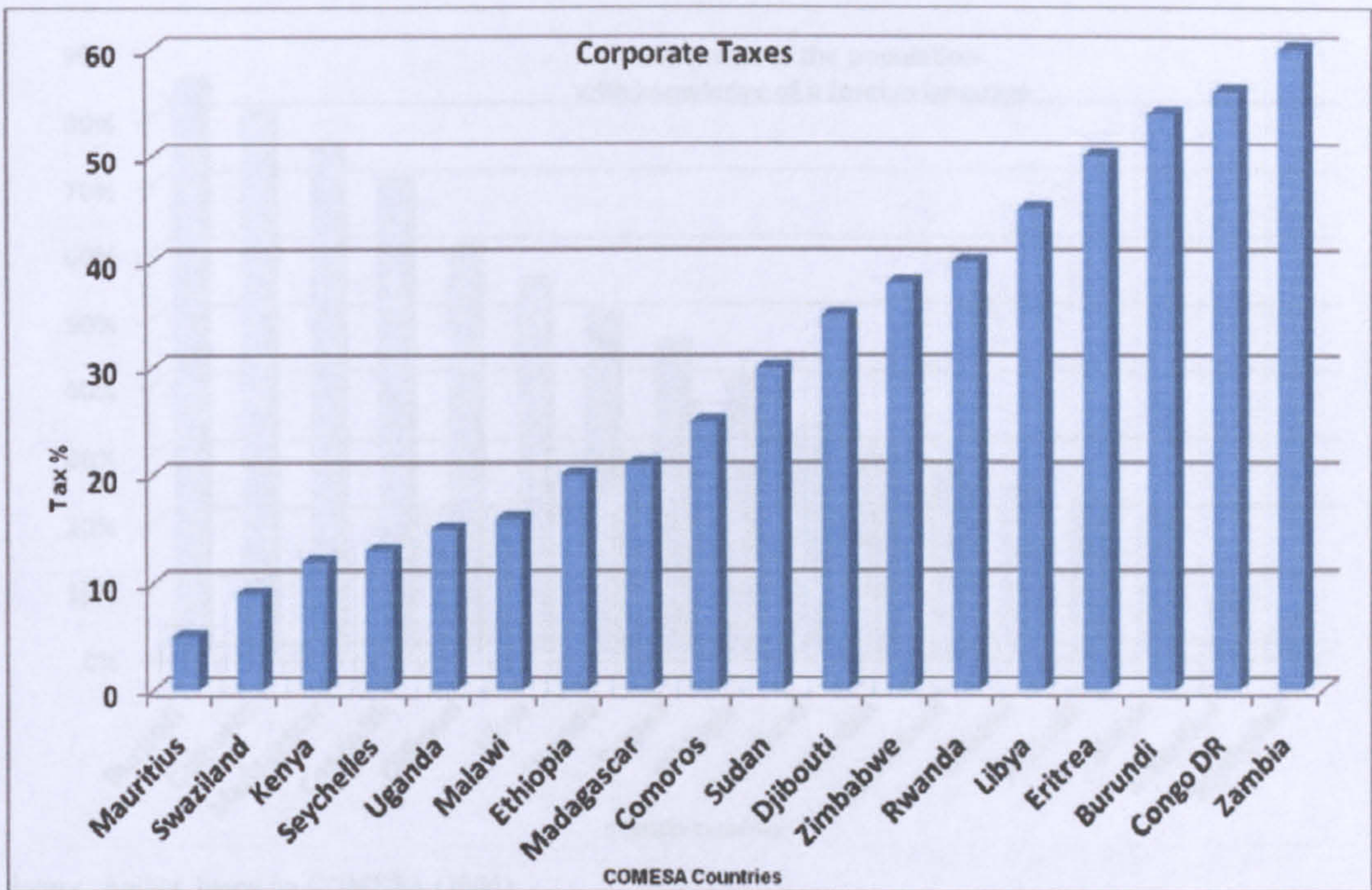


Source: Author, based on COMESA (2006) and IMF (2006)

5.3.10 Corporate taxes

Corporate tax levels generally are also an important criterion for determining the location of RDCs which include surcharges and local taxes. Figure 5.12 presents the corporate tax rate including surcharges and local taxes which have been taken from COMESA (2006), (See Appendix 16).

Figure 5.12: Corporate tax rate including surcharges and local taxes



Source: Author, based on COMESA (2006)

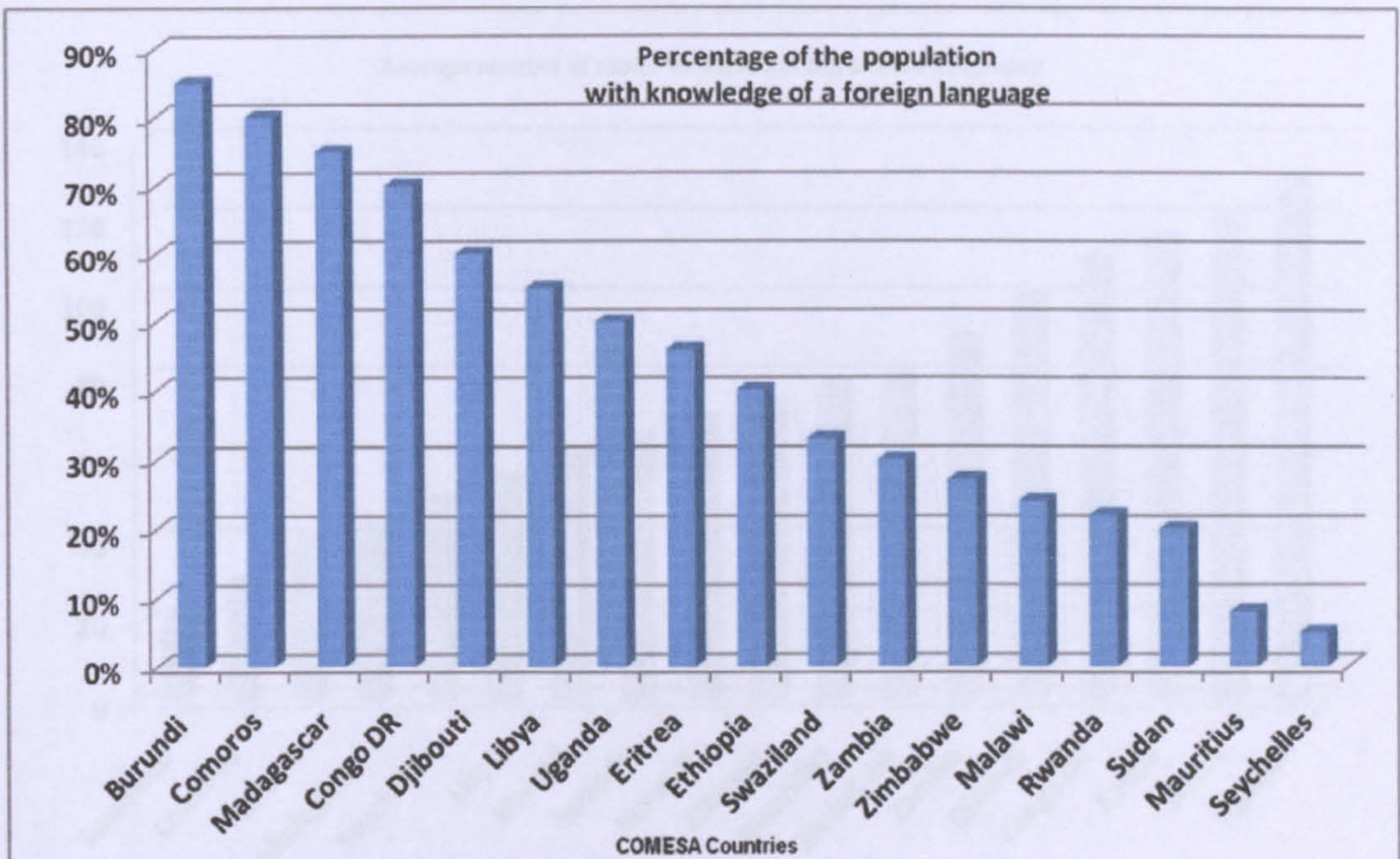
Zambia and Congo DR. have the highest corporate tax levels in COMESA countries while Mauritius, Swaziland and Kenya have the lowest levels. However the effective tax levels are also determined by potential tax incentives offered by the host country.

5.3.11 Multilingualism

Multilingualism is an important criterion for the RDC operations in general as well as customer service activities. Based on the possible resources (CIA world Factbook, 2006) a ranking on the percentage of the population that has knowledge of a foreign language has been illustrated in Figure 5.13. (See Appendix 17)

The importance of this criterion is to ensure that the languages in each COMESA country would not be an obstacle from the place of origin to the RDCs locations. English and French are widely understood by educated classes in Egypt, which is the same in most COMESA countries.

Figure 5.13: Multilingualism in the COMESA countries



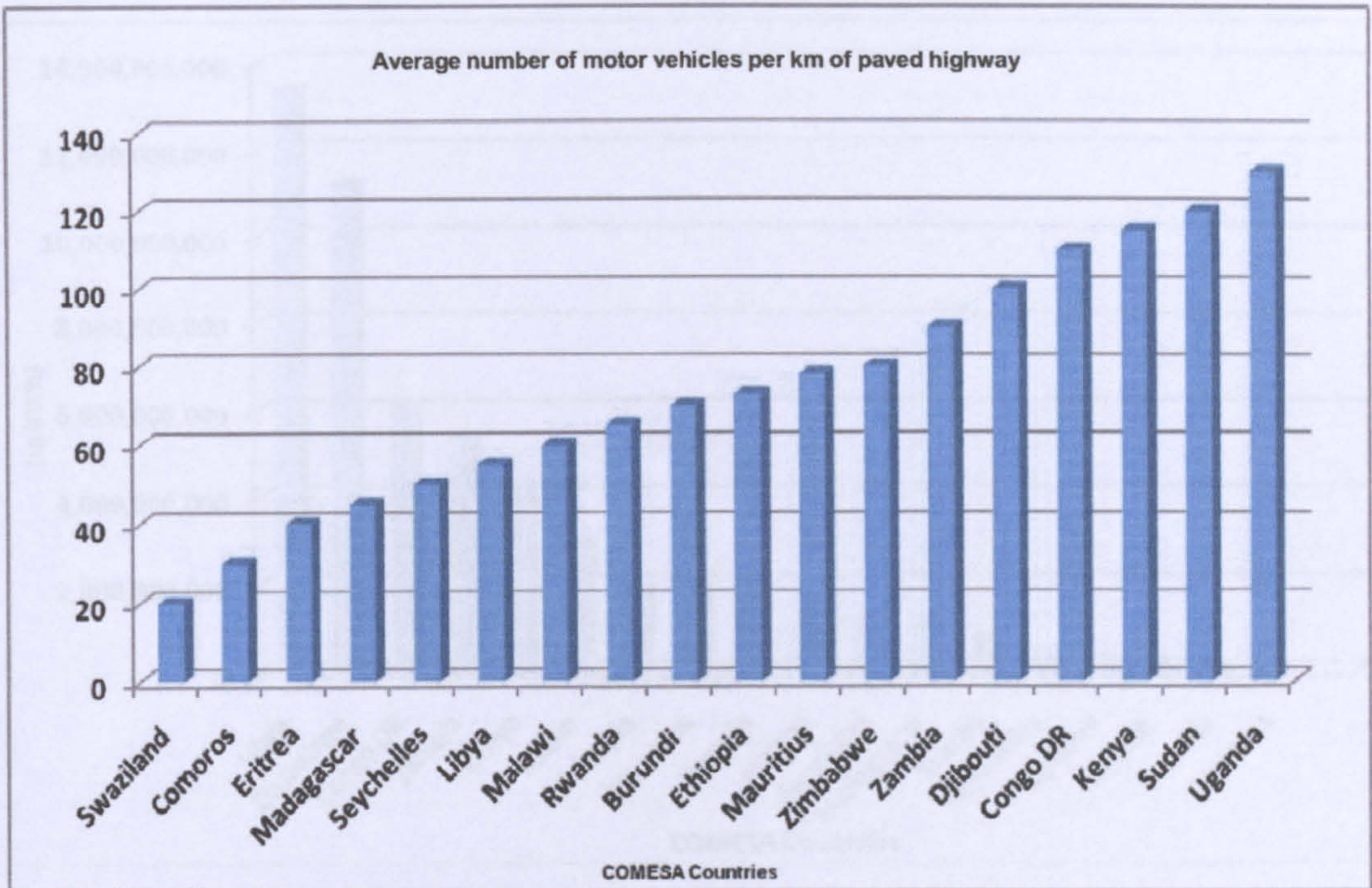
Source: Author, based on COMESA (2006)

English, French and Portuguese are the main foreign languages that are widely spoken in most COMESA countries. There are fourteen COMESA countries including Egypt that have English as the official language for business transactions. These countries are Eritrea, Kenya, Libya, Uganda, Ethiopia, Zimbabwe, Malawi, Mauritius, Rwanda, Sudan, Seychelles, Swaziland and Zambia. On the other hand, the French language is the official language of five COMESA countries; these are Burundi, Comoros, Congo DR., Djibouti, and Madagascar.

5.3.12 Congestion risk

Referring to the fact that COMESA road networks are partially deteriorated, unpaved and increasingly experiencing traffic jams (COMESA, 2006: 70), it is important to assess the congestion risk when determining the location of Egypt's RDCs. Thus, there are several main causes of traffic congestion as stated by Cambridge Systematics, Inc. (2005: 2) and Schrank and Lomax (2005: 3) such as physical bottlenecks i.e. capacity, traffic incidents, work zones, weather, traffic control devices, special events and fluctuations in normal traffic. Consequently, in order to assess the congestion risk (traffic jam probability) for each COMESA country, the average number of motor vehicles per kilometre of paved highway has been calculated. A high traffic density increases the congestion risk; therefore Figure 5.14 represents the average number of motor vehicles per km of paved highway in each COMESA country (See Appendix 18).

Figure 5.14: Average number of motor vehicles per km of paved highway

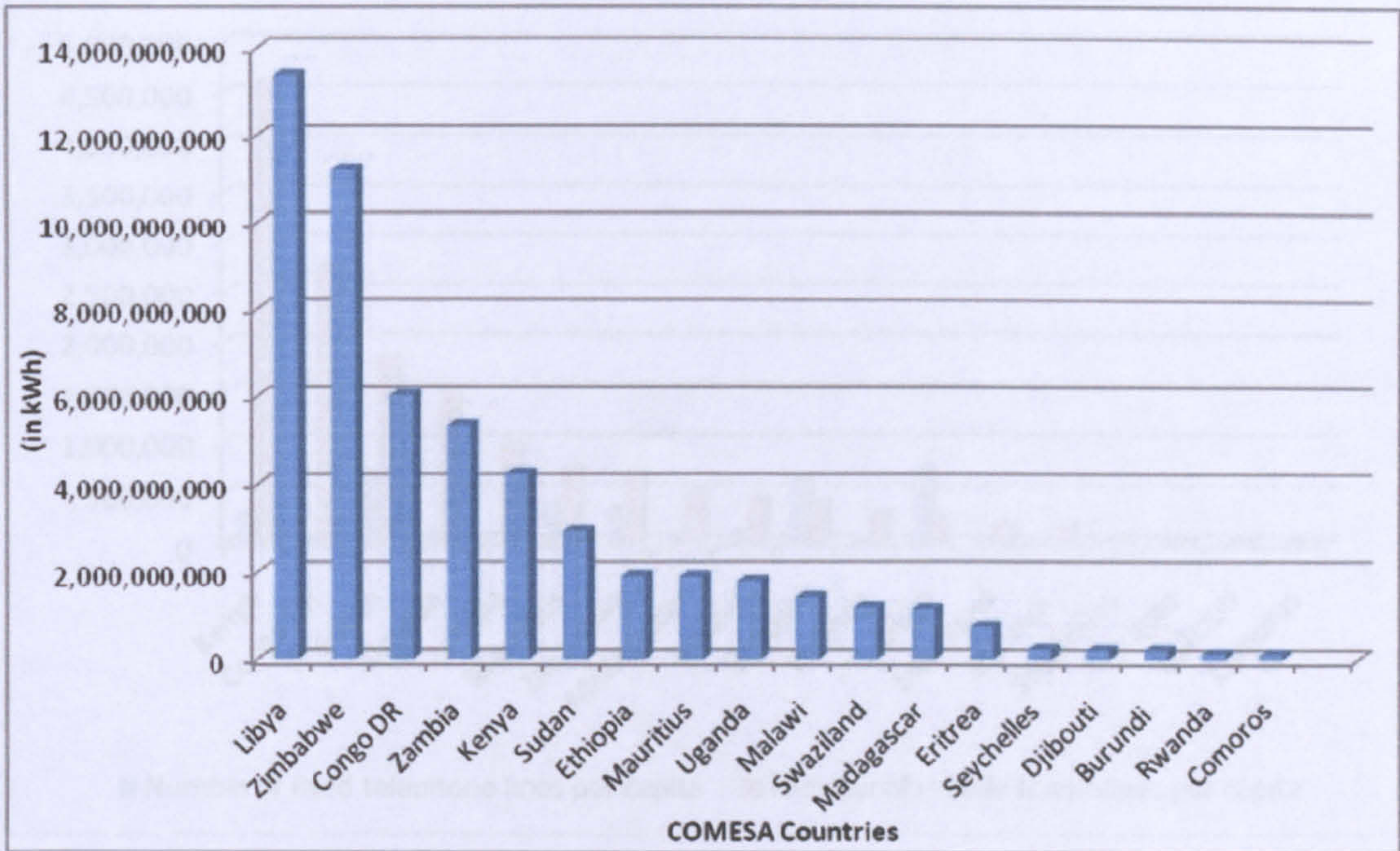


Source: Author, based on COMESA (2006)

5.3.13 Utility infrastructure

Utilities are necessary for the operation of the RDCs, which provide electric power, natural gas, steam supply, water supply, and sewage removal through a permanent infrastructure of lines and pipes. To assess the utility infrastructure in the different COMESA countries five indicators were used. Firstly, the electricity consumption per capita (in kilowatt-hour (kWh) per capita); a large energy consumption per capita indicates that there is a good energy infrastructure in place. Secondly, fresh water usage per capita (in m³ per capita); a large fresh water usage per capita indicates that there is a good infrastructure in place for fresh water transport. Thirdly, gas consumption per capita (in Million Tons of Oil Equivalent (MTOE) per capita); a large gas consumption per capita indicates there is a good gas infrastructure in place. Fourthly, number of fixed telephone lines per capita; this indicates the quality of the fixed telephony network. Finally, the number of fixed and mobile telephones per capita; this indicates the quality of the fixed and mobile telephony networks. Thus, the following figures will present the quality of the utility infrastructure per country. Figure 5.15 illustrates the electricity consumption in each COMESA country (See Appendix 19).

Figure 5.15: The electricity consumption in COMESA countries



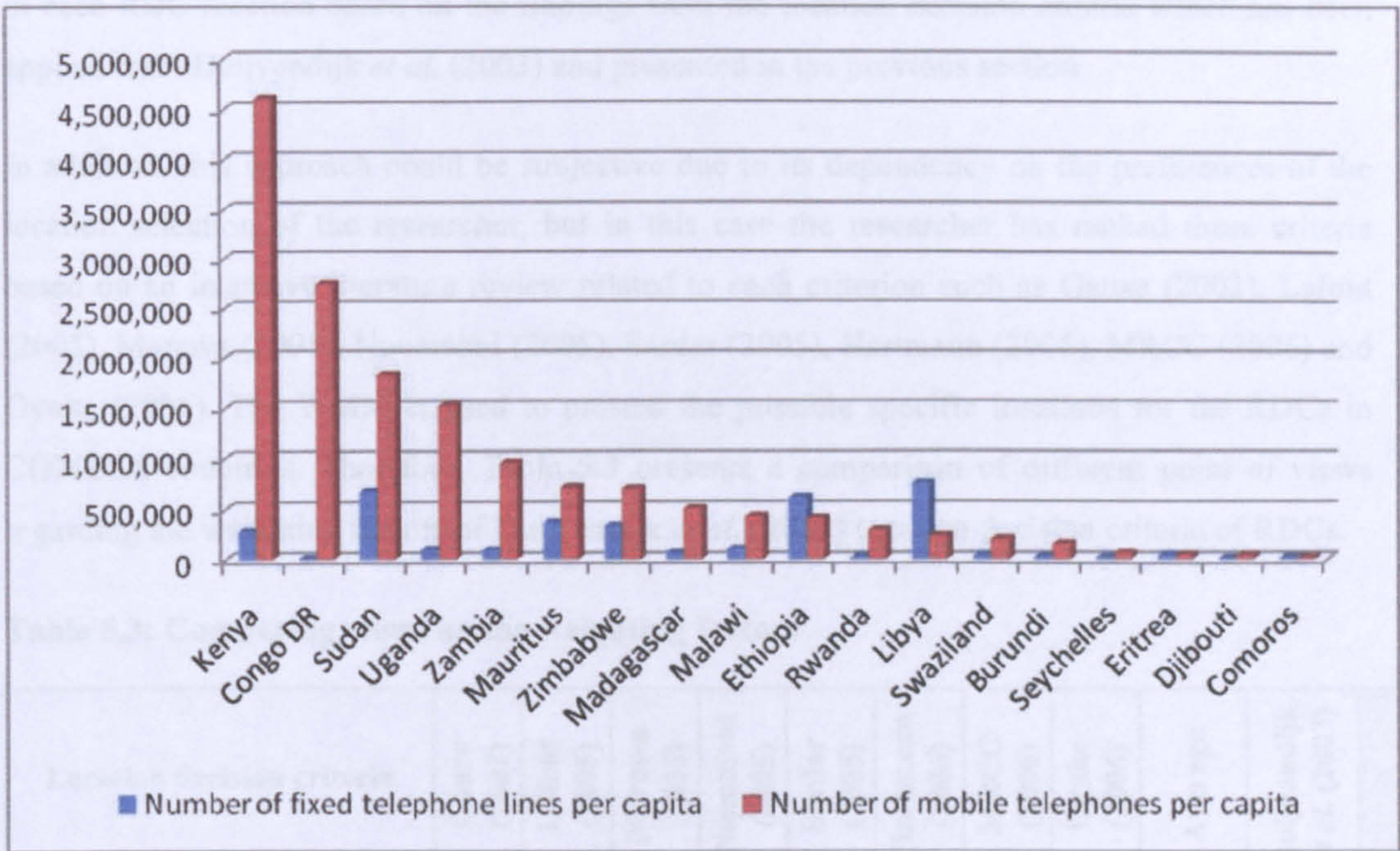
Source: Author, based on EIA (2007)

Regarding the second and third utilities, which are fresh water usage and gas consumption, the researcher found several difficulties obtaining information. However, limited information has been gathered regarding the gas consumption. It seems that Libya is the highest country consuming gas. Libya consumed 6.25 billion cu m in 2003 (EIA, 2007). On the other hand, the researcher has not found any reliable information regarding the latest data of the fresh water consumption in COMESA countries.

The unavailability of these two factors will not highly affect the selection criteria because the utility infrastructure has the lowest level of importance among the other criteria when selecting optimum locations for the Egyptian RDCs in COMESA countries.

Using the available information about the utility infrastructure, the forth and fifth utilities are the number of fixed and mobile telephones in each COMESA country. Figure 5.16 illustrates these fixed and mobile telephones numbers in each COMESA country.

Figure 5.16: The number of fixed and mobile telephones in COMESA countries



Source: Author, based on COMESA (2006)

Concluding the findings of the utility infrastructure criterion, Libya and Kenya have the best utility infrastructure in place while Comoros, Burundi, Djibouti, Seychelles and Eritrea have the poorest.

5.4 POTENTIAL COMESA COUNTRIES TO ALLOCATE EGYPT'S RDCS

5.4.1 Assessing the adopted location selection methods

Thai and Grewal (2005: 8) said literature on location decisions is rich with various models; however, some important gaps can be pointed out, especially in the context of globalisation and integrated logistics approach. Various optimisation models are related to location decisions, but they are basically focused on quantitative factors with costs as the primary concern. However, the selection of a facility location is a multi-objective problem which cannot be addressed purely from either a quantitative or qualitative approach.

Therefore, in order to identify the optimal locations for Egypt's RDCs in COMESA countries, a qualitative approach will be applied at this stage. This approach has been developed and customised from Thai and Grewal (2005) conceptual framework for the RDC location.

Consequently, the Weighed Marking Method (WMM) will be used to assess the appropriateness of each RDC location based on the findings from the location decision criteria which has been applied from Duijvendijk *et al.* (2003) and presented in the previous section.

In addition, this approach could be subjective due to its dependency on the preferences of the location selection of the researcher, but in this case the researcher has ranked these criteria based on an intensive literature review related to each criterion such as Gauze (2002), Lafont (2005), Marawa (2005), Nouamani (2005), Sardar (2005), Hartmann (2006), MRCC (2006) and Oyuke (2006). The WMM is used to present the possible specific locations for the RDCs in COMESA countries. Therefore, Table 5.3 presents a comparison of different point of views regarding the weighting factors of Duijvendijk *et al.* (2003) location decision criteria of RDCs.

Table 5.3: Comparing views on the weighting factors

Location decision criteria	Gauze (2002)	Lafont (2005)	Marawa (2005)	Nouamani (2005)	Sardar (2005)	Hartmann (2006)	MRCC (2006)	Oyuke (2006)	Average	Duijvendijk <i>et al.</i> (2003)	The Author
Transport infrastructure	40	50	20	40	20	25	20	20	26.7	5	15
Wages and benefits	-	-	-	-	20	-	14	20	14.8	5	10
Proximity to seaports	20	20	50	40	25	25	23	20	25.2	4	15
General business environment	-	-	20	-	-	-	10	-	11.3	4	5
Proximity to airports	10	15	5	10	10	25	18	10	11.8	3	5
Proximity to rail hubs	30	15	5	10	15	25	15	10	14.2	3	10
Labour availability	-	-	-	-	-	-	-	-	0	3	5
Proximity to customers	-	-	-	-	-	-	-	20	20	3	10
Proximity to suppliers/sources	-	-	-	-	-	-	-	-	0	3	5
Corporate taxes	-	-	-	-	-	-	-	-	0	3	5
Multilingualism	-	-	-	-	-	-	-	-	0	2	5
Congestion risk	-	-	-	-	-	-	-	-	0	2	5
Utility infrastructure	-	-	-	-	10	-	-	-	10	1	5
Total weighting	100	100	100	100	100	100	100	100	-	-	100

Source: Author.

Regarding the judgement about the weighting factors, the researcher compared different perspectives about the importance of each criterion with Duijvendijk *et al.* (2003) for selecting the appropriate RDCs locations. The level of importance to each location decision criteria is based on CGE&Y experiences Duijvendijk *et al.* (2003: 16). However, these weighting factors have been assembled from different authors who are interested in the major issues which have been involved in the mentioned criteria. However, the researcher presented these points of view in Table 5.3 by calculating the average of the weightings for each criterion and then has adapted his own weightings that show the actual importance of each criterion in the practical business life, as shown in the right hand column.

Each criterion is normalised in accordance with the points scoring system shown in Table 5.4, Within this table, the leading country in any criterion is awarded 10 points, each successive country 0.5 points fewer, with the nineteenth ranked country taking 1 point. The number of ranking points is based on the total number of COMESA countries excluding Egypt. Where two or more countries share the same value for a particular criterion, equal points have been awarded.

Table 5.4: Interpretation of criteria results

Ranking	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Points	10	9.5	9	8.5	8	7.5	7	6.5	6	5.5	5	4.5	4	3.5	3	2.5	2	1

Source: Author.

In addition, the WMM is used to present the possible specific locations for Egypt’s RDCs in COMESA countries. Therefore, each decision criterion might be measured with one or multiple data elements (indicators). If multiple indicators have been used to calculate country scorings on specific decision criteria, then each of these indicators has been given the same weighting factor within that particular criterion. The consolidated country scorings on the decision criteria are then again normalised in the range 1 to 10. The resulting (normalised) country scorings on each of the decision criteria then result in a total ranking taking into account the weighting factors. Additionally, Table 5.4 presents the interpretation of criteria results which are included in Table 5.6.

Furthermore, according to Thai and Grewal (2005: 10), the weighting factors (percentages) indicate its share of importance in the total evaluating criteria which has different weightings among the thirteen criteria. Thus, the summation of these weighting factors equals 100%. In addition, the weighting factors have been based on the researcher’s judgment, which have been utilised considering the Egyptian trade competitiveness prospective in COMESA countries whilst taking into account both the academic and practical approaches regarding this issue. Thus, the composite point (PPT) of each possible location is calculated as follows:

$$Composite\ point = \sum_{i=1}^{13} P Si \times wi \text{ (points related to each criterion} \times \text{weighting factor of that criterion)}$$

The calculation of the PPT score for each country is shown in Table 5.5. Based on the criteria and weighting factors chosen, it illustrates the matrix of the best possible locations for Egypt's RDCs in COMESA countries.

Table 5.5: Matrix of the possible locations for RDCs

Possible Locations	Criterion (1)		Criterion (2)		Criterion (3)		Criterion (4)		Criterion (5)		Criterion (6)		Criterion (7)		Criterion (8)		Criterion (9)		Criterion (10)		Criterion (11)		Criterion (12)		Criterion (13)		PPT Σ
	PS	%	PS	%	PS	%	PS	%	PS	%	PS	%	PS	%	PS	%	PS	%	PS	%	PS	%	PS	%	PS	%	
Burundi	10	15	3.5	10	1	15	3.5	5	1	5	4	10	9.5	5	2	10	3	5	4.5	5	9.5	5	6	5	3.5	5	4.625
Comoros	9.5	15	4	10	6	15	6.5	5	4	5	3.5	10	3	5	1	10	1	5	6.5	5	9	5	9.5	5	1	5	5.2
Congo DR.	8.5	15	2	10	1	15	2.5	5	9	5	9.5	10	9	5	6	10	9	5	2	5	8	5	3	5	9.5	5	5.775
Djibouti	9	15	5.5	10	8.5	15	4	5	2.5	5	4.5	10	8.5	5	3.5	10	2	5	5.5	5	7.5	5	3.5	5	2	5	5.75
Eritrea	8	15	3	10	7	15	3	5	3	5	5.5	10	6	5	4.5	10	3.5	5	3.5	5	6	5	9	5	2.5	5	5.375
Ethiopia	6	15	8.5	10	1	15	8	5	7	5	6	10	8	5	2.5	10	9.5	5	8	5	5.5	5	5.5	5	5.5	5	5.6
Kenya	5.5	15	9.5	10	10	15	9	5	8.5	5	8.5	10	5.5	5	7	10	7.5	5	9	5	10	5	2.5	5	10	5	7.925
Libya	5	15	10	10	9.5	15	2	5	10	5	3	10	4	5	9.5	10	8	5	3.5	5	7	5	7.5	5	4.4	5	6.745
Madagascar	6.5	15	1	10	7.5	15	6	5	10	5	7	10	3.5	5	5	10	6	5	6	5	8.5	5	8.5	5	6.5	5	6.15
Malawi	7.5	15	2.5	10	1	15	7	5	5	5	6.5	10	5	5	3	10	4.5	5	7.5	5	3.5	5	7	5	6	5	4.75
Mauritius	4.5	15	9	10	9	15	10	5	2.5	5	2.5	10	1	5	9	10	6.5	5	10	5	2	5	5	5	7.5	5	6.3
Rwanda	7	15	4	10	1	15	4.5	5	4.5	5	2	10	7.5	5	5.5	10	5.5	5	3	5	3	5	6.5	5	5	5	4.325
Seychelles	4	15	6.5	10	6.5	15	8.5	5	7	5	1	10	2.5	5	6.5	10	2.5	5	8.5	5	1	5	8	5	3	5	5.025
Sudan	1	15	8	10	8	15	5	5	6	5	10	10	2	5	8.5	10	10	5	5	5	2.5	5	2	5	9	5	6.075
Swaziland	2	15	7.5	10	1	15	9.5	5	8	5	5	10	4.5	5	10	10	4	5	9.5	5	5	5	10	5	4	5	5.425
Uganda	2.5	15	7	10	1	15	7.5	5	4	5	7.5	10	7	5	8	10	8.5	5	7	5	6.5	5	1	5	8.5	5	5.275
Zambia	3.5	15	5	10	1	15	1	5	5.5	5	8	10	6.5	5	4	10	5	5	1	5	4.5	5	4	5	8	5	4.15
Zimbabwe	3	15	6	10	1	15	5.5	5	7.5	5	9	10	10	5	7.5	10	7	5	2.5	5	4	5	4.5	5	7	5	5.25

Source: Author, based on Duijvendijk *et al.* (2003) and Thai and Grewal (2005)

Note:

Criterion (1):	Transport infrastructure	Criterion (6):	Proximity to rail hubs	Criterion (11):	Multilingualism
Criterion (2):	Wages and benefits	Criterion (7):	Labour availability	Criterion (12):	Congestion risk
Criterion (3):	Proximity to seaports	Criterion (8):	Proximity to customers	Criterion (13):	Utility infrastructure
Criterion (4):	General business environment	Criterion (9):	Proximity to suppliers / sources		
Criterion (5):	Proximity to airports	Criterion (10):	Corporate taxes		

5.4.2 Analysing the outcomes of RDCs location matrix

As it is clearly shown from Table 5.5, the 19 COMESA countries excluding Egypt have been analysed and measured based on the most important location decision criteria for the RDCs using WMM as mentioned before. Therefore, countries such as Kenya, Libya and Mauritius have scored the best PPT among the COMESA countries, while countries like Sudan and Madagascar, Congo DR., Djibouti and Ethiopia came in the second group of COMESA countries for locating Egypt's RDC. Table 5.6 classifies the rankings of COMESA countries regarding the optimal location for Egypt's RDCs.

Table 5.6: Classification of the best location for Egypt's RDCs in COMESA

First group*	Second group *	Third group *	Forth group *
Kenya	Madagascar	Swaziland	Rwanda
Libya	Sudan	Eritrea	Zambia
Mauritius	Congo DR.	Uganda	
	Djibouti	Zimbabwe	
	Ethiopia	Comoros	
		Seychelles	
		Malawi	
		Burundi	

Source: Author.

Note: * Countries are listed in PPT order

Based on the mentioned criteria, the researcher has certain concerns with some of the COMESA countries which have been selected. These concerns are based on actual and practical issues which appear within Egypt and COMESA trade. However, the aim of the proposed Egyptian RDCs in COMESA is not just establishing the RDCs network, but also to ensure the flows of Egyptian exports to all COMESA countries whilst taking into account the political, economical and geographical aspects besides the transport and trade systems in the final selection. Therefore, the researcher has justified and supported his point of view from the findings in Tables 5.5 and 5.6 applying a criteria checklist, which would be more practical and simulating to the real trade and business life as well as supports the previously adopted criteria of Duijvendijk *et al.* (2003) in such case.

5.4.2.1 Justifying the appropriateness of Egypt’s RDCs locations

The researcher has investigated several issues regarding the best locations for the RDCs in order to utilise the results from Table 5.6 by applying a supportive checklist whilst considering primary factors to justify the selection process. The supportive factors for selecting the optimal location for the RDCs could be highlighted as follows:

- The volume of trade between Egypt and the proposed country, as well as, the volume of trade between the proposed country and its neighboring countries.
- The economical and political stability of the proposed country.
- The local infrastructure of the proposed country, its local transport network as well as its regional logistics network with the neighbouring countries.
- The geographical location of the proposed country, which will facilitate market access.

Using the above-mentioned factors would assist in evaluating each COMESA country for the purpose of finalising the selection process. Scott (1989: 11) suggests a checklist of qualitative factors involving site selection, including location of major markets, location of materials and/or services and the availability of labour and suitable transportation links. He also argued that site selection involves gathering and analysing many different pieces of information, and relating them to the enterprise's over all corporate goals and objectives (Scott, 1989: 12). Therefore, to clarify the selection process, Table 5.7 presents a supportive checklist to define the situation of each COMESA country in terms of the location criteria mentioned previously.

Table 5.7: Supportive RDC location criteria checklist

Country	RDC Location Criteria					
	Volume of Egyptian exports	Volume of trade with neighboring countries	Economic and political stability		Local Infrastructure	Geographical Location
			Economic	Political		
Burundi	◆	◆	×	◆	◆	×
Comoros	✓	◆	×	✓	✓	◆
Congo DR	✓	◆	◆	×	◆	×
Djibouti	✓	✓	✓	✓	✓	✓
Eritrea	✓	◆	×	◆	◆	✓
Ethiopia	✓	✓	×	◆	◆	×
Kenya	✓	✓	✓	✓	✓	✓
Libya	✓	✓	✓	✓	✓	✓
Madagascar	◆	◆	✓	✓	✓	◆
Malawi	✓	✓	✓	✓	◆	×
Mauritius	◆	✓	✓	✓	✓	◆
Rwanda	✓	◆	◆	◆	◆	×
Seychelles	◆	◆	◆	✓	✓	◆
Sudan	✓	✓	×	◆	◆	✓
Swaziland	◆	◆	◆	✓	◆	×
Uganda	✓	✓	×	×	◆	×
Zambia	✓	✓	✓	✓	✓	×
Zimbabwe	✓	✓	×	×	✓	×

Legend: ✓: Appropriate, ◆: Moderate, ×: Inappropriate.

Source: Author, based on ACCE (2006), COMESA (2006) and MFTI (2006a)

From the previous checklist it is clear that there are many countries that have appropriate conditions regarding the mentioned criteria of the RDCs location in the COMESA market. The first column in the above checklist, which represents the volume of Egyptian exports to COMESA countries, shows Egypt's significant trade relations with the other 18 members. This obviously resulted from the demand on Egypt's exports as well as the trade agreements and tariffs reduction under the COMESA treaty, which encourages the trade flows among the COMESA countries.

The second column shows the volume of trade of each COMESA country with its neighboring countries. This criterion aims at demonstrating the ability and the possibility of each country in hosting such RDC and redistributing the exports to the neighboring countries to be served by such RDC within the COMESA market. Kenya, Mauritius, Djibouti, Zambia, Zimbabwe, Uganda, Sudan, Libya and Ethiopia, have strong trade relations with the surrounding countries, whilst the other countries have trade relations but not similar to the mentioned countries for several reasons such as being a non-COMESA member or having political conflicts.

The third column represents economical and political stability. This criterion is considered a very crucial factor, which completely affects the decision of establishing the RDC in any COMESA country. For instance, if one of the COMESA countries meets the above-mentioned criteria for locating the RDC but without having economical or political stability, this will obviously exclude this country from the selection process. According to Salwa Shafik, Ministry of Foreign Trade and Industry (personal communication. 14 January 2006), most of the COMESA countries have stable developing economies, foreign policies and political systems, but countries such as Burundi, Congo DR, Eritrea, Ethiopia and Sudan have political conflicts such as civil wars or economical problems such as famines, and obviously can not be considered as potential candidates for locating the Egyptian RDCs.

The fourth column shows the local infrastructure of each COMESA country, which might not be up to the international standards but at least it is meeting the minimum requirements to support the flow of exports from ports, airports, or motorways to the desired markets. Most of the COMESA countries have moderate or poor infrastructure, but some countries like Kenya, Djibouti, Libya, Mauritius, Zimbabwe and Zambia, have an appropriate local infrastructure that is connected to the main ports, airports and other modes of transport.

The fifth column represents the geographical location of the COMESA country. This criterion is as crucial as the one considering the political and economical stability. Simply, this factor is based on the accessibility to receive or deliver the exports from Egypt to the planned RDC in

the COMESA country. So the geographical location could refer to whether the country is coastal or landlocked. In addition, countries like Burundi, Congo DR, Malawi, Rwanda, Swaziland, Uganda, Zambia and Zimbabwe are locked countries, therefore these countries cannot be considered when selecting the RDCs locations. Therefore, the suitable geographical location could refer to the coastal countries, which can receive the Egyptian exports by its maritime ports rather than using other modes of transport to deliver the goods, due to economic advantages relating to the maritime transport.

Therefore, it is clearly seen from Table 5.7 that Kenya, Libya and Djibouti are the appropriate three countries to allocate Egypt's RDCs due to their significant role in serving other COMESA countries in their trade flows and several capabilities which make them capable of implementing the Egyptian exports strategy. In addition, this finding and the findings from Table 5.5 and 5.7 strengthen the point of view of the researcher.

5.4.2.2 Reviewing the results of the RDCs selection process

In this part of the research, a comparison between the findings from both criteria in Tables 5.7 and 5.8 will be implemented in order to justify and finalise the RDCs selection process.

Therefore, Kenya is considered as one of the optimal location for Egypt to allocate its RDC, due to the significant role of Kenya to serve and support the landlocked countries in the central and eastern part of the African continent, in addition Kenya has scored the best ranking in the Duijvendijk *et al.* (2003) criteria, and it was also one of the most appropriate COMESA countries in the supportive checklist criteria.

Libya and Sudan have special consideration regarding hosting the Egyptian RDCs. Although, the two countries have good indicators and results regarding their capabilities of hosting the RDCs this could be conflicting with the Egyptian exports strategy, which aims at expanding the level of exports to COMESA countries, and such an establishment of network of RDCs would support the exports flows to the region. Consequently, as in the case of Sudan and Libya, due to their close geographical locations to Egypt, and their high demanding markets for Egyptian products, this would render them as two special gateways for the Egyptian exports without the need for establishing particular distribution centres for each country. Besides, if one of the two countries had been included within the RDCs network, it would be difficult to outline and ensure confident distribution channels with the surrounded countries, especially with Libya which has borders with only two COMESA countries i.e. Egypt and Sudan only. In addition, this would make the transportation process highly costly and time consuming to serve the COMESA countries which would not meet the idea of allocating the RDC there. On the other

hand, Sudan is a lot better than Libya, but still due to the political conflicts in southern Sudan as well as the Darfur crisis it would not make it a safe place for investment (MFTI, 2006b: 2).

Mauritius and Madagascar have similar issues regarding hosting the RDCs. Without doubt, Mauritius has a significant role within the COMESA countries islands in the Indian Ocean, and it came within the first group of COMESA countries for the RDC selection. However, this COMESA country could not be one of the Egyptian RDCs for several feasible reasons as is highlighted from (MFTI, 2006a: 31) such as: 1) The unavailability of direct shipping lines between the Egyptian ports and Port Louis in Mauritius. 2) The geographical location of Mauritius makes the country limited to serve only two COMESA islands countries which are Seychelles and Madagascar. In this case the transportation cost and the time of delivering the exports would take a long time due to the transit time in Port Louis and reloading the cargo to Madagascar and Seychelles. 3) Kenya and Tanzania are the main two countries with most of the sea transport journeys stopping in Mombasa port in Kenya and Dar es Salam in Tanzania before heading to Port Louis in Mauritius. This gives the opportunity for Tanzania and Kenya in particular to serve the islands in the Indian Ocean (Murphy, 1991), (Dalenberg and Daley, 1992) and (MFTI, 2005: 147).

Congo DR. and Ethiopia have come in the second group of COMESA countries. However, they are landlocked countries, the export and imports of Congo DR. depend on Mombasa port in Kenya while Ethiopia depends on Djibouti port in Djibouti. Both countries are good markets for Egyptian exports, but their poor proximity to seaports and the unstable political and economical regimes could make these countries inadequate locations for the Egyptian RDCs.

Djibouti is in the second group of COMESA countries. This small country with its port plays a vital role in serving several COMESA countries such as Ethiopia, Eritrea, southern Sudan and Somalia. Although Eritrea is a coastal country, Djibouti has a good transport infrastructure as well as high levels of seaports, rail hubs and customer proximity. In addition, the stable political and economic regimes of Djibouti make the country a good location to host an Egyptian RDC. Moreover, the trade relationship between Egypt and Djibouti is growing with taking into consideration that Egyptian exports reach the Ethiopian and other markets in the region through Djibouti port. Therefore, Djibouti is an optimal location for hosting Egypt RDC in COMESA after Kenya, due to its location which is used to serve countries like Ethiopia and Eritrea.

On the other hand, the COMESA countries which came in the third and forth groups are inappropriate locations for the RDCs, this is due to several reasons which have been mentioned

in some of the first and second groups of COMESA countries from Table 5.6 and due to the checklist criteria which have been presented in Table 5.7.

5.4.2.3 Concluding the RDCs selection process

After selecting and justifying the appropriateness of Kenya and Djibouti as two optimal locations for the Egyptian RDCs in COMESA countries, the researcher found that a third country is needed to serve the southern part of the COMESA region. Thus, based on previous investigation and an intensive literature review, the researcher found Tanzania could be the third location for an Egyptian RDC. Although Tanzania is a former COMESA member, it still has good trade and investment relationships with Egypt as well as with neighbouring countries in the region (MFTI, 2006a: 91).

Besides, the characteristics of Tanzanian capabilities such as transport infrastructure, proximity to rail hubs, seaports, customers and the good business environment make this country able to support the idea to serve some COMESA countries through its seaport Dar es Salam. Table 5.8 presents the same thirteen criteria which have been applied to the 19 COMESA countries.

Table 5.8: Applying the RDC location criteria on Tanzania

Criteria	Information	Remarks
Transport infrastructure	0.084 Km /Sq Km for road density 0.062 Km /Sq Km for the inland water way density	<ul style="list-style-type: none"> For the road density, Tanzania would place the 3rd ranked country after Seychelles and Mauritius. For the inland waterway density, Tanzania would place the 2nd ranked country after Burundi.
Wages and benefits	\$1,005 per month for skilled worker	Tanzania has the same average monthly cost as Kenya.
Proximity to seaports	2,525,737 Sq Km covering 4 countries Dar es Salam 639,800 Cargo Ton.	<ul style="list-style-type: none"> For the coverage areas, Tanzania (Dar es Salam port) would place the 1st ranked country. For the handling of goods, Tanzania (Dar es Salam port) would place the 2nd ranked country after Kenya.
General business environment	Rank 142 according to the world bank rankings	It would place the 8 th ranked country within the COMESA in the general business environment
Proximity to airports	11 airports	<ul style="list-style-type: none"> Mwalimu J.K. Nyerere International Airport is the main airport which operated by Air Tanzania. Tanzania is the 10th ranked country in this criterion
Proximity to rail hubs	3,690 km (total Km of rail network)	Tanzania is the 3 rd ranked country after Sudan and Congo DR.
Labour availability	40% (Unemployment rate)	Tanzania is the 10 th ranked country in this criterion
Proximity to customers	\$27.11 billion GDP \$700 GDP per capita	<ul style="list-style-type: none"> For GDP, Tanzania is the 7th ranked country. For GDP per capita, Tanzania is the 17th ranked country.
Proximity to suppliers / sources	\$27.11 billion GDP	Tanzania is the 7 th ranked country in this criterion
Corporate taxes	30% (Corporate tax rate including Surcharges and local taxes)	Tanzania is the 17 th ranked country in this criterion
Multilingualism	35% (English language is the main foreign language)	Tanzania is the 13 th ranked country in this criterion
Congestion risk	100 (Average of motor vehicles / km of paved highway)	Tanzania is the 6 th ranked country in this criterion
Utility infrastructure	Electricity consumption : 2.959 billion kWh Gas consumption 0 cu m Fresh water usage: n/a No. of fixed telephone: 148,400 No. of mobile phones: 1.942 million	<ul style="list-style-type: none"> 6th rank in electricity consumption 5th rank in no. of fixed and mobiles telephones

Source: COMESA (2006) and EIA (2007)

After applying Duijvendijk *et al.*, (2003) criteria on Tanzania’s capabilities as the third RDC place for the Egypt. It was clearly shown from Table 5.8 that Tanzania has similar capabilities and characteristics are Kenya and Libya. Therefore, Table 5.9 presents the position of Tanzania within the classification of best location for Egypt's RDCs in COMESA.

Table 5.9: Position of Tanzania within the location classification

First group*	Second group *	Third group *	Forth group *
Kenya	Madagascar	Swaziland	Rwanda
Tanzania †	Sudan	Eritrea	Zambia
Libya	Congo DR.	Uganda	
Mauritius	Djibouti	Zimbabwe	
	Ethiopia	Comoros	
		Seychelles	
		Malawi	
		Burundi	

Source: Author.

Note: * Countries are listed in PPT order

† Tanzania’s PPT is: 7.575

Choosing Tanzania was significant within the selection process. Tanzania is the second country after Kenya in the first group, which mean that this country is able to meet the requirement of hosting the Egyptian RDCs in COMESA countries. Furthermore, one of the main reasons of selecting Tanzania as the third location of Egypt’s RDCs is due to its role as a main sea gate for several landlocked COMESA countries practically. Moreover, Tanzanian ports handle cargo for landlocked countries such as Uganda, Rwanda, Burundi, Malawi, Zambia, and even in certain cases Zimbabwe and Swaziland. All these countries are served from the port of Dar es Salam. In addition, Tanzania has a joint rail project with Zambia which is operated by the Tanzania-Zambia Railway Authority (TAZARA) which links Dar es Salam in Tanzania with Kpiri Mposhi in Zambia. The TAZARA railway is used mainly to transport goods for Zambia and Malawi (Hartmann, 2002: 16). The gauge is 1067 mm which is compatible with railways of Southern African countries (Mkiaru, 2004: 3). On the other hand, according the World Bank economy (2006), Tanzania came 142 rank in the world in doing business and this is much better than some of COMESA countries (World Bank, 2006). Regarding air transport, Tanzania has 11 airports which had paved runways. Most internal air services are operated by Air Tanzania, which also flies internationally. Charter companies operate flights to government maintained airports, landing fields, and privately owned airstrips. Foreign airlines provide services from international airports at Dar es Salam and in the vicinity of Mt. Kilimanjaro. There is also an international airport on Zanzibar, which maintains its own airline, ZanAir (UNCTAD, 2002: 16).

In addition, the inland shipping in Tanzania is undertaken on lakes of Victoria, Tanganyika and Nyasa. The major ports are Mwanza, Bukoba and Musoma in Lake Victoria, Kigoma on Lake Tanganyika, and Itungi on Lake Nyasa. Moreover, there is also a potential for navigation on Lake Rukwa and along some of the big rivers, e.g. Kagera. Together with the three lakes this constitutes thousands of square kilometres of natural navigable water, making Tanzania the most valuable transportation resource that has not been well utilised. Besides port facilities and navigational aids are inadequate (MCT, 2003:5).

Furthermore, Tanzania is pursuing economic integration through several bilateral and regional trade protocols. Currently, Tanzania is a member of the Southern Africa Development Community (SADC) and East African Community (EAC) regional blocs (Fan *et al.*, 2005: 2).

Therefore, the regional transport industry with respect to transit traffic is centred at Northern and Central corridors. The two corridors simply comprise of rail and road infrastructures linking Mombasa and Dar es Salaam to landlocked countries (Kweka, 2004: 10). Thus, the government of Tanzania recognises that the private sector is the catalyst of Tanzania development growth. If poverty reduction goals are to be achieved, significant strides must be made in private sector development for both indigenous and Foreign Direct Investment (FDI) through reforms on central and local taxation, labour laws and land planning allocation and development. The Government will continue to address good governance issues to sustain the existing peace and security. The government will strengthen relation, with EAC, SADC and other region economic groups such as COMESA in pursuing development goals by removing physical and non-physical barriers including the development of infrastructure (Fan *et al.*, 2005: 15).

5.5 REVIEWING THE STATUS OF THE SELECTED RDCS COUNTRIES

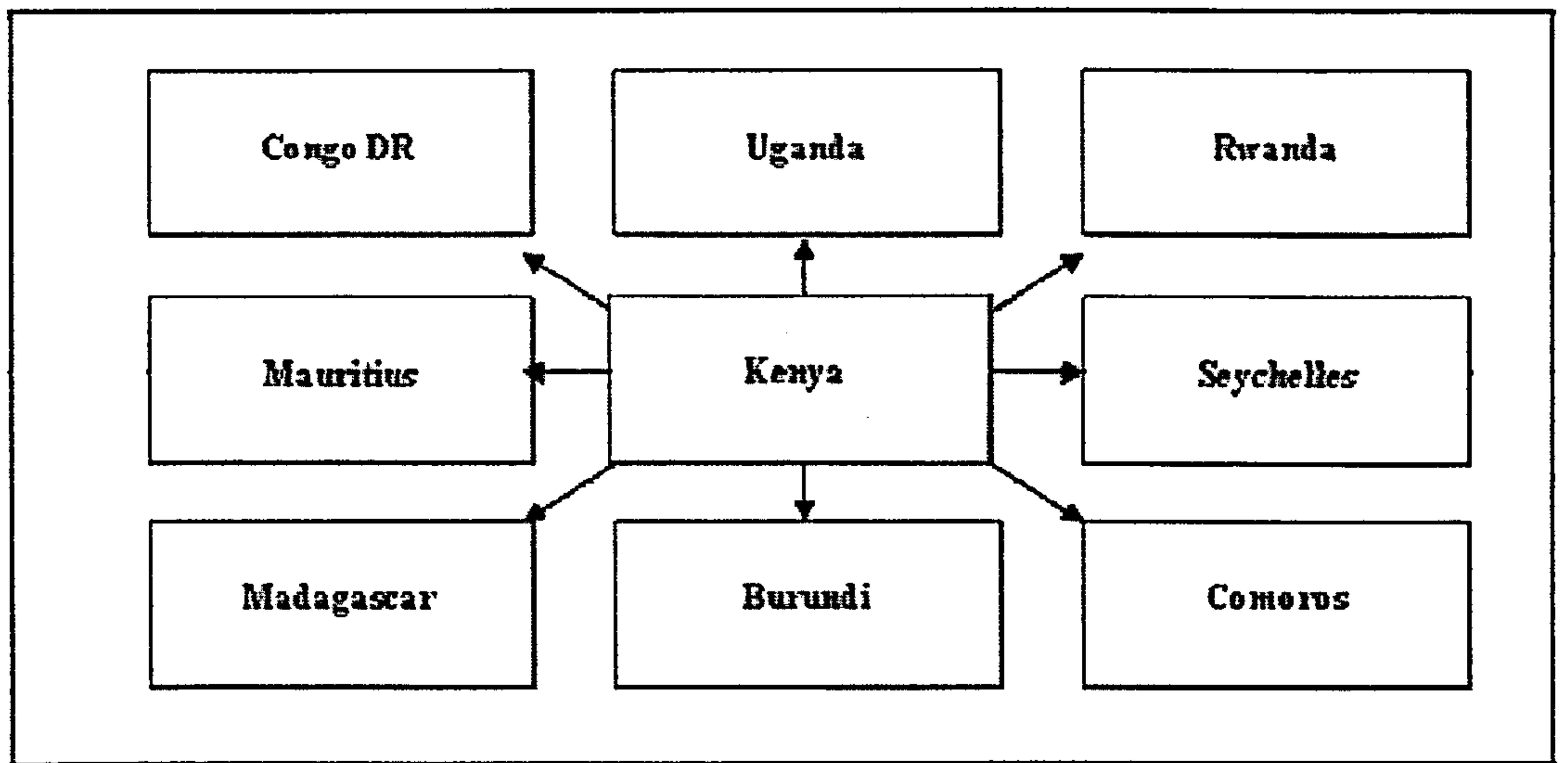
5.5.1 Kenya

The Kenyan market is characterised by being one of the strongest demanding markets for Egyptian products. The agricultural sector accounts for 30% of GDP, growing at an annual rate of 2.3%. However, industry, manufacturing and services performed less favorably (COMESA, 2006: 25). The average annual inflation rate declined from 10.3 % in 2005 and is expected to remain in the 7-11% range over the next five years as a result of a recovery in domestic food production (ACCE, 2006) and (CIA Word Factbook, 2006). Kenya is the world's third largest tea producer. Kenya has a population of 34 million people. In addition to that, the amount of Kenyan imports was \$5.12 billion in 2005, where the Egyptian products constituted 14% of the total Kenyan imports which are quite diverse, while imports are concentrated in one major agricultural product, in this case tea. The largest export category is pharmaceuticals, with a

share of 28%, followed by chemicals, transportation equipment, and carbon. Kenya's exports to Egypt are concentrated in tea, sisal, and bacon. Kenya's exports of tea to Egypt, worth \$59.6 million in 2006, comprise 93.6% of the country's total exports to Egypt (MFTI, 2006b: 59).

Kenya has good relations with all African countries. The country has an integrated transport network. The Port of Mombasa is considered an essential link in this network, as the major port not only for Kenya but also for many locked countries as it is mentioned before. Figure 5.17 shows the countries which would be served from the RDC located in Kenya.

Figure 5.17: Egypt's RDC in Kenya



Source: Author.

As illustrated in Figure 5.17, this RDC will serve eight countries, Burundi, Uganda, Congo DR, Rwanda, Comoros, Madagascar, Seychelles and Mauritius. Most of these countries are locked countries, which consider Kenya as a vital gate for their imports and exports through the port of Mombasa, except Comoros, Madagascar and Seychelles which, are islands in the Indian Ocean.

The scenario of the Egyptian exports flow to the Egyptian RDC in Kenya will be demonstrated as follows: the exports will be delivered using maritime transport from the Egyptian ports to the Port of Mombasa to the RDC which will be based near the port's area. Goods will be distributed to the four landlocked countries: Burundi, Congo DR., Rwanda and Uganda. The other part of this scenario is the distribution to the other four islands in the Indian Ocean; due to the close geographical location between Mauritius, Madagascar, Seychelles, and Comoros it was difficult to select the optimum location for the Egyptian RDC for these countries. However, due to the regular shipping lines and feeder services from Port of Mombasa to these countries, which gives

the possibility for the Port of Mombasa to serve Port Louis in Mauritius, Mutsamudu port in Comoros, Toamasina port in Madagascar and Victoria port in Seychelles, with the Egyptian exports as transshipped cargo in order to avoid the extra transportation costs, and time of delivery (MFTI, 2006b: 63). The specific movement of the Egyptian exports from the RDC in Kenya will be demonstrated in depth in order to highlight the barriers which could affect this movement in the next chapter (See Appendix 20).

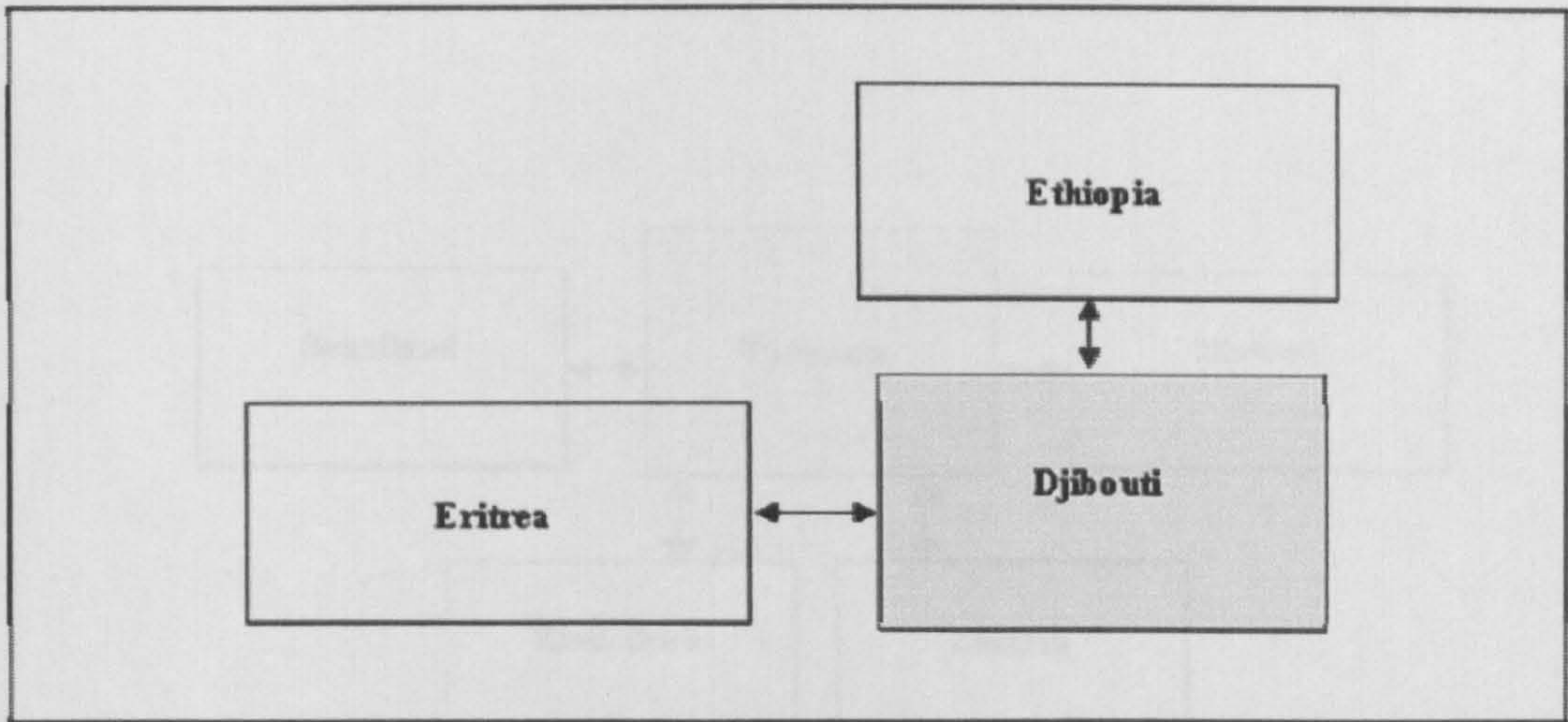
5.5.2 Djibouti

The economy of Djibouti is based on service activities connected with the country's strategic location and status as a free trade zone in northeast Africa. Djibouti provides services as both a transit port for the region and an international transshipment and refueling centre. It has few natural resources and little industry. It is heavily dependent on foreign assistance to help support its balance of payments and to finance development projects (ACCE, 2006: 24).

Djibouti's exports amounted to \$260 million while the imports are \$440 million. Principal exports from the region transiting Djibouti are coffee, salt, hides, dried beans, cereals, other agricultural products, and wax. Djibouti itself has few exports, and the majority of its imports come from France and other African countries, such as: food, beverages, transport equipment, chemicals, and petroleum products. Most imports are consumed in Djibouti, and the remainder go to Ethiopia and northwestern Somalia (MFTI, 2006b: 40). The Djiboutian market has a good advantage for Egyptian exports; it is considered a wide consuming base due to the lack of domestic production industries. Djibouti has been selected as one of the locations for the potential Egyptian RDCs in COMESA due to the fact that the volume of imports from Egypt amounted to \$65 million in 2006, i.e. 5% of the total Djibouti imports (MFTI, 2006a: 137).

The scenario for Egyptian exports flow to the Egyptian RDC in Djibouti will be demonstrated as follows: the exports will be delivered using maritime transport from the Egyptian ports to Djibouti port to the RDC which will be based near to the port's area. Thus, the products will be distributed to Ethiopia and one landlocked country which is Eritrea, as it is illustrated in Figure 5.18.

Figure 5.18: Egypt's RDC in Djibouti



Source: Author.

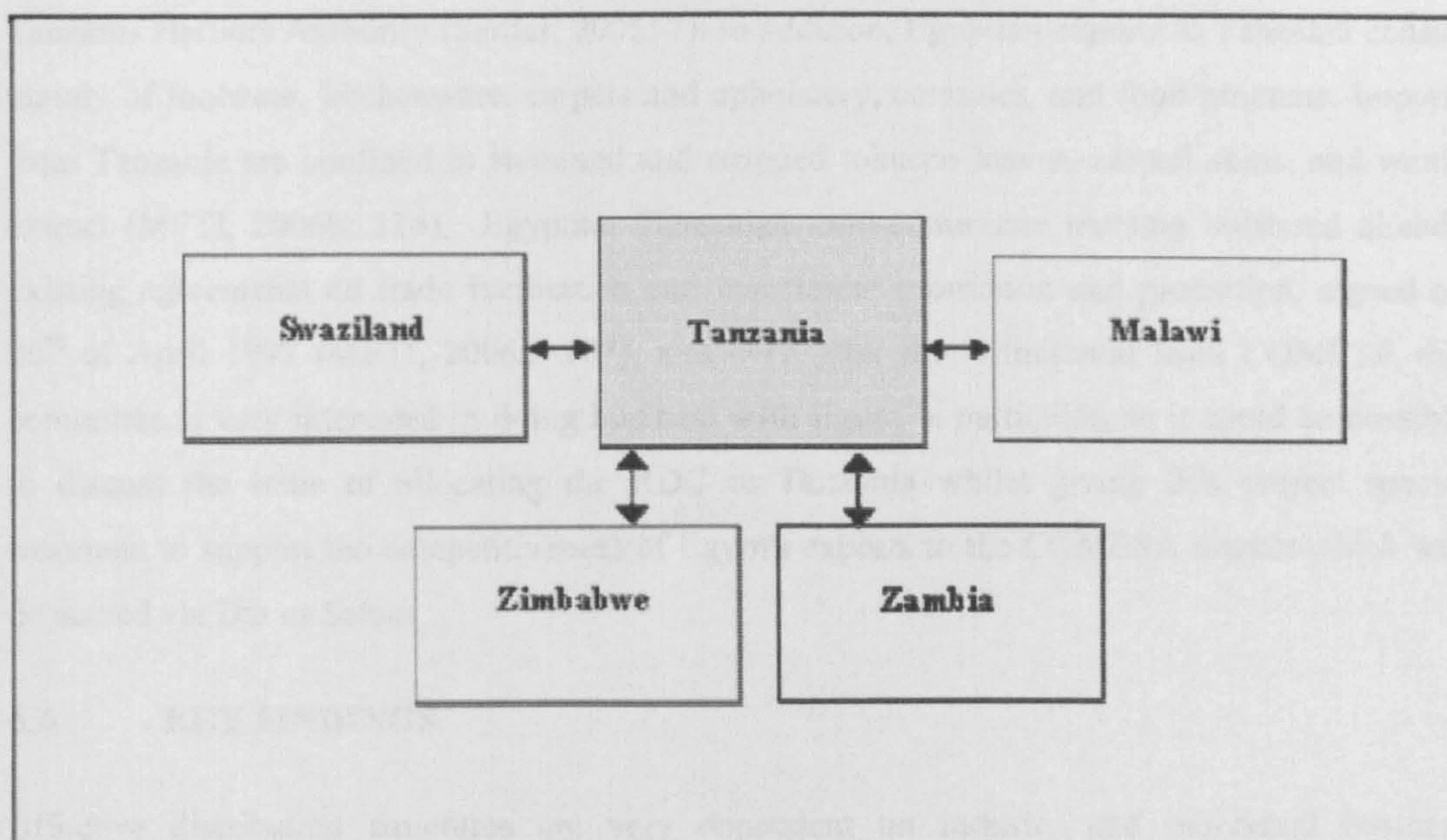
Regarding the previous figure, Djibouti has good economical, social and political relationships with Ethiopia and Eritrea; especially Ethiopia because it is a landlocked country and all the Ethiopian trade comes from Djibouti, rather than Eritrea due to the political conflicts between Ethiopia and Eritrea. Djibouti's transport infrastructure is adequate for distributing the imported Egyptian products, which are normally carried from/to port of Djibouti, and then delivered to the RDC by road or rail to be redistributed to the surrounding countries of Eritrea and Ethiopia (See Appendix 21).

5.5.3 Tanzania

Tanzania has been selected to be the third Egyptian RDC for COMESA market although; it is a former member in COMESA, but withdrew in 2000 (Rugaihuruz, 2002: 4). Considering Tanzania within the COMESA countries was indispensable due to many reasons, such as the good economical and commercial performance, which is supported with an appropriate transportation networks. In addition, Dar es Salam port is considered the second main port besides the Port of Mombassa which serves the surrounding landlocked countries in the east part of Africa, i.e. Zambia, Malawi, Swaziland and Zimbabwe, and considered the cheaper and the quicker gateway to these countries rather than the Port of Mombasa.

The scenario of the Egyptian exports flow to the Egyptian RDC in Tanzania will be demonstrated as follows: the exports will be delivered using maritime transport from the Egyptian ports to the Port of Dar es Salam to the RDC which will be based near to the port's area and consequently will be distributed to the four landlocked countries, as it illustrated in Figure 5.19. (See Appendix 22).

Figure 5.19: Egypt's RDC in Tanzania



Source: Author.

Tanzania's real growth has been estimated at 5.8%, with GDP of \$23.7 billion in 2005. Price inflation in Tanzania remains relatively high but shows a declining trend, falling from 6.2% in 2004 to 5.4% in 2005. Tanzania's exports amounted to \$1.24 billion, and imports of \$ 1.97 billion (MFTI, 2006b: 110) and (Kabanguka, 2002: 16).

Tanzania is home to large reserves of gold, copper, diamonds, coal, lead, iron ore, phosphates, nickel carbons and other minerals. This is basically an agricultural economy, with 90% of the workforce employed in that sector. Also Tanzania imports consumer goods, machinery and transportation equipment, industrial raw materials and crude oil. With Tanzania rated as the second-poorest country in the world, purchasing power is very limited (MFTI, 2006b: 112). This also explains the low diversity in manufacturing, due to weak production and import capacity. Although infrastructure remains underdeveloped, Tanzania has several ports, facilitating shipment of goods to and from other countries. The port of Dar es Salaam is also the capital and an important commercial centre; another major port is Tanga, the country's second-largest commercial centre. Two smaller ports overlook Lake Victoria. Moving inland, Dodoma is a significant communications centre and has an international airport (ACCE, 2006: 28).

Overall, Tanzania is making some headway in economic development. During the coming period, the priority in the country's liberalisation and reform programme will be the development of public utilities and infrastructure. Procedures are underway for privatisation of the Tanzania Telecommunications Company and the Dar es Salaam Water and Sewerage

Authority, while consultants are carrying out a study for the sale of port operations under the Tanzania Harbors Authority (Sardar, 2005: 7). In addition, Egyptian exports to Tanzania consist mainly of footwear, kitchenware, carpets and upholstery, ceramics, and food products. Imports from Tanzania are confined to stemmed and stripped tobacco leaves, animal skins, and wattle extract (MFTI, 2006b: 114). Egyptian Tanzanian joint-committee meeting bolstered already existing agreements on trade facilitation and investment promotion and protection, signed on 30th of April 1997 (MFTI, 2006a: 107), and even after the withdrawal from COMESA this committee is very interested in doing business with Egypt in particular, so it could be possible to discuss the issue of allocating the RDC in Tanzania whilst giving this project special treatment to support the competitiveness of Egypt's exports to the COMESA market which will be served via Dar es Salam.

5.6 KEY FINDINGS

Effective distribution structures are very dependent on industry and individual business characteristics. This chapter has presented an overall distribution structure framework that covers distribution structures encountered in the field of Egyptian exports to COMESA countries. The idea of distributing the Egyptian exports is based on the idea that Egypt is the central supplier which would deliver the exports to the three main RDCs in the region. The locations of these RDCs have been selected based on certain criteria to meet the objectives of implementing the RDC concept i.e. redistributing the Egyptian exports to distribution centres within the COMESA market to meet the customers' requests.

Kenya, Djibouti and Tanzania are the selected countries to host the Egyptian RDCs. The selection process considered several factors to ensure an appropriate location for the RDCs. Practically; the selected countries are playing a remarkable role in the region, in being main gates to several landlocked countries. For that reason, the proposed network of Egypt's RDCs and the countries served by each RDC are examined on two levels: the transportation process; in order to reveal hindrances which might face the flows of the Egyptian exports from the origin place until the consumption places in each COMESA market, and the exported products; to expose the COMESA importers preferences about the Egyptian exports. Therefore, these stages of investigation would be studied in the following chapters of this research. Finally, the main issues of these RDCs are about the methods of allocation as well as operation and promotion of their services among the business and trade officials in the COMESA countries. The allocation issue has been addressed in this chapter, and the issue of operating and promoting these RDCs will be discussed later in this research.

CHAPTER 6: FACTORS AFFECTING THE COMPETITIVENESS OF EGYPTIAN EXPORTS TO THE COMESA COUNTRIES

6.1 INTRODUCTION

After proposing the optimal locations of the Egyptian RDCs in COMESA countries, it is imperative to examine and reveal the barriers which reduce the competitiveness of Egyptian exports to the COMESA market. Therefore, this chapter will assess the Egyptian export logistics process to COMESA countries through the RDCs by highlighting the barriers in three stages. The first stage of investigation will examine the logistical process from the Egyptian manufacturers' base to the Egyptian ports for exportation. The second stage will handle the logistical process from the Egyptian exporting ports to each RDC located near the seaports within the COMESA countries. The third stage will examine the logistical process from the RDC to the served markets.

6.2 THE LOGISTICAL PROCESS OF EGYPT'S TRADE FLOWS TO THE RDCS IN COMESA

This stage of investigation aims at listing all the possible obstacles, which hinder the logistical process of the exported commodities from the place of manufacture in Egypt, to final consumption places in COMESA market.

It is worth mentioning that this research will only focus on maritime transport in the logistical process from Egypt to eastern and southern COMESA countries. Also, this process will not include the logistical process from Egypt to Libya and Sudan because they are close markets to Egypt and priority is given to the other COMESA countries due to the apparent difficulties in trade. In addition, this part will include the available rail/road corridors from the RDCs countries to the served markets.

6.2.1 Egyptian manufacturers/ seaports

There is a steady growth in the volume of trade being transported by land transport between the main industrial cities in Egypt and the major Egyptian seaports. El-Nakib and Roberts (2006: 7) mentioned that the use of roads corridors accounts for approximately 91% of all freight movement, while the railways account for 8% and the inland waterways constitute 1% approximately of the total freight transported per year. In addition, due to the high costs of air transport, it is not used unless for very limited volumes of urgent valuable cargo, which could be spare parts, pharmaceuticals and antiques as mentioned by Hamdy Barghout - Business Development Director at Egytrans (personal communication. 15 June 2006). Thus, he said that there are several reasons, which could be attributed to the fact that land transport is the most used mode of transport for freight movement in Egypt. The availability of a significant number of trucks - approximately 984,493 trucks in 2005 as stated by MRCC (2006: 77) - which offer transportation using all types of trucks creates great competition in this sector which consequently results in competitive prices and services. Moreover, the use of road transport is considered the most flexible mode of transport since it allows a door-to-door service without switching to other modes of transport such as rail and inland waterway.

Besides, there has been significant development in road networks, especially highways that connect the different industrial cities to the main Egyptian seaports (El-Zarka, 2006: 102). These road networks are provided with the suitable facilities i.e. gas stations, light, emergency hospitals, maintenance centres to accommodate the needs of the trucks using these roads. Developing such networks was the initiative of the government towards providing a safe and reliable means to move freight to/from industrial areas.

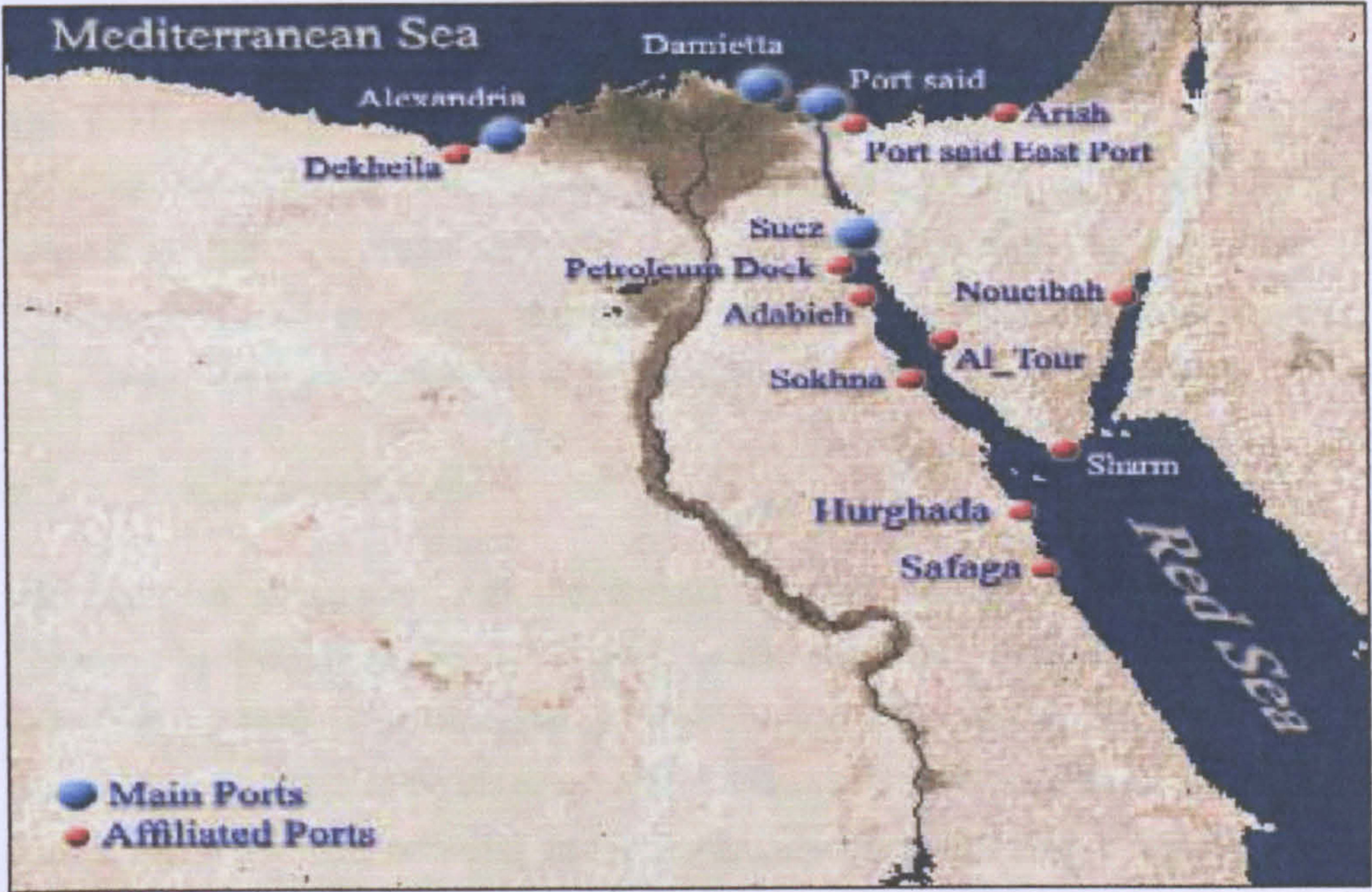
Since Egypt is one of the most promising emerging economies, with US\$ 8.7 billion of exports in 2005 (Join Africa, 2005), the Egyptian government is taking serious steps towards restructuring the current infrastructure to further increase the level of exports. There are integrated transport networks of road/ rail from the industrial cities to the main Egyptian ports (MFTI, 2006a: 74). The seven largest industries are textiles, food and beverages, furniture followed by non-metallic minerals, metal production, chemicals and basic metals (Mobarak, 2004: 3). Table 6.1 shows the major industrial cities in Egypt. As demonstrated, these major industrial cities are connected with the seaports which are gateways for Egyptian exports. The first stage of the investigation will examine the logistical process from these industrial areas to the seaports for exportation. In addition, Appendix (23) presents the geographical distribution of the registered industrial enterprises in the main Egyptian regions.

Industrial City	No. of enterprises	Governorate	Distance between major Egyptian ports and industrial cities (km)				Major manufactured Products
			Damietta Port	Alexandria Port	Port Said Port	Suez Port	
10th of Ramadan	1387	Ismailia	238	272	172	130	Agriculture, Building and Construction products, engineering materials, Consumer durables, Consumer electronics, Diversified chemicals, Electrical components and equipment, Fertilisers and agricultural chemicals, Food distributors, Forest products, Gas utilities, Marine transport equipment, vehicle equipments, Pharmaceuticals, Textiles, Tobacco and Wireless telecommunications equipment
6th of October	1034	Cairo	235	160	275	220	
Al Sadat	419	Menoufeya	195	111	220	170	
New Bani Suef	103	Bani-Swafe	341	387	347	262	
Al Obour	697	Cairo	180	320	210	190	
Badr	338	Suez	274	364	174	5	
Ataqa	108	Suez	264	354	164	2	
Nobaria	81	Cairo	225	250	270	225	
New Cairo	16	Cairo	230	243	265	220	
15th of May	98	Cairo	220	215	271	221	
New Assiut	5	Assiut	591	604	604	520	
Borg al-Arab	560	Alexandria	221	15	273	348	
New Menia	25	Menia	429	472	472	388	
New Salhya	98	Beheira	185	94	215	300	
New Damietta	299	Damietta	5	221	60	284	
Total	5268		-				

Source: Author, based on Mobarak (2004), MFTI (2006b), Ministry of Investment (2006) and CMA-CGM (2006)

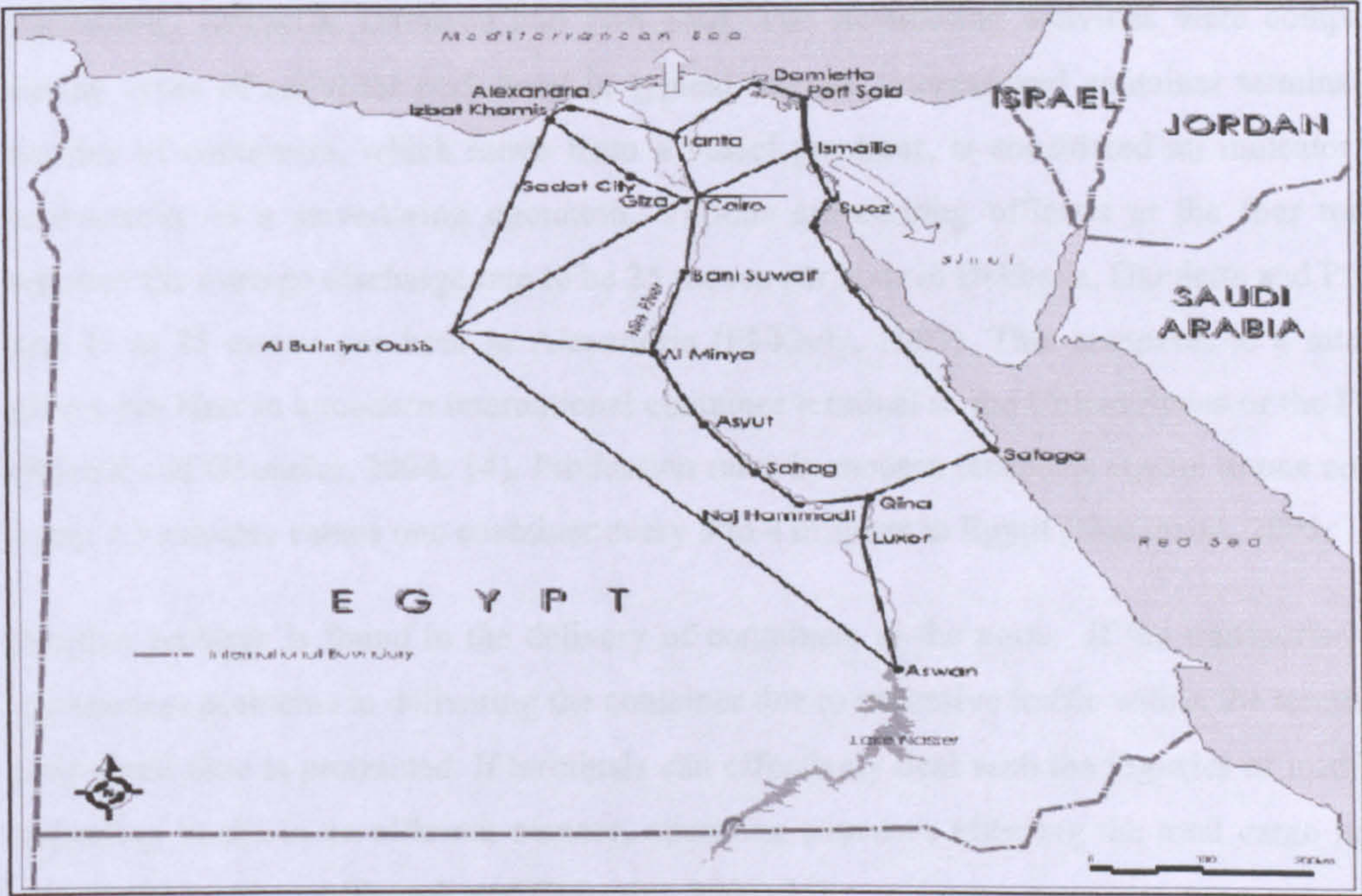
As shown in Table 6.1, these are the main and new industrial cities, which produce products demanded by the COMESA market. The four mentioned industrial cities are connected with a transportation network as it is shown in Figures 6.1 and 6.2.

Figure 6.1: Main and affiliate seaports in Egypt



Source: Egyptian Maritime Transport Sector (2006)

Figure 6.2: Rail/ road transport connections with seaports



Source: ENIT and JIKA (2006)

As it is shown in the previous maps, this network provides a vital link for exports flowing from different locations in Egypt to the main seaports.

After several unstructured interviews, a group of experts from different transport and logistics companies' in Egypt confirmed that there are no major hindrances within this transportation network that might affect the trade flow at this stage.

This fact is considered significant by Ministry of Transport which acknowledges the importance of transportation in the trade process by planning and making an efficient transportation network that links the major industrial areas and free zones to the main Egyptian seaports. However, it is worth mentioning that there are several minor issues relating to seaports, inland and air transport that could slightly affect the flow of Egyptian exports to seaports.

6.2.1.1 Seaports specific issues

The Egyptian government and the designated ministries are facilitating the exportation processes. El-Kady (2005) and MFTI (2005) stated that there are no administrative, legislative, and financial barriers or bureaucracy, which could affect the Egyptian exports from the industrial places to either the sea or airports of departure. However, there are various operational and technical problems occurring in the Egyptian ports, which have a negative effect on the export activities of Egyptian products not only in COMESA but also the worldwide markets.

One of these problems relate to the stevedoring activities observed in the seaport terminals of Alexandria, Dekheila, Damietta and Port Said. The stevedoring activities were compared to similar types of activities performed in typical modern international container terminals. The number of containers, which move from a vessel per hour, is considered an indicator of the productivity of a stevedoring operation. Various stevedoring officials at the four terminals reported the average discharge rate to be 25 moves per hour in Dekheila, Damietta and Port Said and 20 to 25 moves per hour in Alexandria (El-Kady, 2005). This compares to a rate of 40 moves per hour in a modern international container terminal in the United States or the Far East (Burrell and Ghoneim, 2004: 14). Production rates in modern terminals equate to one container every 1.5 minutes versus one container every 3 to 4 minutes in Egypt (Nouamani, 2005: 17).

Another problem is found in the delivery of containers to the ports. If the transporter/trucker experiences problems in delivering the container due to excessive traffic within the terminal, the total dwell time is protracted. If terminals can effectively deal with the logistics of loading and unloading trucks in an efficient manner, operating expenses affecting the total cargo handling costs will be reduced (Burrell and Ghoneim, 2004: 17).

Authorities have allocated many terminals in the seaports of Dekheila and Port Said to be offered by tender to the private sector. There have been no clear private sector initiatives in this sector except for Sokhna port and Port Said East (EMTS, 2005). This can be attributed to the fact that the company operating the container terminal in the Sokhna port and Port Said East is the sole operator. This is not the case in Alexandria, Dekheila, Damietta and Port Said. For instance, in Alexandria the port authority is a stakeholder in the Alexandria Container Handling Company (ACHC) owning 40% shares of the company. There is a clear conflict of interest here when it comes to allowing a private company to rent a terminal and provide container-handling services, since this means allowing a new company to compete with ACHC. This is viewed as a threat to a major and continuous source of foreign currency (Alexandria Port Authority, 2005).

The aforementioned constraint not only maintains a monopolistic environment within the container handling services, which has a negative impact on the quality of service provided to traders, but also affects the quality and price of services provided by shipping lines using Egypt's ports. Shipping lines may find it more cost-efficient not to visit Egyptian ports and shipments might end up being shipped via feeder lines which in turn limits the possibility of attracting transit cargo (MTDB, 2005).

Although container-handling companies have adequate equipment, maintaining this equipment remains problematic because it does not adhere to international norms. Due to poor equipment maintenance, equipment often works inefficiently and is prone to breakdowns. This problem increases transaction costs and hampers a terminal's efficiency, which in turn affects the smoothness of operations and trade facilitation (MTDB, 2005).

6.2.1.2 Inland transport issues

Magdy El-Kady, Chairman of M&K Logistics Company (personal communication 18 June 2006), has commented on the actual issues that are facing the inland transport process at this stage of the research. The inland transport industry in Egypt is considered a vital tool for trading, but specialised companies that offer reliable and proper services do not support this industry.

Yasser Atef, Commercial Counsellor Ministry of Foreign Affairs (personal communication. 18 March 2007) said that the Egyptian Land Transport Company is the only public sector company, which owns trucks and offers inland transport services. The most important problems facing inland transport are traffic accidents and cargo robbery during the logistical process. In addition, the unavailability of trucks is one problem, especially from November until March each year, due to the agricultural exports season, which affects other product delivery to the

ports and to the vessels. On the other hand, refrigerated containers that are carried on trucks to be transported to the ports are facing obstacles, which are summarised in the unavailability of electrical plugs, which should be linked besides the refrigerated container during the inland transport journey.

In addition, he agreed with Burrell and Ghoneim (2004: 17) that the trucking industry does not have access to chassis designed to move containers by truck such as corners or twist locks. Most trucks use chains or rope to secure the container on the truck, which does not conform to general norms for road safety.

Moreover, the general condition of most trucks used for container transport is poor as trucks are often imported as used equipment often in rundown condition, unable to properly carry large or heavy loads. In addition, many of the tyres are worn beyond serviceability and cause frequent blowouts. Besides, truckers often license trucks at the lowest possible gross weight and overload the trucks and trailers well above the legal weight limit (Mobarak, 2004: 10). This procedure allows the truckers to receive higher revenues for each load but imposes a great threat to road safety.

6.2.1.3 Other related Issues

Consolidation of export cargo does not exist because there is not enough volume to one destination to justify such operations. Hence, if cargo is consolidated and shipped to a certain destination then broken up to be shipped to its final destination, this translates into extra time and costs (Nathan Associates Inc, 1999: 4).

Automation is lacking in Egyptian seaports and the Cargo Village at Cairo Airport. However, Damietta Port Authority has established an integrated EDI system to control all phases of cargo activity including security for the entire port complex (Damietta Port Authority, 2005). The system has some interface with customs and easily facilitates the exportation procedures. The Port Authority of Alexandria is also looking to establish two IT applications (El-Nakib, 2004: 29). Both applications are part of a cooperative agreement between Barcelona and Alexandria, using technology developed in Barcelona. The first application will use a Web site to supply static data about the port. The second part of this application is dynamic and will supply specific Bill of Lading information. In addition, the port would develop an automated Vessel Traffic Management System. The system would be used to control arrival, departure and docking of all vessels entering either Alexandria or Dekheila (Alexandria Port Authority, 2005).

The lack of trained personnel and a general reluctance to adapt to an automated system hinders the introduction and use of technology. Traders emphasise the great loss of time due to the excessive number of signatures required and the limited and ineffective use of automated systems. For example, entering data digitally did not overcome delays related to entering them manually. Several reasons were mentioned including, the absence of a network that joins all the different parties involved in the clearance of goods, frequent computer failures, and the continuation of manual data entry (Viswanadham *et al.*, 2001: 4) and (MRCC, 2006: 92).

On the other hand, exporters reported that excessive charges on tests required by the Ministry of Health serve only to further weaken Egyptian goods' competitiveness in the world market. Pharmaceutical exporters, in particular, complained of this problem (Burrell and Ghoneim, 2004: 39). Both importers and exporters believe that certification is sometimes used in an abusive way for rent collection, which further reduces the competitiveness of exports.

There is a lack of well-equipped laboratories able to undertake the necessary tests for the products exported. The exporter has to send samples to labs outside the country, which increases transaction costs. Moreover, the number of accredited labs in Egypt remains very low and the main body responsible for accreditation, the Egyptian National Council for Accreditation (EGAC), is still not recognised internationally, though several steps have been taken in this direction with the help of USAID. The absence of well-equipped labs that are accredited and recognised internationally significantly increase the transaction costs for exporters and reduce the competitiveness of Egyptian exports.

6.2.2 Egyptian seaports /RDCs' seaports

As mentioned previously in this research, there are many challenges facing the maritime transport within the COMESA countries. This section will focus on the movement of traded goods from the main Egyptian ports to the RDCs in COMESA countries. Maritime transport is used to carry 97% of the exported products from Egypt to COMESA countries while 98% is carried on foreign vessels and the remaining 2% is carried by COMESA ones (MTDB, 2005). COMESA's merchant fleet consists of approximately 60 vessels in service with a total deadweight of 240,000 metric tonnes. Most of these vessels, however, are too old and small to compete successfully with more modern foreign ships (ACCE, 2005:29).

Egyptian ports such as Alexandria handle trade from 13 African ports, though there are no direct shipping lines to or from the COMESA ports (El-Nakib, 2004: 33). On the major shipping routes from Alexandria port for instance, vessels pass a transshipment port, either Gioia Taurus

in Italy or Piraeus in Greece. Transit time ranges from 20-25 days, depending on the shipping line (ACCE, 2005: 31).

Some ports only deal with Egypt one way. Apart from the port of Durban in South Africa, Tunis port in Tunisia and Abidjan port in the Ivory Coast, African and COMESA ports receiving Egyptian exports do not ship out to Alexandria (MESCO, 2004). On the other hand, the situation is slightly different at the other Egyptian ports; both Port Said and Suez serve as point of origin and terminals for direct voyages to and from African and COMESA ports, contributing to the large volume shipped through these ports (Mongy Badr, Commercial Counsellor MFTI - personal communication. 20 April 2007).

These voyages take 10 –15 days on average and include no calls at transshipment ports (Sardar, 2005). Responding to the need for a better transportation network, a private sector company in Egypt was established to facilitate direct sea trade between Egypt and COMESA.

However, increased support from the government and financial institutions is still required to attract the private sector into this line of business. In addition, Transmar is a shipping line to the east African coast which was established in 2005. This shipping line serves the Red Sea and Indian Ocean ports from Suez port to Mombassa port in Kenya, Djibouti port in Djibouti, Dar es Salam in Tanzania and Port Louis in Mauritius, with 6 multi-purpose ships of 6700-tons capacity each, with plans to increase the number of ships to 20 once full capacity is utilised. This shipping line is facilitating the inland transport, through existing direct routes to seven COMESA landlocked countries such as Uganda, Rwanda, Burundi, Congo DR., Malawi, Zambia and Zimbabwe (Marawa, 2005).

Mostafa El-Ahwal, President of IACC and founder of Transmar (personal communication. 9 August 2006) informed that Transmar is the first shipping line with an Egyptian Flag, serving ports between Suez, Djibouti, Mombassa, and Dar es Salam. Transmar shipping line was established in 1999 with a capital of L.E. 25 million to serve the COMESA countries, which are 20 countries in South and East Africa.

Apart from this, COMESA seeks to establish its own shipping line to support the trade among the trading bloc and to deal with the high cost of transportation as mentioned by Oyuke (2006).

According to Larbi Sobhy, General Manager and Owner Representative of CMA-CGM (Egypt) (personal communication. 17 June 2006) there are few shipping lines which connect Egypt to COMESA countries on a regular basis, and most of the vessels which are calling at Egyptian ports and the ports in East Africa are tramp vessels, cannot be relied upon.

Concluding the above-mentioned challenges, the researcher made investigations on the available international shipping lines, which are calling between the Egyptian ports and the proposed three Egyptian RDCs in COMESA countries. Table 6.2 shows five major international shipping lines that serve this part of the African continent; there are many tramp vessels with various types of vessel such as general cargo, livestock, and multi-purpose vessels operating in this area. CMA-CGM, Maersk Sealand, MSC, PIL and ZIM lines are container lines that have fixed schedule between Egyptian ports and COMESA selected RDCs ports.

Table 6.2 lists the shipping routes and the average duration of a voyage starting from the Egyptian ports e.g. Sokhna port, Port Said East port, Port Said and Alexandria calling at each COMESA RDC country. Most of the these shipping lines at three COMESA countries except Maersk Sealand shipping line which does not call Dar es Salam in Tanzania, which actually is not a COMESA member.

Table 6.2: Main shipping lines calls RDCs seaports from Egypt

RDC Location	Shipping lines	Routes	Voyage Duration
Djibouti Port (Djibouti)	CMA-CGM	Port Said, EG – Damietta, EG - Jeddah Terminal, SA - Djibouti, DJ.	16 days
	Maersk Sealand	Alexandria Terminal, EG - Damietta EG, - East Port Said Port, EG - Jeddah Terminal, SA - Djibouti, DJ.	10 days
	<i>MSC</i>	<i>Sokhna, EG – Jeddah Terminal, SA – Djibouti, DJ.</i>	<i>7 days</i>
	PIL	Sokhna, EG – Aden, YA - Djibouti, DJ.	10 days
	ZIM	Port Said, EG – Hifa, IL – Eilat, IL - Djibouti, DJ.	12 days
Mombassa port (Kenya)	CMA-CGM	Alexandria Terminal, EG - Port Said Port, EG – Nahava Sheva (Jawaharlal Nehru), IN –Mombassa, KN.	36 days
	Maersk Sealand	Alexandria Terminal, EG - East Port Said Port, EG - Salalah Terminal, OM - Mombassa Terminal, KN.	23 days
	MSC	Sokhna, EG – Jeddah Terminal, SA – Aden, YA – Dar es Salam, TN – Mombassa, KN.	16 days
	PIL	Sokhna, EG – Colombo, SIR - Mombassa Terminal, KN.	44 days
	<i>ZIM</i>	<i>Port Said, EG – Hifa, IL – Eilat, IL - Mombassa, KN.</i>	<i>14 days</i>
Dar es Salam port (Tanzania)	CMA-CGM	Alexandria Terminal, EG - Port Said Port, EG – Nahava Sheva (Jawaharlal Nehru), IN – Dar es Salaam, TZ.	33 days
	Maersk Sealand	N/A	N/A
	<i>MSC</i>	<i>Sokhna, EG – Jeddah Terminal, SA – Aden, YA – Dar es Salam, TN.</i>	<i>13 days</i>
	PIL	Sokhna, EG – Colombo, SIR - Dar es Salaam, TN.	33 days
	ZIM	Port Said Port, EG – Hifa, IL – Eilat, IL - Dar es Salam, TN.	16 days

Source: Author, based on CMA-CGM (2006), Maersk Sealand (2006), MSC (2006), PIL (2006) and ZIM (2006)

In Table 6.2 the voyage time including the transshipment time within the shipping routes are in italic rows, which indicate the minimum voyage time among the other shipping lines. For example, the MSC shipping line has a minimum voyage time from Sokhna port in Egypt to

Djibouti port in Djibouti within 7 days and from Sokhna port to Dar es Salam in Tanzania within 13 days. The ZIM shipping line is the minimum line among the other shipping line that calls Mombassa port in Kenya from Port Said in Egypt via Hifa and Eilat in Israel within 14 days.

All these shipping lines with their routes and voyage time could make it possible for Egyptian exports to be transported to the RDCs in these three countries. There are few alternatives but nevertheless the average delivery varies from 10 – 44 days of delivery, which could be incorporated into the export agreement between the trading parties.

The only barrier which could adversely affect the Egyptian competitiveness to transport the exports to COMESA countries is the availability of shipping lines to call at these three RDCs ports.

6.2.3 RDCs/COMESA markets

This section will investigate the possible road/rail corridors and even maritime transport routes that are connected between the RDCs in Djibouti, Kenya, and Tanzania and the rest of COMESA countries. It is essential to demonstrate the range of availability and validity of transportation infrastructure connections from these RDCs countries to the surrounding countries in order to establish Egypt's RDCs in COMESA countries.

The COMESA road network consists of approximately 561,000 km of classified roads, of which 64,000 km are tarred. The main transport corridors are essentially focused in an east-west direction from the ports to the hinterlands, with very few north-south links (COMESA, 2005). Therefore, the following section will simulate the flow of Egyptian exports from these RDCs in Djibouti, Kenya and Tanzania to the COMESA countries.

6.2.3.1 Djibouti RDC transport connections

The RDC in Djibouti is proposed to serve Eritrea and Ethiopia markets; Eritrea is a coastal country and has feeder ports such as Assab and Massawa on the Red Sea. Ethiopia is a landlocked country, which is almost entirely relied on Djibouti port to export and import its trade. Some passes through the Eritrean ports Assab and Massawa. Both Ethiopia and Eritrea transport networks are linked with Djibouti rail/road corridor (COMESA, 2005).

The Port of Djibouti is strategically located at the junction of the major routes between Europe via the Suez Canal, Asia and East Africa and is the access to Ethiopia which became a landlocked country in 1993 (COMESA *et al.* 2000). The Port of Djibouti is connected to

Ethiopia by road and by rail. The rail is jointly owned by Djibouti and Ethiopia. With regard to road transport, the Government of Ethiopia allows competition between private sector operators and the state owned company.

In Ethiopia, shipping, clearing and forwarding services have been liberalised. However, the Ethiopian Maritime and Transit Services Enterprises (EMTSE) a state owned company controls most of the activities (The Reporter 2006). In Djibouti, the private sector provides all the shipping, clearing and forwarding services. The container terminal is managed by the port. The MTSE and Ethiopian customs are present in the port. Ethiopian cargo is cleared in Djibouti by their customs agents but clearance procedures must be done in Addis Ababa.

Several bilateral agreements have been signed between the governments of Djibouti and Ethiopia relating to or affecting transit transport services. The General Agreement on Transport on 21 March 1981, with the major objective to guarantee Ethiopia's access to the sea, and the Djibouti-Ethiopian Treaty on the Railway on 21 March 1981, dealing mostly with the management of the railways which guarantee Ethiopia a minimum volume of trade to ensure profitability of the railway (Hartmann, 2002).

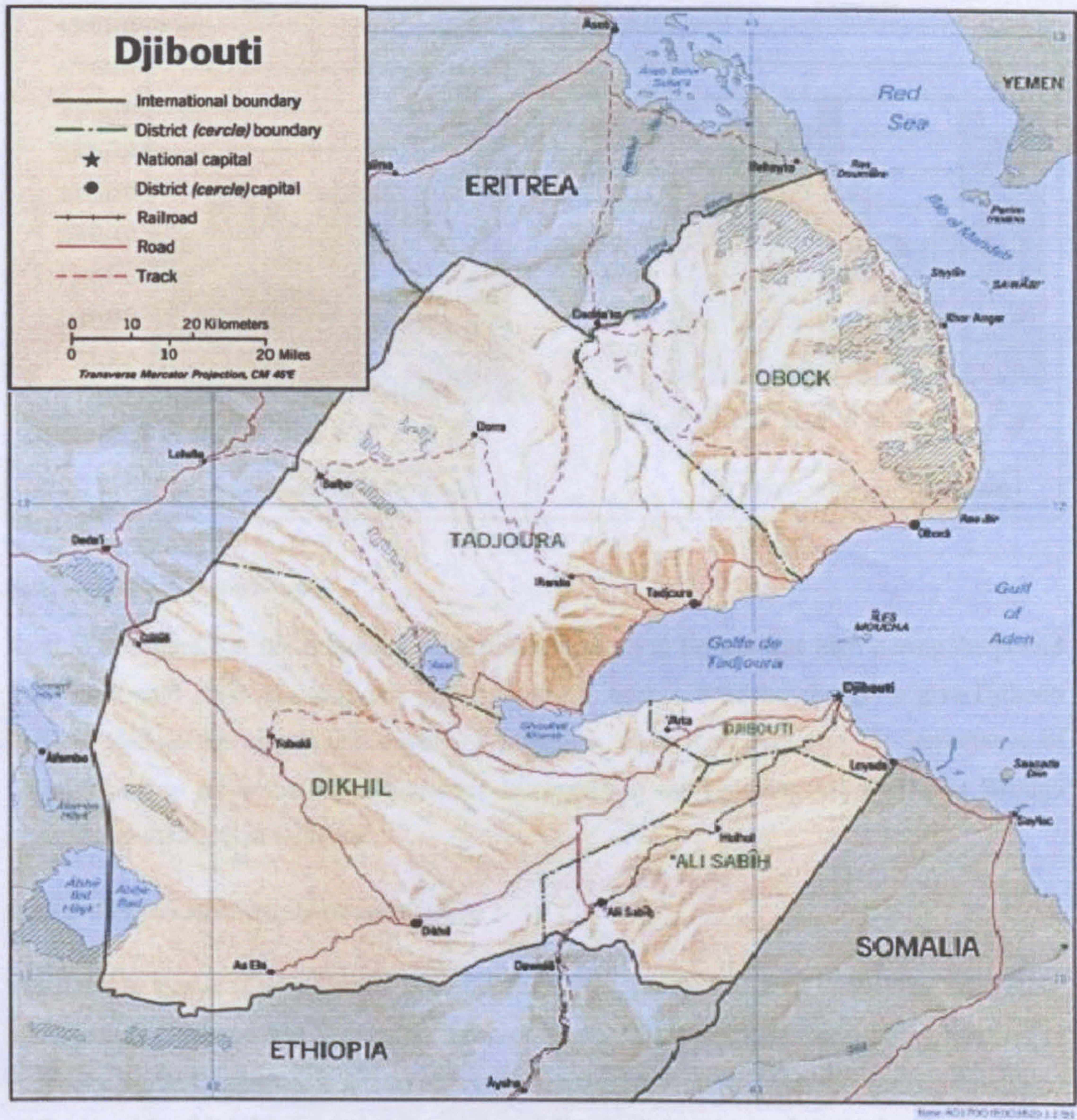
Additional agreements have taken place to ensure the flow of Ethiopian trade through Djibouti such as the Agreement on Road Transport Services on the 12 December 1993 and amended on 10 September 1996 that guarantees free access for operators from both countries, and specifies that rates are freely negotiated between shipper and carrier. The Agreement on the utilisation of the port of Djibouti and services to cargo in transit on 13 April 2002, dealing with Customs, Road Transport, Facilitation, and establishing an Inter-ministerial Committee for the follow-up of the agreement.

Djibouti – Addis Ababa in Ethiopia Corridor is divided into three routes. The first one is the rail to Addis Ababa, which is approximately 781 km, and the second one is the road through Galafi, 910 km, of which 217 km is in Djibouti, currently the main road corridor, in good condition up to the border, and in final stages of rehabilitation in Djibouti, the Addis Ababa-Djibouti railroad is the only line serving central and south-eastern Ethiopia (Nathan Associates Inc., 2006: 18).

The single-track railway a prime source of employment occupies a prominent place in Ethiopia's internal distribution system for domestic commodities such as cement, cotton textiles, sugar, cereals and charcoal

In addition, the third route is the road through Dewartle, 840 km, of which 100 km in Djibouti is rarely used due to conditions in Ethiopia. Figure 6.3 shows the main road/rail connection between the three countries, and their main seaports as well.

Figure 6.3: Main rail/ road and ports in Djibouti, Eritrea and Ethiopia

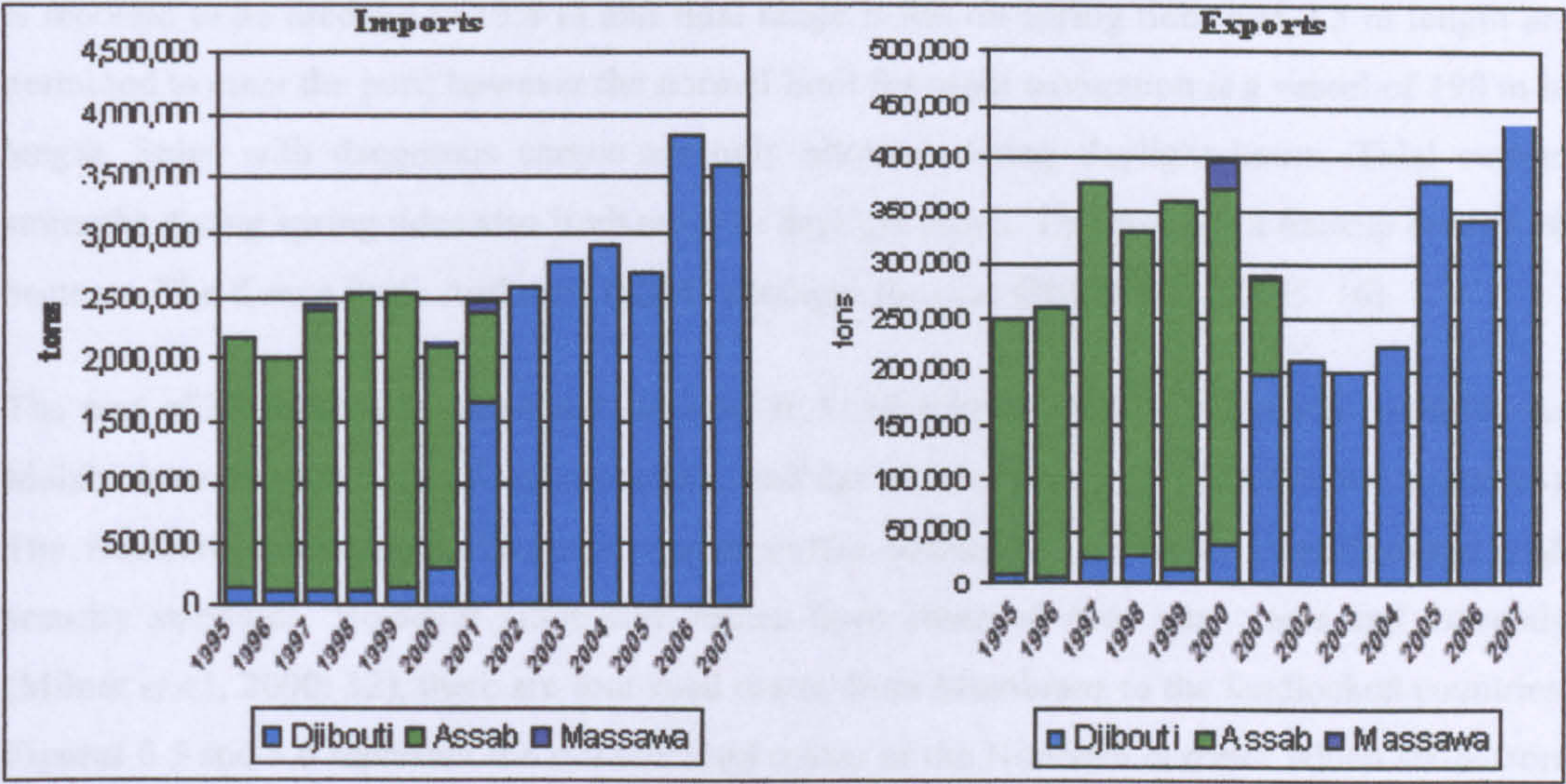


Source: UTL (2008)

Although there is no rail linkage between Djibouti port and the Eritrean cities, there are two main road that routes connect the Djibouti port with the Eritrean cities (PMAESA, 2003). The first road route start from Djibouti port to Assab (the Eritrean port through Dobi), and the second road route connect many Djibouti cities with different Eritrean cities as well as the capital of Eritrea Asmara. The route starts from Djibouti port – Dire Dawa – Awash – Mille - Dese - Adigret – Asmara - Massawa. Djibouti now plays a vital role in serving foreign trade of

both Eritrea and Ethiopia after the political conflicts that took place in the early 1990s. Figure 6.4 represents the change over the last decade of the imports and exports of Ethiopia through Djibouti and Eritrean ports.

Figure 6.4: Imports and exports of Ethiopia through Djibouti and Eritrea ports



Source: MFTI (2006b)

Note: 2007 figures are provisional

As seen in Figure 6.4, the Ethiopian trade through Assab in Eretria was high during the period from 1995 until 2000, but after this period there has been a dramatic change to give Djibouti port the lead in the import and export of Ethiopian trade. This indicates the importance of Djibouti port to serve these two countries in respect of the Egyptian exports flows through establishing the RDC in Djibouti.

6.2.3.2 Kenyan RDC transport connections

The RDC in Kenya is proposed to serve the Burundi, Uganda, Rwanda, Congo DR, Mauritius, Madagascar, Comoros and Seychelles markets. Burundi, Uganda and Rwanda are landlocked countries, while Congo DR is a coastal country on the South Atlantic Ocean with its small port of Banana. Mauritius, Madagascar, Comoros and Seychelles are located on the Indian Ocean.

Due to the differences in the geographical aspects of these countries, this section will be divided into two parts; the first part will demonstrate the available transport routes from Mombasa to Burundi, Uganda, Rwanda and Congo DR while the second part will demonstrate the available maritime transport routes from Mombasa to the COMESA countries located on the Indian Ocean.

- *Part one: Port of Mombasa - Burundi, Uganda, Rwanda, Congo DR*

The Port of Mombassa is the largest port in the East African region, it is well bestowed with equipment and facilities, and has a natural harbour whose berths do not require constant dredging while the quays are firmly established (Gauze, 2002: 13). The 13 km approach channel is reported to be dredged to 13.4 m and tidal range is 4m on spring tides and 2.5 m length are permitted to enter the port; however the normal limit for night navigation is a vessel of 198 m in length. Ships with dangerous cargos are only allowed during daylight hours. Tidal current strengths during spring tides also limit entry to daylight hours. The port has a backup area of 20 hectares. The Kenya Ports Authority (KPA) manages the port (PMAWCA, 2005: 16).

The port of Mombassa is connected via road from Mombassa to the landlocked countries via Malaba (town on the Kenya-Uganda border, and the main crossing between the two countries). The Northern Corridor dominates in transit traffic because of its better condition and high security standards. However alternative routes have emerged over past years and currently (Milner *et al.*, 2000: 32), there are four road routes from Mombassa to the landlocked countries. Figures 6.5 and 6.6 represent the rail and road routes of the Northern corridor which starts from Mombassa port in Kenya to surrounded landlocked countries. The Northern corridor represents the transport infrastructure and facilities in Burundi, Congo D.R., Rwanda, Uganda and Kenya linked to the Port of Mombassa, Kenya. These countries are served by road transport through four routes and by both the Kenya Railways and the Uganda Railways (Anyango, 1997a: 17).

The Mombassa Corridor is managed under the Northern Corridor Transit Agreement, signed by Kenya, Uganda, Rwanda, Burundi and the Democratic Republic of Congo, creating the Transit Transport Co-ordination Authority of the Northern Corridor (TTCANC) to facilitate transit transport. Road is the dominant mode of the corridor (PMAESA, 2003). Therefore, there are four road routes connecting these countries together with Mombassa port which are as follows:

- Mombassa (Kenya) - Nairobi (Kenya) - Eldoret (Kenya) - Malaba (Kenya) - Kampala (Uganda) - Masaka (Uganda) - Mbarara (Uganda) - Kigali (Rwanda) - Bujumbura (Burundi) (the traditional Northern Corridor);
- Mombassa (Kenya) - Nairobi (Kenya) - Nakuru (Kenya) - Kisumu (Kenya) - Busia (Kenya) - Kampala (Uganda) - Masaka (Uganda) - Mbarara (Uganda) - Kigali (Rwanda) - Bujumbura (Burundi). (Part of the traditional Northern Corridor);

- Mombassa (Kenya) - Nakuru (Kenya) - Kericho (Kenya) - Kisii (Kenya) - Isebania - Musoma (Tanzania) - Mwanza (Tanzania) - Biharamulo (Tanzania) - Lushaunga (Tanzania) - Bujumbura (Burundi) /Kigali (Rwanda);
- Mombassa (Kenya) - Voi (Kenya) - Moshi (Tanzania) - Arusha (Tanzania) - Singida (Tanzania) - Nzega (Tanzania) - Lushaunga (Tanzania) - Kigali (Rwanda) - Bujumbura (Burundi), a relatively new route from Mombassa via Central and Northern Tanzania to Rwanda and Burundi.

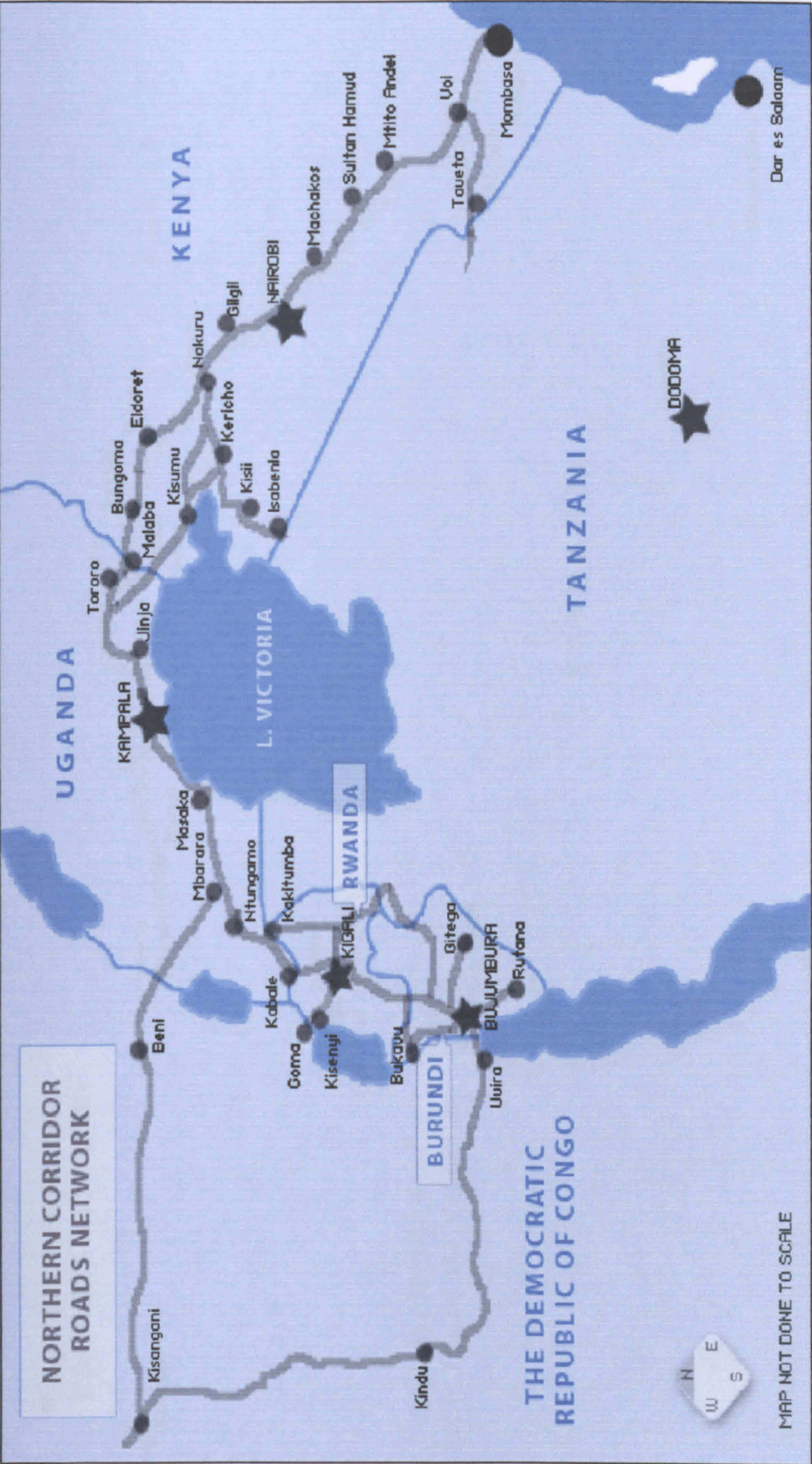
On the other hand, Kabanguka (2002: 6) said that the principal focus of the railway was to provide a means to transport raw material exports to the coast. In Kenya, branch lines were later laid especially to the former white highlands. The main line segments were the Voi -Taveta, Sultan Hamud - Kibini, Konza - Magadi, Nairobi - Thika - Nanyuki, Gilgil - Nyahururu, Tambach - Moi's Bridge - Kitale and Kisumu - Butere. It can be argued that the in-country railway line segments in Kenya are reflective of the exploitative potential of the places they transverse.

These branch lines continue to be used to transport both industrial and agricultural inputs and outputs to/from the various centres to the markets in Nairobi, Mombassa, and Kisumu among others. They also feed the international transit line in exports. The railway infrastructure in Uganda wholly reflects the initial aim of its construction, namely to transport goods to the coast (ECA, 2006).

However, there is an in-country railway segment connecting Busembatia - Mbulamuti to the main line at Jinja in Uganda. This connection was made to facilitate the harvesting and marketing of cotton and cane sugar from Kagira Sugar Mills (COMESA, 2000: 32). In addition, there have been two main railway routes from the ports of Mombassa and Dar es Salam to the landlocked countries, the traditional rail route from Mombassa (Kenya) via Malaba (Kenya) to Kampala (Uganda) and Kasese (Uganda), and Dar es Salam (Tanzania) to Kigoma (Burundi).

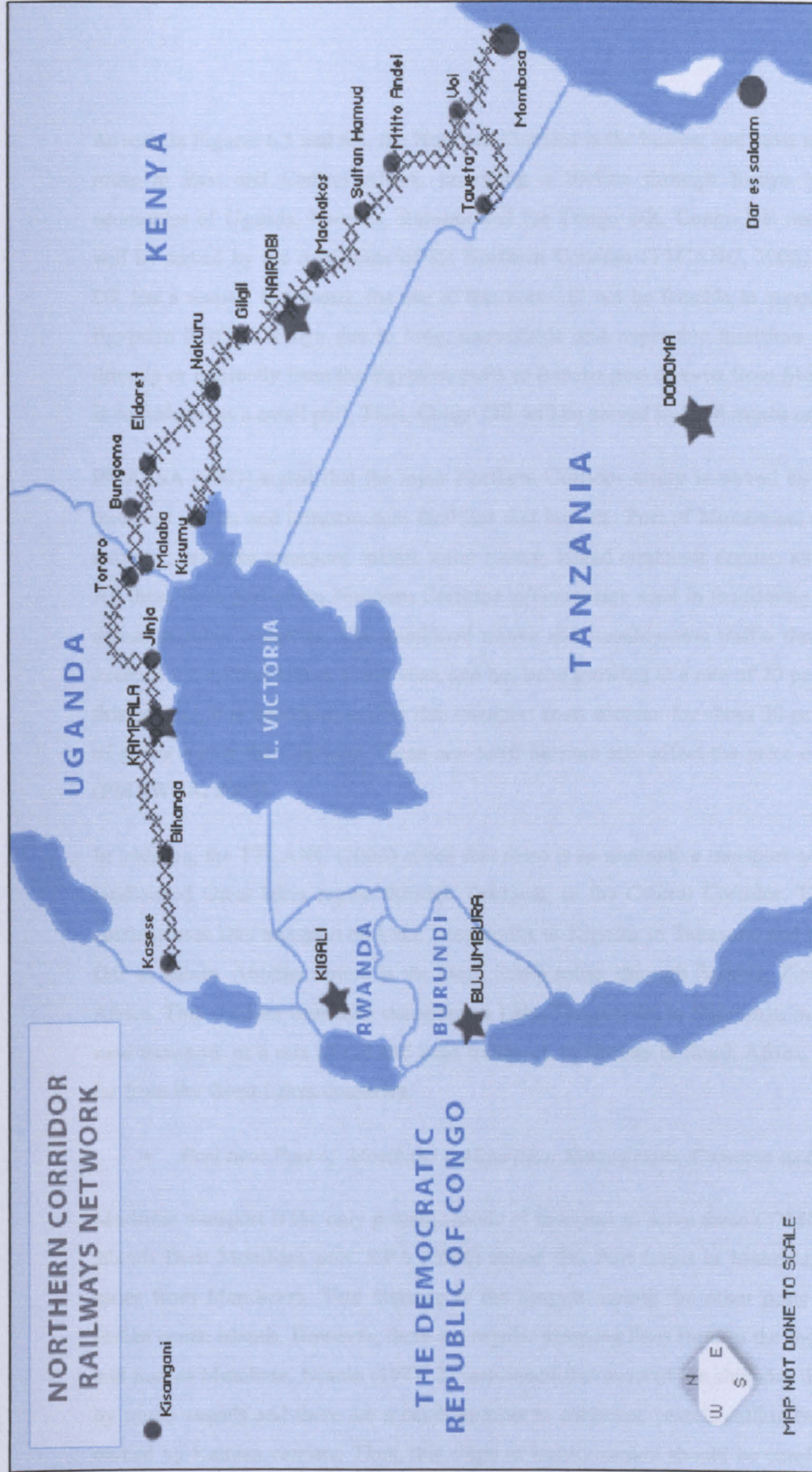
In recent years, however new additional routes on their branch lines have complemented these routes across Lake Victoria, leading to the emergence of the Mombassa (Kenya) - Kisumu (Kenya) - Kampala (Uganda), and the Dar es Salam (Tanzania) - Mwanza (Tanzania) - Kampala (Uganda) routes (TTCANC 2006), as mentioned in Figures 6.5 and 6.6.

Figure 6.5: Northern corridor road network



Source: TTCANC (2006)

Figure 6.6: Northern corridor rail network



Source: TTCANC (2006)

As seen in Figures 6.5 and 6.6, the Northern Corridor is the busiest and most important transport route in East and Central Africa, providing a lifeline through Kenya to the landlocked economies of Uganda, Rwanda, Burundi and the Congo DR. Congo DR market in particular, will be served by the road route of the Northern Corridor (TTCANC, 2006). Although Congo DR has a seaport in Banana, the use of this port will not be feasible to support the idea of the Egyptian RDC in Kenya due to long, unavailable and expensive maritime shipping journeys directly or indirectly from the Egyptian ports to Banana port or even from Mombasa port which is considered as a small port. Thus, Congo DR will be served by road routes only.

PMAESA (2003) stated that the main Northern Corridor artery is served by a combination of transport modes and infrastructure facilities that include: Port of Mombassa; road network; rail network; rail-lake transport; inland water routes; inland container depots; and, an oil pipeline. All these form part of the Northern Corridor infrastructure used in facilitating the flow of goods across member countries. The combined transit and transshipment traffic through the Corridor exceeds 2.2 million tonnes every year, and has been growing at a rate of 20 per cent annually. In this context, it is important to note that transport costs account for about 30 per cent of the value of goods within the Corridor. These non-tariff barriers also affect the price of consumer goods (PMAWCA, 2005).

In addition, the TTCANC (2006) stated that there is an alternative transport network serving the landlocked Great lakes region through Tanzania, in the Central Corridor. The 1,400 km-long corridor uses lake transport on Lake Tanganyika to Kigoma in Tanzania, and then road or rail to Dar es Salam. Another option is the Deep South route, through Zambia, Zimbabwe and South Africa. This corridor uses lake transport on Lake Tanganyika to Mpulungu in Zambia, and then road transport, or a mix of rail and road transport, to Durban in South Africa. This option is too far from the Great Lakes countries.

- *Part two: Port of Mombasa - Mauritius, Madagascar, Comoros and Seychelles*

Maritime transport is the only possible mode of transport to serve these COMESA Indian Ocean islands from Mombasa port. KPA (2006) stated that Port Louis in Mauritius is 1419 nautical miles from Mombassa. This distance is the longest among the other ports in the COMESA Indian ocean islands. However, there are regular shipping lines from/to the Indian Ocean islands and port of Mombasa. Ninnin (1997: 3) mentioned that most of the shipping lines are dominated by tramp vessels and there are a small number to container vessels calling between these ports owned by Kenyan carriers. Thus, this stage of transportation should be carefully conducted by

the shipping operators and freight forwarders in order to ensure the availability of vessels that would deliver the Egyptian exports to these countries through the port of Mombasa.

6.2.3.3 Tanzanian RDC transport connections

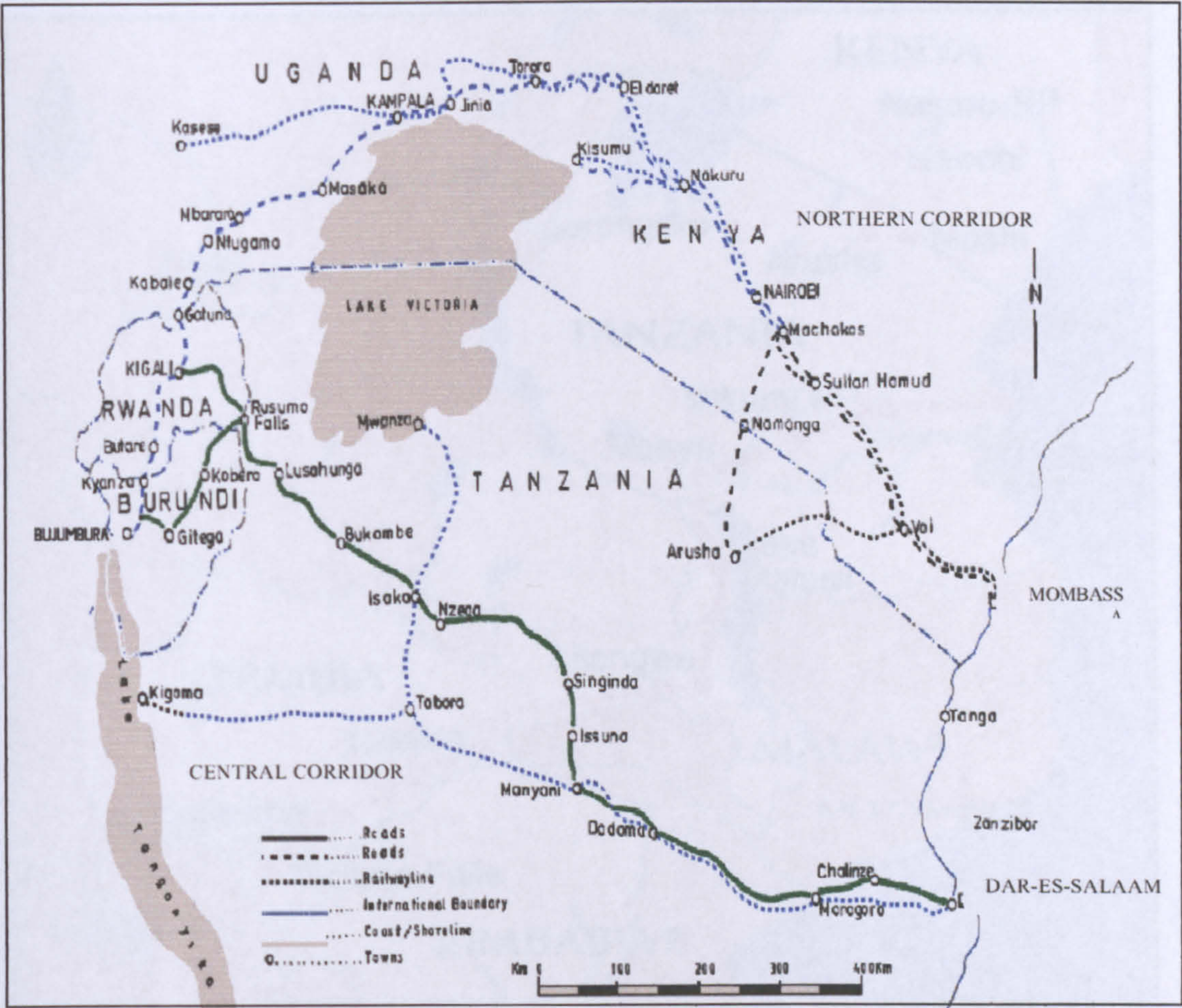
The RDC in Tanzania is proposed to serve Swaziland, Malawi, Zambia and Zimbabwe markets. Swaziland, Malawi, Zambia and Zimbabwe are landlocked countries. Dar es Salam port, managed by Tanzania Harbours Authority (THA) is smaller than Mombassa port but lies on the western side of a sheltered natural harbour. The narrow entrance channel has four bends and a minimum water depth at low tide of 7.4 m (Anyango, 1997a: 19). The port accommodates conventional vessels of up to 175 m in length, and with tide allowance, of 9.0 m to 9.5 m drafts. The limited depth of the entrance channel, the winding approach and present restrictions of daylight navigation constrain overall port operations. There are however approximately 54 hectares of available port backup land. The container terminal at Dar es Salam has a total area of 18 hectares with a quay length of 550 m, compared to the container terminal at Mombassa, which occupies 20 hectares with a quay length of 596 m. Dar es Salam however has had to build two in land Container Depots (ICDs) in the hinterland at Kurasini (10km) and Ubungu (1km) outside the port area. Similarly, while both transit and domestic cargo use the same facilities in Mombassa, Dar es Salam have designated facilities for transit and domestic cargo (TPA, 2006).

Due to the differences in the geographical aspect of these countries, this section will be divided into two parts; the first part will demonstrate the available transport routes from Dar es Salam port to Zambia, Zimbabwe and Malawi while the second part will demonstrate the available maritime transport routes from Dar es Salam to Swaziland.

- *Part one: Port of Dar es Salam-Zambia ,Zimbabwe and Malawi*

Gauze (2002: 5) said the transport infrastructure and facilities in east, central and south Africa are served by the maritime ports of Mombassa, in Kenya and Dar es Salam, in Tanzania. Figure 6.7 presents the Central Corridor, which integrates with Mombasa port in Kenya to serve some COMESA countries such as Uganda, Rwanda and Burundi besides the Northern Corridor.

Figure 6.7: Central corridor



Source: Anyango (1997a)

As it is shown Figure 6.7, the traditional Central Corridor route is Dar es Salam (Tanzania) - Dodoma (Tanzania) - Singida (Tanzania) - Nzega (Tanzania) – Lushaunga (Tanzania) - Kigali (Rwanda)/Bujumbura (Burundi). This road joins the newly constructed Isaka (Tanzania) to Biharamulo (Burundi) road just after Nzega, some 20 K m before Kahama (Tanzania).

However, regarding the countries served by Egypt’s RDC in Tanzania, the Central Corridor does not connect with Malawi, Zambia, Zimbabwe and Swaziland as stated by Lafont (2005: 17). However, there are rail and road routes that could serve these countries individually. Figure 6.8 shows the road/rail routes from the RDC in Dar es Salam.

Figure 6.8: The road/rail routes from the RDC in Dar es Salam



Source: Adopted from Griffiths (2008)

As it is seen from Figure 6.8, the rail and road routes are almost parallel. The first route which has rail/road routes is from Dar es Salam (Tanzania) - Mbeya (Tanzania) - Lusaka (Zambia) - Livingstone (Zambia).

The second rail/road route goes to Malawi, from Dar es Salam (Tanzania) - Mbeya (Tanzania) - Salima (Malawi) - Lusaka (Zambia) - Livingstone (Zambia). The third route, which goes to Zimbabwe, is an all road route. This route goes through Zambia, from Dar es Salam (Tanzania) - Mbeya (Tanzania) - Lusaka (Zambia) - Chirundu (Zambia) - Victoria Falls (Zimbabwe).

In addition, the TAZARA Corridor (Dar es Salam Corridor) is a strategic artery linking southern Africa with east and central Africa. There is increasing traffic on this route from two directions: from South Africa, Zimbabwe and Zambia in the south, and from the Nacala Corridor in Malawi and Mozambique. The traffic is largely sugar, cement, fuel and machinery. The TAZARA

Corridor provides the shortest distance by rail from the Copperbelt (Zambia) to Dar es Salam port, is owned by Tanzania and Zambia. The corridor traverses some of the most fertile land in southern Tanzania and northern Zambia, and has potential for agriculture, tourism, mining, forestry and fishing (SADC, 2006).

- *Part two: Port of Dar es Salam - Swaziland*

Due to its location inside South Africa, Swaziland's trade is conducted with South Africa and to a lesser extent, through the port of Maputo in Mozambique, the major trade corridors are the ones crossing the borders with those countries. Rail transport corridors include the northern link to Komatipoort and the southern link to the Kwa Zulu Natal ports of Durban and Richards Bay and the eastern link across the Mozambique border (Lafont, 2005: 32).

Traffic movements across the border also include goods to and from other SACU countries, landlocked SADC and COMESA countries and a large proportion of Swaziland's overseas trade handled through the ports of Durban, Richards Bay and Maputo (Anyango, 1997b: 41).

6.3 ISSUES AFFECTING THE LOGISTICAL PROCESS IN COMESA

Concluding previous the factors which could affect the logistical process of the flows of Egyptian exports to the RDCs in COMESA countries, it is possible to assume that the transport corridors have a wide range of similarities among the issues which affect the trade flows among these transport corridors, as it is stated by Djankov *et al.*, (2006: 28).

Tackling the challenges of international trade not only in COMESA, but also in Africa requires a comprehensive and coordinated approach that entails improvements in infrastructure and provision of efficient and competitive services in the area of roads, railways, ports, information and communications technology; the removal of illegal roadblocks; and the simplification and harmonisation of customs and border procedures.

Therefore, the following sub-sections will highlight the main issues encountered in the use of transport corridors as an essential part of the logistical process to serve the COMESA markets.

6.3.1 High costs of transport operations

The transit costs to the landlocked countries are not only a function of distance as mentioned by Anyango (1997a: 23). Costs rise because of inadequate transport infrastructure facilities, inefficient transport operational management, unreliable communications between the ports and the landlocked countries, complicated customs and documentation procedures, and many other

official and unofficial costs related to road use in coastal or other transit countries (ECA 2004c: 16).

Experience in the region also indicates that political relations between the landlocked countries and the transit countries, security aspects and development priorities of the transit countries and availability of backhaul cargo are also of critical importance in determining transit costs (COMESA, 2006: 72).

In addition, a Ugandan based shipper, Mr. Kulkarni, (personal communication. 29 September 2006) made some comments about his experience as a shipper in COMESA market. He said that the shippers are always seeking reductions in transit time for the different transport producers especially documentation with the regulatory authorities. The only way to win the race against time is for all the players to work in harmony as partners in progress and this will be achieved by giving priority clearance desks for sensitive cargo, balancing of speed component in transport costs, making of high capacity infrastructure, controlling proper and regular maintenance schedules, implementing electronic transfer of clearance information, and setting up of rapid response teams in accident spots.

It should be clear that the transit transportation costs include both the direct and indirect costs of transit, the latter often not determined. Delays occasioned by cumbersome procedures and non-physical barriers en-route, in addition to poor turn-around of vehicles and containers partly due to the lack of appropriate tracking systems also contribute to the escalation of the transit transportation costs (ADB, 2003: 44).

The challenge of removing roadblocks and preventing the diversion of goods on Africa's roads is enormous. These problems are extensive, deep-rooted and inherently difficult to come to grips with. Overall, improvements have to be based on political agreements and interventions from the highest government levels. This, in fact, is a prerequisite to sustainable solutions. The New Partnership for Africa's Development (NEPAD), through its Peer Review mechanism, could play a lead role in this regard.

6.3.2 Inadequate transport infrastructure

Cabanius (2003: 32) declared that the roads and railways are poorly maintained in COMESA countries, while complicated customs and administrative procedures add to delays and costs. For instance, Djibouti's imports from Europe, delays in African ports and terminals take longer than the sea section of the journey. For Uganda, Malawi, and Eastern Congo DR., Tanzania

potentially offers the cheapest access to the sea, but the poor state of Tanzanian roads and railways rules this option out (Nathan Associates Inc., 2006: 9).

A study by ECA (2006) mentioned that there are certain requirements such as the infrastructure for these transport corridors which should be highly considered due to its direct impact on user charges and regulations, service efficiency, and facilities within these corridors. However, poor infrastructure is reflected in higher direct transport costs and longer delivery time which would negatively affect the efficiency of services. In addition, an improvement in a country's infrastructure can make a big difference not only to the cost of trading, but also the facilities and services efficiencies.

Another study by Limoa and Venables (2001) which was mentioned in the ECA (2006) report shows that if a country's infrastructure improved such that the country moved from being at the mid-point (median) among 64 countries to being among the top 25 % of those countries, this would reduce transport costs by an amount equivalent to 481 km of overland travel and 3,989 km of travel by sea. It would also increase trade volumes by 68 % which is equivalent to being 2,500 km closer to other countries.

Specific action required to improve the road transport infrastructure include: maintaining and rehabilitating existing roads, expanding the road network to isolated areas, widening roads with narrow lane and shoulder widths where necessary and adjusting horizontal and vertical alignments taking into consideration the increased use of heavy vehicles. As for the action required to improve the ports infrastructure, these would include: replacing obsolete and inappropriate equipment at ports with modern container handling facilities, developing container terminals; developing more dry ports to serve both landlocked countries as well as interior areas of coastal countries; and training local staff to run containerised systems that are highly mechanised and computerised, and quite useful for multimodal transport operations.

6.3.3 Poor co-ordination and control of transport operations' management

AFREXIMBANK (2003: 51) mentioned in its report that the projects to facilitate transit in general need to be conceived in a regional framework, so that they can address issues and support improvements in all countries through which their trade passes. He said that transit traffic does impose costs on a country's facilities. For instance, the Ivory Coast, which is a non-COMESA member is one of the coastal countries serving Mali, builds its roads for vehicles with a ten ton axle weight; it is not compensated for damage by trucks from Mali, whose legal axle weight limit is 13 tons.

Banomyong (2000: 229) expressed some concerns about the aspects of transport corridors in South East Asia, which have similar or better situation than COMESA countries case. He said that at the present moment, there is no integrated transport or logistics system in place in the region but various transport corridors are available to users of the regional transport network. The smooth flow of freight or exports within a transport corridor will determine its success. The case of COMESA traders is taken to illustrate the point, as some COMESA countries are landlocked with limited access to the sea. Therefore, to have an integrated transport or logistics system within the available transport corridors requires several aspects to ensure the feasibility of implementing such a system. The key problems that affect customs operations in COMESA countries could be summarised as follow:

- *Excessive documentary requirements and outdated official procedures*

According to estimates by UNCTAD (1997: 39), on average customs transaction involves 20-30 different parties, 40 documents, 200 data elements 30 of which are repeated at least 30 times and the re-keying of 60-70 % of all data at least once. Frequently, documentation requirements are ill-defined and traders are not adequately informed on how to comply with them, thus increasing the potential for errors.

- *Insufficient use of automated systems*

The lack of or insufficient use of automated processes and information technology is a major source of delays, costs and inefficiencies, as paper documents are usually presented at the time of border crossing, and verification of the information submitted takes place at that time. African countries have recognised the need to simplify and speed up customs procedures by use of automated systems.

- *Lack of transparency, predictability and consistency in customs activities*

Lack of transparency and predictability is a major source of uncertainty as regards costs and time involved for international trade transactions. When the necessary information on applicable regulations is not readily available, trade operators have to spend resources in order to obtain information. Enterprises operating in an environment that is not transparent need to spend more resources to obtain regulatory information. Furthermore, they will frequently have to add expenses for bribes, penalties and administrative or judicial appeals. As these additional expenses do not usually vary according to the value of the goods or the volume of sales, they serve to increase the operational costs per unit and put firms in developing countries in a weaker position than larger firms.

- *Lack of modernisation of, and cooperation among, customs and other governmental agencies.*

Customs departments and other government agencies involved in trade are often inefficiently structured internally. Common problems include inadequacies in physical infrastructure, training and education, inefficient emoluments of staff, and lack of co-ordination and co-operation between customs administrations as well as between customs and tax administration.

6.3.4 Low utilisation of transport capacity

The low traffic generation along some corridors results in the low utilisation of transport capacity. This could be resolved by encouraging and promoting investment in economic (traffic generation) projects along corridors under the auspices of governmental and international organisations' programmes. Moreover, the poor marketing of services and poor facilitation contribute to the under-use of transport capacity available. Therefore, securing effective marketing and facilitation through using enhanced private sector initiatives could be a solution to enhance the utilisation of transport capacity.

6.3.5 Poor co-ordination between transport modes

Undeveloped multi and inter-modal transport systems result in the poor co-ordination between transport modes. The development of such systems is crucial for the integration of transport modes in COMESA countries. Moreover, the lack of inter-modal competition policies and effective regulation enforcement weakens the integration of the different modes of transport which render its co-ordination a difficult goal to accomplish.

6.3.6 Poor safety and security

The deterioration of security has added to costs and risks. Many traditional relatively efficient routes have been closed by civil unrest or political differences between countries. To cover security risks most landlocked countries have had to develop multiple corridors. Moreover, this means that infrastructure is overused on some routes and underused on others, and that countries run the financial risk of building facilities that may be underused. Such problems are not readily solved (Ellis, 1997: 9).

The need for more stringent security procedures in the face of the recent wave of international terrorism is becoming more important and poses a new and serious challenge to customs administration as well as to operators, especially in the maritime and air transport sub sectors.

There is a growing need to balance safety and security and the smooth flow of goods and services.

Table 6.3 summarises the common issues within the transport means which face the flows of Egyptian exporters to COMESA market in addition to the proposed actions to overcome these issues and its status of implementation.

Table 6.3: The common problems, agreed actions and status of implementation in COMESA market

Nature of problem(s)	Action(s)	Status
<p>High cost of transport operations (up to 40% of value of goods and more than 5 times of developed countries) and poor quality of service to users</p> <ul style="list-style-type: none"> • Use of outdated or inadequate operational facilities and systems • Inefficient infrastructure and management • Other constraints as listed below 	<ol style="list-style-type: none"> 1. Improve facilities and acquire and apply new technology by enhancing private sector investment and participation. 2. Improve transport infrastructure and management (see below). 3. Remove other constraints (see below). 	<ol style="list-style-type: none"> 1. Ongoing 2. Ongoing 3. Ongoing
<p>Inadequate transport infrastructure</p> <ul style="list-style-type: none"> • Maintenance backlog (roads \$6bill, railways \$0.3bill) and poor management and financing • Capacity limitation (in traffic volume and access) • Varying design specifications and quality • Border crossing delays (customs) documents and procedures) • Other poor facilitation (e.g. insurance and security) 	<ol style="list-style-type: none"> 1. Enforce efficient user pay principle and implement road transit charges 2. Promote private sector participation in investment, maintenance and management of infrastructure through privatisation, and establishment of autonomous agencies (eg road funds, road boards and road agencies) 3. Undertake vigorous investment promotion through spatial development initiatives or development corridors (SDI/DC) concept in a public-private sector partnership 4. Harmonise design standards and specifications, axle load limits and gross vehicle weight 5. Adopt one-stop border concept and implement a comprehensive customs and cross-border facilitation improvement programme. 6. Improve other facilitation by adopting improved insurance and security systems. 	<ol style="list-style-type: none"> 1. Policy in Protocol. Road user transit charges agreed and implementation manual under preparation 2. Policy in Protocol. Implementation ongoing and some good progress made roads sector reform and privatisation of ports terminals, railways, airports, etc. 3. Reforms to establish conducive investment environment and several SDI/DCs programmes under implementation. Regional investment Forum also being organised 4. Design standards for regional trunk road network (RTRN) completed and implementation has started. Specifications for low volume paved roads under preparation. 5. Programme designed jointly by SATCC + SITCD, incorporating COMESA and other partners' views/positions. AfDB has provided assistance for Beira Corridor, USAID (RAPID) has also provided assistance. EC considering. 3 Pilot one stop border posts projects designed, implementation being pursued especially in Maputo Corridor. 6. Study on insurance system with COMESA completed. Consultations are ongoing in member States for decision.

Nature of problem(s)	Action(s)	Status
Poor co-ordination and control of transport operations and management <ul style="list-style-type: none"> • Inefficient management • Poor cross-border and inter-country co-ordination. 	<ol style="list-style-type: none"> 1. Undertake transport management reform including commercialisation and (part or full) privatisation 2. Improve strategic planning, monitoring and regulation functions of government and its (autonomous or executive) agencies 3. Establish stakeholder consultative mechanisms including route management groups, corridor planning committees, bilateral border transition committees, national and regional sub-sectoral committees (SCOMs) and national and regional associations. Enter into bilateral agreement using established model, and move to multilateral agreement. 	<ol style="list-style-type: none"> 1. Protocol and model legislation and restructuring guidelines agreed upon. Country adoption and implementation of reforms on going for all modes. 2. Implementation ongoing but rather slow. More assistance generally required by member States. 3. Implementation ongoing but needs further assistance to accelerate. Examples; regional SCOMs established (except railways and integrated transport), some associations established but need strengthening, some route management groups formed. Bilateral agreements entered into but require effective implementation
Low utilisation of transport capacity <ul style="list-style-type: none"> • Low traffic generation along some corridors • Poor marketing of services • Poor facilitation 	<ol style="list-style-type: none"> 1. Encourage and promote investment in economic (traffic generation) projects along corridors under the auspices of SDI/DCs programmes 2. Secure effective marketing using enhanced private sector initiative under the auspices of SDI/DCs programmes 3. Improve facilitation (as described above). 	<ol style="list-style-type: none"> 1. Implementation ongoing within the SDI/DCs programmes 2. Implementation ongoing under the SDI/DCs programmes 3. Implementation ongoing (as described above)
Poor co-ordination between transport modes <ul style="list-style-type: none"> • Undeveloped multi and inter-modal transport systems • Lack of or poor inter-modal competition policies and effective regulation enforcement 	<ol style="list-style-type: none"> 1. Develop integrated transport and multi and inter-modal transport systems. 2. Vigorous enforcement of competition policies and regulations 	<ol style="list-style-type: none"> 1. Progress very slow. More assistance and work needed. Also private sector needs further encouragement to introduce such systems. Introduction of up to date tracking systems and technologies (e.g. ACIS and RSIS) ongoing. 2. Adoption of such policies and effective enforcement still very poor. Agreement secured to control overloading through administrative punitive procedures. Also agreed to use private sector to manage weighbridges.
Poor safety <ul style="list-style-type: none"> • High accident incidence along corridors. 	<ol style="list-style-type: none"> 1. Implement comprehensive safety regulation and programmes along corridors and in all modes. 	<ol style="list-style-type: none"> 1. Comprehensive safety improvement programmes designed for roads, ports and maritime transport, and aviation designed or established. Some implementation ongoing. More assistance and action needed.

Source: Author based on World Bank (1995) COMESA *et al.* (2000), Hartmann (2002), COMESA (2006) and Djankov *et al.* (2006)

6.4 KEY FINDINGS

It is clear to understand the vital role of logistics principles to properly manage the flow of international trade between countries. Although the logistics activities and the structure of the supply chains of both exporters and importers could avoid barriers that could affect their trade flow, there are several factors whether logistical challenges or trade obstacles which would affect their trade competitiveness within the trading region.

The Egyptian exports play a significant role within the COMESA market, but this role is disabled by a lot of extraordinary factors that already exist as features of the COMESA market, which could not support the main role of trade logistics and its supply chains to ensure the quick response and to achieve customer satisfaction.

The journey of Egyptian exports has been divided into three stages; Table 6.4 highlights the main issues that could affect the logistical process from Egypt to the proposed RDCs in COMESA countries.

Despite the seriousness of issues that have been previously discussed and constraints faced by COMESA countries regarding the logistical process of the international trade flow in general and Egyptian exports in particular, make it is extremely difficult to address all the problems simultaneously. Although a comprehensive approach is necessary in the long term, actions need to be prioritised in a rational way in the medium term. Furthermore, the need for regional approaches and strategic partnerships to complement national measures must be stressed, since international trade involves the use of infrastructure and services of at least two countries. This is especially true for landlocked countries with key transit facilities lying outside their territorial boundaries. A regional approach can be an efficient means of coordinating actions, setting priorities, reviewing progress, mobilising resources, allocating funds, and monitoring contribution levels, with regard to solving common problems.

Table 6.4: Highlighting the main findings of chapter Six

Transport process	Level of barriers	Reasons
Stage one	Low	<ul style="list-style-type: none">• Due to the serious governmental strategies toward developing and improving overall Egypt's trade and transport infrastructure for the purpose of exportation.• The availability of the shipping lines, the time of sea journeys, and the transit and transshipment operations from the Egyptian seaports to the seaports of the RDCs locations in Kenya, Djibouti and Tanzania are the main obstacles at this stage.• Approximately five international shipping lines regularly call between the Egyptian ports and the ports of the RDCs countries in COMESA, beside the serious potential to establish another two shipping lines to serve the trade in the particular area.
Stage two	Medium	
Stage three	High	<ul style="list-style-type: none">• <i>The RDC in Djibouti</i> is the most flexible gate to Ethiopia and Eritrea due to the availability of rail and road corridors among these countries.• There are two major issues that could negatively affect the flow of Egyptian exports to <i>the RDC in Kenya</i>;<ul style="list-style-type: none">i) The transportation costs from Egypt by the maritime transport to landlocked countries e.g. Burundi, Congo DR., Rwanda and Uganda through Kenya. This gate is linked with the Northern Corridor. These landlocked countries considered this as their only way to import and export their trade. Moreover, the poor road and rail infrastructure in the Northern Corridor would increase the trade bill not only the transportation cost but also the high rate of insurance and the high probability of theft and damage of these exports.ii) The transshipment operation which will be handled to deliver the Egyptian exports to Comoros, Madagascar, Seychelles, and Mauritius. This will certainly have an influence on the quick response concept and will lead to extra cost due to the unavailability of direct shipping lines from Egypt to these countries, and port of Mombassa besides Dar es Salam are the two gates to reach these countries from Egypt.• <i>The RDC in Tanzania</i> will serve four landlocked countries which are Malawi, Zambia, Zimbabwe, and Swaziland. These countries will be served by individual rail/road corridors. However, Swaziland as a landlocked country located within the boundaries of South Africa and Mozambique, so this will constitute some difficulties in transporting the Egyptian exports from the RDC in Tanzania directly to Swaziland and the only mode of transport available will be road transport. Another alternative is to transship the Egyptian exports from the Tanzanian port Dar es Salam to the Port of Durban in South Africa or Maputo port in Mozambique and deliver to the Swaziland market.

Source: Author.

CHAPTER 7: TRADERS' PRACTICES AND ATTITUDES TOWARDS THE SELECTION OF EGYPT'S RDCS FOR THE COMESA MARKET

7.1 INTRODUCTION

The purpose of this chapter is to study the parties who are involved with Egyptian exports and includes Egyptian exporters, COMESA importers, and transport/logistics service providers. The sampling procedure of the questionnaires is presented in the research methodology. The research findings presented stem from analysis of the Egyptian exports in COMESA countries bfromy an online structured questionnaire which has targeted COMESA importers in order to determine their preferences concerning the imports. At the same time, another online structured questionnaire has targeted the Egyptian exporters who are directly dealing with the COMESA market to cover several issues such as: quality, price and availability of Egyptian exports to the COMESA market, in addition to the capabilities of Egyptian exporters to fulfil the demand of the COMESA market. This questionnaire also included the analysis of the reasons that make the COMESA market prefer international products rather than Egyptian alternatives, and the attitudes towards the selection of Egypt's RDCs in COMESA countries. An analysis of the questionnaires is included in this chapter, in addition to identifying the main features of the Egyptian exports compared with the foreign exports in COMESA market.

7.2 SAMPLING AND RESEARCH METHODOLOGY

It is noteworthy to emphasis the competitiveness of Egyptian exports to the COMESA market and consequently to understand the required improvements for their competitive advantages. It is necessary to investigate and to collect relevant information through the collection of primary data, i.e., data gathered for the first time by the researcher through the use of questionnaires, surveys or interviews (Burns, 2000: 31) relating to the status of Egypt's exports to COMESA market to expose the factors which affect Egyptian export products. Therefore, this will demonstrate the actual barriers which hinder the flow of Egyptian exports to the COMESA market by using two online structured questionnaires.

Two sample frames, one for Egyptian exporters and the other for COMESA importers, listing 100 organizations each, were developed randomly from the business directory of the Ministry of

Foreign Trade and Industries in Egypt (MFTI) and the American Chamber of Commerce in Egypt (ACCE) as well as the COMESA trade directory. The sample frames represented a fair cross-section of firms from a wide variety of industries and included organizations of all types and sizes with different levels of annual sales.

The targeted respondents in each company were the general manager or assistant manager. Care was taken to include all companies which related to the questionnaires scope in the sample. One email including the questionnaire's URL with a cover letter was sent to each company in both samples (See Appendix 24). The initial results were unsatisfactory, but a follow up by telephone to the Egyptian exporters and re-emailing the questionnaire for the COMESA importers have activated the respondents number. The questionnaire was provided in Arabic language where appropriate. The Arabic version was translated from English and then back translated to ensure equivalency to Egyptian exporters in order to avoid any difficulties of understanding the English version of the questionnaire and this has been sent as an attached Microsoft Word document to these companies (See Appendix 25 and 26).

A detailed five-page questionnaire for the Egyptian exporters and three-page questionnaire for the COMESA importers was developed to examine a wide variety of Egyptian export issues whilst considering the proposed RDCs network in that market. A pilot test was conducted using a convenient sample of 15 general managers belonging to Egyptian export companies and COMESA import companies, each representing a different company. These managers were encouraged to critically assess the surveys and offer suggestions that would improve the clarity and operational relevance of all the questions. The feedback from these managers enabled the researcher to improve both questionnaires and tailor the questions to the research scope.

The first questionnaire has targeted the people who are dealing with Egyptian exports such as: manufacturers, freight forwarders, exporters, traders, shipping agencies, and others; to acquire their opinions on the following points: quality, price, availability, the response of the exporters to COMESA market, the proposed RDCs and its potential benefits to the Egyptian exports and the main competitors of Egypt's exports in the region. The second questionnaire has targeted the importing bodies in COMESA, which are dealing with Egyptian products to comprehend their preferences of Egyptian products and their opinions on the proposed RDCs. However, this will assist in the comparison between Egypt's exports and the competing countries in order to determine Egypt's primary competitors and to understand the strengths, weaknesses, opportunities, and threats among the trade competition within the COMESA market.

Both questionnaires used a number of questions based on the Likert scale. As discussed in 3.4.2.2, the reason for using a 6 point scale rather than a 5 point one is to give the respondents an extensive range of answers, whilst eliminating the option of a neutral point.

Usable responses from the Egyptian exporters’ questionnaire were 36% while the responses from the COMESA importers questionnaire were 46%. Non-respondents, from Egypt in particular, were contacted by telephone to determine the reason of non-response. Three reasons of non response were identified. Firstly, the seven online pages for the exporters in Egypt and three online pages for the COMESA importers appeared a time consuming task for the general and assistant managers. Secondly, in some companies, a number of individuals would have had to provide data in order to complete these questionnaires. In such cases, the questionnaires were routed by e-mail through a number of individuals and were lost, filed or placed in an infinite queue. Finally, the slow internet connection and consequently the page downloading did not support the respondents from COMESA importers in particular to complete the online questionnaire i.e. three of the COMESA importers sent emails to the researcher complaining the website was not working or the page couldn’t be displayed. The completed questionnaires were entered into a personal computer and analysed by using Microsoft Excel 2003 rather than SPSS. With using Microsoft Excel, the data and the analysis are both visible to the researcher, whereas SPSS has a separate data file which cannot display the output simultaneously (Sekaran, 2000: 328). The questionnaire responses were both qualitative and quantitative.

The rate of response as mentioned in Table 7.1 was found to be better than similar studies (Mehra and Inman, 1992, Wafa and Yasin, 1998, Yasin et al., 2001, and Salaheldin, 2005). Some of these authors’ use of larger sample sizes means the actual number of responses in this study is slightly lower, albeit of a size which still permits valid conclusions to be drawn.

Table 7.1: Questionnaires responses details

	Egyptian exporters questionnaire	COMESA importers questionnaire
Sent to	100	100
Accessed the questionnaires website	96	78
Total responses	36	43
Percentage	36%	43%
Total responses to both questionnaires	39.5%	

Source: Author.

The construction of the questionnaires has been based on unstructured interviews with specialists in the research area and several successful studies previously conducted in related fields of research, i.e. Nathan Associates (1999), ACCE (2005) and MFTI (2006a) studies. Modifications have been made to the information gathered accordingly to the researcher’s own

knowledge of conditions of the Egyptian exportation sector and the nature of business in COMESA and the theoretical issues discussed previously in this research.

The validity of the questionnaire instrument, i.e. how well an instrument that is developed measures the particular concept it is intended to measure, was tested by both face validity and content validity (Fink 1995). Face validity is concerned with how a measure or procedure appears and it was conducted by distributing a copy of the two questionnaires to lecturers working in the field of transport and logistics in Egypt. Content validity is based on the extent to which a measurement reflects the specific intended domain of content. This was tested by giving the copy of the two questionnaires to a small number of professionals in the industry. Responses from these two categories of people led to some minor revisions to the questionnaire layout and content prior to its wider deployment.

Therefore, a wide variety of analytical techniques was used to interpret and illustrate the data. Responses containing ratio data were analysed using means and *T* Test. The following sections will analyse the responses of both questionnaires.

7.3 EGYPTIAN EXPORTERS QUESTIONNAIRE

The aim of the Egyptian exporters' questionnaire is to investigate the nature of their business in the COMESA countries by:

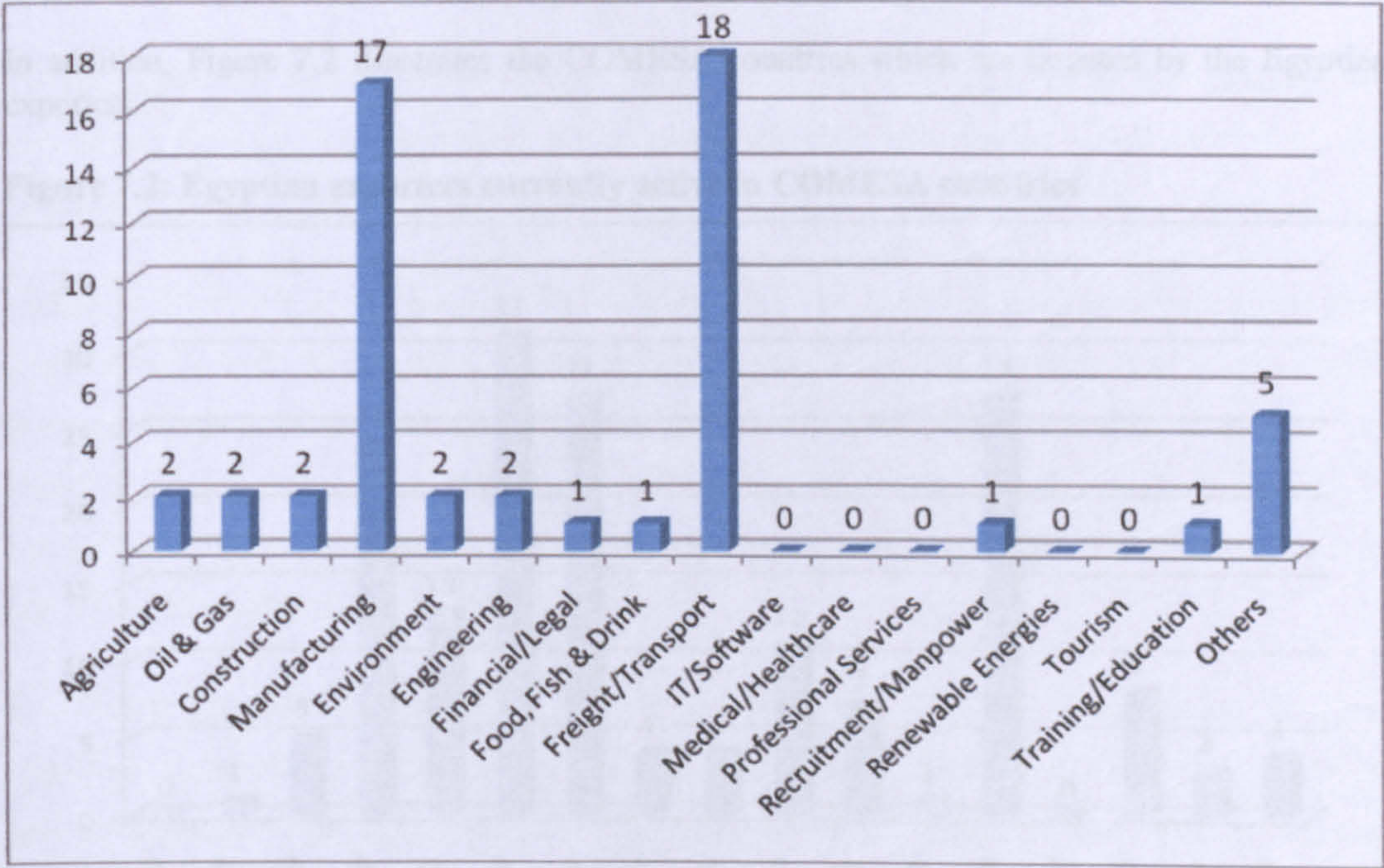
- Investigating the COMESA countries where the Egyptian exporters are active and determining the nature of business of the Egyptian companies in COMESA;
- Evaluating the issues that Egyptian exporters encounter when doing business with COMESA and assessing the issues that face the Egyptian exporters business in Egypt;
- Examining the main foreign competitors of Egyptian products in the COMESA market, whilst revealing the reasons that make the COMESA market favour the international products rather than the Egyptian ones;
- Evaluating several issues concerning the competitiveness of the Egyptian exports and providing the Egyptian exporters' opinion regarding the proposed Egyptian RDCs in COMESA countries; and
- Determining the benefits that the proposed Egyptian RDCs would bring to the Egyptian exporters when doing business in COMESA countries.

The exporters' questionnaire comprises four sections each of which contains a number of questions relating to the section's topic.

7.3.1 Basic information

The questionnaire was sent to leading manufacturers in Egypt as well as the companies who are dealing with COMESA regarding the transportation and freight forwarding. The researcher found that the feedback from the acquired sample of Egyptian exporters was impressive. Although the number of respondents was not large, it covered the required information regarding the information gaps in this particular area of this stage of research. The number of respondents was 36% of the total responses from the Egyptian exporters; Figure 7.1 shows the business nature of respondents. The Figure shows that 18% of the respondents were manufacturers, while 17% were transport and freight companies. These two types of respondents gave the highest responses to the Egyptian exporters' questionnaire. Five types of businesses such as the agricultural, oil and gas, construction, environment, and engineering have similar responses which were two respondents for each business. It is clearly noticed that the percentage of the Egyptian exporters is less than the COMESA importers percentage. This result was not expected from the researcher.

Figure 7.1: Egyptian exporters' nature of business



Source: Author.

Consequently, these companies which are representing Egyptian exporting bodies in COMESA were requested to provide the favoured countries in COMESA where they are highly active.

In addition, Table 7.2 shows the respondents' profile. The Figure shows that 17 of the respondents are distributors in the COMESA market while 18 of the respondents constitute in-country liaison or representative office in COMESA. Other respondents such as direct sales, agents, representatives, franchise, joint venture, in-country subsidiary office and in-country branch office constitute 2 respondents for each.

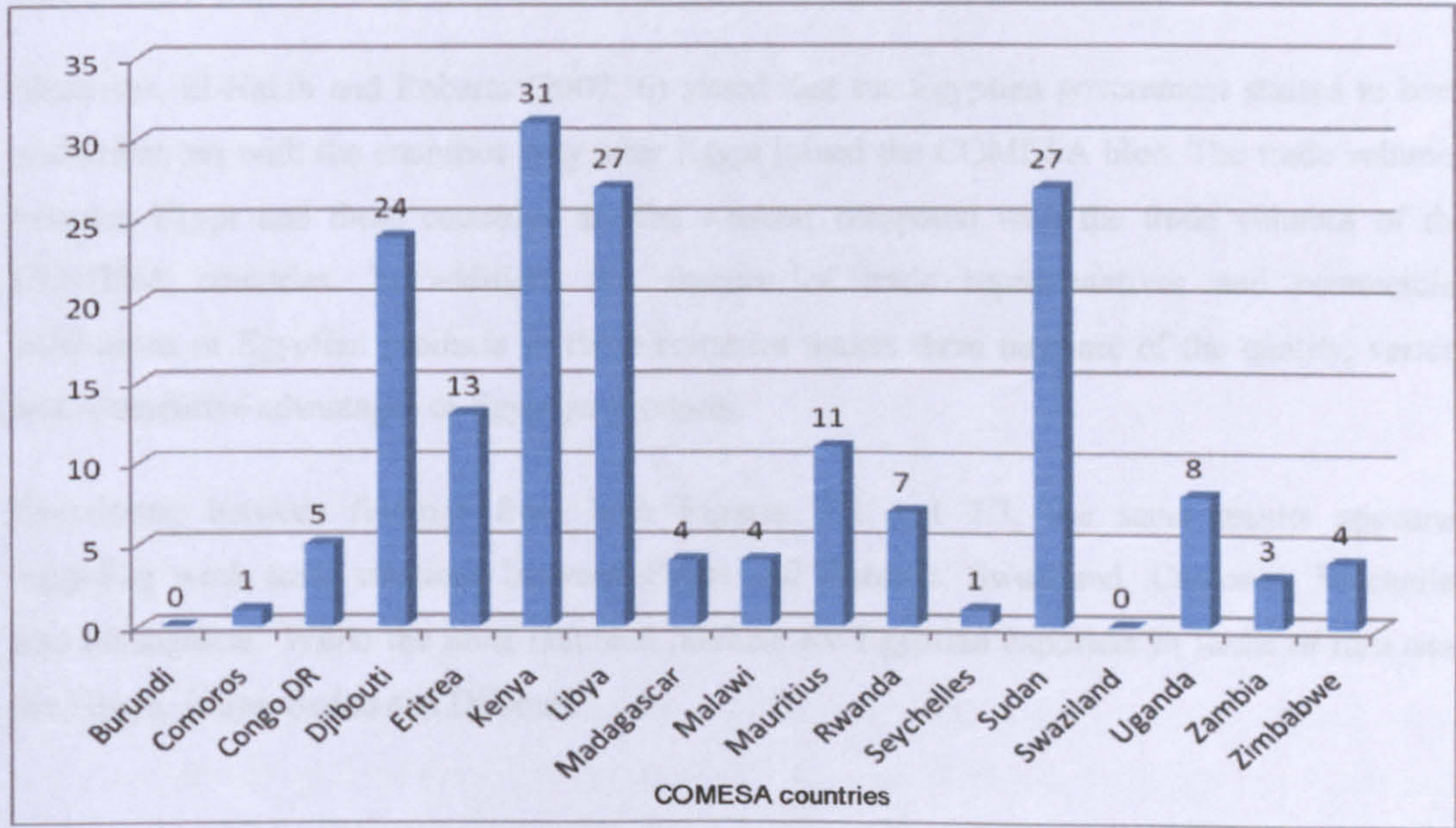
Table 7.2: Respondents profile

Business	Responses
Direct sales	2
Agent	2
Representative	2
Distributor	17
Franchise	2
Joint Venture	2
In-country subsidiary office	1
In-country branch office	1
In-country liaison/rep office	18
License	0
Others	0

Source: Author.

In addition, Figure 7.2 illustrates the COMESA countries which are targeted by the Egyptian exporters.

Figure 7.2: Egyptian exporters currently active in COMESA countries



Source: Author.

As shown in Figure 7.2, almost 85% of the COMESA countries are considered current markets for Egyptian exporters. Kenya, Libya, Sudan, and Djibouti got the highest responses from Egyptian exporters. Kenya is a strategic partner for Egypt in the east of Africa, in addition, it has direct transportation route from/to Egypt. Libya and Sudan being the closest COMESA neighbours are the second two countries favoured by the exporters. Djibouti is a targeted market for the exporters as well. This is not due to COMESA group treaty, but these trade relations existed before Egypt joins the COMESA.

On the other hand, four countries, as mentioned above, are not favoured by Egyptian exporters. Burundi and Swaziland did not receive any responses from the Egyptian exporters while, Comoros and Seychelles only received one response each. The researcher was keen to investigate these results in particular with some experts in the exportation industry in Egypt by conducting unstructured interviews.

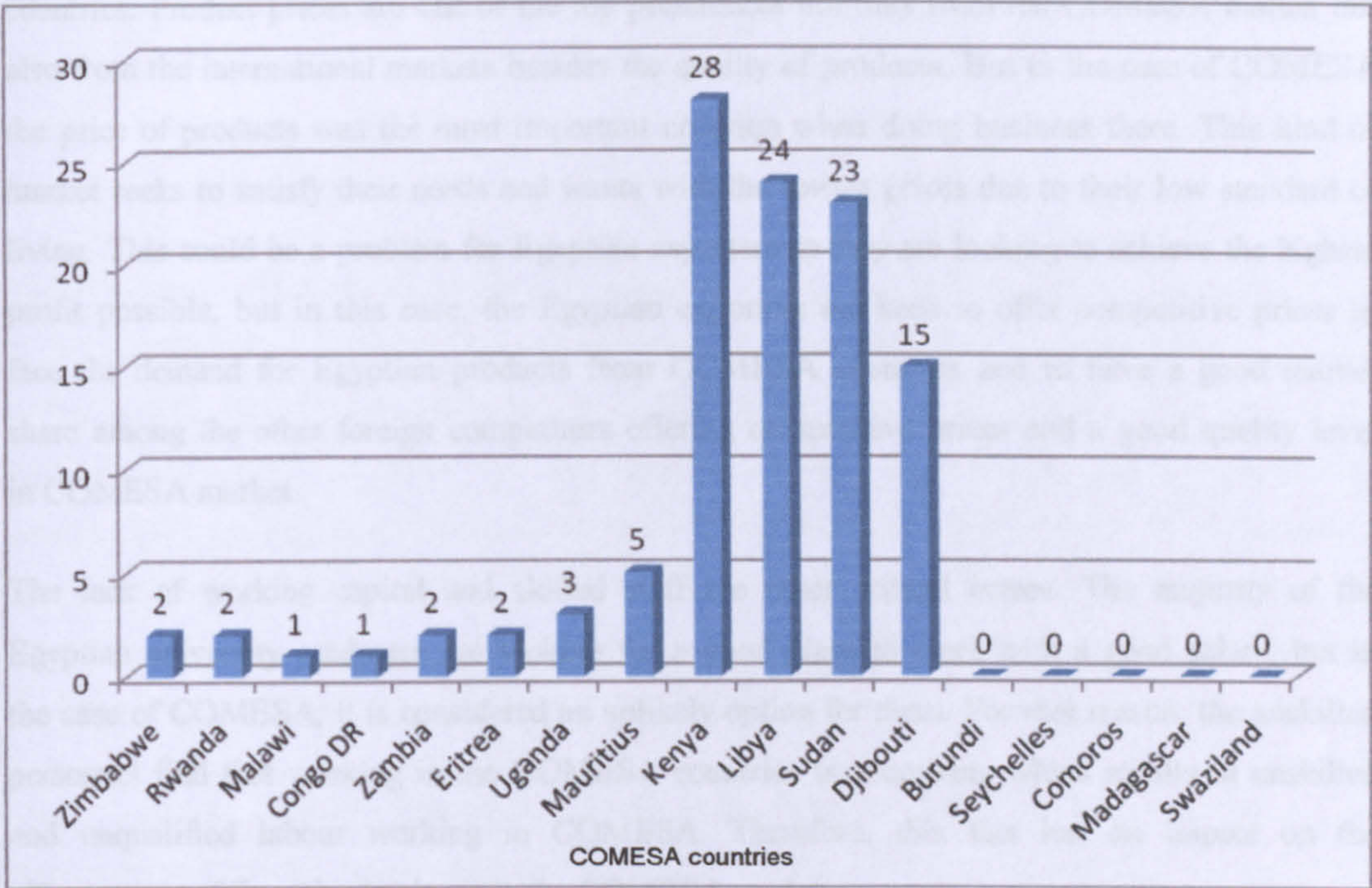
Ezz Ibrahim, technical consultant at the Ministry of Foreign Trade and Industries (personal communication. 20 September 2006) referred to several issues which affect the business with these four countries in COMESA. In the case of Burundi and Swaziland, the unavailability of direct transportation with these landlocked countries, render the trade bill for Egyptian exports very high. Besides, small market capacity and weak demand in both Burundi and Swaziland do not satisfy the profit goals of Egyptian exporters.

He also stated that South African exports almost dominated the market needs in these countries, and as for Comoros and Seychelles he revealed that they have strong relationships with the countries which have occupied them in the past.

Moreover, El-Nakib and Roberts (2007: 6) stated that the Egyptian government started to have trade relations with the countries only after Egypt joined the COMESA bloc. The trade volumes between Egypt and these countries are the weakest compared with the trade volumes of the COMESA countries. In addition, the absence of trade representatives and commercial exhibitions of Egyptian products in these countries makes them unaware of the quality, variety and competitive advantages of Egyptian products.

Correlating between findings from both Figures 7.2 and 7.3, the same results appeared regarding weak trade relations between Egypt and Burundi, Swaziland, Comoros, Seychelles and Madagascar. While the most favoured markets for Egyptian exporters in terms of turn over are Kenya, Libya, Sudan and Djibouti.

Figure 7.3: Important markets in terms of turnover for Egyptian exporters



Source: Author.

The findings of the previous two figures show similarities in reasons for doing trade. These reasons could refer to the level of awareness of Egyptian products in these countries due to their proximity to Egypt, in addition to the constant trade and commercial activities promoting Egyptian products.

Thus, these countries are demanding Egyptian products, and for this reason the level of profitability or turnover satisfies Egyptian exporters to do business in these countries.

7.3.2 Exporters’ opinion in COMESA business

In this section, three main questions have been asked to Egyptian exporters regarding their opinion on doing business with COMESA in order to demonstrate and examine detailed issues relating to this case.

7.3.2.1 Issues facing Egyptian exporters in COMESA

The aim of this part is to explore and evaluate the issues which could face the Egyptian exporters when doing business in COMESA market. Table 7.3 presents 20 factors which face the Egyptian exporters in COMESA markets. In this part of the questionnaire the exporters were asked to evaluate on a six-point Likert type scale: (1) = Excellent, (2) = Good, (3) = Moderately Good, (4) =Moderately Poor, (5) = Poor, (6) = Very Poor. Competitive prices came the first

concern for the exporters due to severe competition from foreign exporters to the same group of countries. Product prices are one of the top preferences not only from the COMESA market but also from the international markets besides the quality of products. But in the case of COMESA the price of products was the most important criterion when doing business there. This kind of market seeks to satisfy their needs and wants with the lowest prices due to their low standard of living. This could be a problem for Egyptian exporters as they are looking to achieve the highest profit possible, but in this case, the Egyptian exporters are keen to offer competitive prices to face the demand for Egyptian products from COMESA countries and to have a good market share among the other foreign competitors offering competitive prices and a good quality level in COMESA market.

The lack of working capital and skilled staff are other critical issues. The majority of the Egyptian university graduates are looking for a good place to work with a good salary, but in the case of COMESA, it is considered an unlikely option for them. For that reason, the unskilled personnel find that working in the COMESA countries is promising which results in unskilled and unqualified labour working in COMESA. Therefore, this fact has an impact on the effectiveness of Egyptian business in the COMESA market.

Table 7.3: Issues encountered in COMESA business

Factors	Rank	Mean
Competitive prices	1	2.56
Lack of working capital	2	2.97
Lack of staff/skills	3	2.97
Language difficulties	4	3.06
Export documentation	5	3.06
Exchange rate	6	3.08
Import duties	7	3.11
Legal Complexities/Bureaucracy	8	3.14
Corruption	9	3.14
Availability of shipping lines	10	3.14
Identifying business opportunities	11	3.19
Cultural issues	12	3.19
Cost of market entry	13	3.22
Instability of political and economical situation	14	3.25
Product development funding	15	3.31
Finding overseas distributors/agents	16	3.36
Finding overseas business partners	17	3.36
Brand identity/market penetration	18	3.36
Foreign Taxation	19	3.44
Sourcing market information	20	3.50

Source: Author.

Language difficulties are another issue to overcome. Since most of the COMESA countries were former British and French colonies, they belong to the global francophone community, in addition to their different local languages. This imposes misunderstanding or at least delay in business contracts with Egyptian traders who mainly used the English language as the formal language when doing foreign trade.

Export documentation and exchange rates are other issues, the exchange rate in particular is one of the considerations in doing business in Egypt. The government has a great influence on the exchange rate. In 2004 the exchange rate of the US dollar reached the highest rate ever in the Egyptian economy 1 US dollar = 7 Egyptian pounds after the exchange rate was fluctuating between 3.4 - 4.5 Egyptian Pounds at the end of 1990s and until 2003. This has led to increasing level of exports to the world market. However, since the level of imports is greater than the level of exports, the Egyptian government was forced to stabilise the exchange rate again and the US dollar become equal to 5.7 Egyptian Pounds (WTO, 2005a: 45) .

Import duties, Foreign Taxation, legal complexities/bureaucracy and corruption are discouraging Egyptian exporters to do business in COMESA. Although Egyptian exporters are exempted from import charges in COMESA countries due to its membership in COMESA's FTA, bureaucratic procedures and corruption still exist when doing business with COMESA countries. The bureaucratic routine in COMESA sea and air ports is disheartening for the exporters and even for the different types of cargo which could be damaged, stolen and delayed within its journey to the COMESA markets. Corruption takes the form of bribes to accelerate the bureaucratic routine which is reflected in the total cost and the profit margin of the business by indirect ways and revokes potential intentions to continue the business with these kinds of markets (Ibrahim, 2002: 77).

Availability of shipping lines is an issue which has been investigated in this chapter. The limited number of shipping lines between the Egyptian ports and the COMESA ports is a weak link to support and accelerate trade. And even with this limited number, the long sea journeys within these shipping lines affect the quick response to the COMESA market and the cost to fulfil the shipment delivery (El-Nakib and Roberts, 2007: 8).

Identifying business opportunities, the cultural issues, brand identity/market penetration, sourcing market information and the cost of market entry in COMESA countries are poorly evaluated by the Egyptian exporters. All these factors are weak from the point of view of the Egyptian exporters due to the lack of up to date and detailed information of COMESA market growth trends. In addition the absence of market analysis and acquiring the preferences of

customers, importers and manufacturers from the COMESA market is affecting the identification of business opportunities. The previously mentioned issues and the experience of dealing with them have been gained by the companies working in COMESA market, and without any prior background about such issues. For that reason, Egypt has set up commercial representation offices in 6 COMESA member states: Uganda, Kenya, Zambia, Zimbabwe, Ethiopia, and Sudan. This could contribute in acquiring information about such market as well as the problems which could be faced. For example, Abdelbaki (2003: 9) said there are some bottlenecks that exist at present which are related to business communication, especially with regard to payment and collection risk. Usually the goods must be physically available on location. Usually it is the large, public sector companies that have the capacity to buy warehouses and transport their goods to them where sales are made from there.

With regard to payment terms, most of the African countries are still not familiar with the common practice of opening letters of credit, and prefer to work with open accounts or payment at site (ex-warehouse). Egyptian businessmen prefer to work on the basis of confirmed, irrevocable letters of credit from first rate banks.

Another method of payment, the offset system, is similar to the barter system, where governments agree to trade certain commodities, then leave it to the businesses directly, for example trading tea for fruits. So, the individual businesses deal directly with each other, after informing the Governments so that this information is recorded in their accounts.

Political and economic instability in some COMESA countries negatively affects the potential movement towards further investment or even trade collaborations with these unstable countries (COMESA, 2006: 60). The trader or the exporter is aiming to establish an ongoing trade business and not just one transaction. But with these situations the exporters will not be able to risk the business and lose expected income in such cases.

Product development funding, finding overseas distributors/agents/partners are poorly evaluated as well. The product development fund issue is not implemented in most of the exporters companies. Although most of the manufacturers have a research and development (R&D) department it is not funded by a funding body in a particular product for a specific region or country. This case is implemented for special regions such as EU, USA, but not for the African markets i.e. COMESA countries. On the other hand, finding overseas distributors / agents / partners is not preferred by the Egyptian exporters as evaluated. They used to have their own subsidiaries or branches in COMESA countries, but in some cases joint trade business partnerships are established there.

There is also an issue of business risk. Hamdy Barghout, Business Development Director at Egytrans (personal communication. 15 June 2006), discussed the risks and dangers present in the world business environment today. He said that this coupled with Egypt's trade movement to adopt more progressive and strategic practices will require the development of risk management to ensure efficient and effective operation of the proposed RDCs in the COMESA market.

7.3.2.2 *Issues in the exportation process in Egypt*

After evaluating the issues facing Egyptian exporters in doing business in COMESA countries, it is imperative to investigate the issues that face the Egyptian exporters in the exportation process starting from Egypt and ending in COMESA countries. In this part of the questionnaire the exporters were asked to evaluate 15 main factors that face the exporters' business in Egypt on a six-point scale: (1) = Excellent, (2) = Good, (3) = Moderately Good, (4) = Moderately Poor, (5) = Poor, (6) = Very Poor. The overall evaluation of the mentioned issues in Table 7.4 appeared to vary between moderately good and moderately poor.

Table 7.4: Evaluating the issues facing Egyptian exporters in Egypt

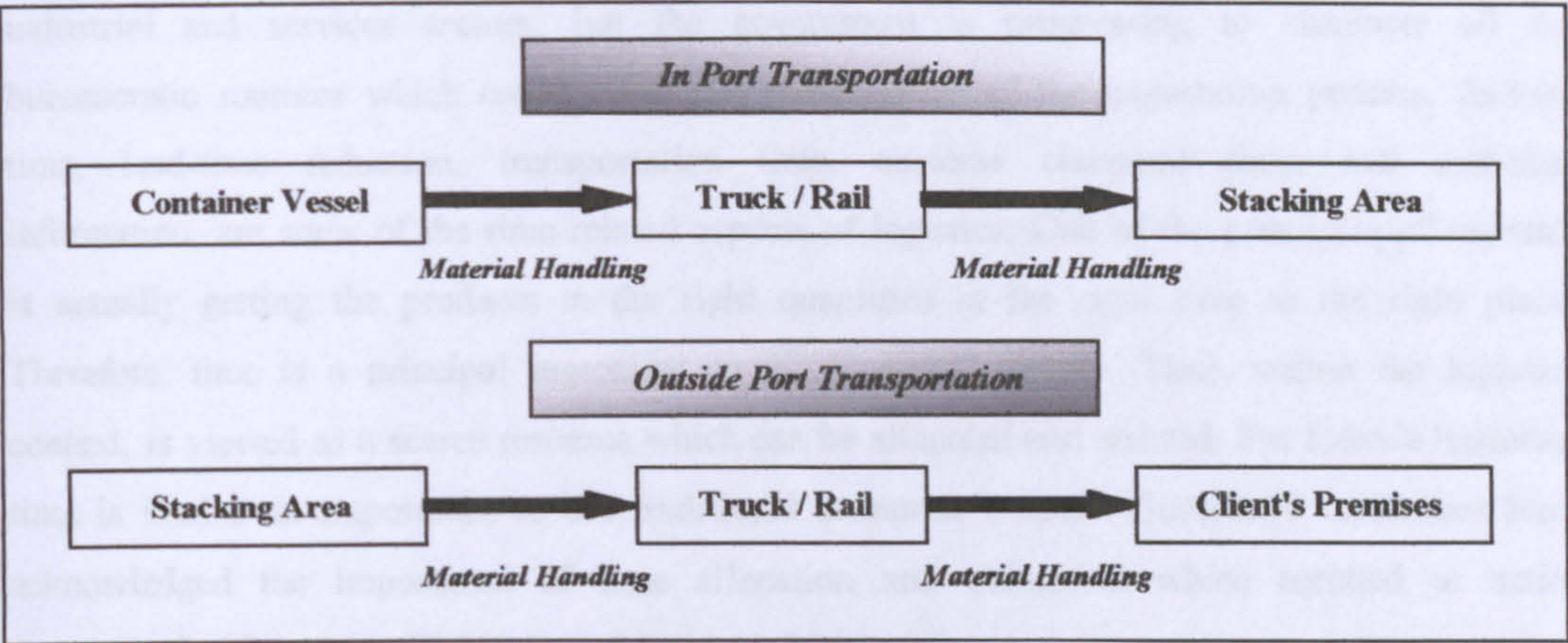
Factors	Rank	Mean
Transportation infrastructure and facilities	1	2.83
Third-party logistics providers	2	3.06
Certainty in demand and supply	3	3.06
Manufacturing cycle times	4	3.08
Bureaucracy	5	3.11
Business approach	6	3.17
Information technology	7	3.22
Multimodal transport solutions	8	3.22
National competition	9	3.22
Organisation and management support	10	3.25
Warehousing facilities	11	3.33
Investment funds	12	3.36
Awareness of logistics and supply chain concepts	13	3.39
Governmental support	14	3.58
Corruption	15	3.61

Source: Author.

The transportation infrastructure and facilities in Egypt are moderately good to cope with trade requirement to connect between the main places in the trade processes. All the services performed by the third-party logistics providers (3PL) involve a number of different stages, for instance, the transportation service performed by a 3PL to move the client's containers from the port of departure to the client's premises involves two main stages.

Figure 7.4 shows the stages involved in transporting containers from the port of departure to the client's premises.

Figure 7.4: The stages of transportation services



Source: El-Zarka (2006)

As shown in Figure 7.4, the containers have to be unloaded from the arriving vessel to the truck which will move the containers to the stacking area and this refers to the first transportation stage which takes place in the port. This first stage of transportation involves another logistics activity which is material handling to discharge the containers from the vessel to be loaded on the truck, and then to be discharged once again from the truck to its designated place in the stacking area. The second stage of transportation involves the movement of containers from the stacking area to the client's premises outside the port. This second stage also involves the material handling activity in loading the containers from the stacking area to the truck and then unloading the containers from the truck in the client's premises (Manheim, 1979) and (El-Zarka, 2006: 109).

Therefore it could be noticed that the transportation service provided by a 3PL constitutes different stages possibly involving other logistics activities (Chapman *et al.*, 2003: 120). Hence, it is important for 3PLs to have employees who are capable of analysing the different stages taking place in the logistics services they provide in order to easily detect any possible weaknesses or deficiencies that might affect the 3PL's performance and its reputation in the market (El-Zarka, 2006: 72).

Certainty in demand and supply and the manufacturing cycle times are the next two factors which are important to take into consideration of the Egyptian exporters. There is a fairly strong link between the two factors due to their dependence on each other. Facing the demand by

determining the required supply and this will be supported by the manufacturing cycle time which will be able to face the demand from the market.

Bureaucracy is one of the main problems of the government; it is faced in the majority of the industrial and services sectors, but the government is progressing to eliminate all the bureaucratic routines which could affect the effectiveness of the exportation process. Just-in-time, lead-time reduction, transportation time, customs clearance time, and real-time information, are some of the time related aspects of logistics. One of the principles of logistics is actually getting the products in the right quantities at the right time to the right place. Therefore, time is a principal ingredient to the logistics mixture. Time, within the logistics context, is viewed as a scarce resource which can be allocated and utilised. For today's business, time is similar in importance to the traditional economic outputs. Successful economies have acknowledged the importance of time allocation and utilisation which resulted in major economic developments (El-Nakib and Roberts, 2007: 9).

Therefore, this illustration proves that the time wasted in procedures such as the customs' clearance greatly affects the Egyptian exporter's performance and credibility in the Egyptian market. El-Zarka (2006: 114) stated that the Egyptian government should make a comprehensive reform of the customs' law and change the related procedures to suit the new business concept of "time equals money". The government authorities should recognise that they belong to the time circle upon which many businesses plan their operations. Therefore the government authorities should know that if any time delay occurs within their operations, it will directly affect all the following stages, thus causing time delay in the overall business cycle. Hence a time management philosophy should be adopted to benefit both the government and all parties involved.

It has been almost ten years since the start of the logistics business approach in Egypt as mentioned by Al Falah *et al.*, (2003: 15). This period of time was probably not yet sufficient for exporters to be well experienced in this field. But time is not to be blamed. The initiation of the logistics business approach was not based on a serious study which defines the strategy or plan upon which the exporters will operate. China, the new economical and industrial power in the new millennium has something in common with Egypt: the new field of logistics. Although the logistics business is considered new in China, it has been present in almost the same period as Egypt, but China was forced to master the logistics business because the Chinese realised that it is highly responsible for their products' competitiveness in the international market. Their concern and seriousness about the field is reflected in the various conferences held in major

cities in China that address the logistics and supply chain management issues in the Chinese market (Holodnicki, 2005: 4).

Information technology is ranked the 7th factor related attribute. Currently, 95% of the respondents are using computers and information technology applications such as EDI to facilitate their operational and logistical strategies (Regan and Song 2000). This is not because they are not interested in new technology, but more because of the lack of awareness of benefits the advanced IT which would bring to their logistics strategy. Therefore, this is limiting their opportunities to gather more information about the market, prices, products and even traders. It must not be forgotten that Egypt is a fast developing country in the Middle East in electrical and telecommunication infrastructure where the government is highly encouraging companies to adopt IT applications as a part of the E-Government plan (Das Gupta *et al.*, 2003).

Multimodal transport solutions e.g. door-to-door transport; through transport and IT are seen to be moderately important attributes. This can be partly explained by the lack of knowledge relating to multimodal transport and the types of services it can offer (Banomyong, 2000: 190). Almost all of the respondents had a unimodal framework when it came to transport services and most of them were satisfied with road transport as the only mode of transport available. For the logistics service providers, multimodal transport services are important, as they need to be able to efficiently combine the various modes of transport in order to provide a seamless logistics flow of goods while at the same time being liable for the goods from origin to destination.

For decision-makers in Egypt, national competition is seen as an important factor with a mean of 3.22. These results are also consistent with the literature, Manheim (1994) discussed that firms today face increasingly severe competitive pressure, and have good organisation and management support through the efficient use of the logistics function which can provide opportunities for competitive advantage on local and global markets.

All the respondents are aware or have heard that logistics and supply chain concepts can be or is a leading function, especially when global co-ordination of production and distribution/warehousing facilities have emerged as a major issue and opportunity. In the early stages of marketing policy development, one of the foremost issues that need to be resolved is the method of product distribution or channel distribution, which will be made (Fawcett *et al.*, 1992).

During logistics channel selection, the firms will be trying to achieve six aims: (1) maximisation of sales opportunities; (2) achieving high levels of product availability; (3) achieving high levels of customer service; (4) minimising costs; (5) gaining timely, accurate market intelligence and (6) ensuring smooth integration of both the commercial and physical aspects of the distribution

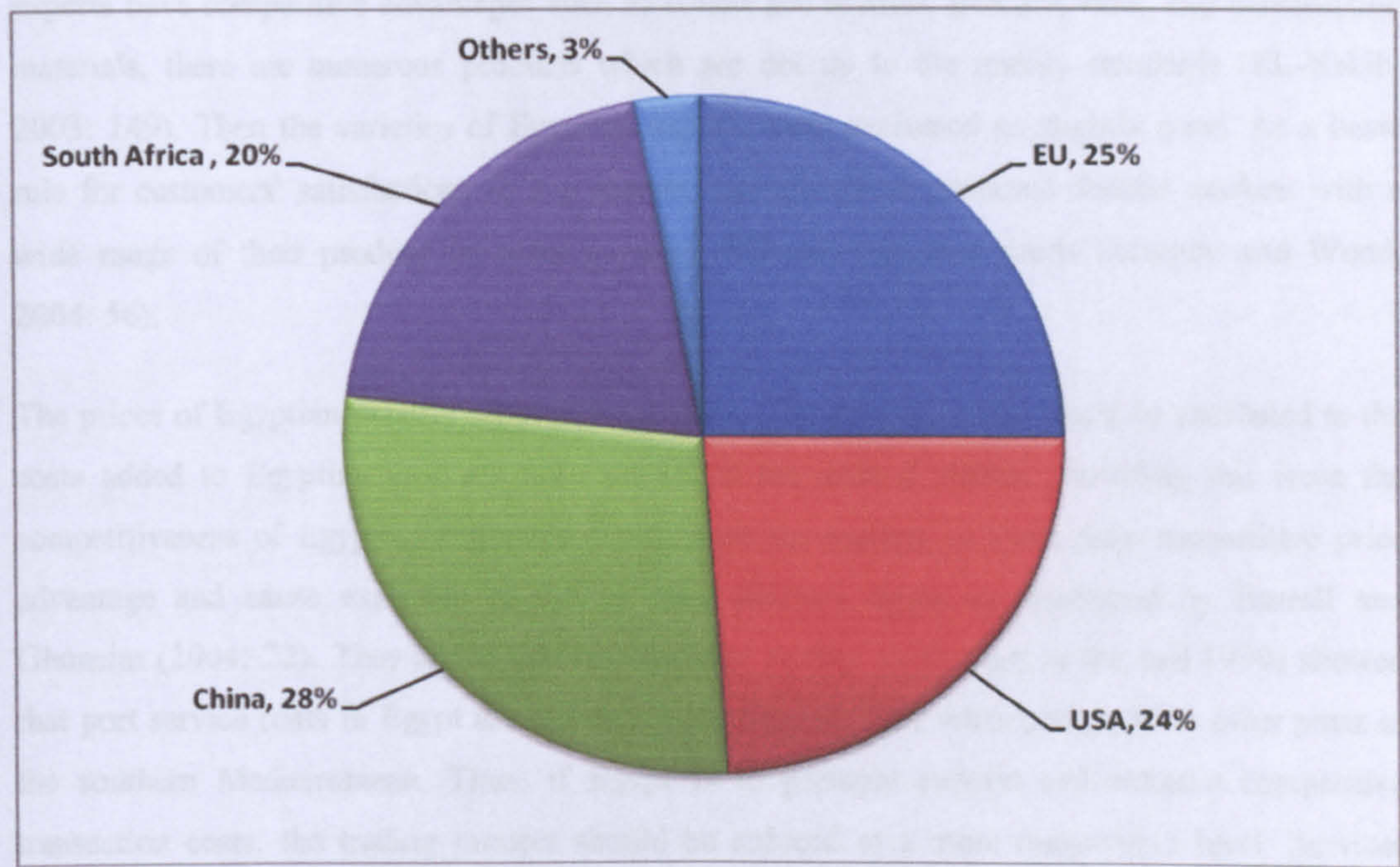
chain. The respondents know that if they want to succeed, they need a very precise marketing strategy that will help sustain their competitive advantage.

In addition, three factors are seen to be the least important attributes by Egyptian exporters which are; governmental support, investment funds and corruption. Government support constituted encouraging the investment funds especially the Foreign Direct Investment (FDI) with establishing Built, Operate and Transfer (BOT) projects to rehabilitate or enhance several infrastructures in the country. Eliminating the corruption within the administrative authorities is another issue the government struggle to overcome (Mobarak, 2004: 15).

7.3.2.3 Competitors of Egyptian exporters in COMESA

A question was asked of the Egyptian exporters to expose their attitudes regarding their competitors in COMESA market. Figure 7.5 illustrates the main competitors for Egyptian exporters in COMESA countries. 28% of the respondents said that China is the main competitor to Egypt in COMESA due to their cheap prices and quality satisfaction for the customers in COMESA. The EU came in the next place, as France, UK, Spain etc. were controlling some African and COMESA countries trade.

Figure 7.5: The main competitors for Egyptian exporters in COMESA



Source: Author.

In addition, USA is the third main competitor in COMESA for 24% of the respondents from Egyptian exporters. South Africa is the Fourth competitor for 20% of the respondents, and the rest 3% for other countries such as Tanzania, Japan, India and UAE.

7.3.3 Evaluation of the Egyptian exports

In this section of the questionnaire the Egyptian exporters were asked to evaluate their products based on nine factors. In addition other open ended questions were presented to the exporters which concern the possible reasons that make Egyptian products not the first choice for foreign customers such as COMESA customers. The following two subsections will explore the feedback from the respondents.

7.3.3.1 Egyptian exporters evaluate their products

Table 7.5 presents the evaluation of Egyptian exports by Egyptian exporters. The respondents evaluated four factors as good and moderately good. These factors are the quality of Egyptian products, their varieties, their prices and the reliability of order fulfilment.

The first four factors reveal some important facts. The exporters highly evaluated the quality of Egyptian exports, but this could not be generalised to all products. Although some Egyptian exports have competitive advantages such as cotton and textiles, iron and steel, and construction materials, there are numerous products which are not up to the quality standards (EL-Nakib, 2003: 149). Then the varieties of Egyptian exports were evaluated as slightly good. As a basic rule for customers' satisfactions in any market, manufacturers penetrate desired markets with a wide range of their produce in order to meet different customer needs (Murphy and Wood, 2004: 56).

The prices of Egyptian exports came in third place. The reason for this could be attributed to the costs added to Egyptian products until arrival to the desired market. Avoiding this issue the competitiveness of Egyptian exporters could cause the exports to loose their competitive price advantage and cause exporters to fail to meet delivery times as mentioned by Burrell and Ghoneim (2004: 22). They added that international studies carried out in the mid 1990s showed that port service costs in Egypt are higher, on average, by 30% when compared to other ports in the southern Mediterranean. Thus, if Egypt is to promote exports and enhance competitive transaction costs, the trading process should be reduced to a more competitive level. Services falling within the context of trade facilitation are considered as inputs in the production process and they must be reduced in order to offer competitive prices. Thus, trade facilitation is a key component here.

Then the factor of order fulfilment reliability has been evaluated as a good factor which the Egyptian exporters used in order to win customers, new markets, and profits as well. This results in an indirect source of making profits and increasing the level of foreign currencies for Egypt by fulfilling the traders' orders with proper procedures and a quick response.

Table 7.5: Evaluation of Egyptian exports

Factors	Rank	mean
Quality of Egyptian exports	1	2.56
Variety of Egyptian exports	2	2.61
Price of Egyptian exports	3	2.78
Reliability of order fulfilment	4	2.81
Order cycle time	5	3.00
Flexibility in trade transactions	6	3.03
Tendency to business collaboration	7	3.08
Degree of damage to shipment	8	3.28
Information and communication flows	9	3.33

Source: Author.

Five factors are seen to be the least important attributes by Egyptian exporters. These factors are: order cycle time, flexibility in trade transactions, tendency to business collaboration, degree of damage to shipment and, information and communication flows. The order cycle time represents the basic element of customer service where logistics customer service is explained as the time elapsed between when a customer order, purchase order, or service request is placed by a customer and when it is received by that customer.

Order cycle elements are; transport time, order transmittal time, order processing and assembly time, production time and stock availability. Order cycle time is expressed as bimodal frequency distribution. The constraints on order cycle time such as: order processing priorities, order condition standards e.g., damage and filling accuracy, and order constraints e.g., size minimum and placement schedule (Ballou, 2004: 111). Thus, all these facts are not properly implemented by the manufacturers or exporters when undertaking an order from a customer. The result from the exporters shows that the order cycle time is not up to the mentioned standard or even this could be due to their unawareness of these elements of the order cycle time.

Flexibility in trade transactions and tendency to business collaboration were least evaluated by the exporters. This could be due to their dependence close partners rather than negotiating with new partners or traders, in order to guarantee such profit from selling their products to well known parties.

Degrees of damage to shipment and information and communication flows are evaluated as poor. The damage level of a shipment is a good indicator from the point of view of the exporters that the damage is low to exported products, which ensure that the products arrived in a good condition to the final destination.

While poor information and communication flows is another issue to be considered, this is due to the lack of using advanced technologies among the exporters' bodies which connects these parties with the government's authorities, seaports, airports and other involved bodies in the exportation process.

7.3.3.2 Reasons of international competition with Egyptian exports

After the evaluation in table 7.5, the next question was about mentioning the possible reasons which would make the COMESA market favour the international products rather than Egyptian ones. All Egyptian exporters agreed that competitive and reasonable prices with a variety of products from foreign countries make the level of demand on these products more than Egyptian products.

In addition, the exporters summarised other principle reasons such as: timing, reachable channels to customers, quality, bilateral agreements, regularity and financial facilities. Moreover, the product prices according to the exchange rates are low compared with Egyptian produces.

Another obvious reason is related to marketing as Egyptian products are not well marketed or promoted in COMESA market.

One of the respondents commented on the nine factors in Table 7.5 stating that if any country is willing to increase its market share in the international market then these factors are to be implemented and adopted to gain real benefits from its trade with world markets.

7.3.4 Evaluating the Egyptian RDCs network in COMESA

The last section of the questionnaire included two crucial questions pertaining to the opinion of the Egyptian exporters in the proposed network of the RDCs in COMESA countries and the potential benefits to be gained from the implementation of such a network.

7.3.4.1 Egyptian exporters' feedback on the RDCs network

Regarding proposed locations of the Egyptian RDCs in COMESA which has been verified and selected in chapter five, it was imperative to explore the opinion of the Egyptian exporters about

these locations. Table 7.6 summarised the exporters’ opinion on the proposed locations of Egyptian RDCs in COMESA. The evaluation of the Egyptian exporters on the proposed RDCs network in COMESA countries showed that the RDC in Kenya is the most favoured gate for Egyptian exports to the mentioned corridors which are served by the Kenyan ports. Djibouti came in the second place, while Tanzania came third.

Table 7.6: Evaluation of Egyptian RDCs in COMESA countries

Factors	Rank	Mean
RDC in Kenya will serve: Uganda, Rwanda, Burundi, Congo DR Seychelles, Comoros, Mauritius and Madagascar	1	2.08
RDC in Djibouti will serve: Ethiopia and Eritrea	2	2.22
RDC in Tanzania will serve: Zambia, Malawi, Zimbabwe and Swaziland	3	2.39

Source: Author.

The exporters have presented comments regarding the above mentioned RDCs network. Firstly, they greatly agreed on the RDCs in Kenya and Djibouti while not clearly disagreed on the RDC in Tanzania. The proposed Egyptian RDC in Kenya is logistically an optimal location serving Burundi, Congo D.R., Rwanda and Uganda. The Northern corridor represents the transport infrastructure and facilities between these countries and Kenya linked to the Port of Mombassa. These countries are served by road transport through four routes and by both the Kenya and Uganda Railways, which mean that the RDC location in Kenya is totally applicable to the actual trade flows to these four landlocked countries. The Indian Ocean countries will be served as a transshipped cargo from Mombassa port to Seychelles, Comoros, Mauritius and Madagascar. However, the Egyptian exporters preferred to have a separate RDC to serve Seychelles, Comoros, Mauritius and Madagascar in order to save transportation and distribution time. This point of view could be possibly implemented in the future, but according to the trend of the development of the Egyptian exports with these four countries, it is not feasible to establish an RDC serving these countries as the volume of exports are quite low.

The RDC in Djibouti is another example of the exporters’ agreement on this location which is proposed to serve Ethiopia and Eritrea by Djibouti road corridor. The Port of Djibouti is strategically located at the junction of the major routes between Europe via the Suez Canal, Asia and East Africa and is the access to Ethiopia and Eritrea. In Djibouti, the private sector provides all the shipping, clearing and forwarding services. Ethiopian cargo is cleared in Djibouti by their customs agents but the clearance procedures must be done in Addis Ababa. While the Eritrean cargo could be delivered by road or rail transport as well.

The RDC in Tanzania would serve five landlocked countries. Although Tanzania is not a COMESA member, and it does not enjoy a zero rated duty, COMESA will continue to be in cooperation with Tanzania through the PTA, East African Co-operation (EAC). The central corridor which connects Dar es Salam port in Tanzania to Zambia, Malawi, Zimbabwe and Swaziland will be the main road/rail corridor to reach the landlocked countries. Some respondents said that it is not necessary to select a non COMESA country to be one of the RDCs locations. On the other hand, one of the respondents has said that the rail connection between Egypt and Sudan does not exist i.e. there is no railway network after the High Dam in Aswan, in addition the rail gauge is 1435 mm in Egypt while it is 1067 mm in Sudan which disrupts the rail transport journey from Egypt to Sudanese market (Abdel-Monem, 2005: 7). For that reason he suggested to establish a special terminal or distribution centre in the Egyptian/Sudanese border line south of Aswan to support the trade using the inland transport.

7.3.4.2 Evaluating the benefits of Egyptian RDC network in COMESA

The exporters were asked to evaluate the possible benefits to Egyptian exports when implementing the Egyptian RDCs network in COMESA countries. Table 7.7 shows the respondents' feedback on the benefits of the RDCs.

Table 7.7: Evaluating the benefits of Egyptian RDCs in COMESA countries

Factors	Rank	Mean
Enhancing the growth of Egyptian trade	1	2.56
Competitive Pricing	2	2.64
Buffering between supply and demand	3	2.67
Improving order fulfilment	4	2.67
Maximising effectiveness while minimising cost	5	2.67
Accurately tracking goods	6	2.75
Adopt best practices	7	2.75
Allow consolidation and sorting of products	8	2.78
Generate the chance to enter new markets	9	2.78
Reducing in-transit theft	10	2.78
Achieving inventory control	11	2.81
Customer response time	12	2.83
Increase Productivity	13	2.83
Time compression	14	2.89
Centralisation of Egypt's supply chains structures	15	3.00

Source: Author.

Enhancing the growth of Egyptian trade came top. The RDCs idea would accelerate and enhance the flows of Egyptian exports to COMESA market. NIA (2001) stated that the value of RDCs has stood the test of time, yet someone is always trying to justify that by elimination of the intermediaries, the exporter or customer can obtain a competitive advantage by performing

the various distribution functions. History has proven that those exporters who are working in a partnering relationship with the RDCs and focus their efforts on their core competencies are truly the companies who have a short and long term competitive advantage when all aspects of the business are considered.

Those exporters without a partnering relationship, use a comparison of unit prices, which is the unfortunate and archaic practice employed by many. Without the intermediaries, the distribution channel would be extremely confusing. Fragmented support is also confusing and suppresses the true value of distribution realised by all current and future channel participants. One of the reasons for the existence of RDCs is to perform economically justified services for both its suppliers and customers. The competitive prices achieved within the RDCs services must be less than the total value added by those services to both suppliers and customers in order to maximise effectiveness while minimising costs.

Buffering between supply and demand is another benefit as well as improving order fulfilment that the implementation of RDCs will undertake especially in the kind of markets where the certainty of demand cannot be confirmed. Therefore, this will support the availability of Egyptian products in COMESA market.

The benefits of implementing the RDCs would assist in adopting the best practices in the management of these exports within the RDCs such as accurately tracking goods, allowing consolidation and sorting of products , reducing in-transit theft and achieving inventory control.

Generating the chances to enter new markets will evolve new sales practices which will be supported by distribution economics. Thus, the RDCs efficiency will continue to improve customer requirement patterns and customer service will be maintained and improved. Technology will further enhance the value of RDCs to all distribution channel participants.

The RDCs add value to the final product by performing several special functions required to successfully service customers needs such as customer response time and time compression. This could be within the transferring of raw materials into finished products, thus creating utility of form, transferring the finished product from the shipping platform to the marketplace, thus creating the utility of place, fabricating and transferring products in a timely manner, thus creating the utility of time and transferring title from one owner to another, thus creating the utility of possession. Consequently this will directly increase the productivity with respect to the previous conditions.

Centralisation of Egypt's supply chain structure could be shaped with the network of RDCs in COMESA countries, thus the exporters or manufacturers will customise and consider these RDCs within their global supply chains. Therefore, Professor Prahalad contends in the NIA (2001) website the following:

"The most powerful way to prevail in global competition is still invisible to many companies. Once, the diversified corporation could simply point its business units at particular end markets and admonish them to become world leaders. But with market boundaries changing ever more quickly, targets are elusive and capture is, at best, temporary. The critical test for management is to create an organisation capable of infusing products or services with irresistible functionality or, better yet, creating products or services that customers need but have not even imagined."

This challenge is a deceptively difficult task. It requires radical change i.e. a cultural change, the complexity of which is further compounded as long as products and services are purchased by users at *the lowest price* and not necessarily at *the lowest total cost*.

El-Nakib and Roberts (2007: 10) emphasised that innovation and imagination are mandatory to being the low-cost provider, which has always been the ultimate prerequisite to the long-term success of all industry participants. This is going to be even truer due to buyers' level of sophistication, or lack thereof, and distributors continually striving to differentiate themselves from their competition. Distribution is a process that allows the customers and the suppliers leverage of their resources and overcome obstacles and take advantage of the opportunities that change presents and that distribution can offer.

7.4 COMESA IMPORTERS QUESTIONNAIRE

The aim of the COMESA importers questionnaire is to explore their preferences regarding the Egyptian products by:

- Determining the highly demanded Egyptian products by the COMESA customers;
- Determining the reasons that make the major suppliers to COMESA favourable to this market;
- Evaluating the Egyptian products from the point of view of the COMESA importers;
- Identifying the COMESA importers' evaluation on Egypt's products;
- Emphasising the COMESA importers opinions regarding the proposed network of Egyptian RDCs in COMESA countries;

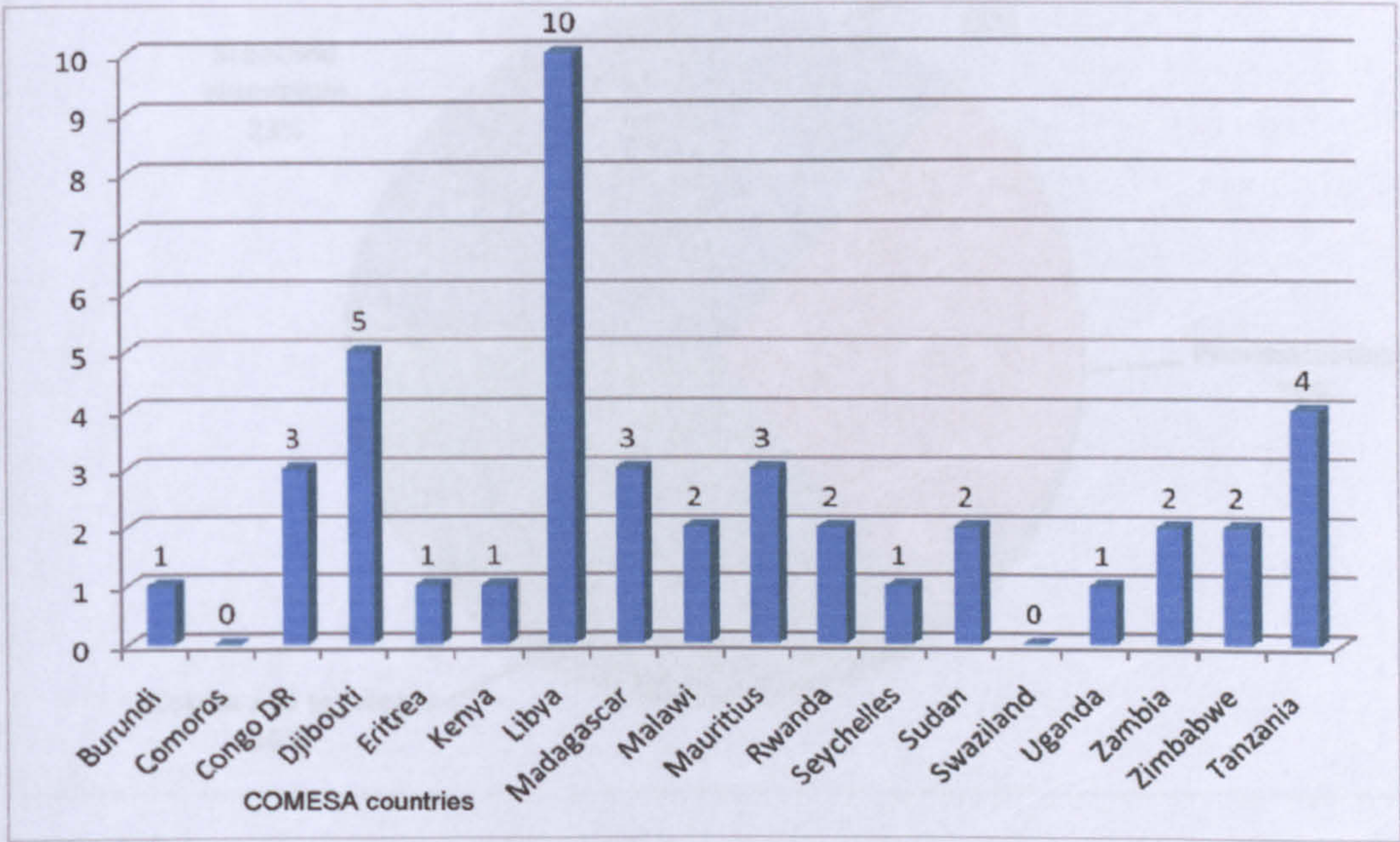
- Discovering the potential challenges aiming from the implementation of the proposed RDCs in COMESA countries ; and
- Assessing the benefits of the proposed Egyptian RDCs to the importers and customers in COMESA countries.

The COMESA importers questionnaire comprises three sections, each of which contain a number of questions relating to the section’s topic.

7.4.1 Basic information

Before analysing the responses of the COMESA importers questionnaire, the number of respondents of each COMESA country should be revealed. As is mentioned earlier in this chapter, the number of responses was 43% of the total responses from the COMESA importers. Figure 7.6 shows the number of respondents in each COMESA country. The figure contains the distribution of the COMESA importers sample received from the questionnaire which represents 43% of the responses. The importers from Kenya were the highest respondents followed by importers from Djibouti, Tanzania, Libya and Mauritius. Importers from Comoros and Swaziland showed no response to the questionnaire, although they were contacted not only by emails but also by fax and telephone.

Figure 7.6: Number of respondents by country



Source: Author.

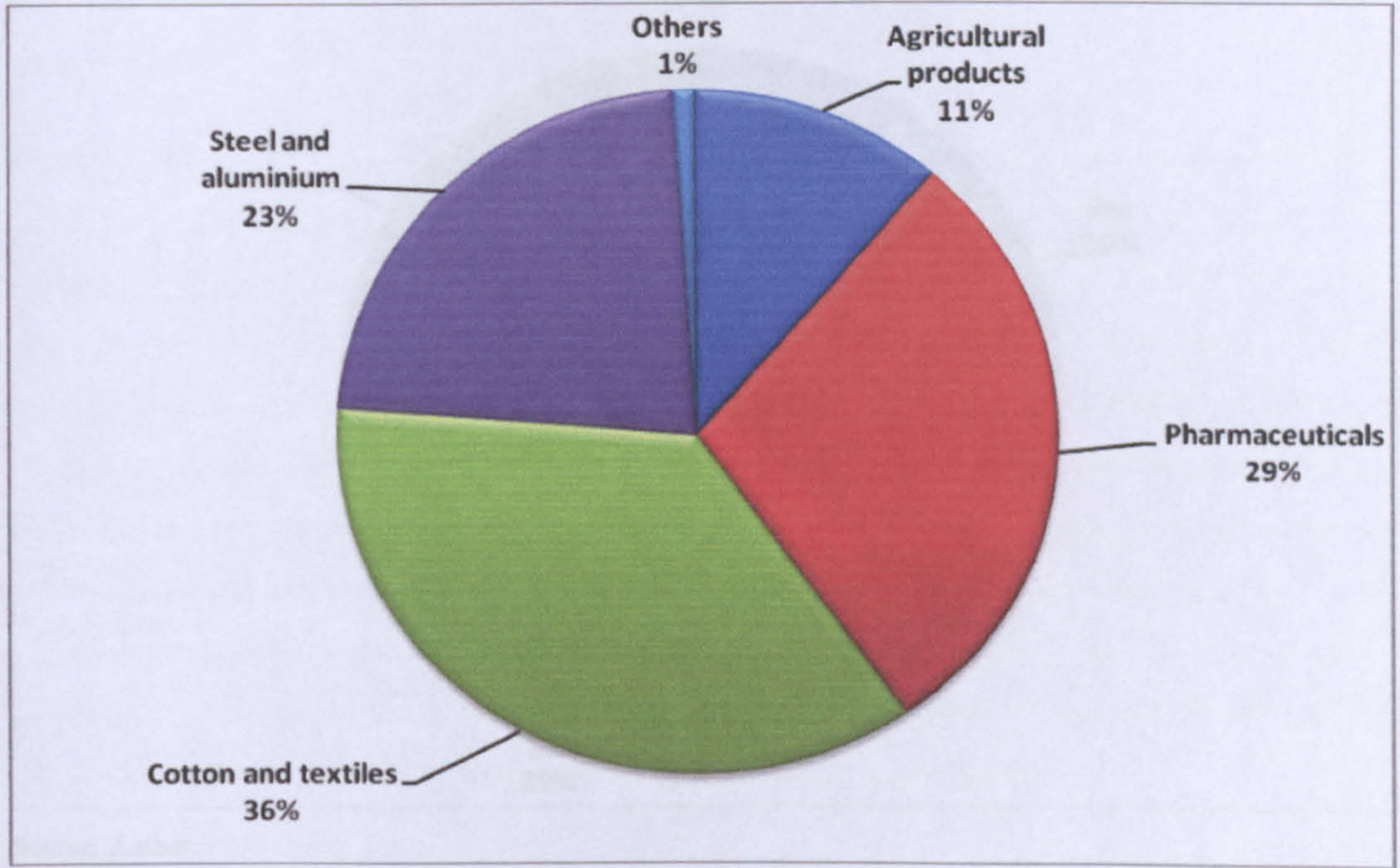
Section one of the COMESA importers questionnaire contains four questions aiming to collect basic facts about the importing bodies in COMESA countries. The purpose of this section is to demonstrate the most demanded Egyptian products in the COMESA market. Moreover, this section aims to present the main transportation means and modes used to transport trade of the COMESA market, with particular stress on the landlocked countries to determine the most used modes of transport that serve the geographical constraints of their countries.

Investigating the major suppliers to the region is one of the objectives of this questionnaire, in order to reveal the countries which are competing with Egypt in COMESA market share by highlighting the reasons why these countries lead such a market.

7.4.1.1 Egyptian products in the COMESA market

In order to get an insight into the preference of the COMESA importers, it was necessary to examine the most demanded Egyptian products in COMESA market. The respondents were asked to specify the most demanded products from a category of five products which was the result of the analysis of COMESA imports in chapter four. Figure 7.7 shows the most demanded Egyptian products in COMESA market.

Figure 7.7: The most demanded Egyptian products in COMESA market



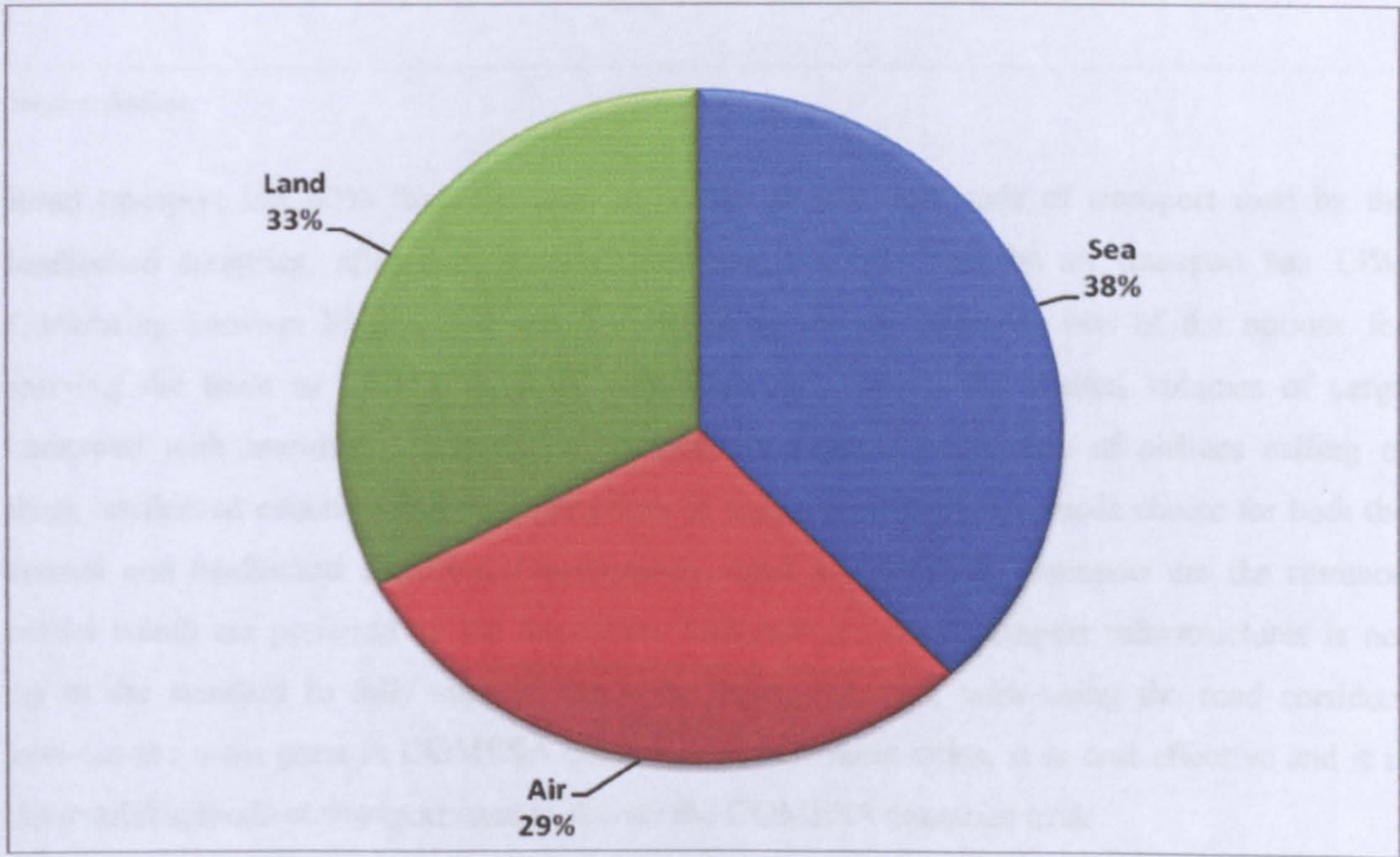
Source: Author.

As is clearly seen from Figure 7.7, cotton and textiles are the most demanded Egyptian products with a percentage of 36%, while pharmaceuticals are also highly demanded with 29%. Steel and aluminium present 23% and agricultural products present 11%. Other Egyptian products such as chemicals, constructional equipment, cement and food stuff represent 1% of the demanded Egyptian products in COMESA market. These results match the same findings earlier undertaken, and it is worth mentioning that, Egypt is playing a dynamic role to increase the exports of these commodities to the world due to the competitive advantage that Egypt is enjoying in the production of these commodities.

7.4.1.2 *Transport usage*

After determining the most demanded Egyptian products, it was important to explore the most used modes of transport in COMESA's trade movements. Figure 7.8 shows the usage of transport modes by COMESA importers. Maritime transport is seen as the dominant mode for transport to and from COMESA countries whether coastal or landlocked countries. It represents 36% of the transport modes usage due to its characteristics as being the most appropriate mode of transport to achieve economy of scale with a suitable delivery time.

Figure 7.8: Modes of transport preferred by COMESA importers

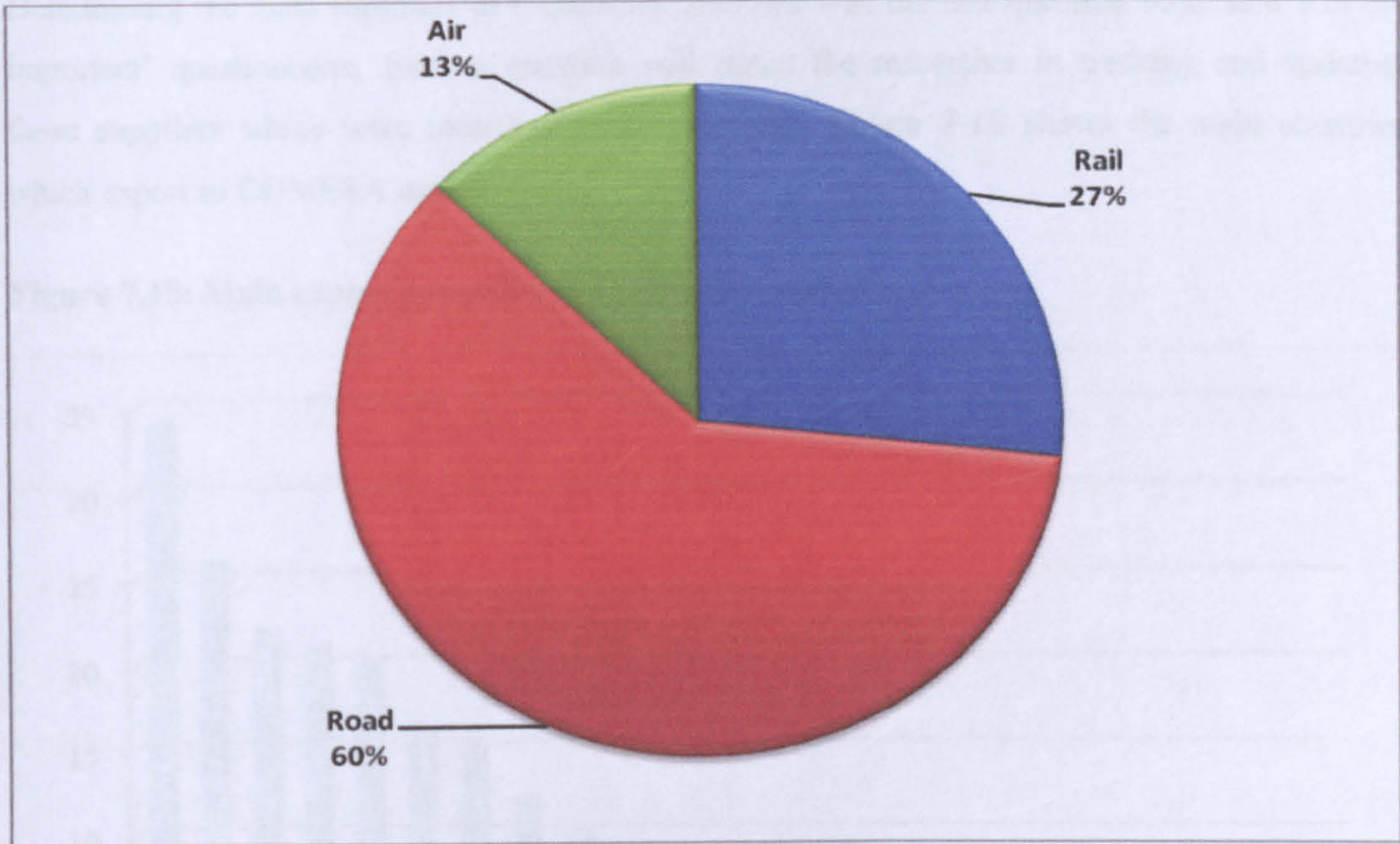


Source: Author.

Land transport includes the roads and the railways. It has 33% which is accounted for by door to door services and access to the landlocked countries. With 29% of air transport usage, the

transport modes are clearly defined for COMESA importers preferences. As to the landlocked COMESA countries, a question has been added to determine the best mode of transport used for their trade. Figure 7.9 shows the percentages among the three most used modes of transport by landlocked COMESA countries.

Figure 7.9: Modes of transport preferred by landlocked countries in COMESA



Source: Author.

Road transport has 60% from the total responses as the best mode of transport used by the landlocked countries, after that, the rail transport has 27% and the air transport has 13%. Correlating between Figures 7.8 and 7.9 regarding the air mode as one of the options for carrying the trade to COMESA, it is very clear that due to the limited volumes of cargo compared with maritime transport for instance, inadequate availability of airlines calling of these landlocked countries and the high prices of airlines, affect the air mode choice for both the coastal and landlocked countries. Consequently, road and maritime transport are the common modes which are preferred by the importers. Although the road transport infrastructures is not up to the standard to fully support the trade flows, but still, with using the road corridors between the main ports in COMESA countries and the main cities, it is cost effective and it is the available mode of transport used to deliver the COMESA countries trade.

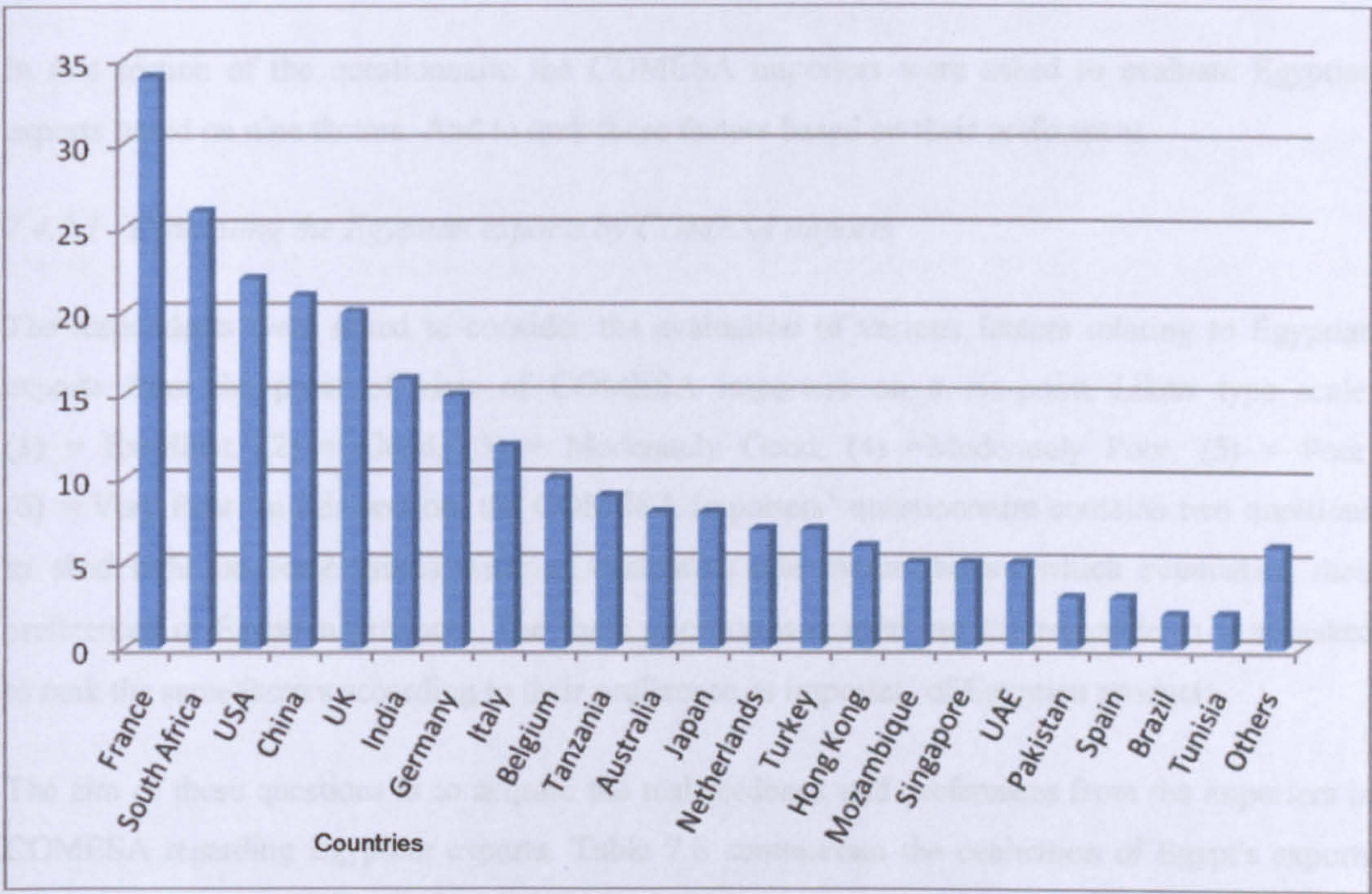
The researcher highlighted from the SDI Regional Coordinator in South Africa Mr. Moyane's e-mail the constraints of landlocked countries. He said the landlocked countries of Eastern and Southern Africa have a general transport handicap imposed on their development by their

geographic location. This handicap stems from the effects of both exports and imports, and thus on the economy as a whole arising out of additional distance over which goods need to travel and from the dependence of transit of these goods through another coastal country.

7.4.1.3 Competitive suppliers

Determining the main suppliers of COMESA countries was the last question in section 1 of the importers' questionnaire. Such a question will assist the researcher in tracking and updating these suppliers which were identified in chapter four. Figure 7-10 shows the main countries which export to COMESA market.

Figure 7.10: Main export countries to COMESA market



Source: Author.

Figure 7.10 shows that 13% of the respondents from the COMESA importers expressed that France is one of their main suppliers. This is due to the fact that most of the COMESA countries were French colonies and France is still acquiring its raw materials from these former colonies to be manufactured in France and then export these products back to the COMESA market (Ibrahim 2002: 12). South Africa has been chosen to come second place by 26 respondents, because the geographical location of South Africa closes to some COMESA countries. In addition, South Africa is producing and exporting most of the needed products by the COMESA

7.4.1.4 Reasons of choosing the foreign suppliers

The respondents were asked to identify the reasons why the previously mentioned countries in 7.4.1.3 are the major suppliers. Such an investigation assists in understanding the competitiveness of these countries' products against Egyptian products. The reasons are summarised in the good quality, variety and availability of the needed products with a good price, quick response from these suppliers, regional agreements with groups of countries which facilitate and reduce the tariffs and taxes on trade, transportation connections, availability of regular shipping lines and the geographical location of some countries such as South Africa which makes the trade flow with COMESA markets easy and fast.

7.4.2 Evaluation of Egyptian products

In this section of the questionnaire the COMESA importers were asked to evaluate Egyptian exports based on nine factors. And to rank these factors based on their preferences.

7.4.2.1 Evaluating the Egyptian exports by COMESA imports

The respondents were asked to consider the evaluation of various factors relating to Egyptian exports from the point of view of COMESA importers on a six-point Likert type scale: (1) = Excellent, (2) = Good, (3) = Moderately Good, (4) = Moderately Poor, (5) = Poor, (6) = Very Poor. In this section, the COMESA importers' questionnaire contains two questions to shed light on some issues such as evaluating nine major factors which summarise their preferences in Egyptian products. The same question was used but the respondents were asked to rank the same factors according to their preference as importer' of Egyptian products.

The aim of these questions is to acquire the real feedback and preferences from the importers in COMESA regarding Egyptian exports. Table 7.8 summarises the evaluation of Egypt's exports from the point of view of COMESA importers.

Table 7.8: Evaluation of Egypt's exports

Factors	Rank	Mean
Information and communication flows	1	2.63
Tendency to business collaboration	2	2.70
Degree of damage to shipment	3	2.84
Flexibility in trade transactions	4	2.84
Variety of Egyptian products	5	2.86
Reliability of order fulfilment	6	2.86
Order cycle time	7	2.91
Price of Egyptian products	8	2.93
Quality of Egyptian products	9	3.02

Source: Author.

The evaluation of Egyptian exports has provided an informative feedback to be considered in order to improve the Egyptian strategy towards COMESA market. The information and communication flow is the most important factor that impacts their business with Egyptian products. Moreover, the Egyptian traders are effectively ensuring detailed information about shipment of products to the COMESA countries as well as their tendency to penetrate and establish new business collaborations with the COMESA market, which prove their positive attitudes to encourage trade with COMESA and others. The condition of shipments regarding damage is also one of the positive indications for Egyptian products besides the variation of these products which meet some customers' needs and the reliability of fulfilling the orders. Flexibility is still showing a fair indication, thus, all the previous factors are mainly administrative and managerial procedures which are considered as secondary tools to accomplish the trade arrangements. However, it is clearly noticed that the main two factors which are considered as fundamental issues to create the demand on products did not receive good evaluation; the quality of Egyptian exports has the lowest evaluation among the other factors as well as the price. This negative indication should be carefully considered when the Egyptian exportation strategy could fail due to these two crucial factors.

Consumers in today's market are more alert about the quality of products/services displayed due to the high competition in the market and the availability of numerous producers offering similar products/services (El-Nakib and Roberts, 2006: 4). In order to have the credibility for entering the international market or even a developing market such as COMESA (ECA, 2004b: 48), producers are subject to sets of standards that must be met. This set of standards is commonly known as quality standards. The past five-eight years have witnessed a trend in the Egyptian market that still continues. All types of business want to be accredited by the International Organisation for Standardisation (ISO) in order to become an ISO certified company. But unfortunately, the Egyptian business culture considers the ISO certificate nothing

more than a promoting tool to attract customers (El-Zarka, 2006: 112). Thus, this is the root cause for the declining quality of Egyptian products. Although the COMESA customers' quality requirement would not be as the European customers, the quality issue should be taken into account for Egyptian exports.

Due to the controversy existing in the quality of service, an additional burden to misconception is added to the Egyptian exports. Therefore, there should be a clear understanding of the customer service standards and there should be a true embrace of customer service culture because its benefits would not be limited to the company but also the entire market.

On the other hand, the price of Egyptian products is still a problem from the point of view of COMESA importers. Cost is one of the major concerns for any producer. Lowering the cost associated with production means more profit for the producer. Therefore producers are always concerned about using techniques/practices that help in reducing costs. The phenomenon of *over-invoicing* is not limited to Egypt, but it also extends to third world countries generally (Wood *et al*, 2002). *Over-invoicing* is the practice of billing a price unjustifiably higher than fair market. *Over-invoicing* has been present in some Egyptian products as stated by the respondents (El-Zarka, 2006: 123). The evaluation of COMESA importers reveals two major findings; firstly, the Egyptian products' prices are high with low quality, and secondly, the people responsible for the administrative and contracting procedures are not qualified to make commercial decisions.

7.4.2.2 *Ranking the preferences*

After evaluating the Egyptian exports, it is necessary to reveal the COMESA importers' preferences regarding their wants and needs from products not only from Egypt but also from the rest of the world. The same factors have been used to demonstrate these preferences by ranking these nine factors from (1) to (9), and the result shows that 57% of the importers preferred the same order of factors as mentioned in table 7.9. Correlating between the findings from Tables 7.8 and 7.9, it showed that the quality came first, followed by the price. This clearly presents the current situation of quality and price of Egyptian exports. With this situation the competitiveness of Egyptian products will be very weak to compete in such market. The COMESA importers expressed that quality and price are the major preferences to their needs. At the same time these two factors had the lowest evaluations by COMESA importers.

Table 7.9: Ranking the preferences of COMESA importers on Egypt's exports

Factors	Rank	Mean
Quality of Egyptian products	1	1.98
Price of Egyptian products	2	2.19
Variety of Egyptian products	3	3.23
Order cycle time	4	4.74
Reliability of order fulfilment	5	5.14
Flexibility in trade transactions	6	5.63
Tendency to business collaboration	7	6.63
Degree of damage to shipment	8	7.49
Information and communication flows	9	7.98

Source: Author.

Overall, the picture is clear between the evaluation results and the ranked preferences of COMESA importers, their preferences in Table 7.9 are not compatible with their evaluation regarding the Egyptian products. On the other hand, 43% of the respondents' preferences were ranked differently. However, it is not very different from the mentioned order in the previous table. The responses varied between quality and price of Egyptian products to be the first or the second ranked, but the other factors have not had this variation.

7.4.3 COMESA importers' opinion in the proposed RDCs

In the last section of the questionnaire, two questions were included to obtain technical and professional feedback regarding the proposed Egyptian RDCs network in COMESA countries. The opinions of the COMESA importers in the proposed network of the RDCs in COMESA countries and its potential benefits are the main ideas of this section's questions.

7.4.3.1 COMESA importers feedback on the RDCs network

Examining the benefits that the proposed Egyptian RDCs would bring to COMESA countries have been made on a six-point Likert type scale: (1) = Totally agree, (2) = Agree, (3) = Slightly Agree, (4) = Slightly Disagree, (5) = Disagree, (6) = Totally Disagree. In this case, the closer the averages are to (1), the more important is the factor. Table 7.10 lists the COMESA importers' opinion in the RDCs network in COMESA countries.

Table 7.10: COMESA importers’ feedback on the proposed RDCs

Factors	Rank	Mean
RDC in Djibouti will serve: Ethiopia and Eritrea	1	2.00
RDC in Kenya will serve: Uganda, Rwanda, Burundi, Congo DR Seychelles, Comoros, Mauritius and Madagascar	2	2.09
RDC in Tanzania will serve: Zambia, Malawi, Zimbabwe and Swaziland	3	2.14

Source: Author.

After selecting the locations of these RDCs and its distribution channels to each COMESA country, the importers were asked to evaluate this proposed network. On average, the importers from COMESA countries evaluated the Egyptian RDCs as: *'Totally Agree and Agree'*, the RDC in Djibouti has the highest evaluation, almost 50% of the respondents totally agreed on the RDC location. This is due to the actual location that receives Ethiopian and Eritrean trades. The RDC in Kenya came in second place; where Mombassa port serves the mentioned countries in Table 7.10. The respondents here agreed on this location but with some concerns on countries such as Seychelles, Comoros, Mauritius and Madagascar. Some responses preferred to have a separated RDC to serve these countries in order to achieve the quick response and to avoid any extra transit time to get the Egyptian exports to these countries. Finally, The RDC in Tanzania came in the last place. Many responses did not nominate Tanzania to serve four COMESA countries. But most of the respondents stated that this is business and cannot be subject to being a COMESA member. They preferred the location of Tanzania due to the competitive costs of transportation through Dar es Salam port. Most of the served countries from the RDC in Tanzania are landlocked countries. 88% generally have agreed on the above mentioned RDCs network in COMESA, but 12% of the responses have disagreed.

In addition, many comments on the proposed RDCs network have been received. Some of these comments have criticised Tanzania as a gate to some landlocked COMESA countries as mentioned before, and they suggested allocating two RDCs only in Djibouti and Kenya.

Moreover, most of the responses criticised the researcher about the status of Sudan and Libya. Importers from both counties were dissatisfied from the survey due to not including these two countries in the RDCs network. A clarification was sent from the researcher to these interested importers from Sudan and Libya, explaining that these countries are very close to Egypt and exports can be directly sent to these two markets without the need of DCs. Sudan is south of Egypt and Libya is in the West of Egypt. Both countries are connected with Egypt through many transport modes which ensure a sustainable trade flows among them.

7.4.3.2 Evaluating the benefits of Egyptian RDCs network in COMESA

COMESA importers were asked to evaluate the potential benefits acquired from the establishment of the Egyptian RDCs network in COMESA partners. The responses showed that the COMESA importers evaluation is consistent with the benefits that Egypt can gain from the establishment of the RDC network in COMESA. This proves that the RDCs would benefit both Egypt and COMESA countries in supporting trade flow.

The purpose of acquiring the opinion of the COMESA importers regarding the benefits of the proposed Egyptian RDCs has been verified in Table 7.11. These benefits are considered the most significant issues benefiting Egyptian exports strategies and accelerating the meeting of COMESA market needs. The COMESA importers have a positive feedback on the potential benefits of the Egyptian RDCs as 64% *'Agree and Slightly Agree'*, while the remaining 36% had a negative feedback.

Table 7.11: COMESA importers' feedback on the benefits of the proposed RDCs

Factors	Rank	Mean
Achieving inventory control	1	2.51
Buffering between supply and demand	2	2.56
Customer response time	3	2.58
Accurately tracking goods	4	2.58
Allow consolidation and sorting of products	5	2.58
Reducing in-transit theft	6	2.60
Enhancing the growth of Egyptian trade	7	2.60
Improving order fulfilment	8	2.63
Maximising effectiveness while minimising cost	9	2.65
Generate the chance to enter new markets	10	2.65
Time compression	11	2.67
Increase productivity	12	2.67
Adopt best practices	13	2.67
Competitive pricing	14	2.70
Centralisation of Egypt's supply chains structures	15	2.72

Source: Author.

The three most important benefits of the RDCs are achieving inventory control, buffering between supply and demand and customer response time respectively. The findings appear to be consistent to a certain extent. Tracking of goods, consolidation and sorting of products are the next set of benefits that could be acquired from implementing RDCs. A report made by Transport Energy (2005: 18) summarised the literature relevant to the subject of the benefits of implementing RDCs. The report mentioned that to provide an effective inventory control and buffer between supply and demand: there are certain kinds of products, groceries for instance,

that have a fluctuating demand, it makes sense to have a small stock of these products so that when customer demand rises, they can be supplied more quickly. With the advent of JIT manufacturing and other 'lean' systems however, companies are finding ways to make this buffer smaller.

Oum and Park (2004: 111) decided that one of the key efficient factors in RDCs operations is meeting the customer service levels by maintaining the customer response time. Thus, setting appropriate and achievable service levels in partnership with others in the supply chain sets the foundation on which efficiency targets can be set, measured and reviewed. This provides the basis for contract price and future service level agreements. Pre-planning, sound organisation and active operational management are vital.

By allocating a series of RDCs in a particular market, the exporting country would be capable of tracking and tracing the movement of cargo from the place of origin through the RDC location until reaching the customers in different COMESA countries. In addition, to allow consolidation and sorting of products, suppliers tend to produce large volumes of a small range of goods, whereas retailers, like supermarkets, tend to demand smaller volumes of a large range of goods. RDCs allow many different types of products to be consolidated and delivered in a cost effective way.

The implementation of the proposed RDCs is expected to reduce the in transit theft which has a positive impact on the flow of cargo to the COMESA market. The theft issue is highly concerning the traders in COMESA due to the lack of warehouses and storage areas which make the security issue very weak.

The strategies of Egyptian trade growth could be acquired within the RDCs in COMESA, the idea of establishment of these RDCs will promote the Egyptian products, and this will require a wide range of governmental support by the commercial representatives which will influence customers in COMESA countries to know and to be convinced with the quality, price, availability and variety of Egyptian products in the COMESA markets. From this point of view, the enhancement of the growth of Egyptian products in COMESA market will be tangible. Consequently, this will interact with restructuring and justifying the supply chains of the Egyptian exports in COMESA market.

Because customers often consider RDC operations as a cost, rather than a profit centre, there is a real tension between service and cost. For example, critical upgrades and improvements to the WMS to improve warehouse efficiency might be denied, due to the capital investment necessary. While this type of pressure or questionable economy exists in RDC operations, some

businesses have responded positively to this challenge, consolidating into a series of fewer, larger RDCs and investing heavily in management and operating systems that maximise efficiency. By nature, different players involved in RDC operations aim to minimise their own costs and make it competitive, but the complicated nature of supply chains means that one party may minimise their own costs at the expense of others. For instance, a large customer may minimise inventory costs by using JIT, but this may force a supplier to produce in smaller, more uneconomical batches that require more frequent transportation. Good practice in RDC operations involves understanding the whole supply chain competitive costs, not merely by each member of the RDC supply chain working at the expense of others.

7.5 QUESTIONNAIRES ANALYSIS OUTCOMES

The respondents of both questionnaires have expressed different opinions which have supported the value of responses and the feedbacks from the Egyptian exporters and COMESA importers. Therefore the following headings will summarise the outcomes which were drawn from the questionnaires results:

- **Egyptian products in COMESA countries**

The Egyptian exporters' responses stated that Kenya, Libya, Sudan, and Djibouti are currently active countries for their business in COMESA market and are considered as important markets in terms of turnover. The COMESA importers responses showed that there is a strong demand for some Egyptian products such as: cotton and textiles, pharmaceuticals, steel and aluminium, agricultural products, chemicals, constructional equipment, cement and food stuff. These products witness an intense competition from other countries in the COMESA market.

- **Transport features in COMESA countries**

COMESA importers commented on the limited use of the rail transport in COMESA countries from the locations of the RDCs to the served countries and markets by each RDC. Rail transport is available in Mombassa, Djibouti and Dar es Salam but due to the low freight volume and the unreliability of service, rail cannot compete with road haulage which is essentially used in coastal and landlocked countries in COMESA market. It is also a result from the lack of interest relating to freight transport operators as well as policy-makers.

In addition, the inland waterway use is minimal and air transport is usually considered only as an emergency channel. In addition, the importance of maritime transport is acknowledged for the main transport leg. The majority of the respondents clearly felt that there was no choice for the Egyptian exports flows other than to use maritime and road transport.

- **Trade hindrances**

The Egyptian exporters exposed several physical and non-physical barriers to the stable flow of Egyptian exports in Egypt and in COMESA countries. Furthermore, they expressed their opinions regarding the factors that adversely affect every stage within the transportation process of Egyptian exports to COMESA countries, such as infrastructure constraints and bureaucratic, operational and administrative procedures.

A better co-ordination of policies with neighbouring countries in COMESA will help ease some international transit problems. To achieve better market access, all alternative transport combinations must be examined in order to select the most efficient and competitive logistics channel in terms of cost, time and reliability.

- **Competing countries in COMESA market**

COMESA importers stated major suppliers or partners which are exporting to the COMESA countries. France is the most important supplier or partner for their products, it purchases raw materials from the African and COMESA markets to be manufactured in France and then export manufactured products to the COMESA market. Table 7.12 that shows the trade volumes of France and COMESA presents that 52% of COMESA's total trade volume is imports from France, while 48% shows exports to France.

Nevertheless, the products from South Africa, Mozambique and Tanzania are the most favourable African export due to several competitive advantages such as the geographical location which is very close to some COMESA countries.

Moreover, these countries are producing and exporting all the products that the COMESA market needs with a good quality and price as well. The United States of America, China, United Kingdom, India, Germany, Italy, Belgium and the Netherlands are pushing their favourite products to the COMESA market as well. Egyptian exporters stated that China, EU countries, USA, and South Africa are the actual competitors to the Egyptian exports in COMESA market. This result could conclude the similarity in both responses concerning the competing countries of Egypt in COMESA market.

Table 7.12: Trade volume between France and COMESA countries

Country	Imports		Exports	
	% of French imports	Volume of imports in US\$	% of exports to France	Volume of exports in US\$
Burundi	5.40%	108,000	3%	15,600
Comoros	20.50%	235,750	27.00%	91,800
Congo DR	9.10%	1,200,290	8%	886,400
Djibouti	4.50%	444,150	2%	50,000
Egypt	6.30%	15,183,000	4.90%	7,021,700
Eritrea	15.90%	1,075,635	3%	10,074
Ethiopia	9.60%	2,661,120	4%	244,800
Kenya	3%	1,537,800	4%	1,254,800
Libya	4.90%	5,301,800	6.20%	1,908,980
Madagascar	16.60%	2,324,000	30.90%	2,938,590
Malawi	3%	193,500	3%	109,200
Mauritius	12.10%	3,033,470	20.70%	4,034,430
Rwanda	2%	48,600	3%	29,400
Seychelles	7.50%	345,000	11.40%	355,794
Sudan	3.50%	1,759,800	1%	699,000
Swaziland	1.50%	322,350	0.50%	99,550
Uganda	3%	402,000	7%	545,280
Zambia	2%	386,800	1%	194,700
Zimbabwe	2%	411,800	3%	493,200
Total	-	72,313,500,000	-	66,449,680,000

Source: Author, based on WTO (2006)

In addition, Table 7.13 compares the Egyptian exports and the competing countries exports in general emphasising on the COMESA market. From this table the researcher highlights some empirical evidence based the questionnaires results, which show the real situation of Egyptian exports in general compared with the competitors in COMESA market. Therefore, this could extract several recommended actions to be considered in order to improve the overall performance of Egyptian exportation strategies not only in COMESA market but also for the international markets.

Table 7.13: Comparing the features of the Egyptian and the foreign exports in COMESA

Countries	Quality	Price	Transport Connections	Marketing	Business Information
Belgium	H	H	M	H	H
China	M	L	H	H	H
Egypt	M	H	M	L	L
France	H	M	H	H	H
Germany	H	H	H	H	M
India	M	L	H	M	M
Italy	H	H	M	M	M
Mozambique	L	L	H	H	H
Netherlands	H	M	M	M	M
South Africa	H	L	H	H	H
Tanzania	L	L	H	H	H
United Kingdom	H	M	M	M	M
USA	H	H	M	M	M

Source: Author, based on ACCE (2006) and WTO (2006)

Note: (H) High, (M) Moderate and (L) Low

- **Trader's logistics preferences**

The preferences of the COMESA importers were revealed to be the good quality, variety and availability of the needed products with a good price, quick response from these suppliers, regional agreements with groups of countries which facilitate and reduce the tariffs and taxes on trade, transportation connections, and availability of regular shipping lines and the geographical locations of some countries such as South Africa which makes the trade flow with COMESA markets easy and fast. These preferences are the main factors that could be used in order to compare Egyptian exports and the exports of competing countries.

- **Traders opinions in RDCs**

According to the respondents of both questionnaires, the proposed network of the Egyptian RDCs locations in COMESA countries seems to be accepted. Comparing the RDCs location evaluation from the respondents, the RDC in Kenya came in first place followed by the RDC in Djibouti and in last place the RDC in Tanzania. The COMESA importers preferred the RDC in Djibouti at the first place, followed by the RDC in Kenya and at last place the RDC in Tanzania. Furthermore, the benefits of the RDCs might be appealing to the respondents from both Egyptian exporters and COMESA importers business when doing trade in COMESA market.

7.6 KEY FINDINGS

Two questionnaires have targeted both Egyptian exporters and COMESA importers to examine the issues that could face Egyptian exports. Mainly the Egyptian exporters' questionnaire reveals and confirms several issues regarding Egyptian exports and the nature of trade with COMESA market besides their opinion in the RDCs locations. On the other hand, the COMESA importers questionnaire was a vital source of information regarding their preferences in Egyptian exports which has been analysed in order to restructure the Egyptian strategies regarding the COMESA market.

The questionnaires' results largely confirm the findings of previous studies of Egypt's trade with COMESA (MFTI, 2004, 2005, 2006a; ACCE, 2000, 2005, 2006; etc.). However, the local conditions can affect the relative importance of particular decision factors and these preferences can also vary for different commodities.

CHAPTER 8: DESIGNING DEVELOPMENT STRATEGIES TO ENHANCE THE PERFORMANCE OF EGYPTIAN EXPORTS TO COMESA COUNTRIES

8.1 INTRODUCTION

The purpose of this chapter is to link the various elements of the research in greater depth to develop a framework for the RDCs network, in order to outline recommended methods and actions to be taken towards gaining the expected outcomes from the establishment of the Egyptian RDCs network in COMESA countries. Thus, a schematic model for Egyptian exports has been proposed in order to support the proposed actions and methods based on the research findings. This is to have a comprehensive strategy which could overcome the obstacles and ensure sustainable competitive export flows to COMESA countries through the RDCs network. After this chapter, the conclusions and suggestions for further research will be presented in chapter 9.

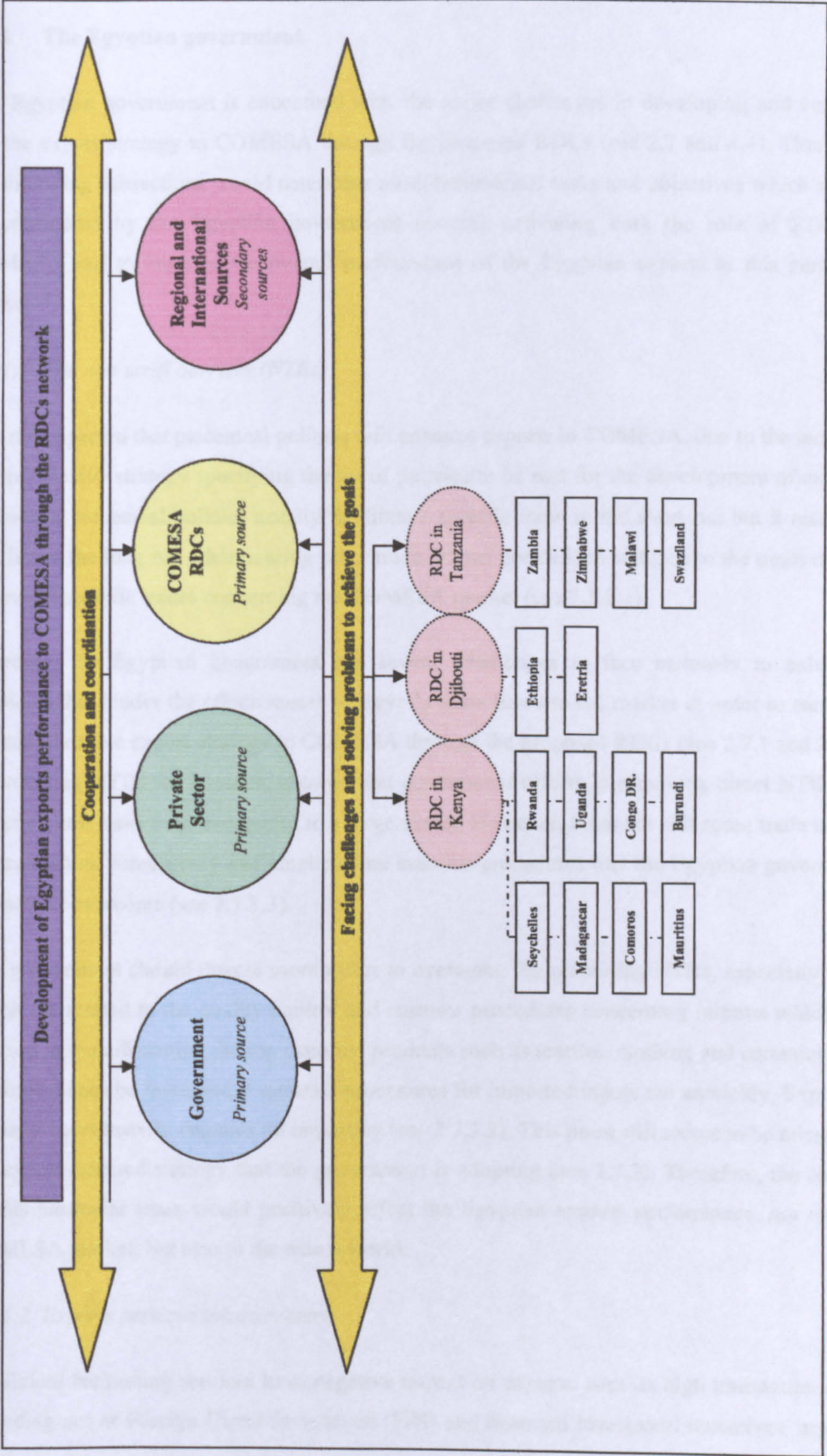
8.2 UPGRADING THE EGYPTIAN EXPORT PERFORMANCE SYSTEM

In this part of the research, upgrading the Egyptian export performance system will be based on a schematic model that outlines the main features to be included in the proposed comprehensive Egyptian export strategy to COMESA market.

The challenges and obstacles which have been discussed and analysed formerly in this research resulted in the fact that the implementation of the Egyptian RDCs network in COMESA countries requires a holistic approach encompassing a long term strategy vision and agenda with associated short term objectives. For this purpose the researcher has designed a schematic model to comprehend the actions within a comprehensive strategy which should be taken towards activating the implementation of the RDCs network in COMESA.

Such an approach is suggested in a schematic model which is shown in Figure 8.1, the model suggests that development of an integrated Egyptian exporting strategy to COMESA countries requires integrated efforts of, and inputs from, four sources which are: government, private sector, COMESA RDCs, and regional/international sources. While the first three are primary sources within the country itself, the fourth is a secondary and external source.

Figure 8.1: Integrated schematic model for Egyptian exports strategy to COMESA



Source: Author.

8.2.1 The Egyptian government

The Egyptian government is concerned with the major challenges in developing and carrying out the export strategy to COMESA through the proposed RDCs (see 2.7 and 4.4). Therefore, the following subsections would determine multidimensional tasks and objectives which should be considered by the Egyptian government towards activating both the role of RDCs in COMESA and to improve the overall performance of the Egyptian exports to this particular market.

8.2.1.1 *The non tariff barriers (NTBs)*

It is not expected that piecemeal policies will enhance exports to COMESA, due to the lack of a comprehensive strategy specifying the set of policies to be met for the development of exports. Moreover, piecemeal policies usually facilitate a specific issue in the short run but it results in conflict in the long run when issuing other trade related policies, in addition to the unawareness of several specific issues concerning the COMESA market (see 7.3.2.1).

However, the Egyptian government has several challenges to face seriously to solve the problems that hinder the effectiveness of Egypt's trade flows to the market in order to carry out a comprehensive export strategy to COMESA through the proposed RDCs (see 2.7.1 and 2.7.2). Overcoming NTBs for instance, showed that government efforts in removing direct NTBs that affect exports have been successful to a large extent. However, there are still some trade related issues such as bureaucracy and cumbersome customs procedures that the Egyptian government did not yet overcome (see 2.7.3.3).

The government should devote more effort to overcome the remaining NTBs, especially those which are related to the quality control and customs procedures concerning imports which will be used in manufacturing the top exported products such as textiles, clothing and ceramics tiles. Exports cannot be increased if customs procedures for imported inputs are unwieldy. Exporting in many cases heavily depends on importing (see 2.7.3.3). This point still seems to be missing in the export oriented strategy that the government is adopting (see 2.7.2). Therefore, the solving of this particular issue would positively affect the Egyptian exports performance, not only to COMESA market, but also to the whole world.

8.2.1.2 *Exports services infrastructure*

Inefficient facilitating services have negative impact on exports, such as high transaction costs, crowding out of Foreign Direct Investment (FDI) and distorted investment incentives, negative

impact on the balance of payments, difficulties that face the current domestic reforms and the absence of a competition law (see 2.7.3). The government has started a number of reforms in the services sector mainly through privatisation and allowing FDI to engage in the provision of a number of services. Nevertheless, the reform of the regulatory framework that accompanies such reforms is inappropriate (see 2.7.3.7). Among the most important issues is the necessity for a competition law to assure the prevalence of a fair competitive environment in services sectors and ensure their contestability. Otherwise, there will only be transfer of monopolistic rents from the government to those private monopolies and the improvement in the efficiency of the services provided will remain questionable (see 6.3 and 7.3.2.2).

8.2.1.3 Export promotion agencies

The main target of the governmental export promotion agencies is that the COMESA customer must be informed about the Egyptian products through different ways which are summarised in the following methods: (see 2.7.3.1)

- Establishment of permanent trade fairs in all COMESA countries and different fairs could exhibit different commodities.
- Establishment of permanent exhibitions provided with sufficient storage space.
- The establishment of representative offices for Egyptian exporting companies in all COMESA countries.
- Advertising campaign for the Egyptian products and the RDCs locations for the main importers in the COMESA market.

8.2.1.4 Integration among the Egyptian producers

The problems concerned with the integration between producers still need solutions. Therefore, the government should devote more efforts to enhancing the subcontracting schemes (see 2.7.3.2). For instance, training programmes should be upgraded in order to educate labour among the producers, e.g. small and medium enterprises (SMEs), which should be strengthened. In addition, facilitating the establishment of business brokers' offices and trade companies that integrate the subcontracting relationship between exporters and large producers with SMEs should gain some priority in the Egyptian government's agenda. However, this does not require the direct involvement of the government in the operation of business brokers and trade companies, but it requires collaborative efforts to facilitate their establishment. Consequently, this could be achieved by facilitating the legal procedures needed to implement such projects

and helping in the provision of the necessary information required for the establishment of their databases (see 2.7.3.6).

On the other hand, the duty drawback system should be extended to the indirect exporters who sell their products domestically to exporters, as a method to enhance the backward linkages and strengthen the integration among producers (see 2.7.3.2). Moreover, such a suggestion is expected to remove the competitive disadvantage of domestic suppliers being denied from access to duty free inputs as is the case with other international suppliers in the world markets and it is likely to partially solve the problem of constant merchandise trade balance by increasing the domestic value added of exports.

8.2.1.5 Transport and logistics infrastructure

When it comes to the transport and logistics infrastructure, the government and the Ministry of Transport are upgrading the entire system based on appropriate plans (see 2.7.3.7). Many rehabilitation plans for road and new road networks have been accomplished to serve the movement of products from the main industrial and free zones in Egypt to the main seaports and airports (see 6.2.1). However, the process of developing and upgrading infrastructure is the primary responsibility of the government which requires continuous improvements of transport system capabilities (see 6.3). Moreover, it is important to realise that governmental initiatives or resources alone are not adequate to meet the nation's growing requirements, and private sector participation is necessary. However, it is important to note that government must set policies that will promote and facilitate private investments in infrastructure and make sure that the process becomes an ongoing one (see 7.3.2.2).

The Egyptian government should initiate these changes by implementing practical measures including developing policies in consultation with private sector organisations. In addition, in order to strengthen the linkages between the large state-owned enterprises and upcoming SMEs businesses, such policies would also result in innovation in firm-level supply-side activities that would include many logistics related activities (see 2.7.3).

On the other hand, two shipping routes should be established to serve the Eastern part of Africa especially the proposed locations of the Egyptian RDCs in COMESA countries. The first one directly links Egypt and Djibouti port and the other line links Egypt and Mombasa in Kenya as well as Dar es Salam in Tanzania. The Eastern and Central parts of Africa are considered as a large favourable market for Egyptian exports (see 6.2.2) and (see 7.3.1). The government could finance these shipping routes which would save both costs and time for the exports journey from Egypt to the COMESA market in particular.

A TEU container would only cost US \$700 - 900 instead of at least US \$1600, and the shipping time will be decreased by more the half two weeks instead of six (see 2.7.3.7).

In addition, the Egyptian government can indirectly contribute in the development of transport and logistics infrastructure in COMESA countries by getting involved in infrastructure development programs and projects through providing the necessary expertise and possibly partial funding to complete such projects.

8.2.1.6 Government commercial representatives

There are numerous methods that could be followed to support the Egyptian trade flows to the proposed Egyptian RDCs in COMESA countries (see 2.7.3.1). Leasing of warehousing / distribution centre spaces and exhibition within the free zones in each RDC country is one of the methods to facilitate the Egyptian trade flow to the COMESA countries (see 2.4.4.1). The Egyptian commercial representative offices - which are parts of the Ministry of Foreign Affairs and Ministry of Foreign Trade and Industry in Egypt - in the three RDCs countries would play a significant role in facilitating and activating the RDCs project. The representative offices are able to undertake several investigations and studies about all the administrative and legal aspects of such RDC projects in each RDC country. In addition, there are plans for establishing exhibitions for Egyptian products mainly in the RDCs countries and subsidiaries in each COMESA country.

8.2.1.7 Financial issues facilitation

One of the main significant duties of the Egyptian government is facilitating and simplifying the financial facilities and transactions among Egyptian exporters business to increase their competitiveness. The extension of direct credit to make it eligible to Egyptian exporters by providing pre and post-shipment export finance as well as financing the imports inputs for export development such as equipment, spare parts and raw materials, are some government support to facilitate financial issues. Moreover, providing insurance services covering commercial and non-commercial risks associated with exports can encourage exporters to enter the COMESA market. As for banking and trade related issues, the Egyptian government can promote the development within the COMESA market for bankers' acceptances and other trade documents as well as payment arrangements and clearing houses.

All of the above mentioned suggestions should be carefully considered by the Egyptian government in the financial institutions in Egypt which the exporters deal. In addition, coordination should be implemented with the COMESA banks and with the African Export and

Import Bank (AFREXIMBANK) that conducts the financial transactions of most of the COMESA traders.

8.2.2 Private sector

The private sector comprises many parties that could be included within this part: carriers, exporters, ship owners, shipping lines, freight forwarders, financial institutions and others that are involved in the logistical distribution of Egyptian exports' flows to COMESA market (see 2.2.8.8). Therefore, these private institutions in both the selected countries for the RDCs and Egypt are playing a key role in implementing the RDCs network objectives.

However, the RDCs network is purely a trend of the private sector investment and the role of government is very limited to the legal and governmental agreements framework. Therefore, the private sector business would play an extremely important role in this respect.

In addition, the business firms also have to interact among themselves and innovate within a clear comprehensive strategy for the RDCs network, and they could participate with new ideas and effective solutions for such challenges or specific issues which would positively affect the whole strategy.

The role of the Egyptian government should not be neglected in supporting the relationship with the host countries. Therefore, the RDC could be jointly supported by Egyptian, local and foreign partners by numerous ways such as capital, expertise and technology.

In addition to the financial institutions such as the African Development Bank which has participated in funding many projects among the COMESA business. Moreover, the private sector should conduct several studies and surveys which focus on the overall parties that are getting benefits from such ideas in market. The studies should cover the required equipment, RDCs activities, labour, the market mechanism, the legal aspects, set up costs of the RDC and the location requirements (see 2.2.8.9). Furthermore, the private sector should particularly stress the marketing strategy. The outline of such a strategy contains direct marketing, marketing researches, promotional campaigns, public relations, advertisements, publicities, participating in trade conferences and international, regional and local fairs (see 7.3.3.2).

Therefore, all the previously mentioned tasks should be integrated in order to establish a fair presence in the COMESA market.

The following sequential flow represents the most important issue for the role of private sector towards the effective implementation of the RDCs network (see 2.7.3.4).

In order for the Egyptian RDCs to achieve a competitive presence in the COMESA market; first, it is imperative to conduct *market research* to understand the current and prospective situation of the market growth and dynamics. This stage will efficiently utilise the required marketing campaigns for the RDCs services. Second, the *marketing of the RDCs* services would help the customers and all the industrial parties and traders to be aware of the RDCs business which directly influences the demand for RDCs services from local and international customers doing business in COMESA countries. Third, *creating demand* for Egyptian exports through the RDCs facilities. Once the demand is growing due to the previously mentioned stages it would be possible to control the logistical cost of moving the Egyptian exports from Egypt to the end customer in COMESA. Fourth, *customising the logistical costs*. It is very simple when it comes to distinguish the total price of any product, which consists of the cost of products plus the logistics costs. Therefore, creating the demand for the Egyptian exports then organising the transportation and logistical aspects in order to affect the price of the final product when it reaches the final destination in COMESA markets. This could build up a competitive presence of the Egyptian exports through the proposed network of Egyptian RDCs in COMESA markets (see 2.7.3.4).

However, it should be noted that the private sector companies are always seeking the investment with a rapid Return on Investment (ROI). Therefore, private sector companies in Egypt and COMESA especially the countries proposed to host the three RDCs, should tend to establish joint venture agreements in the market of interest to achieve quick ROI and profits for both parties such as: building long lasting business relationships, increase the credibility by teaming up with other reputable, branded businesses, beating the competition within the market by offering products at lower prices than competitors, gaining referrals from other businesses, overcoming business problems that save valuable time.

This kind of project should impact on activating and proposing development ideas for doing business in COMESA countries in order to ensure the efficiency of doing business and to upgrade the country's current business and infrastructure conditions (see 6.3). Therefore the summary of some the issues to be considered is:

- The proximity to the heavily populated areas in the region and to a large number of delivery points,
- The quality of the infrastructure connecting the region, allowing effective distribution within the areas of RDCs are the major distribution hubs of COMESA with the largest

seaports in the east part of Africa, measured by number of connections, passenger and cargo traffic,

- The integration between different modes of transportation to reduce reloading costs and time and to increase efficiency e.g. major logistics providers are implementing new intermodal transport systems. A new multimodal transport solution is being created at COMESA seaports. The seaports are connected to railways and highways, and located at a very short distance from port facilities. Representation of major third party transport and logistics suppliers that can provide excellent services and outsourcing opportunities. The logistics providers also secure availability of storage facilities and value-adding activities including repackaging, labelling etc.

8.2.3 RDCs in COMESA

The RDCs in COMESA countries has the main source of providing the information for the strategic planners and the policy makers in Egypt regarding the current and potential aspects of the Egyptian exports strategy to the market as well as strategic planning for the RDCs. The RDCs role within the comprehensive export strategy is to examine and fulfil the tasks which have been designed for each RDC. In addition, the RDCs operators are responsible for managing several methods of conducting performance monitoring, such as benchmarking, targeting, monitoring and reviewing the methods which allow building on the positive changes to the RDCs operations. RDCs operators can directly test the feasibility of the plans and strategies designed by the designated authorities and thus can provide an effective feedback to achieve the required goals behind the establishment and performance of the RDCs. However, the activities conducted by the RDCs are subject to change, due to the COMESA market changes which concern the nature of demand on specific products or services.

Issues relating to business risk have been discussed in sections 2.7.4 and 7.3.2.1. Based on these, a categorisation for identifying risks and uncertainties in Egypt's RDCs in the COMESA market is proposed, as follows:

- *Physical*: the actual movement and flow within and between firms, transportation, service mobilisation, delivery movement, storage, and inventories of the RDCs.
- *Financial*: the flow of cash between organisations, incurrence of expenses, and use of investments for the entire RDCs networks.

- *Informational*: the processes and electronic systems, data movement triggers, access to key information, capture and use of data, enabling processes and market intelligence.
- *Relational*: the appropriate linkage between Egypt as a central supplier, the RDCs and its customers for maximum benefit.
- *Innovational*: the processes and linkages across the RDCs, its customers, suppliers, and resource parties for the purpose of discovering and bringing product to market, service, and process opportunities.

In addition, the Egyptian government should consider the political and economic instabilities for the countries which would host the RDCs, as well as outlining the operational aspects of these RDCs by undertaking agreements with the private sector in Egypt of COMESA in order to operate these RDCs under the supervision of the Egyptian government.

8.2.4 Regional and international sources

The co-operation with the regional and international organisations could be useful in facing the challenges of trade developments in COMESA (see 4.2.2). In addition, the assistance from relevant agencies could provide a historical perspective for the development process of the Egyptian export strategy. Therefore, tested knowledge and general guidance as well as sharing the experiences with similar bodies could provide guidance in solving current and potential problems. However, the Egyptian government might again help in this matter to control the scheme of such collaboration (see 2.7.2).

Thus, the experiences of advanced developing nations such as United Kingdom, Netherlands, Germany, United States, and even several Asian countries such as Singapore, China, Malaysia and Japan, which lead in exporting to the international markets as well as applying proper supply chain management distribution principles and the management of the RDCs in particular are likely to be more helpful and support the Egyptian RDCs network idea (see 4.3.2). In addition, these countries' experiences and expertise in this particular area of research could be very useful for the Egyptian policy makers and for the traders in COMESA market as well, especially as USA, UK and the EU all have trade agreements with the COMESA market through the African Growth and Opportunity Act (AGOA) which make market access provisions granted by the EU to COMESA, and the continuing EU agreement grant duty-free and quota-free EU and U.S. market access for most of what COMESA produces. Sharing experiences with concerned people or agencies in these countries would be very helpful in developing practical solutions (see 7.3.2.3 and 4.2.2).

Because of their exposure to the relevant literature, the academics and researchers can play an important role in disseminating knowledge about these experiences.

8.3 KEY FINDINGS

Egyptian exporting parties' performance has revealed many shortcomings and disadvantages which negatively affect the overall performance of Egyptian exports. The shortages are found in the export promotion agencies, the integration among the producers, the Egyptian government's role towards exports, the role of Egyptian research and development centres and labour market competitiveness. In addition to several restrictions affecting the performance of the Egyptian exports, all these issues should be recovered in order to be on the right side which supports the idea of the RDCs network in COMESA. Therefore, the process of upgrading the Egyptian performance system has been based on a schematic model that outlines the comprehensive strategy toward developing and enhancing the performance of Egyptian export flow to the COMESA market through the implementation of the proposed RDCs network.

CHAPTER 9: CONCLUSIONS AND SUGGESTIONS FOR FURTHER WORK

9.1 INTRODUCTION

This chapter presents a summary of the research findings as well as a discussion drawn from these findings. Limitations of the research are stated and the chapter concludes with a suggestion for future research. The main objective of this research is to assess and evaluate the proposal of establishing Egyptian RDCs in COMESA countries in order to boost Egyptian exports to that market. The study was mainly focused on the Egyptian exporters and COMESA importers, in addition to policy makers, freight forwarders, shipping line representatives, and logistics service providers in Egypt and in COMESA region. The research has used the case study research technique, which was strengthened with a wide range of collection and assimilation of information in order to comprehend the process of establishing and selecting Egyptian RDCs network in COMESA countries as well as to investigate the competitiveness of the Egyptian exports within that market and to allow conclusions to be made in a number of related areas. Therefore, in this chapter, section 9.2 highlights the main research findings which are extracted from the analysis of this research and compares it with the mentioned research aims. In addition, section 9.3 demonstrates the main research limitations, and finally, section 9.4 suggests several research areas that were left unanswered concerning the way through which this work may be developed in the future.

In relation to the hypothesis of this research, that the volume of Egyptian exports would be enhanced within the COMESA market through the establishment of a network of RDCs, the research has partially achieved the hypothesis. The research proved that the concept of implementing the RDCs network could be achieved, although it would not fully achieve the stated goals unless certain actions were undertaken. These actions pertain to the development of the logistics infrastructure in the COMESA market to support the inbound and outbound flows of Egyptian exports to and from the RDCs, in the context of COMESA's wider goals.

9.2 CONCLUSIONS

As a result of the work undertaken in this study, a number of important conclusions are made which pertain to Egypt's trade logistics in the COMESA market.

- 9.2.1** The literature offers substantial evidence directly linking improvements in transport and logistics to improvements in export performance. The increasingly complex demands of the international economy have dramatically increased the importance of trade support services. Particularly, these demands stem from integrated global manufacturing and production networks, an increasing need for just-in-time logistics, growing usage of intermodal transport involving one or more modes of transportation (road, air, maritime or rail) and new security considerations. As the demands of the international economy become more complex, processes are required to complete trade transactions, involving multiple steps, a number of players and a range of legal and regulatory frameworks in addition to the technological developments among the trade transactions. With added costs at each step of the process, the quality, cost and efficiency of trade support services will affect the final value of a good at its final destination and its ability to be competitive in global markets.
- 9.2.2** Weaknesses in many developing countries' trade support service sectors contribute to high transaction costs and a limited ability to meet the transport and logistical demands of an increasingly complex global economy, undermining the competitiveness of their exports and ability to take advantage of emerging global market opportunities. In addition, exports shipped from developing countries face comparatively high transaction costs that can be as much as two to three times the cost in developed countries and account for as much as three times the average tariff rate. Therefore, it is imperative that developing countries, international donors and international trade organisations alike implement initiatives that facilitate the provision of lower cost, more efficient and reliable trade support services in developing country trade. With reductions in tariff and non-tariff barriers opening access to key industrial markets, countries that are unable to reduce their transaction costs will find it more difficult to reap the benefits of expanded exports, foreign investment and economic growth.
- 9.2.3** COMESA countries have been experiencing considerable progress in their economic development and reform programs. However, the economies of most COMESA countries remain fragile. Purchasing power is still weak, political disruptions are commonplace, and social unrest and ethnic rivalries continue to constrain development in

several countries. The traditional import basket does not differ much from one COMESA country to another, with manufactured articles being the primary component. Likewise, for a typical COMESA or even African country's exports, primary goods and natural resources form the dominant categories. This situation presents Egypt with both a problem and an advantage. The problem is that for many manufactured commodities, Egypt will find it difficult to penetrate markets that developed countries have already raced to fill. At the same time, Egypt as a COMESA member has the advantage of preferential treatment over these countries, which creates opportunities for a wide range of Egyptian exports. COMESA and African countries are likely to be more willing to increase Egypt's share of their imports when there is likely to be mutual benefit, and this means that Egypt should work towards relocating its own sources of imports of raw materials and primary goods to favour COMESA countries.

9.2.4 Egypt can take a leading role in helping to develop its export flows to COMESA countries by designing a proper practical and legal framework as well as through easing administrative bottlenecks in order to activate the role of the proposed RDCs in COMESA. Therefore, the development of the logistics, distribution operations within the supply chain conditions would have very significant effect on the Egyptian and COMESA economies and on the prosperity of the traders in Egypt and COMESA. Consequently, a sound integrated Egyptian RDCs network in COMESA could bring short term benefits to traders and transport operators, as well as long term consistent structural changes in the supply chain and distribution flows of Egypt's trade to the market.

9.2.5 Due to the lack of efficient logistical systems in COMESA countries, the economic integration might force the issue following full implementation of the COMESA FTA with considering the RDCs network involvement in strengthening trade between Egypt and the COMESA bloc. The distribution flows of Egyptian exports should be a systematic approach to Egypt's trade efficiency and competitiveness. Moreover, this approach calls for an integrated view of all relevant trade and logistics related issues in Egypt. Thus, international competition and expansion of geographical markets have forced manufacturers to focus on integrated production and logistics strategies in order to reduce costs, and at the same time, to obtain higher service standards. The need to control logistical costs has become as important as the need to keep down other production costs.

- 9.2.6** The idea of distributing Egyptian exports to COMESA countries through the RDCs is based on the idea that Egypt is the central supplier which would deliver the exports to the three main RDCs in the region. Kenya, Djibouti and Tanzania are the selected countries to host the Egyptian RDCs. The locations of these RDCs have been selected based on certain criteria to meet the objectives of implementing the RDC concept i.e. redistributing the Egyptian exports to distribution centres within the COMESA market to meet the customers' requests. Moreover, the proposed network of Egypt's RDCs and the served countries by each RDC have been examined in three stages starting from the manufacturers' places in Egypt until the place of consumption through the RDCs in COMESA countries. This is in order to reveal the hindrances which might face the flows of the Egyptian exports.
- 9.2.7** The analysis which has been based on the questionnaires and interviews on relative importance of location determinants for RDCs reveals that the COMESA market and service related factors such as market size and growth potential, geographical location and market accessibility, transport facilities, political and economical stabilities, skilled labour, flexible government, and logistics service providers are more important issues than other factors. Moreover, among these critical determinants, market size and transport infrastructure capabilities are major driving forces for RDCs locations in the COMESA market. Similar findings are also obtained from several interviews with senior managers and government officials in Egypt. These results suggest that Egypt wishing to build major logistics hubs or RDCs in the COMESA region needs to begin its efforts by targeting strategically important industries, for which the size of the domestic market is large enough to provide economic incentives for Egyptian exports to locate RDCs, firstly to serve the domestic market and then to expand its business activities involving other countries in the region as time passes.
- 9.2.8** Results from the questionnaire analyses indicate that the Egyptian exporters and COMESA importers generally prefer Kenya and Djibouti more than Tanzania as appropriate locations for centralised RDCs. In fact, Kenya has attracted the greatest number of responses for consolidated RDC among COMESA countries. This means that the selection of Kenya was successful to host Egyptian RDCs in the region. In addition, Djibouti, and Tanzania came second as preferable locations for the RDCs especially Djibouti. This is due to serving Ethiopia which is considered as one of the major markets for consumption in the region. Moreover, Tanzania as a former COMESA member received fair support from the respondents. For that reason the

author strongly supports the selection of Tanzania beside Kenya and Djibouti, in order to have three dominant locations which could adequately serve all COMESA countries, specially the southern landlocked countries of COMESA where the selection of Tanzania was essentially based on this purpose. In addition, the capabilities of Tanzania were fairly similar to the capabilities of Kenya.

9.2.9 There is no single local or foreign company or organisation that has established a highly consolidated RDC that can serve the entire COMESA market. Although the current trend of globalisation forces multinational companies to consolidate warehouses and distribution centres located in each country into fewer distribution centres that serve a much wider geographic area, there still exist some opposing pressures such as difference in local customer preferences and government conditions. However, in the case of Egypt and COMESA, these issues have been overcome effectively. The COMESA importers questionnaire showed that many importers from different COMESA countries have agreed on the proposed idea and selected locations for the Egyptian RDCs in Kenya, Djibouti and Tanzania for serving customers in the COMESA market.

9.2.10 Egypt and COMESA countries have much to gain from improving the efficiency of trade logistics infrastructure. The experience of other countries which have successfully improved trade logistics systems suggests that a strong logistics and supply chain management system could support the existing trade initiatives and enhance the potential benefits from trade agreements. However, this requires a sequence of actions at national and regional levels:

- *At the country level*, building an efficient logistics system requires concerted efforts on the part of governments and the private sector to jointly identify and resolve potential problems in transport infrastructure, information flows and others. This process can be launched through three crucial steps: preparation and introduction of a national transport strategy, integration of institutions to better link trade and transport reforms. Moreover, less urgent actions include continued focus on efforts to increase the volume of exports through attention to the macroeconomic framework as well as more focused initiatives such as matching grant programmes to improve export potential at firm and industry level. In addition, efforts to support the development of shipping associations and market entry by trade intermediaries would also help to address the problem of low export shipment volumes. At the same time, such measures

would help to create a broader constituency for support to launch more difficult reforms, such as encouraging entry into port and airfreight service sectors and reorientation of customs authorities. Simultaneously, efforts should be focused on ensuring easy and reasonable access to institutions for testing and improving product quality. These efforts could be complemented by working with the insurance industry to help improve coverage and harmonisation of carrier insurance and promoting the wider use of information and communication technology in trade processes.

- *At the regional level*, a strong network to facilitate transport would be an important asset for Egypt and COMESA traders and investors. As globalisation increasingly places production systems in competition with each other, firms which can effectively source materials and export products through neighbouring countries will have an essential advantage over those which cannot, as well as national economies that would benefit from the stronger performance of exporting firms.

9.2.11 A comprehensive strategy outlined in a schematic model of the RDCs network comprised of five basic dimensions which are the government, private sector, RDCs in COMESA, academics and researchers, and regional/international sources. This strategy is based on assessing several issues regarding the performance of Egyptian exports including the exporting bodies which are dealing with this particular issue. This proposed comprehensive strategy aims at developing and enhancing the performance of Egyptian exports flows to the COMESA market through the implementation of the Egyptian RDCs network.

9.2.12 The Egyptian government, the RDCs, and the governments of Kenya, Djibouti and Tanzania are required to ensue that there is a comprehensive framework for identification and management of risks and to develop approaches that further integrate risk management processes. The risks could be political, economical, social or even technological, which have to be overcome by certain contingency plans according to arising circumstances. This could be organised by having integrated regulatory and compliance advisory capabilities to cover a broad range of risk management and compliance issues, including the co-development of risk policies and procedures for oversight and management of risk. In addition, compliance related monitoring tools, business practice compliance and internal risk reporting should be established.

9.2.13 A national advertising and marketing plan should be launched utilising all the COMESA media, promoting and marketing Egyptian goods and services. This strategy could be in part financed by the Egyptian government and partly by the private companies involved. On the other hand, the Egyptian media should be utilised to enlighten the Egyptian business communities about the opportunities in COMESA for Egyptian industries, construction, investment and export of technical know-how and labour. For instance the Egyptian company Kato Aromatic group, in Kampala, Uganda, has established a permanent exhibition, displaying a wide range of Egyptian commodity groups for a nominal annual fee. In addition, it also provides relevant market data for the commodities displayed. Moreover, three marketing campaigns are launched annually via local media of Egyptian products. The Kato Aromatic group has made an agreement with a private TV channel under the auspices of the Egyptian embassy in Uganda to broadcast Nile TV programmes for six hours daily, along with advertisements for Egyptian producers and investors, in addition to the coordination with commercial representatives that belongs to the Egyptian embassies in COMESA countries.

9.2.14 The emergence of reliable and competitive time logistics services can contribute to, and foster, new trading opportunities as well as increased competitiveness. A better awareness on the part of all concerned is probably a key element for the development of an integrated logistical approach within the RDCs network. In addition, appropriate technical assistance in creating this awareness and implementing the necessary changes may be another. Therefore, it is necessary to develop policies and strategies to sustain growth and maintain competitiveness for Egyptian export flows through the RDCs in COMESA countries. This is a vital issue, when considering the integrated logistical approach which must encompass not only the economic, commercial and operational aspects of the international movement of goods, but also all issues related to the facilitation of trade and the responsibility for transporting goods from the place of origin to the final place through the RDCs. Moreover, trading opportunities would be improved by implementing such integrated supply chain operations among the RDCs in COMESA, and by an appropriate legal environment that stimulates the provision of efficient local logistical services by taking advantage of international joint ventures.

9.3 LIMITATIONS OF THE RESEARCH

The main focus of the research was to assess the establishment of the Egyptian RDCs network to support Egyptian export flows with a particular emphasis on COMESA countries. The scope of the research was limited in seven ways:

- The research has considered an overall review of exported Egyptian products to the COMESA countries rather than focusing on certain specific Egyptian products.
- The geographical setting of the research mainly focused on COMESA countries with Egypt at the centre of the study.
- The research has not considered the overlapping of Egypt's memberships between the COMESA and the other regional trade agreements.
- The location decision criteria for the Egyptian RDCs in this study are not addressing specific products or their characteristics which might influence location decisions.
- It focused on a pre-determined sample of Egyptian exporters and COMESA importers while taking into consideration the logistics service providers from both sides. The data collected is only representative of Egypt and COMESA businesses involved in international trade and transit.
- It was mainly limited to road, rail and maritime transport within the COMESA countries, rather than inland waterway and air transport. This research did not include a detailed investigation of these two former modes of transport due to their high costs and limitations in transporting small volumes of goods from/to Egypt and COMESA countries.
- The research did not delve into the managerial and operational aspects of the RDCs nor into the distribution stage of the Egyptian exports between the RDCs and end customers in the COMESA market.
- The Likert ratings for evaluating proposed RDCs in COMESA and its benefits and characteristics of Egyptian products did not provide an indication of the possible trade-offs that traders from both sides (the Egyptian exporters and COMESA importers respondents) were prepared to make between modal choice variables.

There were many difficulties involved in the search for relevant data with regard to COMESA trade indicators and market demands. Furthermore, the obsolete, unavailability and incomplete data sets, as well as the confusing data values and complete lack of data in some cases was challenging to the researcher.

The political situation in some of COMESA countries involved in the study also created many barriers to data collection, as many government agencies were unwilling to release their operating procedures and practices, governmental agencies such as: Ministries of Transport and Foreign Trade, port authorities and Customs of COMESA countries.

Data collected from international organisations and private enterprises were also quite bureaucratic to obtain, as much of the data required for this research is considered commercially sensitive.

These private enterprises and companies consisted of manufacturers, exporters, importers, freight forwarders, transport operators and shipping lines. On the other hand, some international organisations were very helpful in providing updated data and special reports, as well many free online studies were available and contained informative data regarding Egypt and COMESA countries.

As the main body of data was collected from Egypt and COMESA traders, Egyptian government officials, Egyptian exporters and logistics operators, caution must be exercised when making broad generalisations based on this study.

The author also gathered data from government officials, COMESA importers, and transport providers from several COMESA countries in order to understand the competitiveness of Egyptian exported products as well as the transport and distribution procedures between Egypt and COMESA countries among the selected RDCs. The results derived from the empirical study may not be generalised because of the sampling frame's constraints.

The empirical evidence included in this research was conclusive mostly in relation to the Egyptian traders, policy-makers, logistics operators and, to a certain extent, regional policy makers involved in trade facilitation. Nonetheless, the methodology used for this research can be considered a valid option for further studies.

9.4 SUGGESTIONS FOR FUTURE RESEARCH

This research has shown that, through a systematic evaluation of the flows of Egyptian exports from Egypt to each COMESA country through the selected RDCs, a number of issues were left un-answered such as the logistical procedures of the main competitors to Egypt in COMESA e.g. China, UK, EU, USA, Singapore or the possible use of air and inland waterways between the three main RDCs and the surrounding countries. It is hoped that this study will provide a foundation for research in transport, logistics and regional trade, especially in Eastern and Southern of Africa. Therefore, there are some suggested ideas for possible future research, summarised as follows:

- To measure the efficiency and competitiveness of transport corridors in COMESA countries with comparable constraints of access and low economic development.
- To undertake a detailed marketing investigation about the preferences of the COMESA customers and compare it with what/ how is actually supplied from different suppliers/ countries in COMESA market.
- The methods to improve multimodal transport with the logistics decision-making within the COMESA trades.
- To understand the factors involved in freight forwarders' supply chain design and planning processes.
- To explore the reasons of reduced competitiveness of Egyptian products within the global supply chain reliability.
- To outline marketing strategies for promoting Egyptian exports in Africa and COMESA in particular.
- The methods to effectively operate the Egyptian RDCs, taking into consideration achieving the high standards of operations management and the limited capabilities in some COMESA countries.
- To observe the Egyptian policy makers' points of interests in the COMESA market and to undertake research investigations pertaining to these points of interests. This in turn could support them in formulating feasible policies to this market.

This list is only a suggestion for possible future research. There are more areas that need to be researched further, even within the context of Egyptian export performance and the methods by which distribution and supply chain principles can have an impact on it. An area of considerable interest could also be the proportion of costs tied-up in sea transport, road transport, rail transport, and ports between Egypt and COMESA or in other countries or regions. In addition, the logistics and distribution of Egyptian exports could be used as a methodology to benchmark logistics performance within regions, between regions, within countries, between countries, and on a continental or a global scale.

On the other hand, academics and researchers could participate to provide a comprehensive perspective and independent empirical analysis on the practical and operational issues regarding the management of the RDCs network in COMESA under a general improvement of Egyptian exports performance. Thus, R&Ds in public or private organisations as well as the Egyptian government and private sector should participate in shaping policies and outlining potential plans to guarantee the overall performance of Egyptian exports.

Moreover, Egyptian academics and researchers could undertake studies to evaluate existing export performance, its structure, operation, strengths and weaknesses not only in COMESA but also in the world. Therefore, these kinds of empirical studies could be the basis of a framework for the determination of the gap between the existing and the desired performance of Egyptian exports. Once a framework is in place, the researchers and academics in conjunction with the professionals from business and industry can conduct in depth research to find ways and means to bridge the gap.

Furthermore, the research findings can also be used as inputs to decision making regarding the design of Egyptian exports at several levels. In Egypt, there is a wide range of demand for education and training in supply chain and logistics management programmes and its impact on the exports industry. Thus, academics and researchers could play a very significant role in satisfying research and particular studies demand.

Finally, the researcher used various techniques in the study and recommends their use for other areas and applications as it assisted in achieving the following:

- Unstructured interviews allowed the researcher to conduct more flexible interviews in terms of defining new ideas for the research and allowed him to collect data from professionals in the industry.
- Conducting the questionnaires through the internet was a very effective method to reach

the target sample and acquire the required data from the COMESA market itself.

- Adopting the location decision criteria model from Duijvendijk *et al.* (2003), which was used in locating the optimal locations for RDCs in the EU, helped the researcher in applying the same concept in locating the Egyptian RDCs in the COMESA market, taking into consideration the differences pertaining to the characteristics of the two markets. This location decision criteria model can be further adopted in other studies targeting other markets.
- Developing a schematic model helped the researcher in outlining all the required actions that should be taken regarding the development of the research area and achieving its goals.

REFERENCES

- ABDEL-BAKI, S. (2003) *Common Market for Eastern & Southern Africa*. Economic and Trade Division, Royal Netherlands Embassy in Cairo, (2-02-7368752).
- ABDEL-FADIL, M. (2000) *Profits Pass Through Here*. [online] Cairo: Al-Ahram Weekly. Available at: <http://weekly.ahram.org.eg/2000/474/op5.htm> [Accessed 6th August 2005]
- ABDEL-LATIF, A., AND NUGENT, J. (1996) Export Promotion Policies: Transaction Costs and Export Channel Choices in Egypt. *Contemporary Economic Policy* 14 (4), 1-14.
- ABDEL-MONEM, A. (2005) Creating of non traditional financing sources for the railways projects - COMESA case. In The 12th scientific seminar of The Arab Union of Railways, September, 18- 21, 2005. Khartoum, Sudan.
- ACKERMAN, K. (2004) Understanding today's distribution center, *Ackerman Warehouse Forum* 19 (11), 1-6.
- ADB (2003) *Globalization and Africa's development*. Abidjan: African Development Bank.
- AFREXIMBANK (2003) *African Trade Report 2003 - Leveraging Emerging Opportunities in a Changing World*. Cairo: African Export-Import Bank.
- AIR TRANSPORT ACTION GROUP (2000): *The Economic Benefits of Air Transport*, ATAG publications, Geneva.
- AIRPORTS COUNCIL INTERNATIONAL (2002) *Airport Economic Survey*, Geneva: ACI publications.
- AKKERMANS, H. BOGERD, P., AND VOS, B. (1999) Virtuous and vicious cycles on the road towards international supply chain management. *International Journal of Operations and Production Management* 19 (6), 565-581.
- AL FALAH, K., ZAIRI, M., AND AHMED, A. (2003) The role of supply chain management in world class manufacturing - An empirical study in the Saudi context. *International Journal of Physical Distribution & Logistics Management* 33 (5), 12-20.
- ALEXANDER, C. AND SHEEDY, E. (2004) *The professional risk managers' handbook: A comprehensive guide to current theory and best practice*. 1st ed. Wilmington, DE: PRMIA Publications.
- ALEXANDRIA PORT AUTHORITY (2005) *Annual report*. APA-EMTS.
- ALPAR, P. (1989) The role of information systems in entrepreneurial firms. *Research Centre of Information Management*, Chicago, Illinois University.
- AMERICAN CHAMBER OF COMMERCE IN EGYPT (1996) African markets and Egyptian exports. BSAC, (ACCE/02/1996 publication).
- AMERICAN CHAMBER OF COMMERCE IN EGYPT (2000) *Exporting to COMESA and South Africa*. BSAC, (ACCE/02/2000 publication).
- AMERICAN CHAMBER OF COMMERCE IN EGYPT (2004) *Information Technology in Egypt*. BSAC, (ACCA7/2006).

- AMERICAN CHAMBER OF COMMERCE IN EGYPT (2005) *Egypt and COMESA*. BSAC, (ACCE/12/2005 publication).
- AMERICAN CHAMBER OF COMMERCE IN EGYPT (2006) *African trade relationships*. BSAC, (ACCE5/2006).
- AMJADI, A., AND YEATS, A. (1995) *Have transport costs contributed to the relative decline of African exports? Some preliminary evidence*. Washington DC: World Bank.
- ANDERSON, J. AND NARUS, J. (1990) A model of distribution firm and manufacturing firm working partnerships. *Journal of Marketing* 54 (1), 42-59.
- ANYANGO, G. (1997a) *Comparative transportation cost analysis in East Africa*. Nairobi: Office of Sustainable Development-USAID, (Technical Paper No. 22).
- ANYANGO, G. (1997b) *Comparative Costs of Transport: The Northern Tier Countries of the Greater Horn of Africa*. Nairobi: Office of Sustainable Development-USAID, (Technical Paper No. 60).
- ARABIC NEWS (2005) *Egypt's Exports to COMESA Countries up to \$372 Million*. [online] Cairo: Arabic News. Available at: <http://www.arabicnews.com/ansub/Daily/Day/050705/2005070540.html> [Accessed 16th July 2005]
- ARSHAM, H. (1994) *Questionnaire design and surveys sampling*. [online] Baltimore: The University of Baltimore. Available at: <http://home.ubalt.edu/ntsbarsh/stat-data/Surveys.htm> [Accessed 17th June 2006]
- ARTEY, E., AND ODURO, A. (1996) *Regional Integration Efforts in Africa: An Overview*. In J.J. Taunissen (ed). *Regionalism and the Global economy: The Case of Africa*. The Hague, FONDAD.
- ARYEETEY, E. (1997) *Sub-Saharan Experiences with Regional Integration. Trade Reform and Regional Integration in Africa*. Washington DC: IMF, WP/79/215.
- ARYEETEY, E. (2000) Regional integration in east Africa. *OECD Development Centre* 7 (4), 45-50.
- AZIM, A., AND WAHBA, K. (2002) *Impact of marketing mix on exports of Egyptian textiles using a System Dynamics approach*. Paper presented at 20th International Conference in Systems Dynamics, Palermo, Italy. 28-2 August, 2002.
- AZIM, A., AND WAHBA, K. (2004) *Boosting the Egyptian exports: towards developing a comprehensive system dynamics based tool for international market selection*. Paper presented at 22nd International Conference in Systems Dynamics, Oxford, UK. 24-29 July 2004.
- BAKER, P. (2004) Aligning distribution centre operations to supply chain strategy. *The international Journal of Logistics Management* 15 (1), 111-123.
- BALLOU, R. (2004) *Business Logistics/ Supply Chain Management*. 5th ed. New Jersey: Prentice Hall.

- BAMFORD, C. (1999) *The internationalization of logistics in Great Britain*. In Waters, D (Eds), *Global Logistics and Distribution Planning: Strategies for Management*. 4th ed, Kogan Page, London, pp.301-313.
- BANTHAM, J., CELUCH, K. AND KASOUF, C. (2003) A perspective of partnerships based on interdependence and dialectical theory. *Journal of Business Research* 56 (1), 265-74.
- BENJAMIN, R., ROCKART, J., SCOTT MORTON, M., AND WYMAN, J. (1984) Information technology: a strategic opportunity. *Sloan Management Review* 25 (3), 3-10.
- BENSON, D., AND WHITE HEAD, G. (1985) *Transport and distribution*. London: Longman.
- BERGSTEN, C. (1997) *Open Regionalism*. [online] Washington, DC: Institute for International Economics. Available at: <http://www.iie.com/publications/wp/wp.cfm?researchid=152> [Accessed 30th June 2006]
- BERNON, M., MENA, C., TEMPLAR, S., AND WHICKER, L. (2003) *Costing waste in supply chain processes: a European food and drink industry case study*. Proceedings of the 10th International EurOMA Conference Operations Management and the New Economy, Cernobbio, Italy, June 16th-18th, vol. 1. pp. 345-354.
- BEST, A. (2001) Creating a pan-European distribution strategy. *Logistics and Transport Focus* 3 (9), 46-47.
- BHASKARAN, S. (1998) Simulation analyses of a manufacturing supply chain, *Decision Sciences* 29 (3), 633-657.
- BHATNAGAR, R., JAYARAM, J. AND PHUA, Y. C. (2003) Relative importance of plant location factors: across-national comparison between Singapore and Malaysia. *Journal of Business Logistic*. 24(1), 147-170.
- BIGRAS, Y., AND GELINAS, R. (2004) The characteristics and features of SMEs: favourable or unfavourable to logistics integration. *Journal of Small Business Management* 42(3), 263-270.
- BINDER, M., AND CLEGG, B. (2006) A conceptual framework for enterprise management. *International Journal of Production Research* 44 (18-19), 3813-3829.
- BINDER, M., AND CLEGG, B. (2007) Enterprise management: A new frontier for organisations. *International Journal of Production Economics* 106 (20), 409-430.
- BOEY, S. (2003) *Logistics can Boost Trade*. [online] Petaling Jaya: The Satr. Available at: <http://www.bus.tu.ac.th/usr/ruth/misc/logistic.html> [Accessed 21st January 2007]
- BORSODI, R. (1927) *The distribution age*. New York: D. Appleton.
- BOUNDS, G., AND STAHL, M. (1991) *Competing Globally through Customer Value: The Management of Strategic Suprasystems*. New York: Quorum Books.
- BOWERSOX, D., AND CLOSS, D. (1996) *Logistical management*. Singapore: McGraw-Hill publishing.
- BOWERSOX, D., AND DAUGHERTY, P. (1995) Logistics paradigms: the impact of information technology. *Journal of Business Logistics* 16 (1), 65-80.

- BOWERSOX, D., CLOSS, D., AND HELFERICH, O. (1996) *Logistical Management*, 3rd ed. New York: Macmillan.
- BOWERSOX, J., CLOSS, D. AND COOPER, M. (2002) *Supply Chain Logistics Management*. Singapore: McGraw Hill Publishing.
- BOYNTON, P., AND GREENHALGH, T. (2004) *Selecting, designing, and developing your questionnaire*. [online] Oxford: BMJ Journals. Available at: <http://bmj.bmjournals.com/cgi/content/full/328/7451/1312> [Accessed 17th June 2006]
- BRANCH, A. (2000) *Export practice and management*. 4th ed. London: Thomson Learning.
- BROOKE, M. (2005a) *RFID: common mistakes*. [online] New York: RFID Journal. Available at: <http://www.rfidjournal.com/article/articleview/1483/1/128/> [Accessed 4th September 2005]
- BROOKE, M. (2005b) *RFID in supply chain: uncommon best practices*. [online] Irvine: Avatar. Available at: <http://www.avatarpartners.com/newscenter.htm> [Accessed 4th September 2005]
- BRUCE, J. (2003) Precision guided logistics. In the proceedings of: *Industrial College of the Armed Forces Strategic Supply Seminar*, Washington, DC, May 9, Vol.1, page 54.
- BRYNJOLFSSON, E., AND HITT, L. (1996) Paradox lost? Firm-level evidence on the returns to information systems spending. *Management Science* 42 (4), 541-558.
- BURNS, R. (2000) *Introduction to research methods*. 4th ed. Frenchs Forest: Pearson Education.
- BURRELL, D., AND GHONEIM, A. (2004) *Constraints to trade facilitation in Egypt*. U.S. Agency for International Development, Cairo: TAPR Project.
- BURSTEIN, A., NEVES, J., AND REBELO, S. (2003) Distribution costs and real exchange rate dynamics during exchange-rate-based-stabilizations. *Journal of Monetary Economics* 50 (6), 1189-1214.
- BYRNE, P., AND HEAVEY, C. (2006) The impact of information sharing and forecasting in capacitated industrial supply chains: a case study. *International Journal of Production Economics* 103 (1), 420-437.
- CABANIUS, P. (2003) *Improvement of Transit Systems in central Africa*. New York: UNCTAD, (UNCTAD/LDC/2003/7).
- CAMBRIDGE SYSTEMATICS, INC (2005) *Traffic congestion and reliability trends and advanced strategies for congestion mitigation*. Cambridge Systematics, Cambridge, Massachusetts.
- CARLSONA, L., AND YAOB, A. (1996) A visually interactive expert system for a distribution center environment. *International Journal of Production Economics* 45 (1), 103- 111.
- CARRUTHERS, R., BAJPAI, J. AND HUMMELS, D. (2002) Trade and logistics: An East Asian perspective. *Workshop at the Institute for Southeast Asia Studies*, Singapore.

- CARSON, R., AND MITCHELL, R. (1989) *Using surveys to value public goods: the contingent valuation method*. Washington, DC: The Johns Hopkins University Press.
- CASSING, J. (1998) *Enhancing Egypt's exports*. Cairo: Nathan Associates Inc. USAID/Egypt DEPRA Project.
- CENTRAL INTELLIGENCE AGENCY (2005) *The world fact book*. Washington, DC: CIA.
- CENTRAL INTELLIGENCE AGENCY (2006) *The world fact book*. Washington, DC: CIA.
- CENTRAL INTELLIGENCE AGENCY (2007) *The world fact book*. Washington, DC: CIA.
- CHAMPY, J., AND HAMMER M. (1993) *Re-engineering the corporation*. London: Harper Collins.
- CHAPMAN, R., SOOSAY, C., AND KANDAMPULLY, J. (2003) Innovation in Logistic Services and the New Business Model. *International Journal of Physical Distribution & Logistics Management*, 33 (7), 112-125.
- CHOI AND HARRIGAN (2003) *Handbook of International Trade*. London: Blackwell.
- CHOPRA, S., AND MEINDL, P. (2004) *Supply chain management: strategy, planning, and operations*. 2nd ed. New Jersey: Prentice-Hall.
- CHOW, G., HEAVER, T. AND HENRIKSSON, L. (1995) Strategy, structure, and performance: a framework for logistics research. *Logistics and Transportation Review* 31 (4), 285-308.
- CHRISTENSEN, S., AND KOHLS, J. (2003) Ethical decision making in times of organisational crisis. *Business and Society* 42 (3), 328-358.
- CHRISTOPHER, M. (1998) *Logistics and supply chain management: Strategies for Reducing Cost and Improving Service*. 2nd ed. London: Prentice-Hall.
- CHRISTOPHER, M. (2002) *Global supply chain strategy debate*. [online] Johannesburg: The Gordon Institute of Business Science. Available at: <http://www.gibs.co.za/home.asp?pid=125&toolid=2&itemid=404> [Accessed 27th March 2005]
- CHRISTOPHER, M. AND JUTTNER, U. (2000) Developing strategic partnerships in the supply chain: a practitioner perspective. *European Journal of Purchasing and Supply Management* 6 (1), 17-27.
- CHRISTOPHER, M. AND LEE, H. (2001) *Supply Chain Confidence The Key to Effective Supply Chains Through Improved Visibility and Reliability*. Vastera, Inc.
- CMA-CGM (2006) *Schedules*. [online] Alexandria: CMA-CGM Website. Available at: <http://www.cma-cgm.com/business/lin/line.asp> [Accessed 16th June 2006]
- COMESA (2000) *Eastern and Southern Africa*. Paper presented at Transit Transport Seminar Mombasa, Kenya, 13 - 17 November 2000.
- COMESA (2004) *COMESA annual report 2004*. Lusaka: COMESA.

- COMESA (2005) *COMESA annual report 2005*. Lusaka: COMESA.
- COMESA (2006) *COMESA annual report 2006*. Lusaka: COMESA.
- COMESA (2007) *COMESA Member States*. [online] Lusaka: COMESA. Available at: <http://www.comesa.int/countries> [Accessed 27th June 2007]
- COMESA, ECA, PMAESA, SATCC AND TTCA (2000) *Transit transport seminar for Eastern and Southern Africa*. Mombassa, Kenya. 13-17 November 2000.
- COOPER, C., LAMBERT, M., AND PUGH, J. (1997) Supply chain management: more than a new name for logistics. *The International Journal of Logistics Management* 8 (1), 2-10.
- COOPER, D. AND EMORY, C. (1995) *Business research methods*, Chicago: Irwin.
- COPACINO, W. (1997) *Supply chain management: the basics and beyond*. Boca Raton FL: St. Lucie Press.
- COUNCIL OF SUPPLY CHAIN MANAGEMENT PROFESSIONALS (2007) *Supply chain visions, logistics terms and glossary*. Washington, DC: CSCMP, (UDAT/02/2005).
- COWMAN, K. (2005) *SCM: What is it?* [online] Alexandria: Pronto-North America. Available at: http://www.prontoerp.com/continuous_improvement4.htm [Accessed 9th April 2005]
- COYLE, J., BARDI, E., AND LANGLEY, C. (2003) *The management of business logistics. A supply chain perspective*. 7th ed. Ohio: Southwestern Publishing.
- CULLEN, J., JOHNSON, J. AND SAKANO, T. (2000) Success through commitment and trust: the soft side of strategic alliance management. *Journal of World Business* 35 (3), 223-40.
- DADZIE, Q. (1990) Transfer of logistics knowledge to Third World countries, *International Journal of Physical Distribution & Logistics Management* 20 (9), 10-16.
- DAMIETTA PORT AUTHORITY (2005) *Fact book 2005*. DPA-EMTS.
- DANIELS, J., RADEBAUGH, L AND SULLIVAN, D. (2004) *International business: Environments and operations*. 10th ed. New Jersey: Prentice Hall.
- D'ARCY, S. (2001) Enterprise Risk Management. *Journal of Risk Management of Korea* 12 (1), 1-25.
- DAS GUPTA, D. AND NABLI, M. (2003) *Trade, Investment and Development in the Middle East and North Africa*. [online] Washington DC: World Bank. Available at: <http://www.netlibrary.com/Search/SearchResults.aspx> [Accessed 22nd February 2005]
- DAVID, F. (2005) *Strategic Management: Concepts and Cases*, 10th ed. Prentice Hall, New Jersey.
- DAVID, P. (1990) The dynamo and the computer: An historical Perspective on the modern productivity paradox. *The American Economic Review* 80 (2), 355-361.
- DAYA, Y. (2007) *Trade potential between South Africa and Angola*. Pretoria: Directorate International Trade: Trade Research Desk, (DIT-TRD/March 07).

- DE TONI, A., AND TONCHIA, S. (2003) Strategic planning and firms' competencies: Traditional approaches and new perspectives. *International Journal of Operations & Production Management* 23 (4), 947-976.
- DEARDORFF, A. (1998) Determinants of bilateral trade: Does gravity work in a neoclassical world?. In J.A. Frankel (ed.): *The Regionalization of the World Economy*, Chicago: Chicago University Press, 7-22.
- DEARDORFF, A. (2006) *The Terms of Trade and Other Wonders*. [online] Michigan: university of Michigan. Available at: <http://www-personal.umich.edu/~alandear/glossary/> [Accessed 30th June 2006]
- DECE (2006) *Regional integration arrangements-Mediterranean region*. Cairo: Delegation of the European Commission in Egypt (DECE).
- DEPARTMENT OF DEFENSE (2005) *Strategic Supply*. [online] Washington, DC: National Defency University. Available at: <http://www.ndu.edu/icafe/industry/IS2003/papers/2003%20Strategic%20Supply.htm> [Accessed 31st August 2005]
- DEVARAJ, S., AND KOHLI, R. (2003) Performance impacts of information technology: is actual usage the missing link. *Management Science* 49 (3), 273-289.
- DEVLIN, J., AND YEE, P. (2005) Trade logistics in developing countries: the case of the Middle East and North Africa. *The World Economy* 28 (3), 435-456.
- DINCER, O., TATOGLU, E., AND GLAISTER, K. (2006) The strategic planning process: evidence from Turkish firms. *Management Research News* 29 (4), 206-219.
- DIXIT, A., AND NORMAN, V. (1980) *Theory of International Trade: A Dual, General Equilibrium Approach*. London: Cambridge University Press.
- DJANKOV, T., FREUND, C., AND PHAM, C. (2006) *Trading on Time*. The World Bank, Washington, DC.
- DOUGLAS M., AND LAMBERT, L. (2002) *Supply chain management: A key to achieving business excellence in the 21st century*. New York: CLM Publications.
- DUIJVENDIJK, P., HUITEMA, F., LENDERS, R., PRONK, D AND PLANTE, M. (2003) *EU enlargement: European distribution centres on the move? implications for European distribution structures resulting from the 2004 EU enlargement*. A Cap Gemini Ernst & Young (CGE&Y) production, Utrecht, Netherlands.
- DUTTA, G., FOURER, R., MAJUMDAR, A. AND DUTTA. D. (2007) An optimization-based decision support system for strategic planning in a process industry: The case of a pharmaceutical company in India. *International Journal of Production Economics* 106 (1), 92-103.
- DYER, J. (2000) *Collaborative advantage*. London: Oxford University Press.
- ECONOMIC COMMISSION OF AFRICA (2004a) *Accelerating regional integration in Africa*. Addis Ababa: ECA.

- ECONOMIC COMMISSION OF AFRICA (2004b) *ECA prospectus 2004*. Addis Ababa: ECA.
- ECONOMIC COMMISSION OF AFRICA (2004c) *Economic report on Africa - unlocking Africa's trade potential. ECA prospectus 2004*. Addis Ababa: ECA.
- ECONOMIC COMMISSION OF AFRICA (2006) *Trade Facilitation to promote Intra-African Trade*. [online] Addis Ababa: Committee on Regional Cooperation and Integration. Available at: http://www.uneca.org/crci/trade_facilitation.htm
[Accessed 23rd October 2006]
- EGYPTIAN MARITIME TRANSPORT SECTOR (2006) *Egyptian ports*. [online] Cairo: EMTS-Ministry of Transport. Available at: <http://www.mts.gov.eg/>
[Accessed 9th April 2006]
- EIA (2007) *International Electricity Consumption*. [online] Washington, DC: Energy Information Administration. Available at:
<http://www.eia.doe.gov/emeu/international/electricityconsumption.html>
[Accessed 23rd January 2007]
- EL-FIQI, M. (1999) *Boosting Trade with Africa*. [online] Cairo: Al Ahram Weekly. Available at: <http://weekly.ahram.org.eg/1999/426/ec2.htm> [Accessed 22nd April 2004]
- EL-KADY, S. (2005) *The international trends for developing maritime transport and the Seaports*. [online] Cairo: EMTS-Ministry of Transport. Available at:
http://www.mts.gov.eg/English/documents/pdf/paper_adm-shereen.pdf
[Accessed 9th April 2006]
- ELLIS, S. (1997) *Rapid appraisal techniques for identifying maintenance priorities on low Volume roads*. Transport Research Laboratory, PR/OSC/122/97.
- EL-NAKIB, I. (2003) *The integration of logistical activities to support the competitive status of Egypt's foreign trade with COMESA countries*. MSc Thesis. Arab Academy for Science, Technology and Maritime Transport.
- EL-NAKIB, I. (2004) The impact of logistics trends on the maritime industry: the COMESA case. *Maritime Transport Technology Magazine* 3 (85), 27-39.
- EL-NAKIB, I. (2006) RFID in distribution centres: Are the Egyptian exporters ready for it? *AASTMT Scientific Journal* 31 (62), 102-114.
- EL-NAKIB, I. AND ROBERTS, C. (2007) *Establishing Egyptian regional distribution centres in COMESA: some empirical evidence from the Egyptian exporters' perspectives*. Paper presented at the Science and Traffic Development Conference (ZIRP 07) Zagreb, Croatia, 28-29 March 2007.
- EL-NAKIB, I., AND ROBERTS, C. (2006) *Challenges to inland waterways logistics development: the case of Egypt*. Paper presented at 3rd International conference of Inland Water Transport (MELAHA 2006) Luxor, Egypt. 15-17 May 2006.
- EL-ZARKA, S. (2006) *Assessment of the current situation of the logistics service providers industry in Egypt*, MSc Thesis. Arab Academy for Science, Technology and Maritime Transport.

- ENIT AND JIKA (2006) Cerates, *News letter of ENIT*, Egyptian Railways, Vol. 3, 1-3.
- EVARISTUS, I. (2001) *Final report on air transport as a mode of transport for regional trade in East Africa*. Prepared for Technoserve Inc. Nairobi: Department of geography, University of Nairobi.
- EVENSEN WEB DESIGN (2005) *Questionnaire Validity*. [online] EVENSON WEB. Available at: <http://www.evensenwebs.com/validity.html> [Accessed 17th June 2006]
- EXPORT.GOV (2006) *Trade barriers*. [online] Washington, DC: US Export Portal. Available at: http://www.export.gov/tradeproblems/exp_trade_prob_main.asp [Accessed 16th April 2006]
- EZZAT, D. (2000a) *Showcasing COMESA*. [online] Cairo: Al Ahram Weekly. Available at: <http://weekly.ahram.org.eg/2000/470/ec1.htm> [Accessed 24th February 2004]
- EZZAT, D. (2000b) *A bridge to Africa*. [online] Cairo: Al Ahram Weekly. Available at: <http://weekly.ahram.org.eg/2000/480/eg4.htm> [Accessed 10th May 2004]
- FAN, S., NYANGE, D. AND RAO, N. (2005) *Public Investment and Poverty Reduction in Tanzania: Evidence from Household Survey Data*, Washington D.C: International Food Policy Research Institute, (DSGD-NO.18).
- FAWCETT, P., MCLEISH, R. AND OGDEN, I. (1992) *Logistics Management*, London, Pitman.
- FAWZY, S. (1998) *The Business Environment in Egypt*. Cairo: Egyptian Center for Economic Studies (ECES), (WP-No. 34).
- FEARON, D. (2005) *Theory of the location of industries*. [online] Santa Barbara: Centre for Spatially Integrated Social Science. Available at: <http://www.csiss.org/classics/content/51> [Accessed 27th March 2005]
- FEDERAL TRADE COMMISSION (2005) *Radio Frequency Identification: Applications and implications for consumers*. A Workshop Report from the Federal Trade Commission Staff. Washington DC, (1-877-FTC-HELP).
- FEENSTRA (2003) *Advanced International Trade*. Princeton University Press.
- FIALA, P. (2005) Information sharing in supply chains. *Omega* 33 (5), 419-423.
- FINK, A. (1995) *How to ask survey questions*. Thousand Oaks, CA: SAGE Publications.
- FINK, A. AND KOSECOFF, J. (1998) *How to conduct surveys a step-by-step guide*. 2nd ed. London: SAGE.
- FINKENZELLER, K. (2003) *RFID handbook Radio-Frequency Identification fundamentals and applications*. 2nd ed. England: John Wiley & Sons, Ltd.
- FISHER, R., (2002) *Trade trends of developing countries, 1990–2001*. Virginia: Nathan Associates Inc. TCB Project – USAID, (PCE-I-00-98-00016)

- FOSU, A. (2002) *International trade and labour market adjustment in developing countries*. In Greenaway, D., Upward, R. and Wakelin, K. (eds) *Trade, Investment, Migration and Labour Market Adjustment*, Palgrave Macmillan, London.
- FRANKS, J. (2000) Supply chain innovation. *Work study* 49 (4), 152-155.
- FROHLICH, M., AND WESTBROOK, R. (2001) Arcs of integration: an international study of supply chain strategies. *Journal of Operations Management* 19 (2), 185-200.
- FUJITA, M., KRUGMAN AND VENABLES, A. (1999) *The Spatial Economy: Cities, Regions and International Trade*. Cambridge, Mass.: MIT Press.
- GADDE, L. (2001) *From marketing channels to differentiated networks-distribution dynamics in a historical perspective*. In Dahiya, S. (Ed.), *The Current State of Business Disciplines*, Spellbound Publications, Kothar, 2642-2662.
- GANESHAN, R., AND HARRISON, T. (2004) *An introduction to supply chain management*. [online] Inventory Management and Inventory Control. Available at: <http://www.invatol.com/IntroSuplChnMgt.html> [Accessed 6th March 2005]
- GAUZE, F. (2002) *Transformation of African Ports in the changing International Economic Environment: Prospects and challenges*. Paper presented at 2nd Pan-African Port Conference Ngorongoro, Tanzania. 9 - 11 December 2002.
- GEARY, S., DISNEY, S., AND TOWILL, D. (2006) On Bullwhip in Supply Chains-Historical Review, Present Practice and Expected Future Impact. *International Journal of Production Economics* 101 (1), 2-18.
- GEORGIA TECH COLLEGE OF COMPUTING (1997) *Questionnaire Design*. [online] Georgia: GTCC. Available at: http://www-static.cc.gatech.edu/classes/cs6751_97_winter/Topics/quest-design/ [Accessed 18th June 2006]
- GHAURI, P., GRØNHAUG, K., AND KRISTIANSLUND, I. (1995) *Research methods in Business studies, A practical guid*. New York: Prentice Hall.
- GHONEIM, A. (2000) *Determinants of the Egyptian exports market access to the EU*. FEMISE Research Program.
- GHONEIM, A. (2001) *The Egyptian exporting community and the institutional setup: assessment of the last decade development and perspectives for EU-Med partnership*. FEMISE Research Program.
- GOETSCH, D., DAVIS, D., AND DAVIS S. (1997) *Introduction to Total Quality: Quality Management for Production, Processing, and Services*. 2nd ed. New Jersey: prentice Hall.
- GOETSCHALCKX, M., AND RATLIFF, H. (1988) Sequencing picking operations in a man aboard order picking system. *Material Flow* 4 (1), 255-263.
- GOETSCHALCKX, M., VIDAL, C., AND DOGAN, K. (2002) Modelling and design of global logistics systems: A review of integrated strategic and tactical models and design algorithms. *European Journal of Operational Research* 143 (1), 20-30.

- GRANNEMAN, S. (2003) *RFID chips are here*. [online] London: The Register.
Available at : http://www.theregister.co.uk/2003/06/27/rfid_chips_are_here/
[Accessed 3rd September 2005]
- GREENHALGH, G. (1991) *Manufacturing strategy formulation and implementation*. New York: Addison-Wesley Publishing Company.
- GRIFFITHS (2008) *Africa Kumuka Tour*. [online] Sedny: Griffiths Website. Available at: <http://www.griffiths.net.au/albums/africa/africalayout.gif> [Accessed 23rd January 2008]
- GRIZZLE, J., AND TRIVELLORE, E. (1995) A split questionnaire survey design. *Journal of the American Statistical Association*, **90** (429), 54-62.
- GRUBEL, H. AND LLOYD, P. (1975) *Intra-Industry Trade: The Theory and Measurement of International Trade in Differentiated Products*. London: Macmillan.
- GU, J., GOETSCHALCKX, M., MCGINNIS, L. (2007) Research on warehouse operation: A comprehensive review. *European Journal of Operational Research* **177** (1), 1-21.
- GUIFFRIDA, A., AND NAGI, R. (2006) Cost characterizations of supply chain delivery performance. *International Journal of Production Economics* **102** (1), 22-36.
- GUNASEKARAN, A., AND NGAI, E. (2004) Information systems in the supply chain integration and management. *European Journal of Operational Research* **159** (2), 269-295.
- GUNASEKARAN, A., PATEL, C., AND MCGAUGHEY, R. (2004) A framework for supply chain performance measurement. *International Journal of Production Economics* **87** (3), 333-347.
- HABERBERG, A., AND RIEPLE, A. (2001) *The strategic management of organisations*. New York: Prentice-Hall.
- HADI, S. (2003) *Research Methodology*. Alexandria: AASTMT Press.
- HART, C. (1998) *Doing a literature review: releasing the social science research imagination*. London: Sage Publications Ltd.
- HARTMANN, O. (2002) *Eastern Africa corridors*. Paper presented at 2nd Pan-African Port Conference Ngorongoro, Tanzania. 9 - 11 December 2002.
- HATTON, G. (1990) Designing a warehouse or distribution centre. In *Gower Handbook of Logistics and Distribution Management*. 4th ed. Aldershot: Gower publication.
- HAYES, R., AND WHEELWRIGHT, C. (1984) *Restoring our competitive edge: competing through manufacturing*. New York: Wiley and Sons.
- HAYES, R., AND WHEELWRIGHT, S. (1984) *Restoring our competitive edge; competing through manufacturing*. New York: Wiley and Sons.
- HEINRICH, C., AND BETTS, B. (2003) *Adapt or die: transforming your supply chain into an adaptive business network*. New Jersey: John Wiley & Sons.

- HELPMAN, E. (1998) The structure of foreign trade. CEPR Discussion Paper No. 2020.
- HILL, T. (1993) *Manufacturing strategy: the strategic management of the manufacturing function*. London: Macmillan.
- HINKLE, L., AND SCHIFF, M., (2004) Economic Partnership Agreements between Sub-Saharan Africa and the EU: A Development Perspective. *The World Economy* 27 (9), 132–133.
- HIPPLER, H., AND SCHWARZ, N. (1987). Response effects in surveys. In Hippler, N. Schwarz, & Sudman, S. (Eds.), *Social information processing and survey methodology*. New York: Springer-Verlag.
- HOKKANEN, R. (1989) Country trade arrangements in international trade: a tool for creating competitive advantage?. *Scandinavian Journal of Management* 5(2), 105-122.
- HOLODNICKI, M. (2005) Spotlight on China-the manufacturing center of the world. *CSCMP: Supply Chain Comment*, 4-10.
- HUGOS, M. (2003) *Essentials of supply chain management*. New Jersey: John Wiley & Sons, Inc.
- HWANG, H. (2002) Design of supply chain logistics system considering service level. *Computers & Industrial Engineering* 43 (2), 297- 310.
- IATA (2007) *Airlines Members*. [online] Quebec: International Air Transport Association. Available at: http://www.iata.org/membership/airline_members.htm [Accessed 23rd January 2007]
- IBRAHIM, E. (2002) *Egypt and COMESA group*. Cairo: Dar ElNahda.
- ID-BOOK (2002) *Designing and using questionnaires*. [online] ID Book Website. Available at: http://www.id-book.com/interactive_perlman.htm [Accessed 4th November 2006]
- IMF (2006) *World Economic Outlook Database*. [online] Washington, DC: International Monetary Fund. Available at: <http://www.imf.org/external/pubs/ft/weo/2006/02/data/index.aspx> [Accessed 23rd January 2007]
- INSTITUTE OF SECURITY STUDIES (2006) *Profile: COMESA*. [online] Cape Town: ISS. Available at: http://www.iss.co.za/AF/RegOrg/unity_to_union/comesaprof.htm#structure [Accessed 11th January 2006]
- INTEL CORPORATION (2005) *RFID technology business value*. [online] California: Intel Corporation. Available at: http://www.intel.com/business/bss/technologies/rfid/business_value.htm [Accessed 1st September 2005]
- INTERNATIONAL MARITIME ORGANIZATION (1991) *Port logistics: compendium for model course 5.02*, London.

- IQBAL, Z., AND KHAN, M. (1997) *Trade Reform and Regional Integration in Africa*. Washington: International Monetary Fund.
- JABNOUN, N., AND SAHRAOUI, S. (2004) Enabling A TQM Structure through Information Technology. *Competitiveness Review* 14 (1/2), 72-81.
- JACOB, N., ARENS, J., AND ZERBAK, T. (2005) *Sampling procedure, questionnaire design, online implementation and survey response in a multi-national online journalist survey*. [online] Ljubljana: WAPOR. Available at: <http://ciss.ris.org/> [Accessed 17th June 2006]
- JANEBA, E. (2007) International trade and consumption network externalities, *European Economic Review* 51 (4), 781-803.
- JAVALGI, R., AND REISENWITZ, H. (2001) International logistics operations of MNCs: An exploration of the pharmaceutical industry. *Review of Business* 22 (1/2), 43-51.
- JENKENS, C. (2003) Catch-up in Southern Africa. *Cooperation South* 2003 3 (1), 4-18.
- JOHANSSON, C., LEGGE, D. AND WAPPLING, A. (2000) Factors in the supply chain supporting three-way partnerships. *International Journal of Logistics: Research and Applications* 3 (2), 147-156.
- JOHNSON, E. (2006) Supply chain management: technology, globalization, and policy at a crossroads. *Interface* 36 (3), 191-193.
- JOHNSON, G. AND SCHOLE, K. (1997) *Exploring corporate strategy*, 4th ed. New York: Prentice Hall.
- JOIN AFRICA (2005) *African Countries Ranking in Exports and Imports*. [online] Cape town: Join Africa. Available at: http://joinafrica.com/Country_Rankings/exports_africa.htm [Accessed 10th November 2005]
- JOOPE, M. (2007) *The Research Process*. [online] Toronto: Ryerson Polytechnic University. Available at: <http://www.ryerson.ca/~mjoppe/ResearchProcess/ExploratoryResearch.htm> [Accessed 4th January 2007]
- KABANGUKA, J. (2002) *Cargo tracking along the Northern and Central corridors*. Paper presented at 2nd Pan-African Port Conference Ngorongoro, Tanzania. 9-11 December 2002.
- KAMEL, S., HUSSEIN, M. (2001) The development of e-commerce: the emerging virtual context within Egypt. *Logistics Information Management* 14(1/2), 119-126.
- KAMEL, S., HUSSEIN, M. (2002) the emergence of e-commerce in a developing nation: Case of Egypt. *Benchmarking: An International Journal* 9 (2), 146-15.
- KAPLAN, B., AND DUCHON, D. (1988) Combining Qualitative and Quantitative Methods in Information Systems Research: A Case Study, *MIS Quarterly* 12 (4), 571-587.
- KEMPPAINEN, K., AND VEPSÄLÄINEN, A. (2003) Trends in industrial supply chains and networks. *International Journal of Physical Distribution and Logistics Management* 33 (8), 701-719.

- KENGPOL, A. (2004) Design of a decision support system to evaluate the investment in a new distribution centre. *International Journal of Production Economics* **90** (1), 60-70.
- KHANDELWAL, P. (2005) *COMESA and SADC: prospects and challenges for regional trade integration*. UNU-CRIS OCCASIONAL PAPERS, (0-2005/1).
- KLAPPER, L., LAEVEN, L., AND RAJAN, R. (2004) *Business environment and firm entry: evidence from international data*. Washington DC: World Bank.
- KLOTE, J. (2001) *The Design of a Distribution Center with Value Added Operations*, MSc Thesis, Faculty of the Virginia Polytechnic Institute and State University.
- KOTSCHWAR, B., AND HOPKINS, J. (2005) Regional trade agreements among developing countries as a basis for development. *South-South Trade and Cooperation*, School for Advanced International Studies (SAIS).
- KOTZAB, H. AND TELLER, C. (2003) Value-adding partnerships and co-opetition models in the grocery industry. *International Journal of Physical Distribution & Logistics Management* **33** (3), 268-81.
- KRUGMAN, P. (1994) Empirical evidence on the new trade theories: The current state of play. In *New Trade Theories: A Look at the Empirical Evidence*, London: CEPR.
- KUMAR, N. (1996) The power of trust in manufacturer retailer relationships. *Harvard Business Review* **74** (6), 92-106.
- KUMAR, R. (1999) *Research methodology*. London: SAGE Publications Ltd.
- KWEKA, J. (2004) *Transport Cost and Trade Policy in Tanzania*, Economic and Social Research Foundation, Dar es Salaam, Tanzania.
- LAABS AND VANDENBUSCH (2004) *RFID impacts to retail industry*. [online] Wisconsin: University of Wisconsin. Available at:
http://www.uwosh.edu/faculty_staff/wresch/FPRFID6.htm
 [Accessed 9th September 2005]
- LACY, S. (2004) *Inching toward the RFID revolution*. [online] Ohio: Business Week online.
 Available at:
http://www.equitekcapital.com/Investorinfo/Webpagecontent/alien_articles/businessweek083104.htm. [Accessed 3rd September 2005]
- LAFONT, D. (2005) *The Challenges of Multimodal Transport in landlocked African Countries*. Bolloré DTI.
- LAMBERT, D. AND STOCK, J. (2000) *Strategic logistics management*. 4th ed. Boston: McGraw-Hill.
- LANDEROS, R. AND MONCZKA, R. (1989) Cooperative buyer/seller relationships and a firm's competitive posture. *International Journal of Purchasing and Materials Management* **26** (1), 9-18.
- LANGABEER, J., AND ROSE, J. (2001) *Creating demand driven supply chains*, Oxford: Chandos Publishing.

- LAWRENCE, R. (1997) *Preferential Trading Arrangements: The Traditional and the New in Regional Partners in Global Markets: Limits and Possibilities of the Euro-Med Agreements*, London: CEPR/ECES.
- LEAMER, E., AND LEVINSOHN, J. (1995) International trade theory: The evidence. In G.M.Grossman and K. Rogoff (eds.): *Handbook of International Economics*, 3 Amsterdam: North-Holland, 1339-1394.
- LEDERMAN, D., AND MALONEY, W. (2003) *R&D and development*. Washington DC: World Bank, (WPS3024).
- LEE, A. (1991) Integrating Positivist and Interpretive Approaches to Organizational Research, *Organization Science* 2 (4), 342-365.
- LEE, B. (1997) *On improving Egypt's economic performance: the costs of exchange*. Cairo: Egyptian Centre for Economic Studies, (WP-NO. 13-JU-97).
- LEE, H. AND BILLINGTON, C. (1995) The evolution of supply chain management models and practice at Hewlett-Packard. *Interfaces* 25 (5), 42 - 63.
- LEE, H., AND WHANG, S. (2001) *E-business and supply chain integration*. Stanford Global Supply Chain Management Forum, (SGSCMF-W2-2001).
- LIMAO, N. AND VENABLES, A. (2000) *Infrastructure, geographical disadvantage and transport costs*. Mimeo, World Bank, Washington, and Columbia University, New York.
- LINFORD, P. (2003) *The influence of supply chain collaboration on customer value*, MSc Thesis, Afrikaans University.
- LYAKURWA, W., MCKAY, A., NG'ENO, N., AND KENNES, W. (1997) *Regional Integration in Sub-Saharan Africa: A Review of Experiences and Issues*. In Oyejide, Ademola, Ibrahim Elbadawi and Paul Collier (eds.) *Regional Integration and Trade Liberalisation in Sub-Saharan Africa*, Volume I: Framework, Issues and Methodological Perspectives. London: Macmillan.
- MAHESHWARI, B., KUMAR, V., AND KUMAR, U. (2006) Optimizing success in supply chain partnerships. *Journal of Enterprise Information Management* 19 (3), 277-291.
- MALMBORG, J., KRISHNAKUMAR, B. (1989) Optimal storage assignment policies for multiaddress warehousing systems. *IEEE Transactions on Systems, Man, and Cybernetics* 19 (1), 197-204.
- MANHEIM, L. (1979) *Fundamentals of Transportation Systems Analysis. Volume 1: Basics Concepts*, Cambridge, The MIT press.
- MANHEIM, L. (1994) Beyond the Logistics Pipeline: Opportunities for Competitive Advantage in: *Logistics and Distribution Planning*, Cooper J (Ed.), London, Kogan Page, 62-97.
- MARAWA, A. (2005) Overview of COMESA programmes. In COMESA Regional Transport and Communications Workshop, August 6-8, 2005. Alexandria, Egypt.
- MARITIME RESEARCH AND CONSULTATION CENTER (2006) *Special study for transport infrastructure in Egypt*. MRCC-AASTMT, (14-06-MR06).

- MARITIME TRANSPORT DATA BANK (2005) *Analysis of the current situation of MTS*. Alexandria: MTDB.
- MARKUSEN, MELVIN, KAEMPFER AND MASKUS (1995) *International Trade: Theory and Evidence*. New York: McGraw-Hill.
- MARSHALL AND ALEXANDER (2005) Planning for the unexpected: human resource risk and contingency planning. *Purdue Extension*, Purdue University.
- MATTOO, A., AND SUBRAMANIAN, A. (2004) The WTO and the Poorest Countries: The Stark Reality. *IMF Working paper*, Washington DC: IMF, WP/04/81.
- MATTSSON, L. (2003) Reorganization of distribution in globalization of markets: the dynamic context of supply chain management. *Supply Chain Management: An International Journal* 8(5), 416-426.
- MBOWENI, T. (2007) *Risks and challenges facing the global economy*. Paper presented at the Mail & Guardian Business Breakfast, Johannesburg, South Africa. 4 May 2007.
- MBUTHIA, S. (2002) *An analysis of farm level transport needs and provisions in Mwea Tebere Irrigation Scheme*. MA thesis, Kenya University.
- MCFARLAN, F. (1984) Information technology changes the way you compete. *Harvard Business Review* 62 (3), 98 - 103.
- MCKINNON, A. (1989) *Physical distribution systems*. London: Routledge.
- MCT (2003) *National transport policy*. Ministry of Communication and Transport (MCT) United Republic of Tanzania.
- MEDITERRANEAN SHIPPING COMPANY, S.A. (2006) *Schedules*. [online] Alexandria: MSC Website. Available at: <http://www.mscevva.ch/schedule.htm> [Accessed 17th June 2006]
- MESCO (2004) *Egyptian –African trade overview*. R&D section, (May12-2004).
- METZ, P. (1998) *Demystifying supply chain management*. [online] New York: Rochester Institute of Technology. Available at: <http://www.rit.edu> [Accessed 12th March 2005]
- MICCO, A., AND PÉREZ, P. (2002) Determinants of Maritime Transport Costs. *Inter-American Development Bank*, Working Paper (#441).
- MICHEL, P. (1993) *Transportation assessment for Egyptian export products*. Cairo: Trade Development Center, (T/02).
- MILNER, C, MORRISSEY, O, AND RUDAHERANWA, N. (2000) Policy and non-policy barriers to trade and implicit taxation of exports in Uganda. *The Journal of Development Studies* 37 (2), 26-35.
- MIND TOOLS (2007) *SWOT Analysis Discover new opportunities, Manage and eliminate threats*. [online] London: Mind Tools. Available at: http://www.mindtools.com/pages/article/newTMC_05.htm#business [Accessed 4th February 2007]

- MINISTRY OF FINANCE (2004) *Enhancing Competitiveness for SMEs in Egypt*. Ministry of Finance-Egypt: SME Development.
- MINISTRY OF FOREIGN TRADE AND INDUSTRY (2004) *Egyptian movement towards Africa*. Cairo: MFTI, (FTI-2004).
- MINISTRY OF FOREIGN TRADE AND INDUSTRY (2005) *Egyptian movement towards Africa, the challenges*. Cairo: MFTI, (FTIP2-2005).
- MINISTRY OF FOREIGN TRADE AND INDUSTRY (2006a) *Egyptian exports*. Cairo: MFTI, (MAY2-2006).
- MINISTRY OF FOREIGN TRADE AND INDUSTRY (2006b) *Egypt and the world - key industrial and trade indicator*. Cairo: MFTI, (DEC10-2006).
- MINISTRY OF INVESTMENT (2006) *Annual report*. Cairo: EMC.
- MKIARU, E. (2004) *Tanzania paper on transport and communications infrastructure development and transit trade facilitation*. Geneva: UNCTAD secretariat, (UNCTAD/LDC/2004/11/24).
- MOBARAK, A. (2004) *The Challenges of Sustainable Industrial Development in Egypt A Country*. Paper for The World Summit. United Nations Industrial Development Organization (UNIDO) on Sustainable Development (WSSD) Cairo, Egypt.
- MULLER, G. (1999) *The importance of demand planning in the management of a fast moving consumer goods supply chain*. Johannesburg: Rand Afrikaans University Press.
- MURPHY, P., AND WOOD, D. (2004) *Contemporary logistics*. 8th ed. New Jersey: Prentice-Hall.
- MUSTAPHA, S. (2005) *Economic and Welfare Impacts of the Economic Partnership Agreement on COMESA, UNECA*, Addis Ababa, Ethiopia Presentation at the Regional Meeting on EPAs, 22-24 September, 2005, Mombasa, Kenya.
- MYERS, M. (1997) *Qualitative Research in Information Systems*. [online] Georgia: Association for Information systems. Available at: <http://www.qual.auckland.ac.nz/> [Accessed 16th January 2006]
- NACHMIAS, C., AND NACHMIAS, D. (1992) *Research methods in the social sciences*, Edward Arnold, London.
- NATHAN ASSOCIATES INC (1999) *Reducing transport costs of Egypt's exports*. Cairo: Development Economic Policy Reform Analysis Project – USAID, (263-C-00-96-01).
- NATHAN ASSOCIATES INC (2003) *improving trade policy coordination and dialogue in developing countries- a resource guide*. Virginia: Nathan Associates Inc. TCB Project - USAID, (PCE-I-00-98-00016-00).
- NATHAN ASSOCIATES INC (2006) *Djibouti economic performance assessment*. Virginia: Nathan Associates Inc. TCB Project - USAID, (PCE-I-00-00-00013-00).
- NDUNG'U, N. (2000) Regional integration experience in Eastern African regions. *OECD Development Centre* 7 (4), 23-29.

- NDUNG'U, S. (2003) East Africa's Experience, From Colonial Times to Present. *Cooperation South* 2003 3 (1), 46-61.
- NESATHURAI, A. (2003) *Key players in the logistics chain*, Westport.
- NESBARY, D. (2000) *Survey research and World Wide Web*. Massachusetts: Allyn and Bacon.
- NIA (2001) *The value of distribution*. [online] Virginia: National Insulation Association. Available at: <http://www.insulation.org> [Accessed 1st October 2006].
- NILSEN, P. (2007) The how and why of community-based injury prevention A conceptual and evaluation model. *Safety Science* 45 (4), 501-521.
- NINNIN, B. (1997) *Transport et Développement A Madagascar*. French co-operation Ministry and Malagasy Public Works Ministry, INRETS.
- NOUAMANI, A. (2005) Egypt in Africa's trade. *AASTMT Scientific Journal* 30 (59), 5-9.
- NOUR, O. (2001) The significance of rail links in Africa. *Executive Intelligence Review* 23(2), 31-33.
- NOZICK, L., AND TURNQUIST, M. (1998) Integrating inventory impacts into a fixed-charge model for locating distribution centres. *Transportation Research Part E: Logistics and Transportation Review* 34 (3), 173 -185.
- NOZICK, L., AND TURNQUIST, M. (2001) Inventory, transportation, service quality and the location of distribution centres. *European Journal of Operational Research* 129(2), 362-373.
- NYBERG, A. (1994) *Distribution system consequences of horizontal mergers*, unpublished MSc thesis, Stockholm School of Economics, Stockholm University.
- OFORI, G. (2000) Greening the construction supply chain in Singapore. *European Journal of Purchasing & Supply Management* 6 (3), 195-200.
- OSLON, D. (2003) Distribution operations- design for excellence. In *Gower Handbook of Supply Chain Management*. 5th ed. Aldershot: Gower publication.
- OTOBO, E. (2004) Regionalism and Trade: A Glimpse of Africa's Experience. *The New School Economic Review* 1 (1), 119-122.
- OUM, T. AND PARK, J. (2004) Multinational firm's location preference for regional distribution centers: focus on the Northeast Asian region. *Transportation Research Part E: Logistics and Transportation Review* 40 (2), 101-121.
- OYUKE, J. (2006) *COMESA seeks to set up its own shipping line*. [online] Nairobi: The Standard Available. at: http://www.eastandard.net/archives/cl/hm_news/news.php?articleid=35099&date=17/01/2006 [Accessed 28th June 2006]
- PETERSEN, G. (2002) Considerations in order picking zone configuration. *International Journal of Operations and Production Management* 22 (7), 793-805.

- PETERSEN, G., AND AASE, G. (2004) A comparison of picking, storage, and routing policies in manual order picking. *International Journal of Production Economics* 92 (1), 11-19.
- PHILLIPS, E., and PUGH, D. (1994) *How to get a PhD*. Grate Britain: Guildford and King's Lynn.
- PIL GROUP (2006) *Schedules*. [online] Alexandria: PIL Website. Available at: <http://www.webcsm.com:8100/schedule/schedule.jsp> [Accessed 16th June 2006]
- PORTER, M. (1998a) *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Free Press.
- PORTER, M., AND MILLAR, V. (1985) How information gives you competitive advantage. *Harvard Business Review* 63 (4), 149-160.
- PRAHINSKI, C., AND KOCABASOGLU C. (2006) Empirical research opportunities in reverse supply chains. *Omega* 34 (6), 519-532.
- PREECE, R. (1994) *Starting Research*. London: Pinter Publishers.
- PRESCOTT, J. (2004) *Sustainable distribution: a strategy*. [online] London: Department of Transport. Available at: <http://www.dft.gov.uk> [Accessed 19th March 2005]
- PRICEWATERHOUSECOOPERS (2005) *Transportation & Logistics*. [online] London: PWC. Available at: <http://www.pwcglobal.com/> [Accessed 16th April 2006]
- PROCTOR, T. (2000) Strategic marketing management for health management: cross impact matrix and TOWS. *Journal of Management in Medicine* 14(1), 47-56.
- RADWAN, S. (2006) *Ready for Take-off*. [online] Cairo: Al Ahram Weekly. Available at: <http://weekly.ahram.org.eg/2006/798/ec2.htm> [Accessed 10th February 2007]
- RAMADAN, I. (2002) *The supply chain for Egypt's fresh product exporters: barriers to efficiency and proposed strategies for improvement*. PhD Thesis. Southampton Institute.
- RATLIFF, D., AND ROSENTHAL, S. (1983) Order-picking in a rectangular warehouse: A solvable case of the traveling salesman problem. *Operations Research* 31 (3), 507-521.
- RAZZAQUE, M. (1997) Challenges to logistics development: the case of a Third World country Bangladesh. *International Journal of Physical Distribution & Logistics Management*, 27 (1), 18-38.
- REES, G. (1998) Elite interviewing. In: *Interview design and Implementation Seminars*, Cardiff University, 19 May 1998.
- REGAN, A., AND SONG, J. (2000) *An Industry in Transition: Third Party Logistics in the Information Ag*. [online] California: University of California. Available at: <http://www.uctc.net/papers/634.pdf> [Accessed 4th June 2004]
- RESEARCH, DEVELOPMENT AND PUBLISHING SECTOR (2005) Economic review. *Central Bank of Egypt Journal* 44 (2), 103-111.

- REUER, J., AND ARINO, A. (2007) Strategic alliance contracts: dimensions and determinants of conceptual complexity. *Strategic Management Journal* **28** (3), 313-330.
- RIMA, I. (1995) *Quantification, and economic analysis: numeracy in economics*. New York: Routledge.
- ROBERTS, M., AND TYBOUT, R. (1997) *What Makes Exports Boom, Directions in Development*, The World Bank, Washington, DC.
- RODRIGUE, P., SLACK B., AND COMTOIS, C. (2006) *The geography of transport systems*. London: Routledge.
- ROJID, S. (2006) COMESA trade potential: a gravity Approach. *Applied Economics Letters* **13** (1), 947-951.
- ROSENZWEIG, E., ROTH, A., DEAN JR., J. (2003) The influence of an integration strategy on competitive capabilities and business performance: An exploratory study of consumer products manufacturers. *Journal of Operations Management* **21** (4), 437-456.
- ROWENHORST, B., REUTER, B., STOCKRAHM, V., VAN HOUTUM, G., MANTEL, R. AND ZIJM, W. (2000) Warehouse design and control: Framework and literature review. *European Journal of Operational Research* **122** (1), 515-533.
- RUGAIHURUZA, J. (2002) *Dar es Salam port: challenges and perspectives*. Paper presented at 2nd Pan-African Port Conference Ngorongoro, Tanzania. 9 - 11 December 2002.
- RUSHTON, A., OXLEY, J., AND CROUCHER, P. (2000) *The handbook of logistics and distribution management*. 2nd ed. London: Kogan Page Ltd.
- RYZEX GROUP (2005) *Glossary of terms*. [online] Wiltshire: Ryzex Group website. Available at: <http://www.ryzex.com/uk/barcodeGlossary.cfm#d> [Accessed 1st September 2005]
- SAENZ, N. (2000) DC concept design development. *Technically speaking* **1** (4), 1-2.
- SARDAR, M. (2005) COMESA Shipping Lines. In Maritime Transport in COMESA Workshop, December 17 – 18, 2005. Alexandria, Egypt.
- SARKIS, J. (2003) Strategic decision framework for green supply chain management. *Journal of Cleaner Production* **11**(4), 397-409.
- SCHARY, P. AND SKJOETT-LARSEN, T. (2001) *Managing the Global Supply Chain*. 2nd ed. Copenhagen: Handelshojskolens Forlag.
- SCHNEIDER, M. (2003) *Radio Frequency Identification (RFID) technology and its applications in the commercial construction industry*. M.Sc. Thesis. University of Kentucky.
- SCHRANK, D., AND LOMAX, T. (2005) *Urban mobility report*, Texas Transportation Institute.
- SCOTT, P. (1989) Location means business. *CMA Magazine* **63** (2), 10-15.
- SCP (2007) *Warehouse Layout*. [online] Bedfordshire: Supply Chain Planning UK Limited. Available at: <http://www.scp-uk.co.uk/whlayout.html> [Accessed 19th January 2007]

- SD SMITH PLC (2005) *Office products*. [online] Cambridgeshire: SD Smith Plc. Available at: <http://www.dssmith.uk.com/> [Accessed 9th April 2007]
- SEKARAN, U. (2000) *Research methods for business*. 3rd ed. New York: John Wiley & Sons.
- SHAN LU, C. (2003) Market segment evaluation and international distribution centres. *Transportation Research Part E: Logistics and Transportation Review* 39 (1), 49-60.
- SHEU, J., CHOU, Y., AND HU, C. (2005) An integrated logistics operational model for green-supply chain management. *Transportation Research Part E: Logistics and Transportation Review* 41 (4), 287-313.
- SIMCHI-LEVI, D., KAMINSKY, P. AND SIMCHI-LEVI, E. (2003) *Designing and managing the supply chain: concepts, strategies, and case studies*. New York: McGraw-Hill.
- SINGH, N. (2003) Emerging technology to support supply chain management. *Communications of the ACM* 46 (9), 243-247.
- SMART CHIP, INC (2005) *Inching toward the RFID revolution*. [online] New Delhi: Technology.
Available at: <http://www.smartchiponline.com/2.html> [Accessed 9th September 2005]
- SNYDER, V., AND DASKIN, S. (2005) Reliability models for facility location: the expected failure cost case. *Transportation Science* 39(3), 400-416.
- SRINIVASAN, T. (2005) *Challenges of economic reform in Egypt*. Stanford Centre for International Development, (Working Paper No. 253).
- STANLEY B. (1997) *Breakthrough Customer Service: Best Practices of Leaders in Customer Support*. New York: John Wiley & Sons, Inc.
- STATPAC (2005) *Qualities of a Good Question*. [online] Minneapolis: StatPac. Available at: <http://www.statpac.com/surveys/question-qualities.htm> [Accessed 18th June 2006]
- STEVENS, G. (1990) Successful supply chain management. *Management Decision* 28 (8), 25-30.
- SUBRAMANI, M.R. AND VENKATRAMAN, N. (2003) Safeguarding investments in asymmetric interorganizational relationships: theory and evidence. *Academy of Management Journal* 46 (1), 46-62.
- SWAMINATHAN, J.M., SMITH, S.F. AND SADEH, N. (1998) Modelling supply chain dynamics: a multi agent approach. *Decision Sciences* 29 (3), 607-632.
- SWARMIDASS, P. (1986) Manufacturing strategy: its assessment and practice. *Journal of Operations Management* 6 (4), 50-67.
- SWEENEY, S. (2000) *Human geography*. [online] California: The University of California. Available at: <http://www.alexandria.ucsb.edu/> [Accessed 27th March 2006]
- TANIGUCHI, E., THOMPSON, R., YAMADA, T., AND DUIN, R. (2001) *City logistics network modelling and intelligent transport systems*. Oxford: Elsevier Science Ltd.

- TERESKO, J. (2004) Material handling moves up. *Industry Week* 253 (3), 42-49.
- TERRADOS, J., ALMONACID, G., AND HONTORIA, L. (2007) Regional energy planning through SWOT analysis and strategic planning tools: Impact on renewable development. *Renewable and Sustainable Energy Reviews* 11 (6), 1275-1287.
- THAI, V., AND GREWAL, D. (2005) Selecting the location of distribution centre in logistics operations: a conceptual framework and case study. *Asia Pacific Journal of Marketing and Logistics* 17 (3), 3-24.
- THE ECONOMIST INTELLIGENCE UNIT (2006) *Business environment rankings methodology Outline of the model*. [online] London: The Economist. Available at: http://graphics.eiu.com/files/ad_pdfs/CF_PDF.pdf [Accessed 1st December 2006]
- THE REPORTER (2006) *Ethiopia's Search for a Port*. [online] Cape Town: Ports and Ships. Available at: http://www.ports.co.za/didyouknow/article_2006_01_21_3058.html [Accessed 23rd October 2006]
- THE TRANSPORT ENERGY BEST PRACTICE PROGRAMME (2005) *Improve the operational efficiency of regional Distribution Centres (RDCs)*. Department of Transport.
- THOMAS M., CORSI AND BOYSON, S. (2003) Real time e-supply chain management: diffusion of new technologies and business practices. *Transportation Research Part E: Logistics and Transportation Review* 39 (2), 79-82.
- TOWILL, D.R., NAIM, N.M. AND WIKNER, J. (1992) Industrial dynamics simulation models in the design of supply chains, *International Journal of Physical Distribution and Logistics Management* 22 (1), 3-13.
- TPA (2006) *Dar es Salam port*. [online] Dar es Salam: Tanzanian Ports Authority. Available at: <http://www.tanzaniaports.com/dsm/index.htm> [Accessed 22nd October 2006].
- TRANDEL-KORNECHUK, D. (1998) Comparing and selecting patient satisfaction questionnaires. *Medical Group Management Journal* 45(3), 66-72.
- TRANDEL-KORNECHUK, DM. (1998) Comparing and selecting patient satisfaction questionnaires. *Medical Group Management Journal* 45(3), 66-68.
- TRUNICK, P. (2005) *10 things to consider when establishing a global distribution network*. [online] Ohio: Logistics Today. Available at: <http://www.logisticstoday.com/displayStory.asp?sNO=7434> [Accessed 6th November 2006]
- TTCANC (2004) *Investment opportunities in the northern corridor with emphasis in transport infrastructure*. TTCA secretariat, COMESA Businesses Summit, 7-8 June Kampala, Uganda.
- TTCANC (2006) *The Northern Corridor Transport Network*. [online] Mombasa: TTCANC. Available at: <http://www.ttcanc.org/> [Accessed 22nd October 2006]

- TUSLER, R. (1996) *Project Risk Management Principles*. [online] London: Coblands Consulting. Available at: <http://www.netcomuk.co.uk/~rtusler/> [Accessed 9th July 2007]
- UNCTAD (1995) *Facing the challenge of integrated transport services*. New York: United Nation, (UNCTAD/SDD/MT/7).
- UNCTAD (1997) *Selected basic transport indicators in the landlocked countries*. Geneva: UNCTAD secretariat, (UNCTAD/LDC/97)
- UNCTAD (2002) *Investment policy review- the United Republic of Tanzania*. Geneva: UNCTAD secretariat, (UNCTAD/ITE/IPC/Misc.9).
- UNCTAD (2003a) *Multimodal transport: the feasibility of an international legal instrument*. Geneva: UNCTAD secretariat, (UNCTAD/SDTE/TLB/2003/1).
- UNCTAD (2003b) *Improvement of transit systems in Southern and Eastern Africa*. Geneva: UNCTAD secretariat, (UNCTAD/LDC/2003/3).
- UNCTAD (2004a) *UNCTD hand book for statistics*. Geneva: UNCTAD secretariat, (UNCTAD/TD/STAT.29).
- UNCTAD (2004b) *World investment report 2004 the shift towards services*. New York: UNCTAD.
- UNCTAD (2006) *World investment report 2006: FDI from Developing and Transition Economies: Implications for Development*. New York: UNCTAD.
- UNITED NATIONS (2005) *What are the millennium development goals?*. [online] New York: UN. Available at: <http://www.un.org/millenniumgoals/> [Accessed 20th September 2006]
- UTL (2008) *Map Collection*. [online] Texas: University of Texas Libraries. Available at: http://www.lib.utexas.edu/maps/africa/djibouti_rel91.jpg [Accessed 22nd January 2008]
- VAN DONK, D., VAN DER VAART, T. (2005) A case of shared resources, uncertainty and supply chain integration in the process industry. *International Journal of Production Economics* 96 (9), 97-108.
- VET, P. (2002) *Automotive supply chain partnering*. 24th Annual SAPICS conference on supply chain management, 5-8 June Johannesburg.
- VISWANADHAM, N. AND GAONKAR, ROSHAN (2001) E-logistics trends and opportunities. *The Logistics Institute*, 1-9.
- VOGELAAR, H., AND DIJK, T. (2003) *Terms of reference for a transport and communications strategy and priority investment plan for eastern and Southern African region*. Background paper for Stakeholders' Workshop 5-7 November 2003, Lusaka, Zambia.
- VOS, B., VAN DEN BERG, E. (1996) Assessing international allocation strategies. *International Journal of Logistics Management* 7 (2), 69-84.
- WALLER, A., (1983) Use and location of depots. In *Gower Handbook of Physical Distribution Management*. 3rd ed. Aldershot: Gower publication.

- WALTON, S., AND GUPTA, J., (1999) Electronic data interchange for process change in an integrated supply chain. *International Journal of Operations and Production Management* 19 (4), 372-388.
- WEAR SYSTEMS, INC (2005) *RFID's impact in warehousing and manufacturing*. [online] Lansing: Wear system Knowledge Base. Available at: <http://www.waersystems.com/knowledge%5Fbase/> [Accessed 9th September 2005]
- WEB SURVEYOR (2004) *Web Survey Best Practice: Questionnaire Development*. [online] London: Web Surveyor. Available at: http://www.websurveyor.com/resources/web-survey-best-practice.asp?c=49&LEAD_SOURCE=BESTPRAC [Accessed 18th June 2006]
- WHIP, R. (1997) Qualitative methods: technique or size. Paper presented at the *Principles of Research Design Seminar*, Cardiff Business School, 6 November 1997.
- WHITING, R.(2004) RFID growth poses a data management challenge, *Computing* 2(26),29-30.
- WILD, J, AND WILD, K. (2008) *International Business: The Challenges of Globalization*. 4th ed. New Jersey: Prentice Hall.
- WILLIAMS, A. (2003) How to write and analyse a questionnaire. *Journal of Orthodontics* 30 (3), 245-252.
- WILLIAMS, L., ESPER, T., AND OZMENT, J. (2002) The electronic supply chain. *International Journal of Physical Distribution and Logistics Management* 32 (8), 52-59.
- WON, J., AND OLAFSSON, S. (2005) Joint order batching and order picking in warehouse operations. *International Journal of Production Research* 43 (7), 1427-1442.
- WORLD BANK (1994) *Private Sector Development in Egypt: The Status and the Challenges*. Washington D.C: World Bank.
- WORLD BANK (1995) *Improving African Transport Corridors*. [online] Washington, DC: The World Bank Group- Operations Evaluation Department. Available at: <http://www.worldbank.org/oed/> [Accessed 18th June 2006]
- WORLD BANK (2000) *Can Africa Claim The 21st Century*. Washington DC: World Bank.
- WORLD BANK (2004) *Regional trade agreements: effects on trade, global economic prospects 2005: Trade, Regionalism and Development*. Washington DC: World Bank.
- WORLD BANK (2005a) *African trade indicators 2005*. Washington, DC: World Bank.
- WORLD BANK (2005b) *The global economic prospects trade, regionalism, and development*. Washington, DC: World Bank.
- WORLD BANK (2006) *Doing Business-Economy Rankings*. [online] Washington, DC: World Bank. Available at: <http://www.doingbusiness.org/EconomyRankings/?regionid=431> [Accessed 22nd January 2007]
- WORLD ECONOMIC FORUM (2005) *Global risks to the business environment*. Geneva, Switzerland.

- WORLD ECONOMIC FORUM (2005) *The Arab world competitiveness report*. Geneva: WEF.
- WTO (2005a) *Egypt Trade Policies and Practices by Measures*. [online] Geneva: WTO.
Available at: http://www.wto.org/english/tratop_e/tpr_e/s150-3_e.doc
[Accessed 27th July 2005]
- WTO (2005b) *Egypt Trade Policies by Sectors*. [online] Geneva: WTO. Available at:
http://www.wto.org/english/tratop_e/tpr_e/s150-4_e.doc [Accessed 27th July 2005]
- WTO (2006) *International Trade Statistics-Trade by Region*. [online] Geneva: WTO.
Available at: http://www.wto.org/english/res_e/statistics_e/its2006_e/its06_byregion_e.htm
[Accessed 18th January 2007]
- WU, F. (2007) Re-orientation of the city plan: Strategic planning and design competition in China. *Geoforum* 38 (2), 379-392.
- YAP, B. (1991) *Development of computer aided tools to support strategic planning*. MSc Thesis. University College Galway.
- YASSER, E. (1999) *Economics of transport alternatives study report*. Agricultural Technology Utilization and Transfer Project (ATUT), Ministry of Agriculture and land Reclamation, Cairo, Egypt.
- ZEDUCORP (2006) *Maps*. [online] New York : Zeducorp Inc.
Available at: <http://www.map-of-africa.us/> [Accessed 12th July 2007]
- ZIM (2006) *Schedules*. [online] Tel Aviv: ZIM Website. Available at:
http://www.zim.com/schedule_ptp.htm [Accessed 16th June 2006]

APPENDIX 1: MAP OF AFRICA



Source: Zeducorp (2006)

APPENDIX 2: NON-COMESA MEMBER'S ECONOMICAL INDICATORS (US \$)

Country	Exports	Imports	Trade Balance	Population
<i>Algeria</i>	<i>55,600,000,000</i>	<i>27,600,000,000</i>	<i>28,000,000,000</i>	<i>32,930,091</i>
Angola	35,530,000,000	10,210,000,000	25,320,000,000	12,127,071
Ascension Island	N/A	N/A	N/A	N/A
Benin	563,100,000	927,300,000	-364,200,000	7,862,944
Botswana	4,836,000,000	3,034,000,000	1,802,000,000	1,639,833
Burkina Faso	543,500,000	1,016,000,000	-472,500,000	13,902,972
Cameroon	4,318,000,000	3,083,000,000	1,235,000,000	17,340,702
Cape Verde	96,710,000	495,100,000	-398,390,000	420,979
Central African Rep.	131,000,000	203,000,000	-72,000,000	4,303,356
Chad	4,342,000,000	823,100,000	3,518,900,000	9,944,201
Congo, Rep	5,996,000,000	1,964,000,000	4,032,000,000	3,702,314
Equatorial Guinea	8,961,000,000	2,543,000,000	6,418,000,000	540,109
Gabon	6,677,000,000	1,607,000,000	5,070,000,000	1,424,906
Gambia	3,286,000,000	5,666,000,000	-2,380,000,000	22,409,572
Ghana	3,286,000,000	5,666,000,000	-2,380,000,000	22,409,572
Guinea	615,100,000	730,000,000	-114,900,000	9,690,222
Guinea-Bissau	116,000,000	176,000,000	-60,000,000	1,442,029
Ivory Coast	7,832,000,000	5,548,000,000	2,284,000,000	17,654,843
Lesotho	779,100,000	1,401,000,000	-621,900,000	2,022,331
Liberia	910,000,000	4,839,000,000	-3,929,000,000	3,042,004
Mali	323,000,000	1,858,000,000	-1,535,000,000	11,716,829
Mauritania	784,000,000	1,124,000,000	-340,000,000	3,177,388
Morocco	11,720,000,000	21,220,000,000	-9,500,000,000	33,241,259
Mozambique	2,429,000,000	2,815,000,000	-386,000,000	19,686,505
Namibia	2,321,000,000	2,456,000,000	-135,000,000	2,044,147
Niger	222,000,000	588,000,000	-366,000,000	12,525,094
<i>Nigeria</i>	<i>59,010,000,000</i>	<i>25,100,000,000</i>	<i>33,910,000,000</i>	<i>131,859,731</i>
Reunion	214,000,000	2,500,000,000	-2,286,000,000	776,948
Senegal	1,478,000,000	2,980,000,000	-1,502,000,000	11,987,121
Sierra Leone	185,000,000	531,000,000	-346,000,000	6,005,250
Somalia	79,000,000	344,000,000	-265,000,000	8,304,601
<i>South Africa</i>	<i>36,770,000,000</i>	<i>33,890,000,000</i>	<i>2,880,000,000</i>	<i>44,448,470</i>
Tanzania	1,831,000,000	3,180,000,000	-1,349,000,000	37,445,392
Togo	868,400,000	1,208,000,000	-339,600,000	5,548,702
Tunisia	11,610,000,000	13,890,000,000	-2,280,000,000	10,175,014
Western Sahara	N/A	N/A	N/A	273,008
Total	274,262,910,000	191,215,500,000	-	524,025,510

Source: Author, based on WTO (2006) and IMF (2007)

APPENDIX 3: COMESA MEMBER'S ECONOMICAL INDICATORS (US \$)

Country	Exports	Imports	Trade Balance	Population
Burundi	55,680,000	207,300,000	-151,620,000	8,090,068
Comoros	34,000,000	115,000,000	-81,000,000	690,948
Congo DR	1,108,000,000	1,319,000,000	-211,000,000	62,660,551
Djibouti	250,000,000	987,000,000	-737,000,000	486,530
<i>Egypt</i>	<i>24,220,000,000</i>	<i>35,860,000,000</i>	<i>-11,640,000,000</i>	<i>78,887,007</i>
Eritrea	17,650,000	701,000,000	-683,350,000	4,786,994
Ethiopia	1,085,000,000	4,105,000,000	-3,020,000,000	74,777,981
Kenya	3,614,000,000	6,602,000,000	-2,988,000,000	34,707,817
<i>Libya</i>	<i>37,020,000,000</i>	<i>14,470,000,000</i>	<i>22,550,000,000</i>	<i>5,900,754</i>
Madagascar	993,500,000	1,544,000,000	-550,500,000	18,595,469
Malawi	513,100,000	767,900,000	-254,800,000	13,013,926
Mauritius	2,318,000,000	3,391,000,000	-1,073,000,000	1,240,827
Rwanda	135,400,000	390,400,000	-255,000,000	8,648,248
Seychelles	365,100,000	570,600,000	-205,500,000	81,541
Sudan	<i>7,505,000,000</i>	<i>8,693,000,000</i>	<i>-1,188,000,000</i>	<i>41,236,378</i>
Swaziland	905,600,000	1,088,000,000	-182,400,000	1,173,900
Uganda	2,201,000,000	2,274,000,000	-73,000,000	1,136,334
Zambia	3,928,000,000	3,092,000,000	836,000,000	11,502,010
Zimbabwe	1,766,000,000	2,055,000,000	-289,000,000	12,236,805
Total	88,035,030,000	88,232,200,000	-	379,854,088

Source: Author, based on WTO (2006) and IMF (2007)

APPENDIX 4: CLASSIFIES THE AFRICAN COUNTRIES WITHIN THE RTAS

Acronym	Name	Member Countries
CEMAC	Central African Economic and Monetary Community	Chad, Cameroon, Central African Republic, Equatorial, Guinea, Gabon, Congo.
CEN-SAD	Community of Sahel-Saharan States	Burkina Faso, Central African Republic, Chad, Djibouti, Egypt, Eritrea, Gambia, Libya, Mali Morocco, Niger, Nigeria, Senegal, Somalia, Sudan, Tunisia.
CEPGL	Economic Community of the Great Lakes' Countries	Burundi, Democratic Republic of Congo, Rwanda
COMESA	Common Market for Eastern and Southern Africa	Burundi, Comoros, Democratic Republic of Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, Zimbabwe.
EAC	East African Community	Kenya, Uganda, Tanzania.
ECCAS	Economic Community of Central African States	Burundi, Cameroon, Chad, Central African Republic, Equatorial Guinea, Gabon, Congo, Democratic Republic of Congo, Rwanda, Sao Tomé and Principe.
ECOWAS	Economic Community of West African States	Benin, Burkina Faso, Cape Verde, Ivory Coast, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal, Togo.
IGAD	Intergovernmental Authority for Development	Djibouti, Eritrea, Ethiopia, Kenya, Sudan, Somalia, Uganda.
IOC	Indian Ocean Commission	Comoros, Madagascar, Mauritius, Seychelles, France (Reunion).
MRU	Mano River Union	Guinea, Liberia, Sierra Leone.
SACU	Southern African Customs Union	Botswana, Lesotho, Namibia, South Africa, Swaziland.
SADC	Southern African Development Community	Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa Swaziland, Tanzania, Zambia, Zimbabwe.
UEMOA	West African Economic and Monetary Union	Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal, Togo.
UMA	Arab Maghreb Union	Algeria, Libya, Mauritania, Morocco, Tunisia.

Source: Otobo (2004)

APPENDIX 5: INTRA-COMESA TRADE IMPORTS FROM 2002 - 2006 (US \$)

Country	2002	2003	2004	2005	2006
<i>Burundi</i>	26,296,561	42,758,361	35,464,214	34,109,054	32,753,894
<i>Comoros</i>	5,851,274	7,486,014	8,304,151	9,326,438	10,348,726
<i>Congo DR</i>	121,971,246	170,784,981	190,462,617	217,424,278	294,385,939
<i>Djibouti</i>	61,712,213	66,472,210	65,243,854	65,512,586	66,781,318
<i>Egypt</i>	502,396,778	502,217,009	667,550,051	791,504,891	915,459,730
<i>Eritrea</i>	1,832,575	7,554,843	9,740,142	12,809,683	15,879,224
<i>Ethiopia</i>	120,472,894	128,870,901	134,423,324	140,687,143	146,950,962
<i>Kenya</i>	187,569,597	242,078,712	241,291,228	254,327,893	267,364,559
<i>Libya</i>	N/A	N/A	N/A	N/A	-
<i>Madagascar</i>	83,085,290	66,214,852	70,046,949	74,703,413	79,359,876
<i>Malawi</i>	96,546,507	82,903,689	107,504,960	122,545,208	137,585,457
<i>Mauritius</i>	79,288,110	89,145,559	104,540,793	118,551,580	132,562,368
<i>Rwanda</i>	21,609,725	42,575,490	45,011,845	52,080,553	59,149,260
<i>Seychelles</i>	23,574,130	22,464,296	30,939,347	37,018,177	43,097,007
<i>Sudan</i>	252,212,517	367,797,516	426,631,480	499,653,203	572,674,926
<i>Swaziland</i>	4,080,832	3,370,495	3,995,004	4,285,802	4,576,599
<i>Uganda</i>	255,097,679	273,878,888	278,827,296	287,233,904	295,640,512
<i>Zambia</i>	146,335,809	246,252,782	286,743,870	342,091,429	397,438,988
<i>Zimbabwe</i>	103,120,083	67,383,148	54,163,656	35,314,804	16,465,951
Total	2,093,053,820	2,430,209,746	2,760,884,781	3,099,180,039	3,488,475,296

Source: Author, based on COMESA (2006) and IMF (2007)

Note: Italic countries are the COMESA FTA members.

APPENDIX 6: EXTRA-COMESA TRADE IMPORTS FROM 2002 – 2006 (US \$)

Country	2002	2003	2004	2005	2006
<i>Burundi</i>	<i>86,200,000</i>	<i>126,400,000</i>	<i>126,800,000</i>	<i>303,000,000</i>	<i>323,300,000</i>
<i>Comoros</i>	<i>33,900,000</i>	<i>34,100,000</i>	<i>55,300,000</i>	<i>62,500,000</i>	<i>73,200,000</i>
<i>Congo DR</i>	<i>1,405,000,000</i>	<i>1,989,000,000</i>	<i>1,489,000,000</i>	<i>1,145,000,000</i>	<i>1,187,000,000</i>
<i>Djibouti</i>	<i>209,100,000</i>	<i>199,100,000</i>	<i>269,000,000</i>	<i>285,600,000</i>	<i>315,550,000</i>
<i>Egypt</i>	<i>17,880,000,000</i>	<i>10,748,900,000</i>	<i>11,534,800,000</i>	<i>13,042,700,000</i>	<i>9,870,100,000</i>
<i>Eritrea</i>	<i>531,000,000</i>	<i>592,200,000</i>	<i>596,800,000</i>	<i>200,000,000</i>	<i>639,133,000</i>
<i>Ethiopia</i>	<i>1,450,600,000</i>	<i>2,583,400,000</i>	<i>1,336,800,000</i>	<i>1,676,470,000</i>	<i>1,619,570,000</i>
<i>Kenya</i>	<i>3,273,900,000</i>	<i>3,450,900,000</i>	<i>4,237,200,000</i>	<i>4,617,300,000</i>	<i>5,098,950,000</i>
<i>Libya</i>	N/A	N/A	N/A	N/A	-
<i>Madagascar</i>	<i>385,600,000</i>	<i>1,021,200,000</i>	<i>1,628,400,000</i>	<i>2,754,533,000</i>	<i>3,375,933,000</i>
<i>Malawi</i>	<i>589,900,000</i>	<i>621,500,000</i>	<i>619,700,000</i>	<i>640,000,000</i>	<i>654,900,000</i>
<i>Mauritius</i>	<i>2,092,900,000</i>	<i>2,229,200,000</i>	<i>2,676,400,000</i>	<i>2,916,330,000</i>	<i>3,208,080,000</i>
<i>Rwanda</i>	<i>64,200,000</i>	<i>91,600,000</i>	<i>131,700,000</i>	<i>163,000,000</i>	<i>196,750,000</i>
<i>Seychelles</i>	<i>395,200,000</i>	<i>340,700,000</i>	<i>386,400,000</i>	<i>365,300,000</i>	<i>360,900,000</i>
<i>Sudan</i>	<i>1,994,500,000</i>	<i>2,373,700,000</i>	<i>3,393,100,000</i>	<i>3,985,070,000</i>	<i>4,684,370,000</i>
<i>Swaziland</i>	<i>912,300,000</i>	<i>1,391,500,000</i>	<i>1,497,900,000</i>	<i>1,952,000,000</i>	<i>1,852,833,000</i>
<i>Uganda</i>	<i>649,000,000</i>	<i>918,700,000</i>	<i>1,326,500,000</i>	<i>1,242,233,000</i>	<i>1,580,983,000</i>
<i>Zambia</i>	<i>1,131,600,000</i>	<i>1,317,800,000</i>	<i>1,982,700,000</i>	<i>2,108,470,000</i>	<i>2,534,020,000</i>
<i>Zimbabwe</i>	<i>2,271,000,000</i>	<i>2,170,800,000</i>	<i>1,652,800,000</i>	<i>1,713,330,000</i>	<i>1,404,230,000</i>
Total	35,355,900,000	32,200,700,000	34,941,300,000	39,172,836,000	38,979,802,000

Source: Author, based on COMESA (2006) and IMF (2007)

Note: Italic countries are the COMESA FTA members.

APPENDIX 7: TRANSPORT INFRASTRUCTURE MATURITY IN COMESA COUNTRIES

Countries	Total Km of Road network	Total Km of Inland waterway network	Country's geographic area in Sq Km	Density of Road network (Km/ Sq Km)	Density of Inland waterway network (Km/ Sq Km)
Burundi	14,480	2,180	27,830	0.520	0.078
Comoros	880	10	2,170	0.406	0.005
Congo DR	157,000	77,810	2,345,410	0.067	0.033
Djibouti	2,890	20	23,000	0.126	0.001
Eritrea	4,010	0	121,320	0.033	0.000
Ethiopia	33,856	7,444	1,127,127	0.030	0.007
Kenya	63,000	13,400	582,650	0.108	0.023
Libya	83,200	0	1,759,540	0.047	0.000
Madagascar	49,827	600	587,040	0.085	0.001
Malawi	28,400	700	118,480	0.240	0.006
Mauritius	2,020	0	2,040	0.990	0.000
Rwanda	12,000	400	26,338	0.456	0.015
Seychelles	455	0	458	0.993	0.000
Sudan	11,900	4,068	2,505,810	0.005	0.002
Swaziland	3,594	0	17,363	0.207	0.000
Uganda	70,746	200	236,040	0.300	0.001
Zambia	91,440	2,250	752,614	0.121	0.003
Zimbabwe	97,440	1500	390,580	0.249	0.004

Source: COMESA (2006) and MFTI (2006)

APPENDIX 8: MONTHLY LABOUR COSTS PER COUNTRY IN COMESA

Country	Average Monthly cost in US \$ for Skilled worker
Burundi	\$90
Comoros	\$150
Congo DR	\$70
Djibouti	\$240
Eritrea	\$80
Ethiopia	\$410
Kenya	\$1,005
Libya	\$1,200
Madagascar	\$60
Malawi	\$80
Mauritius	\$450
Rwanda	\$150
Seychelles	\$250
Sudan	\$400
Swaziland	\$390
Uganda	\$330
Zambia	\$200
Zimbabwe	\$250

Source: COMESA (2006)

APPENDIX 9-1: PROXIMITY TO SEAPORTS IN EACH COMESA COUNTRY

Country (Main seaport)	Average geographic area covered per main seaport (thousands Sq Km)	Country (Main seaport)	Average Gross weight of goods handled per main port (Million tonnes)
Comoros (Mutsamudu Port)	2,170	Comoros (Mutsamudu Port)	95,820
Djibouti (Djibouti Port)	423,816	Djibouti (Djibouti Port)	442,900
Eritrea (Port of Assab)	121,320	Eritrea (Port of Assab)	140,100
Kenya (Mombasa)	1,235,359	Kenya (Mombasa)	1,050,000
Libya (Port of Benghazi)	1,436,847	Libya (Port of Benghazi)	569,000
Madagascar (Port of Toamasina)	587,040	Madagascar (Port of Toamasina)	245,200
Mauritius (Port Louis)	2,040	Mauritius (Port Louis)	452,200
Seychelles (Victoria Port)	455	Seychelles (Victoria Port)	100,000
Sudan (Port of Sudan)	1,894,905	Sudan (Port of Sudan)	301,700

Source: COMESA (2006)

APPENDIX 9-2: COMESA SEAPORTS HANDLING CONTAINERISED CARGO

Country	Port(s)	Country	Port(s)
Comoros	Dzaudzi	Kenya	Mombassa
	Moroni	Libya	Banghazi
	Mutsamudu		Tripoli
Djibouti	Djibouti	Madagascar	Antsiranana
			Antsohimbondrona
			Mahajanga
			Toamasina
Egypt	Alexandria	Mauritius	Toliara
	Damietta		Port Louis
	Port Said		Beira
	Sokhna	Seychelles	Victoria
Eritrea	Assab	Sudan	Port Sudan
	Massawa		

Source: ACCE (2005)

Note: Ports in italic are the main ports of each county.

APPENDIX 10: GENERAL BUSINESS ENVIRONMENT RANKINGS

Country	World Ranking
Burundi	166
Comoros	144
Congo, DR.	175
Djibouti	161
Eritrea	170
Ethiopia	97
Kenya	83
Libya	176
Madagascar	149
Malawi	110
Mauritius	32
Rwanda	158
Seychelles	84
Sudan	154
Swaziland	76
Uganda	107
Zambia	177
Zimbabwe	153

Source: World Bank (2006)

APPENDIX 11: PROXIMITY TO AIRPORTS IN EACH COMESA COUNTRY

Country	Numbers of commercial airports	Main airport(s)
Burundi	1	Bujumbura International Airport
Comoros	4	Prince Said Ibrahim International Airport
Congo DR	24	N'Djili International Airport
Djibouti	2	Ambouli International Airport
Eritrea	3	<ul style="list-style-type: none">• Asmara International Airport• Massawa International Airport
Ethiopia	14	Bole International Airport
Kenya	22	<ul style="list-style-type: none">• Jomo Kenyatta International Airport• Moi International Airport
Libya	59	Tripoli International Airport
Madagascar	59	Ivato International Airport
Malawi	6	Chileka International Airport
Mauritius	2	International Airport (Mauritius island)
Rwanda	5	Kigali International Airport
Seychelles	14	<ul style="list-style-type: none">• Seychelles International Airport• Praslin Island Airport
Sudan	12	Khartoum International Airport
Swaziland	18	Matshapa International Airport
Uganda	4	Entebbe International Airport
Zambia	11	Lusaka International Airport
Zimbabwe	17	Harare International Airport

Source: COMESA (2006) and IATA (2007)

APPENDIX 12: RAIL NETWORKS IN COMESA COUNTRY

Country	Rail network kilometers	Geographic country area
Burundi	0	390,580
Comoros	0	752,614
Congo DR	5138	2,040
Djibouti	100	1,759,540
Eritrea	306	587,040
Ethiopia	681	2,345,410
Kenya	2778	121,320
Libya	0	236,040
Madagascar	854	582,650
Malawi	797	2,345,410
Mauritius	0	17,363
Rwanda	0	2,505,810
Seychelles	0	455
Sudan	5978	27,830
Swaziland	301	1,127,127
Uganda	1244	118,480
Zambia	2173	26,338
Zimbabwe	3077	23,000

Source: CIA the World Fact Book (2006) and COMESA (2006)

APPENDIX 13: LABOUR AVAILABILITY PER COUNTY

Country	Labour availability
Burundi	48%
Comoros	20%
Congo DR	46%
Djibouti	45%
Eritrea	40%
Ethiopia	44%
Kenya	38%
Libya	30%
Madagascar	25%
Malawi	35%
Mauritius	10%
Rwanda	43%
Seychelles	18%
Sudan	16%
Swaziland	31%
Uganda	42%
Zambia	41%
Zimbabwe	80%

Source: CIA the World Fact Book (2006) and COMESA (2006)

APPENDIX 14: PROXIMITY TO CUSTOMERS

Country	GDP (in US Dollars)	GDP per capita (US Dollars per inhabitant)
Burundi	4,000,000,000	700
Comoros	441,000,000	600
Congo DR	42,740,000,000	700
Djibouti	619,000,000	1000
Eritrea	4,154,000,000	1000
Ethiopia	54,900,000,000	900
Kenya	34,680,000,000	1100
Libya	37,480,000,000	11800
Madagascar	14,560,000,000	900
Malawi	7,410,000,000	600
Mauritius	15,680,000,000	12800
Rwanda	10,430,000,000	1500
Seychelles	626,000,000	7800
Sudan	76,190,000,000	2100
Swaziland	6,018,000,000	5000
Uganda	39,390,000,000	1800
Zambia	9,409,000,000	900
Zimbabwe	24,370,000,000	2100

Source: COMESA (2006) IMF (2006)

APPENDIX 15: PROXIMITY TO SUPPLIERS / SOURCES

Country	GDP
Burundi	4,000,000,000
Comoros	441,000,000
Congo DR	42,740,000,000
Djibouti	619,000,000
Eritrea	4,154,000,000
Ethiopia	54,900,000,000
Kenya	34,680,000,000
Libya	37,480,000,000
Madagascar	14,560,000,000
Malawi	7,410,000,000
Mauritius	15,680,000,000
Rwanda	10,430,000,000
Seychelles	626,000,000
Sudan	76,190,000,000
Swaziland	6,018,000,000
Uganda	39,390,000,000
Zambia	9,409,000,000
Zimbabwe	24,370,000,000

Source: COMESA (2006) and IMF (2006)

APPENDIX 16: CORPORATE TAXES

Country	Corporate tax rate including Surcharges and local taxes (%)
Burundi	54
Comoros	25
Congo DR	56
Djibouti	35
Eritrea	50
Ethiopia	20
Kenya	12
Libya	45
Madagascar	21
Malawi	16
Mauritius	5
Rwanda	40
Seychelles	13
Sudan	30
Swaziland	9
Uganda	15
Zambia	60
Zimbabwe	38

Source: COMESA (2006)

APPENDIX 17: MULTILINGUALISM

Country	Percentage of the population with knowledge of a foreign language	Main Language
Burundi	85%	French
Comoros	80%	French
Congo DR	70%	French
Djibouti	60%	French
Eritrea	46%	English
Ethiopia	40%	English
Kenya	90%	English
Libya	55%	English
Madagascar	75%	French
Malawi	24%	English
Mauritius	8%	English
Rwanda	22%	English
Seychelles	5%	English
Sudan	20%	English
Swaziland	33%	English
Uganda	50%	English
Zambia	30%	English
Zimbabwe	27%	English

Source: CIA the World Fact Book (2006) and COMESA (2006)

APPENDIX 18: CONGESTION RISK

Country	Average number of motor vehicles per km of paved highway
Burundi	70
Comoros	30
Congo DR	110
Djibouti	100
Eritrea	40
Ethiopia	73
Kenya	115
Libya	55
Madagascar	45
Malawi	60
Mauritius	78
Rwanda	65
Seychelles	50
Sudan	120
Swaziland	20
Uganda	130
Zambia	90
Zimbabwe	80

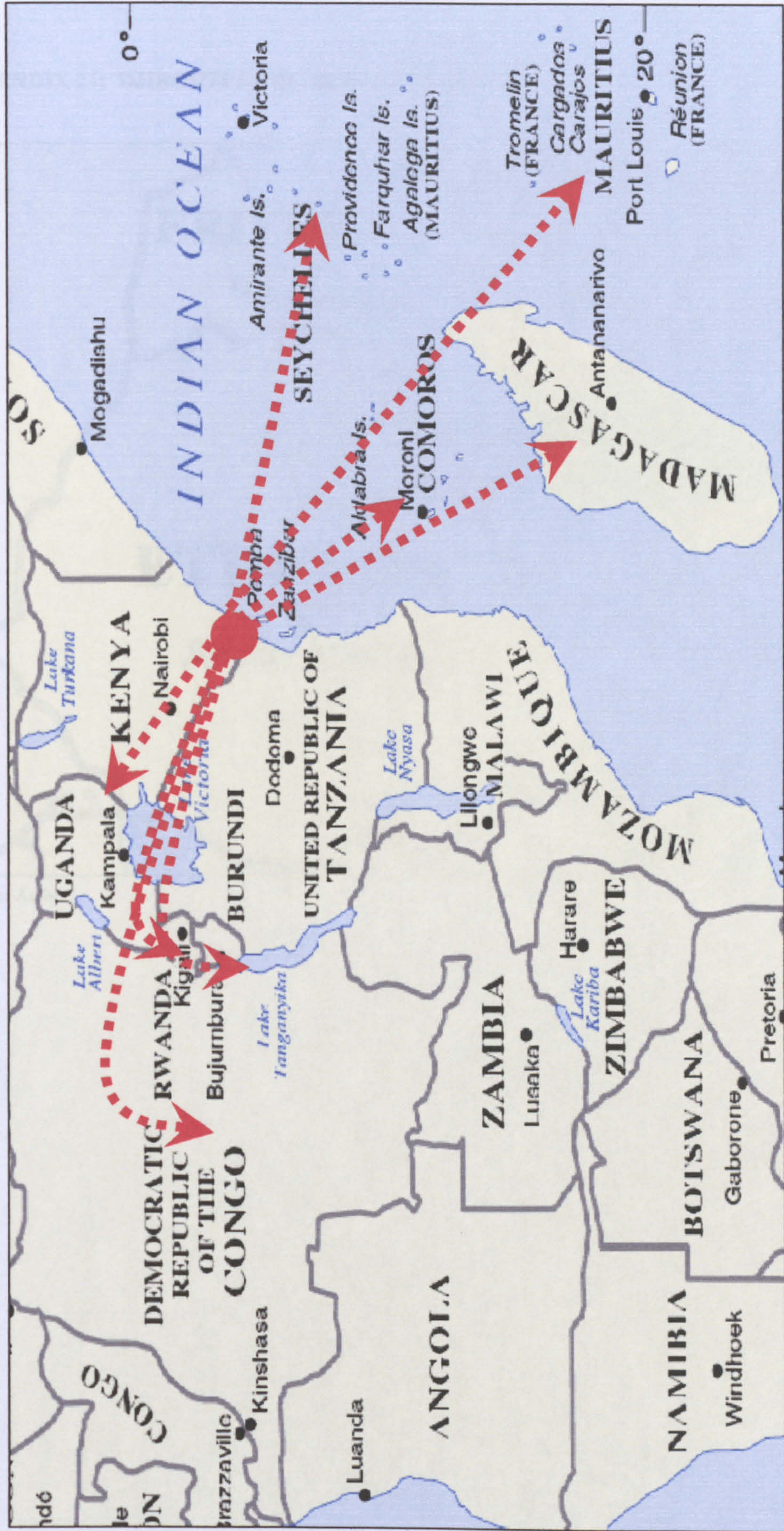
Source: COMESA (2006)

APPENDIX 19: UTILITY INFRASTRUCTURE

Country	Energy consumption (in kWh per capita)	Fresh water usage (in m³)	Gas consumption (in Mtoe per capita)	Number of fixed telephone lines per capita	Number of mobile telephones per capita
Burundi	141,400,000	N/A	N/A	27,700	153,000
Comoros	16,740,000	N/A	N/A	16,900	16,100
Congo DR	6,036,000,000	N/A	N/A	10,600	2,746,000
Djibouti	223,200,000	N/A	N/A	11,100	34,500
Eritrea	251,900,000	N/A	N/A	37,700	40,400
Ethiopia	1,914,000,000	N/A	N/A	610,300	410,600
Kenya	4,238,000,000	N/A	N/A	281,800	4,612,000
Libya	13,390,000,000	N/A	6,250,000,000	750,000	234,800
Madagascar	767,700,000	N/A	N/A	66,900	504,700
Malawi	1,206,000,000	N/A	N/A	102,700	429,300
Mauritius	1,805,000,000	N/A	N/A	359,000	713,300
Rwanda	121,100,000	N/A	N/A	23,000	290,000
Seychelles	224,400,000	N/A	N/A	21,400	57,000
Sudan	2,943,000,000	N/A	N/A	670,000	1,828,000
Swaziland	1,161,000,000	N/A	N/A	35,000	200,000
Uganda	1,448,000,000	N/A	N/A	100,800	1,525,000
Zambia	5,345,000,000	N/A	N/A	94,700	946,600
Zimbabwe	11,220,000,000	N/A	N/A	328,000	699,000

Source: CIA the World Fact Book (2006) and EIA (2007)

APPENDIX 20: KENYA'S RDC SERVED MARKETS



Source: Author.

APPENDIX 21: DJIBOUTI'S RDC SERVED MARKETS



Source: Author.

APPENDIX 22: TANZANIA'S RDC SERVED MARKETS



Source: Author.

APPENDIX 23: THE GEOGRAPHIC DISTRIBUTION OF THE REGISTERED INDUSTRIAL ENTERPRISES IN THE MAIN EGYPTIAN REGIONS

Region	Governorate	No. of enterprises	Production Value	Investments	Labour	Wages
Greater Cairo	Cairo	8514	34802	29013	359907	1664
	Giza	2383	22776	18553	153055	787
	Kalubeya	1895	9764	9573	121623	698
Delta	Menoufeya	491	6819	5410	32088	177
	Gharbeya	1487	4792	3451	92202	470
	Kafr El Sheikh	310	2216	490	5917	91
	Damietta	902	9052	2280	13840	49
	Dekahleya	1305	4978	4276	42260	209
Northern Upper Egypt	Minya	263	502	368	8193	27
	Beni Souef	109	1247	1114	5003	27
	Fayoum	128	532	379	6192	23
Central Upper Egypt	Assiut	526	1464	934	13531	65
	New Valley	6	13	7	704	2
Southern Upper Egypt	Red Sea	51	86	330	5026	50
	Sohag	268	937	972	10543	71
	Quena	151	2192	4357	21147	290
	Aswan	151	1214	3310	15357	125
Canal Zone	Port Said	287	5128	1966	18455	80
	Suez	89	3591	6634	21503	225
	Ismailia	131	1473	1607	13065	90
	Northern Sinai	46	339	1603	1469	15
	Southern Sinai	6	144	1178	2682	31
	Sharkeya	3075	22667	19633	153600	1225
Alexandria Zone	Alexandria	2207	23048	22379	209164	2190
	Matrouh	10	64	32	502	4
	Beheira	471	4531	4161	56518	182
Total		25262	164371	144010	1383546	8867

Source: Mobarak (2004)

APPENDIX 24: QUESTIONNAIRES COVER LETTER

Dear respondent,

I am a postgraduate student doing a PhD in Liverpool John Moores University in the United Kingdom. My research area is about undertaking some logistical development in COMESA countries.

In order to gather accurate and reliable information about this area of interest, I respectfully request you to complete my online questionnaire which is carefully designed to collect the data required.

Please log on to the following web site to do the questionnaire:

www.nakibresearch.com

Your participation will involve a response to the stated questions, and should approximately take **10 minutes**. Your involvement in the study is **voluntary**, and you may choose not to participate or to stop at any time.

"This questionnaire is anonymous". The results of the study will be published, but your name will not be linked to responses in publications that are released from the project. In fact, the published results will be presented in summary form only. All information you provide will remain **strictly confidential**.

Please complete the online questionnaire via the mentioned website above, and if you have any questions about this research project, please feel free to contact me:
i.el-nakib@2004.ljmu.ac.uk

Thank you for your consideration.

Sincerely,

Islam El-Nakib

APPENDIX 25: QUESTIONNAIRE FOR EGYPTIAN EXPORTERS TO COMESA COUNTRIES

This questionnaire is part of research work undertakes in Liverpool John Moores University- UK.

Your kind co-operation in answering the following questions is highly appreciated.

Name of the company:
Nature of business:
Country:

1- Sectors of operation

Please tick all the business sectors in which your company operates

Agriculture		Financial/Legal		Professional Services	
Oil & Gas		Food, Fish & Drink		Recruitment/Manpower	
Construction		Freight/Transport		Renewable Energies	
Manufacturing		IT/Software		Tourism	
Environment		Medical/Healthcare		Training/Education	
Engineering		Other Please specify...			

2- In which countries in COMESA is your company CURRENTLY active?

(Please tick all countries that apply)

Burundi		Mauritius	
Comoros		Rwanda	
Congo DR		Seychelles	
Djibouti		Sudan	
Eritrea		Swaziland	
Kenya		Uganda	
Libya		Zambia	
Madagascar		Zimbabwe	
Malawi			

3-Which four countries in COMESA are currently your company’s most important markets in terms of turnover?

(Please write the name of each country in the boxes below. Please do not include Egypt)

1 st	
2 nd	
3 rd	
4 th	

4-How does your company do business in these countries?
(Please tick all that apply)

Direct sales		Joint Venture	
Agent		In-country subsidiary office	
Representative		In-country branch office	
Distributor		In-country liaison/rep office	
Franchise		Licence	
Other (please specify)			

5- Please evaluate the issues that your company encounters when doing business with COMESA based on the following factors using a scale from (1) to (6).

(1 = Excellent, 2= Good, 3= Moderately good, 4 = Moderately Poor, 5= Poor, 6= Very Poor)

	Factors	Evaluation
1	Competitive prices	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
2	Exchange rate	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
3	Lack of working capital	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
4	Import duties	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
5	Product development funding	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
6	Cost of market entry	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
7	Sourcing market information	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
8	Identifying business opportunities	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
9	Finding overseas distributors/agents	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
10	Foreign Taxation	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
11	Instability of political and economical situation	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
12	Finding overseas business partners	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
13	Availability of shipping lines	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
14	Brand identity/market penetration	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
15	Language difficulties	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
16	Cultural issues	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
17	Export documentation	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
18	Legal Complexities/Bureaucracy	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
19	Lack of staff/skills	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
20	Corruption	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>

6- Please evaluate the issues that could face your business in Egypt based on the following factors on a scale from (1) to (6).

(1 = Excellent, 2= Good, 3= Moderately good, 4 = Moderately Poor, 5= Poor, 6= Very Poor)

	Factors	Evaluation
1	Transportation infrastructure and facilities	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
2	Third-party logistics providers	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
3	Certainty in demand and supply	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
4	Manufacturing cycle times	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
5	Warehousing facilities	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
6	Information technology	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
7	Business approach	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
8	Governmental support	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
9	Organisation and management support	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
10	Awareness of logistics and supply chain concepts	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
11	Multimodal transport solutions	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
12	National competition	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
13	Bureaucracy	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
14	Investment funds	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
15	Corruption	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>

7- Who are your main foreign competitors in the COMESA market/ and why?

EU ☐ USA ☐ China ☐ South Africa ☐ others ☐ (*Please specify*)

This image shows a full page of primary-ruled paper. It features multiple horizontal rows of small black dots, evenly spaced vertically, which serve as guides for handwriting practice. The background is white, and there are no margins or other markings present.

8- Please evaluate the Egyptian exports based on the following factors on a scale from (1) to (6).

(1 = Excellent, 2= Good, 3= Moderately good, 4 = Moderately Poor, 5= Poor, 6= Very Poor)

	Factors	Evaluation
1	Quality of Egyptian exports	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
2	Price of Egyptian exports	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
3	Variety of Egyptian exports	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
4	Order cycle time	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
5	Reliability of order fulfilment	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
6	Flexibility in trade transactions	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
7	Tendency to business collaboration	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
8	Degree of damage to shipment	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
9	Information and communication flows	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>

9- Mention the possible reasons which would make the COMESA market favour the international products rather than the Egyptian ones

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10- If Egypt made Regional Distribution Centres (RDCs) allocated in some COMESA countries, please provide your opinion for the following RDCs' locations on a scale from (1) to (6)

(1 = Totally agree, 2= Agree, 3= Slightly Agree, 4 = Slightly Disagree, 5= Disagree, 6= Totally Disagree)

	Factors	Evaluation
1	RDC in Djibouti will serve: Ethiopia and Eritrea	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
2	RDC in Kenya will serve: Uganda, Rwanda, Burundi, Congo DR Seychelles, Comoros, Mauritius and Madagascar	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
4	RDC in Tanzania will serve: Zambia, Malawi, Zimbabwe and Swaziland	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>

Please provide any additional comments on the locations of the previously mentioned RDCs

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11-What benefits would the RDCs bring to your exports to COMESA countries? (Please use the following scale in evaluating the benefits)

(1 = Totally agree, 2= Agree, 3= Slightly Agree, 4 = Slightly Disagree, 5= Disagree, 6= Totally Disagree)

	Factors	Evaluation
1	Achieving inventory control	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
2	Time compression	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
3	Customer response time	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
4	Maximising effectiveness while minimising cost	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
5	Increase Productivity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
6	Competitive Pricing	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
7	Adopt best practices	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
8	Accurately tracking goods	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
9	Reducing in-transit theft	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
10	Improving order fulfilment	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
11	Enhancing the growth of Egyptian trade	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
12	Buffering between supply and demand	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
13	Allow consolidation and sorting of products	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
14	Generate the chance to enter new markets	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
15	Centralisation of Egypt’s supply chains structures	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>

Thank you for your co-operation

APPENDIX 26: QUESTIONNAIRE ON EGYPTIAN EXPORTED PRODUCTS TO THE IMPORTERS IN COMESA COUNTRIES

This questionnaire is part of research work undertakes in Liverpool John Moores University- UK.

Your kind co-operation in answering the following questions is highly appreciated.

Name of the company:
Nature of business:
Country:

Section One: Basic Information

Please answer the following questions:

1-What kind of products do you import from Egypt?

Agricultural products ☐ pharmaceuticals ☐ cotton and textiles ☐ steel and aluminium ☐ others ☐ (Please specify the products).....

2-Please check the modes of transport used: Sea ☐ or Air ☐ or Land☐

3-If you are located in a landlocked country, what are the appropriate means of transport to serve your market? (Check all that applies) Rail☐ Road ☐ Air ☐

4- imports Who are your major suppliers of? (please check all that applies)

France		Italy		Turkey	
Netherlands		Tunisia		Japan	
USA		Spain		Tanzania	
Australia		Belgium		Pakistan	
China		UK		Singapore	
South Africa		Mozambique		Brazil	
India		Hong Kong		UAE	
Germany		Other Please specify...			

As to who are the major suppliers, please mention the reasons that make these countries your major suppliers

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Section Two: Evaluation of Egyptian products

1- Please evaluate Egyptian imports on the following factors on a scale from (1) to (6).

(1 = Excellent, 2= Good, 3= Moderately good, 4 = Moderately Poor, 5= Poor, 6= Very Poor)

	Factors	Evaluation
1	Quality of Egyptian products	<input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
2	Price of Egyptian products	<input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
3	Variety of Egyptian products	<input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
4	Order cycle time	<input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
5	Reliability of order fulfilment	<input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
6	Flexibility in trade transactions	<input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
7	Tendency to business collaboration	<input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
8	Degree of damage to shipment	<input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
9	Information and communication flows	<input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>

2- Please rank the following factors according to their importance to your preference as importer of Egyptian products. Use the Column in the following table to rank your preferences as (1) is the most important factor and (9) is the least important.

	Factors	Ranking
1	Quality of Egyptian products	
2	Price of Egyptian products	
3	Variety of Egyptian products	
4	Order cycle time	
5	Reliability of order fulfilment	
6	Flexibility in trade transactions	
7	Tendency to business collaboration	
8	Degree of damage to shipment	
9	Information and communication flows	

Section Three: Importers Opinion

1- If Egypt made Regional Distribution Centres (RDCs) allocated in some COMESA countries, please provide your opinion for the following RDCs' locations on a scale from (1) to (6)

(1 = Totally agree, 2= Agree, 3= Slightly Agree, 4 = Slightly Disagree, 5= Disagree, 6= Totally Disagree)

	Factors	Evaluation
1	RDC in Djibouti will serve: Ethiopia and Eritrea	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
2	RDC in Kenya will serve: Uganda, Rwanda, Burundi, Congo DR Seychelles, Comoros, Mauritius and Madagascar	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
3	RDC in Tanzania will serve: Zambia, Malawi, Zimbabwe and Swaziland	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>

Please provide any additional comments on the locations of the previously mentioned RDCs

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2-What benefits would the proposed Egyptian RDCs bring to your business in COMESA countries? (Please use the following scale in evaluating the benefits)

(1 = Totally agree, 2= Agree, 3= Slightly Agree, 4 = Slightly Disagree, 5= Disagree, 6= Totally Disagree)

	Factors	Evaluation
1	Achieving inventory control	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
2	Time compression	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
3	Customer response time	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
4	Maximising effectiveness while minimising cost	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
5	Increase Productivity	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
6	Competitive Pricing	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
7	Adopt best practices	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
8	Accurately tracking goods	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
9	Reducing in-transit theft	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
10	Improving order fulfilment	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
11	Enhancing the growth of Egyptian trade	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
12	Buffering between supply and demand	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
13	Allow consolidation and sorting of products	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
14	Generate the chance to enter new markets	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>
15	Centralisation of Egypt's supply chains structures	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/>

Thank you for your co-operation