Enabling Sustainable Development through Logistics: A case of Southern Africa

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ABSTRACT

Africa, as a continent, requires rapid development in order to catapult the continent into developed status. As decision-makers on the continent acknowledge this, ambitious development goals have been put in place. This research study analysed whether logistics, and more specifically, transport logistics can contribute to sustainable development on the continent, and if so, in which ways and forms this can be implemented. The qualitative study focused specifically on the SADC region trade block within Africa. The research included a case study of a leader in the transport logistics industry. Interviews with the company's management committee, as well as the management of its top five clients, have been conducted to form the basis of an explorative study. The findings of this study indicate that logistics can contribute to sustainable development within Africa. Three specific areas of impact have been identified, i.e. the role of logistics as enabler of trade on the continent, its contribution to the combat against climate change and its role in social development. The researcher considers the findings in this paper to be significant for sustainable development in terms of their potential value for use by decision-makers in incorporating logistics into their decision-making. More importantly, the potential significant impact that logistics can have on sustainable development, with the formation of strategic partnerships in achieving these development goals, has been highlighted.

KEYWORDS

Transport Logistics, Sustainable Development, Development Goals, Africa, SADC

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GLOSSARY OF TERMS

AU	African Union
BBEEE	Broad Based Economic Employee Empowerment
BLNS	Botswana, Lesotho, Namibia, Swaziland
CAR	Central African Republic
CO2	Carbon Dioxide
COMESA	Common Market for Eastern and Southern Africa
CSR	Corporate Social Responsibility
CUM	Cape Union Mart
CUTS	Consumer Unity and Trust Society
DoT	Department of Transport
DRC	Democratic Republic of the Congo
EAC	East African Community
ECA	Economic Commission for Africa
ESG	Environmental, Social and Governance
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GTS	Green Transport Strategy
IMF	International Monetary Fund

ITS	Intelligent Transportation Systems
LSP	Logistics Service Provider
MDG	Millennium Development Goals
NEPAD	New Partnership for Africa's Development
OWG	Open Working Group
POD	Proof of Delivery
R&D	Research and Development
RFQ	Request for Quotation
R.S.A.	Republic of South Africa
RTT	Railit Total Transportation
RTTS	Railit Total Transportation (Style Business Unit)
SADC	Southern Africa Development Community
SARS	South African Revenue Services
SDG	Sustainable Development Goals
SRI	Sustainable Responsible Investment
STAR	Steinhoff Africa Retail
TFG	The Foschini Group
TFTA	Tripartite Free Trade Area
UN	United Nations
US	United States
VRP	Vehicle Route Planning

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This dissertation is dedicated to my friend Hilgard Müller.

1. INTRODUCTION

1.1 Research Area

According to a series of working papers published by the International Monetary Fund (IMF), Africa is the poorest continent in the world (Anupam et al, 2000). All 54 of the countries on the continent are classified as developing economies. It is therefore in a position that demands robust, sustainable development and growth. In the sense of development, not only does the continent require financial or economic development, but it also demands social development, whilst being cognisant of the environment, in order to ensure the sustainability of overall, inclusive development.

Africa is said to be both in a position of emergence and a position of struggle. A positive outlook is that Africa is emerging as a noteworthy player in the global economy. The region's average gross domestic product (GDP) is expected to rise between 4% and 5% in 2016 and 2017. Africa is also currently outpacing other regions in terms of foreign direct investment (FDI) growth (DeGhetto, Gray, & Kiggundu, 2016). However, serious challenges and development groundwork remains on the continent. Some of the most persistent challenges are Africa's dependence on reliable infrastructure, leadership and inclusive growth for all its citizens. This is summarised in the African Union's (AU) Economic Commission for Africa (ECA) Sustainable Development Report (Economic Commission for Africa, 2017).

Most African countries are committed to the United Nation's (UN) Sustainable Development Goals (SDG's), which is a positive aspect for Africa, as these global development goals can serve as perfect guidelines for nations to incorporate and align with global development targets. On a continent level, the AU has developed its own development goals for Africa as a continent, which is commonly known as "Agenda 2063 – The Africa We Want." These development goals are specific to Africa as a continent, and African countries can align themselves with these development goals, under the guidance of the AU. The UN's SDG's was prefaced by a set of Millennium Development Goals (MDG's). During the MDG goal setting exercise, logistics, were initially not specifically considered by the different working groups. This was then later reviewed during the SDG goal setting exercise in which it was shown that logistics play a role in all 17 SDG's and should receive the necessary attention when considering each development goal. This research study aims to take an exploratory view from a logistics industry perspective in order to ascertain whether and how logistics can contribute

to development in Africa and Southern Africa, in particular. This is discussed against the UN and AU development goals as reference points. The research is important as to ascertain the potential impact of logistics on development goals; also, to be cautious to not exclude logistics, and its potential impact on development goals.

1.1.1 Research Background

Second to Asia, Africa is the world's largest most populous continent. Including adjacent islands, Africa covers about 30.3 million $km^{2.}$ It covers 6% of the Earth's total surface and 20.4% of its total land area (Boyes, 2013, para. 23). As of 2016, Africa had a population of 1.2 billion people and accounted for about 16% of the world's human population (Population Reference Bureau, 2016). Africa's average population is the youngest amongst all the continents in the world, the median age in 2012 was 19.7, compared to the worldwide median age of 30.4 for the same year. Africa is a youthful continent and it is estimated that its share in the world population will increase to 24% in 2050, from about 13% in 2012. Undoubtedly, Africa has the youngest population in the world and will remain significantly so in the future (Janneh, 2012). This is important in the light of AU Agenda 2063 and its related development goals, which have a long-term view for Africa. African countries vary greatly regarding environments, economics, historical ties and government systems. In the late 19th century, European countries colonised almost all of Africa, which still has a significant effect on Africa's identity (Boyes, 2013). However, most present states in Africa originate from a process of decolonisation in the 20th century. African nations have attempted to cooperate through the establishment of the AU, which is headquartered in Addis Ababa. Under the AU, Africa has also formed several intercontinental trade agreements.

Challenges exist with the development of Africa, and one of these challenges is that, although some countries have seen substantial growth in FDI and attracting international investments, this is not the case for all countries on the continent. Africa is a dynamic continent and it requires analysis on a per-country level and not on a continental level. A further challenge is that conflicts on the continent remain a concern. Countries such as the Central African Republic (CAR), the Democratic Republic of the Congo (DRC), Kenya, Mali, Nigeria, Somalia and South Sudan highlight the continent's continuing challenges of establishing lasting peace and security among its citizens (DeGhetto et al., 2016). Leadership and the challenge of corruption remains a concern in Africa. Prior research highlights the negative implications of corruption and political instability (DeGhetto et al., 2016, p. 100). As further mentioned by DeGhetto

(2016), according to Transparency International's Corruption Perceptions Index, in terms of institutional risk, many African nations are at the bottom of this list. It is not certain how this affects FDI inflows into African nations, but it is well agreed that corruption has a negative impact on development for Africa.

Many developed nations achieved their developed status through centuries of industrialisation, colonisation and a strong dependence on the mining of fossil resources. Often, this was at the expense of colonialised countries (Engerman & Sokoloff, 2005). However, these traditional methods of economic growth are no longer globally sustainable. This is mainly driven by an increased awareness and growing concern regarding climate change, as well as a global thought shift towards inclusive development that considers the impact of both societal and environmental factors, otherwise known as the triple bottom line (i.e. financial, social, environmental). Based on this thinking, developing nations need to find new ways to foster development that will leapfrog its nations into developed status. This paper aims to research how logistics as an industry can contribute to development in this new global milieu while considering Africa's unique challenges mentioned above.

1.2 Problem Statement

Decision-makers should take note that sufficient global research has been completed to support the notion that a well-structured logistics system contributes to development in a country or region. This might appear in different forms, e.g. logistics as a facilitator for global trade; or in its role as contributor to social development; or global aid projects as well as its role in the environment, through combatting climate change. Logistics' role in development could be direct or indirect, but it has been suggested that logistics as an industry plays a role in all of the UN's SDG goals (UN-Habitat, UNEP, & SLoCaT, 2015).

The UN's SDG's was prefaced by a set of development goals, also developed by the UN, called the Millennium Development Goals (MDG) (United Nations, 2002). During the MDG goal-setting exercise, logistics was initially not specifically considered by the different working groups (UN-Habitat et al., 2015). However, 17 years after the initial MDG's, support for sustainable logistics and transport solutions have strongly emerged. In a report by the Open Working Group (OWG) on SDG's published on 19 July 2015, transport related targets were included in eight of the seventeen proposed SDG's (UN-Habitat et al., 2015). This goes to highlight the importance of including logistics related targets in development goals.

The AU's Agenda 2063 is an ambitious, progressive and much needed development agenda for the African continent. As many of its goals are closely correlated with the UN's SDG's, it would be wise for the AU to take notice of the UN's initial exclusion of logistics when the MDG's were formed. Organisations such as governments of countries, the public sector, various businesses and multilateral development agencies rely on the private sector in offering logistics services, which is needed for development (Sohail, et al, 2004). Therefore, the assumption is made that these organisations will contain a certain amount of expectation from logistics service providers to keep abreast with developments in this specialised field. More recently, there has been significant development with technology 'disruptors' entering the logistics industry. This is expected to change and affect the way logistics will be offered to the market in future. This is important when viewed against the AU's Agenda 2063 timeline that spans the next five decades. Logistics and the planning and supply of its accompanying infrastructure should form a critical component in a country's strategic development and growth agenda. However, this component is often overlooked and creates challenges for economic and social development projects. This holds particularly true for developing countries. Development in a country could potentially be hindered due to insufficient logistical infrastructural frameworks being in place. Technology application in logistics could be an important tool to assist with the many development challenges facing Africa and can potentially be the tool that can 'slingshot' Africa into development.

Although research exists on the subject of logistics and development, completed in both a developed and developing economy context (and most notably China), not much research seems to exist on this subject in an African context. It is, therefore, important to gain a perspective from a Logistics Service Provider (LSP) operating in an African context to understand the potential impact and role that logistics can have on development agendas. Perhaps, more importantly, the organisations compiling these agendas should consider, and be aware of the potential impact and role of logistics as a strategic partner for enabling, executing and contributing towards these development agendas.

1.3 Purpose and Significance of the Research

This study aims to research the role of logistics on the African continent as an enabler for development. The study also looks at the important role that private sector logistics companies can play as enablers of development, specifically in contributing towards achieving the UN's 17 SDG's as well as contributing to the AU's Agenda 2063 development agenda.

An assumption is made that governments, the public sector and multilateral agencies depend on the private sector in offering logistic services as experts in the field. Logistics is a specialised, capital intensive industry and is usually dominated by companies that are specialists in their industries (Sohail et al., 2004). Therefore, the assumption is also made that, to a greater extent, these organisations will outsource their logistics functions to logistics service providers. The assumption is made that these organisations (clients) would expect these logistics service providers to stay ahead of developments in the logistics industry and will be receiving expert consultation from these companies on logistics related matters.

There is currently significant development in modern logistics and innovative technology companies entering the logistics space. Reviews have been done on how innovative technology and logistics companies are using modern technology in moving goods across Africa and overcoming logistical infrastructure constraints. The studies have also considered how logistics and technology applied in the logistics space can contribute to sustainable development.

Although a significant number of studies have been completed on this subject, mostly in developed and developing economies, and most notably China, few practical examples and not much literature has been coming out of Africa. This study aims to build upon the existing literature and contribute to it by having used a case study of a logistics service provider company that is actively involved with offering logistics services in African SADC countries. This company's contribution to sustainable economic development in this region has been analysed. The case study could add significance to current literature as not much evidence of transport logistics' role as a contributor to sustainable development exists in an African context and the practical examples could be used for creating awareness and future decision-making by relevant stakeholders and decision-makers.

1.4 Research Question and Scope of Study

1.4.1 Research Question

The research question for this study is whether transport logistics can contribute to sustainable development in Southern Africa. Sustainable development in this study is measured not only by financial or economical aspects, but also based on social and environmental considerations as guided by the UN's SDG's.

1.4.2 Scope of Study

This study had an African focus. Due to the dynamics of Africa as a continent, mentioned earlier in this paper, research was mainly confined to the Southern Africa Development Community (SADC) trade region within Africa. A summary map of countries belonging to the SADC region can be found below and in Appendix A.

Furthermore, in terms of logistics, this paper has focused on transport or road freight logistics in particular. The case study focuses on transport logistics in a niche market, the fashion and lifestyle retail industry. This is important to highlight as transport logistics in this field differs from other forms of transport logistics. Fashion retail is fast-moving and requires just-in-time order fulfilment logistic models.

The figure below represents the 15 SADC member countries belonging to the SADC organisation, which will form the scope of this study.

Figure 1: Map of SADC region - Source: IT ABOT Technology

1.4 Research Assumptions

The research assumed that transport logistics was critical to achieving sustainable development and SDG goals. The research further assumed that all fashion retailers with a presence in SADC have their own set of unique challenges in their respective operating environments. Lastly, the study assumed that the respondents/interviewees chosen for the study provided the necessary information to answer the research question.

2. LITERATURE REVIEW

2.1. Introduction

This section comprehensively reviews existing literature on the interrelationship between logistics and sustainable development. In line with the main themes covered in chapter four, the literature review focuses on logistics role as contributor to economic growth, its role as contributor to the environment as well as its social development role through Corporate Social Responsibility (CSR) programs. When focusing on logistics, attention has been given to broad topics such as infrastructure, technology developments and technology 'disruptors' entering the logistics space, as well as the discussion around trade and donor aid. The provision of infrastructure and its effect on logistics has been covered. This is specifically applicable when viewed in an African context where many infrastructural challenges are present (Economic Commission for Africa, 2017). Existing global literature was reviewed to contextualise and allow comparison with the findings of Chapter four, which have an African focus. Comparison of literature was also done in Chapter four explaining how the findings can be compared to current literature

2.2 Development Goals

2.2.1 United Nation's Millennium Development Goals (MDG's)

During 2000, the UN developed eight Millennium Development Goals (MDG's), which ranged from halving extreme poverty rates to halting the spread of HIV/AIDS and providing universal primary education, all by a target date of 2015 (United Nations, 2002). These formed a blueprint agreed to by all the world's countries and leading development institutions. Unprecedented efforts were galvanised in an effort to meet the needs of the world's poorest. As the MDG's era concluded in 2015, the UN worked with governments, civil society and other partners to build on the momentum generated by the MDG's and carry on with an ambitious post-2015 development agenda. During 2016, a new development agenda was launched, called the Sustainable Development Goals (SDG's) which contained bold and transformative development goals over the next 15 years (United Nations, 2002). A summary of the Millennium Development Goals (MDG's) is attached in Appendix B.

2.2.2 United Nation's Sustainable Development Goals (SDG's)

The UN's 17 SDG's were formally adopted by the UN's general assembly in New York, USA on September 25, 2015. The framework was formally communicated under the banner of 'Transforming our World, the 2030 Agenda for Sustainable Development'. The goals aim to build on the work of the historic Millennium Development Goals (MDGs), which in September 2000, rallied the world around a common 15-year agenda to tackle the indignity of poverty. While the MDG's focused primarily on the investment needs for ending extreme poverty, the SDG's pursue a much broader agenda that includes investments in 17 sustainable investment goals (United Nations, 2015). A summary of the Sustainable Development Goals (SDG's) is attached in Appendix C.

2.3 Logistics relevance in achieving the United Nations Sustainable Development Goals

As mentioned in chapter one of this research paper, during the MDG goal-setting exercise logistics in its own entirety was initially not specifically considered by the different working groups. An Open Working Group on SDG's has, however, illustrated the important role of transport logistics in sustainable development. They highlighted that the transport relevance of the SDG's and their targets could be direct or indirect, but that they stimulate economic and social development and provide accessibility to development opportunities (UN-Habitat et al., 2015). This working group further highlighted that logistics and transport have to be understood as a means to an end, rather than an end in itself. They went further to state that logistics may not always play a direct role in a goal, but to achieve some specific goals and targets, logistics is necessary, and acts as a vital enabler. The risk of ignoring the role of sustainable logistics in achieving these goals will be difficult, because many SDGs depend on logistics and transport to meet their targets (UN-Habitat et al., 2015).

Below is a summary of the recommendations made in this draft paper in terms of each of the respective 17 SDG's. For the purpose of this paper, the 17 SDG's have been divided into four broad categories. The first category is discussed under the theme of economic growth and infrastructure. The second theme is discussed under environmental responsibility, which looks at transport logistics' role in contribution to combating climate change. The third theme is discussed under social development and the last theme is discussed under the formation of partnerships and institutions for realising sustainable development goals.

2.3.1 Theme one: Economic Growth and Infrastructure

Under the SDG number eight, 'Decent work and economic growth', it has been found that quality and cost of transport have a major impact on economic growth, on the ability of businesses to compete, on the movement of freight and on personal productivity. Efficient transport activity, logistics and supply chain, and reduction of trade barriers is fundamental for a more efficient economy, particularly for developing countries. In order to achieve target eight, logistics plays a critical role as a major employment sector that offers a diversity of jobs. In Europe, for instance, the transport industry directly employs more than ten million people, accounting for 4.5% of total employment. Manufacturing of transport equipment provides an additional 1.5% employment. The African example illustrates that every direct job in the transport service sector usually results in 2 to 2.5 indirect jobs in other sectors (UN-Habitat et al., 2015). This is important to note to assist with the creation of employment in Africa. Under SDG number nine, 'Industry, innovation and infrastructure' the authors of this working paper found that, in order to achieve sustainable industrialisation, trans-border connections and transport development corridors for inclusion of and connectivity between economic hubs, play a crucial role. A robust and resilient transportation infrastructure is an essential element for a resilient supply chain as disruption to the global, interregional, national and local trade lanes could impact development, as transport costs could be increased and delivery of products delayed (UN-Habitat et al., 2015). This is important, especially in line with this paper's research focus on whether transport logistics contribute to sustainable development in a specific region. Regarding innovation, a wide-range of innovative technologies were generated within the transport sector. Companies active in the development of IT solutions for transportation showed a very high R&D (research and development) intensity. A major investment opportunity exists for telematics, traffic demand management and Intelligent Transportation Systems (ITS). This could enhance the operational efficiency of the entire transport sector and reduce energy consumption of all forms of motorized transport. Innovation is a key selling factor particularly in the automotive and aviation industries (UN-Habitat et al., 2015). This is also underlined in Chapter four of this paper, where, by using a case study, it was shown how technology could assist with various development aspects within Africa.

2.3.2 Theme two: Environmental concerns/Combating climate change

Due to the nature of transport and its related energy use, it is safe to assume that transport can play a major role in the global fight against climate change. The UN's working group has found

that transportation accounts for approximately 25% of the world's energy demand and for about 61.5% of all the oil used each year. GHG emissions from the transport sector have more than doubled since 1970, increasing at a faster rate than any other energy end-use sector. Applying green technologies and processes in transport and logistics will be a crucial component of comprehensive strategies towards more sustainable ways of consumption and production of goods and services in the entire economy (UN-Habitat et al., 2015). The above relates to SDG's seven, eleven and twelve, i.e. 'Affordable and clean energy', 'Climate change' and 'Responsible consumption and production'. The working group has recommended that for these three SDG's to be achieved, economic development will have to be decoupled from energy use and emissions. They further mention that there are various types of actions that can be taken to improve the efficiency of transport fuel use, for instance improving road conditions, providing high quality fuels, promoting eco-driving, better vehicle technologies including promoting electric vehicles, and overall improvement of urban and rural transport systems. The shortage of reliable rural transport services was quoted repeatedly as being responsible for food crops not reaching the market at all and hindering farmers' ability to expand food production for the market. In other cases, the poor quality of transport services accounted for spoilage during transport to the market (UN-Habitat et al., 2015).

2.3.3 Theme three: Social Development

The UN Habitat working group has established that transport is necessary as an enabler for inclusive economic growth, poverty reduction, social progress and an overall improved quality of life. This relates to SDG's number one to six as well as SDG number ten. Investing in transport infrastructure is key to achieving sustainable economic growth and allowing access to services and markets and, in turn, enhancing the social well-being of communities. This also builds productive capacity and promotes trade and regional and global integration. Furthermore, the logistics sector could contribute to employment opportunities and be a source of stable and quality employment. This could be directly or indirectly applied to development projects and infrastructure development, especially in areas where economic growth and development are present (UN-Habitat et al., 2015). This working group highlighted that in a study done by the World Bank, in the case of Ethiopia, it was shown that access to all-weather roads in 15 villages has helped to reduce the incidence of poverty by 6.7%. In a further study by the World Bank it was shown that global transport investments are estimated to be between US$1-$2 trillion per year. But it was also shown that less than 40 percent of these investments

were made in developing countries, which are home to more than 80 percent of the world's population (UN-Habitat et al., 2015).

With regards to the SDG, 'Zero hunger', it was shown that improvements in logistics could lead to effective management of items such as food prices, instabilities in supply and improved access to remote areas. This working group highlighted that correlation of effective logistics and food security proved to be particularly visible in the context of rural accessibility (UN-Habitat et al., 2015). This study further found that increased urbanisation contributed to the loss of farmland near cities, which in effect means that food supplies need to increasingly come from distant locations. A dependence on effective logistics infrastructures for international trade and food imports, and the cost thereof, has a direct impact on food accessibility. Unreliability of ineffective logistical networks (e.g. congestion, infrastructure challenges and accidents) can lead to spoilage of agricultural products and/or a shortage in supply. The cost of the product can also be influenced when ineffective networks exist. Improvements in logistic networks lead to a decrease in product costs, in turn resulting in household savings and, therefore, food security (UN-Habitat et al., 2015).

Under social development, SDG number three, 'Good health and well-being', it has been found that affordable, reliable and efficient transportation is a vital pre-condition for accessing healthcare, especially in remote areas. Reliable, low-cost and efficient transport infrastructure and services can improve physical access to water and sanitation facilities, particularly in rural areas, which will apply to SDG number six. The same will apply to SDG number four, 'Quality Education'. In terms of access to education, reliable, low-cost transport could positively contribute to access to formal education; the provision of which relies on the existence of a logistics infrastructure (e.g. road and rail for private and public transport) (UN-Habitat et al., 2015). The UN working group also found that transport and logistics can positively contribute to promoting gender equality and reducing inequalities, related to SDG five and ten.

2.3.4 Theme Four: Partnerships and Institutions

Future actions as part of a Sustainable transport agenda will depend on the formulation of strong and action-oriented means of implementation. There is a need for translating transport policy recommendations into action plans. Strong local and national institutions and other developmental partners should be responsible for local action and implementation, which is key to enhancing progress towards sustainable development globally. Collaborative action towards the envisaged common sustainable transport development objectives on global level

must be enhanced. Various global partnerships have already been developed in the sustainable transport arena. This is important as transport acts as an enabler of economic growth, regional cooperation and economic integration. Across jurisdictional borders it can help to increase economic equality and thus political stability. International transport corridors play an important role as border zones are a common conflict trigger. Hence, cross-border collaborative trade and transport solutions are required such as alignment of toll charges, border control procedures or harmonized security measures for transport operations (UN-Habitat et al., 2015).

Section 2.3 has specifically looked at the contributing role of transport and logistics in achieving the UN's SDG's. The literature suggests that transport does play a vital role as enabler for achieving these goals. As the SDG's are global development goals, it is important to investigate the same against development goals in an African context, particularly because of this study's African focus. An effective way of researching this theme, would be to investigate the role of transport logistics against the AU's Agenda 2063, which represents development goals created by the African Union, for the development of Africa as a continent. It is also important, because as highlighted in the case study analysed in Chapter four, it has been found that transport logistics can act as a vital enabler to economic growth and development as well as various other development areas. The role of transport in trade, infrastructure and facilitator of trade was also highlighted, which directly correlates with some aspects of the AU Agenda 2063, which are discussed in section 2.4 below.

2.4 African Union's Agenda 2063

The African Union's Agenda 2063 action plan was formed at the African Union's 50th anniversary celebration in Addis Ababa, Ethiopia, in May 2013. In terms of the plan, African leaders made a pledge to accelerate growth, development and prosperity on the continent going forward to 2063 (DeGhetto et al., 2016).

According to the AU's website, Agenda 2063 is described as 'a strategic framework for the socio-economic transformation of the continent over the next 50 years. It builds on, and seeks to accelerate the implementation of past and existing continental initiatives for growth and sustainable development' (AU, 2013). The guiding vision for Agenda 2063 is the AU Vision of 'An integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in international arena' (AU, 2013).

In a paper published by the Africa Journal of Management, the authors describe the Africa 2063 Agenda as an ambitious, Pan-African people-centred vision and action plan. They mention further that Agenda 2063 aims to position Africa for growth over the next 50 years, incorporating lessons and experiences from the past (DeGhetto et al., 2016). The ultimate goal is centred on securing three ideals, namely unity, prosperity and peace for all its citizens. It is further described as a global, strategic, rolling plan with short- (10 years), medium- (10 - 25 years) and long-term (25–50 years) perspectives. The authors summarised the agenda simply that Agenda 2063 is aimed at getting Africa to do things differently (people-centred), bigger (scaling and scoping up), and better (governance, performance outcomes, impact on citizens, etc.). Critical success factors for Agenda 2063 included the participation of multiple stakeholder groups at all stages, a results-based approach with measurable objectives, and inculcating the right set of African values in line with the African Renaissance, which suggests the transformation of attitudes, values and mind-sets (DeGhetto et al., 2016). In the popular version of Agenda 2063, seven aspirations of Agenda 2063 are mentioned. Table 1 below provides a summary of these aspirations.

Table 1. The seven aspirations of Agenda 2063.

Agenda 2063 aspirations
1. A prosperous Africa based on inclusive growth and sustainable development
2. An integrated continent, politically united, based on the ideals of Pan-Africanism and the vision of Africa's renaissance
3. An Africa of good governance, democracy, respect for human rights, justice, and the rule of law
4. A peaceful and secure Africa
5. An Africa with strong cultural identity, common heritage, values, and ethics
6. An Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children
7. Africa as a strong, united, and influential global player and partner

Source: ***Agenda 2063: The Africa We Want,*** Popular Version, Final Edition, April 2015. Retrieved from http://www.agenda2063.au.int/en/home
Note: see Appendix for further details on the seven aspirations

Table 1: The seven aspirations of Agenda 2063;
Source: Agenda 2063: The Africa We Want, Popular Version, Final Edition, April 2015.

Out of the First Ten Year Plan, the AU identified ten flagship projects or initiatives. These are projects/initiatives approved by the AU Summit as to be very urgent and relevant and whose immediate implementation would provide quick wins, impact socio-economic development and enhance the confidence and commitment of the African Citizenry to be the owners and

drivers of Agenda 2063. As shown earlier in this document, logistics plays a role in all the UN's 17 development goals. The ten initiatives from the AU above can be correlated to the UN's SDG's, and regarding these specific initiatives, logistics will have an impact, either directly or indirectly on all ten of the initiatives. In the short term it would specifically play an important role and have a direct impact on the successful execution of at least four out of the ten goals; specifically goal one (integrated high-speed train network), goal three (African commodity strategy), goal five (continental free trade area) and goal six (African passport and free movement of people).

All four of these goals are important to this study. Goal one would have an impact on how passengers and freight can be moved between African countries, correlating to the South African Department of Transport draft green transport strategy calling for a shift from road to rail transport (Department of Transport, 2017). Goal six speaks to the movement of people within Africa, which would influence different modes of transport for passenger travel. Goal three and five would have a direct impact on how inter-continental trade could be facilitated and the movement of freight between African countries.

The movement of freight is important as one of the aims of Agenda 2063 is to optimise the use of Africa's resources for the benefit of the continent's people. The New Partnership for Africa's Development (NEPAD Agency), the implementing agency of the African Union, has been tasked with fast-tracking the implementation and monitoring of major continental development programmes and frameworks, including Agenda 2063 and the UN's SDG's. An observation is made that NEPAD has been tasked with the execution of both these development goals and this supports the notion that a close correlation between the UN's SDG's and AU's Agenda 2063 exists. It is reassuring to note that decision-makers in Africa are aware of the link between these two development goals and are looking at potential implementation synergies between these two different development goals from different organisations. What is also important to note is that the AU highlighted in Agenda 2063 that a specific goal would be to have a zero dependency on foreign aid by 2030. DeGhetto highlighted in reviewing the framework document, that one of the goals is to establish Africa's share in global GDP to be 15% by 2063, and the proportion of aid in national development budgets to be zero by 2030 (DeGhetto et al., 2016). These are just two of the more than 160 national-level targets described in the framework document. For the purposes of this study, there is no doubt that these two targets are an important consideration, as they will rely heavily on Africa's infrastructure to facilitate

global trade. As highlighted in the case study in Chapter four, there are still various challenges regarding infrastructure and trade in an African context. The important role of international logistics in a global trade context will need to be considered, specifically in achieving the second goal by 2030, which is only thirteen years from current date. Relating to the above, some challenges exist within the Agenda. In line with the focus of this study, challenges have been grouped into three potential areas of concern:

1. Theme one: Institutions, infrastructure, leadership and accountability
2. Theme two: Trade and trade agreements
3. Theme three: Africa's dynamic

2.4.1 Theme one: Institutions, Infrastructure, Leadership and Accountability

The Zimbabwean journalist, Mako Muzenda noted in the Daily Maverick, a South African newspaper, that as an organisation, the African Union (AU) has immense potential, however it seems often that the agendas derived from this organisation were characterised by bureaucratic and political agendas, with little success when it comes to implementation (Muzenda, 2017). Muzenda stated that if the AU truly wants Africa to be taken seriously as a global force, then it needs fewer action plans and more action (Muzenda, 2017). In her article, she highlighted speeches made by various African leaders during the last 54 years, stressing that all these speeches unfortunately share a common thread in that little action has been taken in the past 50 years. The concern could be raised that Agenda 2063 was formed looking to the future of the next 50 years, by incorporating lessons learned during the past 50 years. This could be troublesome for the execution of Agenda 2063 and the next 50 years for Africa as a continent. As highlighted in the interviews of the case study in Chapter four, these agendas are often viewed as political instruments achieving less success when it comes to implementation. An argument is presented in Chapter four that multilateral agencies, such as the AU and UN, should involve the private sector as business partners to assist with implementation of development goals. The forming of partnerships is highlighted by the UN as SDG number 17, 'Partnerships for the goals' (United Nations, 2015).

2.4.2 Theme two: Trade and Trade Agreements in Africa

Currently, Africa's existing free trade areas – the Common Market for Eastern and Southern Africa (COMSEA), the East African Community (EAC), and the Southern African

Development Community (SADC) — are working to join forces and create the region's largest free trade area, called the Tripartite Free Trade Area (TFTA). This is a step toward creating inclusive economic institutions needed for the successful implementation of Agenda 2063 (DeGhetto et al., 2016). A graphical presentation of the current and proposed trade agreements effective in Africa is attached in Appendix E. Indeed, African leaders have long called for increased intra-regional trade as a main requirement of growing the region's economy. Uniting to attract FDI from outside Africa is essential to achieving economic, as well as, social prosperity. Unfortunately, the fact remains that the 26-country proposed TFTA agreement includes less than half of the countries in the AU. The fear is that the countries left out of this and other trade agreements may fall even further behind in terms of development.

Further, although there are benefits to regional integration, there are also challenges. It can increase complexity, hurt small businesses, benefit developed over developing countries, and limit trade with other regions. If integration is not managed correctly, these issues may be detrimental to some of Africa's already fragile economies (DeGhetto et al., 2016). This is important for the context of this study, as the AU will rely significantly on creating an environment conducive to increasing trade from, to and within the continent. This would allow less reliance on global aid, which is one of the main development goals of the AU. DeGhetto suggests a study of the successes and failures of other large regional integration areas, such as the European Union (EU), to better understand how the African region could move forward. By joining together, the EU is collectively the largest economy in the world (DeGhetto et al., 2016) and through their efforts, the EU has worked to integrate post-communist, less-developed countries (i.e. Estonia, Poland, and Romania) with successful, developed nations (i.e. Finland, Germany, Austria, Denmark). Addressing research questions related to economic and political integration between countries with varying levels of development may serve to inform African integration and the development of regional economic and political institutions. Other than the formal aspects of integrating multiple countries, social aspects are imperative but more difficult to achieve. Thus, it is important for scholars to address not only economic benefits (e.g. entrepreneurship, firm growth, innovation, intra-regional trade, inter-regional trade) but also social and environmental benefits (costs) of regional integration (DeGhetto et al., 2016). This relates to this paper's objective of addressing inclusive development through logistics. Creating a favourable trade environment on the continent and increasing trade opportunities would significantly assist in developing the continent. Africa is a resource-rich

country and allowing favourable trade opportunities and infrastructure for trade would significantly assist the continent.

To encourage trade, Africa needs to gain a comparative advantage. Africa and the AU member states need to leverage their existing resources and exploit their current cost advantages. The region has valuable resources at its disposal; leaders in the public and private sector need to focus on strengthening how these resources are organized and utilized within and across national borders. DeGhetto quotes from an Ernst & Young report on how Africa has the resources and the comparative advantage to position itself as the next manufacturing hub. Labour costs are low and Africa also has abundant natural resources, which can be used as raw materials for light manufacturing (DeGhetto et al., 2016). Resource management is especially important in emerging economies that are resource constrained. Resource management deals with structuring, bundling, and leveraging resources. This also requires coordination across countries, industries, and sectors (i.e. public and private) and relates to the idea of the hybrid value chain and collaborative arrangements across sectors to achieve a common goal. Some of these goals include the goals of transformed economies and jobs, modernising agriculture, and the development of environmentally sustainable communities. This is important to transform the economy in order to reach the goal of less reliance on global aid and to transform Africa's economy into a global trade player (DeGhetto et al., 2016). This is important to note, because one of the main arguments presented in Chapter four of this paper is the potential opportunity for the private and public sectors working together towards achieving mutual beneficial goals.

2.4.3. Theme three: Africa's Dynamic

As mentioned earlier in this research paper, Africa is dynamic, and analysis and comparisons should focus on country-level studies. Participating countries of the AU could be at different levels of development, awareness and perhaps commitment to the Agenda 2063 vision and aspirations. For example, big and more developed African economies such as South Africa, Nigeria and Egypt may see Agenda 2063 differently than small, less developed or fragile countries like Swaziland, Burundi or Guinea Bissau. Another important consideration within Africa's dynamic status and its access to abundant resources, both natural and human, is the question of how these positive attributes could be leveraged on both continent and country level, in order to advance Africa's economy? How can Africa as a whole and the individual economies of AU member states leverage their respective cost advantages, values, and natural

and human resources to successfully integrate into the global value chain? (DeGhetto et al., 2016)

2.4.4 Summary: Agenda 2063 as Development Goals for Africa

As the literature suggests, Agenda 2063 is a much needed and overdue agenda for Africa. It shows that Africa needs a measurable, accountable and realistic growth plan to catapult itself into the developed world and out of poverty. Africa certainly has the resources and knowledge to execute this ambitious development plan and, if taken seriously, can deliver on its goals. The participatory process is then also one of the important factors that makes Agenda 2063 different from previous agendas. Due to the time span of the agenda (next 50 years), particular attention is paid to the youth who will be the main owners, implementers, beneficiaries, or victims of this agenda (DeGhetto et al., 2016). This is important and concurs with the research from the UN's Economic Commission for Africa, that Africa currently has the youngest population in the world and will remain significantly so in the future (Janneh, 2012). This could be extended to a point made earlier that all sectors (i.e. public and private) will need to focus on collaborative arrangements across different sectors to achieve a common goal. This will be important to transform the economy in order to reach the goal of less reliance on global aid and transform Africa's economy into a global trade player (DeGhetto et al., 2016). This would be the equivalent of the UN's SDG number 17, in creating partnerships for achieving the relevant development goals.

In the case of this study, these partnerships should include partnerships with private sector logistic service providers, which form a vital part as enablers of trade, and is in turn essential in order to reach the goal of less reliance on global aid and more reliance on global trade. In section 2.5 below, the role of logistics on both these topics is reviewed in more detail.

2.5 Logistics role in development: A literature review

Moving or shipping products from one country, continent or region to another is a critical component of international trade. It enables and facilitates international trade and without it, global or international trade, as we know it, would not exist. Imports and exports between countries are enabled via sophisticated and modern supply chains, which enable international trade. The logistics and supply chain industry has been constantly evolving, from the early days of the trade route explorers, exploring and opening trade routes between different continents to

today's technologically sophisticated, fully integrated supply chain which allows visibility to stakeholders from the order process to the end delivery process, and every process in between.

The existence of an established logistics infrastructure framework, which allows for international movement of products and services, is a critical component in any country's economic development and growth strategic objective. In South Africa, a positive relationship between infrastructure and economic development was found (Hooi Lean, Huang, & Hong, 2014). Some studies in China have attempted to investigate the impact of the transport and logistics infrastructure on economic growth in China. Mody and Wang (1997) as cited in (Hooi Lean et al., 2014) found that roadway transport infrastructure was an important engine of economic growth in coastal China between 1985 and 1989. In research done on the relationship between logistics industry development and economic growth in China, the author, S. Liu, mentions that the logistics industry is a rising basic industry in China, and it is playing a more and more important role in national economy and social development. The paper goes further to state that there is a strong coupling between the logistics industry and other industries of national economy, it brings with it the great social demand for logistics activities (Liu, 2009).

Some literature suggests that in modern times, some input factors are easier to control, whilst logistics remains mainly an unknown factor, if not managed effectively. Research suggests that while other input factors are gradually becoming perfect, logistics becomes the restrictive factor to increase overall economic benefit and social benefits (Liu, 2009). In socialized production, all industrial departments are interdependent, any industry cannot produce and develop without logistics. The author goes further to state that the logistics industry development has a close relationship with economic increase (Liu, 2009). In Liu's paper, six indexes were selected to analyse the relation of logistics industry development and economic increase. They were (1) logistics industry value added; (2) total employment of logistics industry; (3) new fixed assets investment; (4) freight volume; (5) freight turnover and (6) GDP. It was confirmed that logistics industry development has a close relationship with economic increase. The authors found that through the correlation research of Chinese logistics' industry and national economy increase, it can be seen that logistics industry value added, total employment of logistics industry, new fixed assets investment, freight volume, and freight turnover have greater impact on economic increase, the two most important factors are logistics industry value added and freight turnover. Logistics industry value added is part of logistics scale, and freight turnover is part of logistics efficiency. This indicates that both the

enlargement of logistics scale and the increase of logistics efficiency can bring tremendous influence on the development of national economy (Liu, 2009).

As cited in Hooi Lean et al. (2014), Banister and Berechman (2000) depicted a general framework that describes the relationship between the transportation system and economic growth, in which improved transportation accessibility reduces travel time and cost, increases traffic volume, and leads to a spatial redistribution of economic activities. This further leads to pecuniary externalities and allocative externalities in the environment, transport network economies, labour market and firm agglomeration and hence, spurs economic growth. Conversely, Fleisher and Chen (1997) did not find a significant impact of transport infrastructure on economic growth during the period 1978–1993 in China, as cited by Hooi Lean et al., (2014). Demurger (2001) on the other hand found that infrastructure endowment did contribute to economic development based on panel data from a sample of 24 Chinese provinces from 1985 to 1998 (Hooi Lean et al., 2014). Zhu et al. (2008), cited in the same paper by Hooi Lean et al., (2014) that the relationship between logistics and the economy is not mutually exclusive but interactive in China. Using provincial level data from 1982 to 1999, Fan and Chan-Kang (2008) found that road development and telecommunications development contributed significantly to economic growth in China. (Hooi Lean et al., 2014).

However, Rietveld (1989) reported that the development of infrastructure was not a sufficient condition for regional development. Many other factors such as labour and capital also played an important role in economic growth. Although improvements in infrastructure could cause economic growth, the transportation infrastructure itself could not maximize productivity.

This is line with studies by Eakin and Schwartz (1995) that showed increased infrastructure expenditure could not produce maximum productivity in the United States (US). Hooi Lean et al., (2014) and Moreno et al. (1997) found that infrastructure was one of the positive elements that pushed economic growth in Spain. However, the function of infrastructure in promoting productivity was not remarkable except for the time and regional effects. Cadot et al. (2006) also found that infrastructure spending could not maximize economic returns based on the panel data of France's regions over 1985– 1992 (Hooi Lean et al., 2014).

Different types of logistics infrastructure may have different impacts on economic growth. As cited by Hooi Lean et al., (2014), Blum (1982) found supportive evidence in Germany. Specifically, both roads and ports had significant positive effects on productivity while

railways had negative effects. However, Andersson et al. (1989) found that the impact of railways was stronger than that of the main roads in Sweden. Zhu et al. (2008) claimed that the relationship between logistics and economic development was not mutually exclusive but interactive. In other words, logistics supported and promoted the development of the economy while economic development requested an increased development of logistics and thus pushed forward the improvement of the logistics industry (Hooi, Lean et al., 2014). Improved land transport conditions can lead to economic growth by reducing travel time and cost; increasing producers' access to distant markets and inputs; generating benefits by lowering firms' inventories; attracting investment; leading to spatial redistribution of economic activities; and, accelerating industrial agglomeration (Hooi Lean et al., 2014). However, economic development increases the demand for transport and logistics service. It can strengthen both the central and local governments' capability to utilize resources and provide financial supports to infrastructure construction. Therefore, the causality of land transport and economic growth runs in both directions (Hooi Lean et al., 2014).

In a country with high logistics costs like China, improving the infrastructure is important to its future development (Hooi Lean et al., 2014). Therefore, the authors recommended increasing the efficiency of the logistics industry in China, and also found that different modes of transport infrastructure influence each other, suggesting an increasing need for multi-modal transport. All the aforementioned findings in this paper have then also provided a reason for examining the relationship between China's logistics and its economic performance. Not only because China's own future policies depend on these experiences but also because China is a stellar example for other developing countries. The results in this paper imply that in a developing country like China, the improvement of logistics infrastructure plays an important role in developing the economy (Hooi Lean et al., 2014). The findings of this paper make it especially important for developing countries in Africa.

The above papers in this literature review focused primarily on developing economies, especially a fair amount of research has been done on China as a developing country. This is important for African countries as these lessons can be and should be incorporated in decision-making for Africa's economic development goals and the role that logistics and all aspects of logistics play in developing economies. It would now be interesting to review a first world or developed country and the role that logistics play on economic development in these countries.

2.5.1 The case of Belgium

Meersman and Nazemzadeh (2017) argue that the explicit purpose of efficient and productive transport infrastructure is to strengthen economic activities and development. Well-developed transport infrastructure can facilitate international competitiveness and economic growth (Meersman & Nazemzadeh, 2017). This is more relevant to Belgium than many other countries because it is a small, open economy which is highly integrated in the world economy with strong potential spill-overs from global economic activities and international trade. For such an open economy, regional and global connectivity by efficient and effective transport infrastructure is a major economic resource. This strategic location as a main Western European gateway means that most of the land transport infrastructure, waterways, ports and airports are considered as strategic infrastructure for both Belgium and Western Europe. Opponents of further expansion, especially ports, airports, and roads, often focus on the negative external effects they generate for people and the planet as they call into question the positive effects on profit and economic growth (Meersman & Nazemzadeh, 2017).

In the case of Belgium, however the main concurrence is that transport infrastructure contributed to economic growth and productivity but not in a constant manner over time. Transport infrastructure facilitates businesses developments, reduces product price, provides access to global suppliers and consumer markets, and creates more cost effective global production process by lowering transport costs and increased accessibility. Improved transport infrastructure reduces inventory costs of firms which leads to implementation of just-in-time strategies and allows for the realisation of economies of scale, together with interregional and global specialisation (Meersman & Nazemzadeh, 2017).

Furthermore, cheaper transport initiates accessibility to the demand and supply markets, enlarging firms' markets, giving access to various and skilled labour, and cheaper and better neighbouring business services as input. The import and export activities become smoother. Increased import increases local competition which puts the firms under pressure to increase their productivity. Increased export might result under certain conditions in expansion of sales, more employment and higher profits for manufacturers. In the long run, sustainability in transport technology and infrastructure will stimulate structural changes in national and regional economies, and also facilitate sustainable production systems, dynamic institutions, and integration into the globalisation process (Meersman & Nazemzadeh, 2017). Foreign direct investors are seeking regional and national infrastructure investments that improve

accessibility to increased returns on investments. This explains the growth of foreign direct investment movements to regions with a well-developed transport infrastructure such as Northern Europe (Meersman & Nazemzadeh, 2017). This will be important for Africa to take note, especially with regard to the AU Agenda 2063 and its targets of becoming a global player in trade and relying less on global aid. In summary, the findings of this paper imply that when evaluating transport infrastructure investments in Belgium, aggregate growth impacts should be taken into consideration. If not, one risks underestimating the positive contribution of this type of investment to social welfare (Meersman & Nazemzadeh, 2017).

2.5.2 The discussion: Aid vs Trade

(Hayashikawa, 2009) found that trade contributes to economic growth. His findings were that a strong correlation exists between trade openness and economic growth. He further found that increased openness to trade is clearly associated with faster economic growth. However, his findings were also that causality between trade and growth performance remains statistically a difficult issue and it is not always clear, whether trade or some other growth driver is present when performance on poverty reduction or inequality is disappointing. His findings were explained in his paper by a series of country case studies by CUTS International that examined the links between the growth of exports and poverty reduction over 13 developing countries in Asia and sub-Saharan Africa. A positive relationship between the growth in exports and reduction in poverty was visible for most countries, although there were some exceptions. Some countries actually experienced deteriorating poverty levels (Hayashikawa, 2009). These cases highlight the fact that trade is not necessarily a panacea for economic development and that there are factors other than trade which influence poverty reduction differently. Trade policy interventions, if they are to have a greater pro-poor impact, need to consider a country-specific profile. For the poor to have a direct share in some of the gains, other complementary issues need to be taken into account, e.g. education, health and nutrition, existence and access to infrastructure, as well as access to credit and technical assistance (Hayashikawa, 2009). This supports the argument towards a shift for inclusive development, including financial, environmental and social development aspects.

In her book, ‘Dead Aid: Why aid is not working and how there is another way for Africa’, the author, Dambisa Moyo analysed the history of economic development in Africa over the last fifty years and showed how aid crowds out financial and social capital. She also showed how, with improved access to foreign capital and markets with favourable trade policies, even the

poorest nations in Africa can prosper (Moyo, 2009). The importance of creating a favourable trade environment in Africa is underlined in her research, which is aligned with one of the AU's Agenda 2063 key goals for the continent to have a zero dependency on foreign aid by 2030 and to create economic development through increased global trade. In order achieve this goal, the inflow of aid will need to be offset by an increase of trade from the continent. This can be in the form of increased trade between countries on the continent (also a goal of AU Agenda 2063) or for Africa to become a more significant role player in global/international trade. Whichever form this takes for Africa, the literature reviewed in section 2.5 above has proved that a resilient transport infrastructure is required to facilitate and enhance increased trade opportunities. This is important for African countries to take heed of, because as shown in section 2.6 below and confirmed by the case study in Chapter four in this document, Africa, as a continent, still has many infrastructural challenges. In order for the AU to achieve these goals, they will need to pay attention to creating the necessary infrastructure, which will allow for efficient logistical networks to facilitate global trade.

2.6 Logistics Technology and Infrastructure

In a recent article, Frank Matsaert, CEO of TradeMark East Africa, was quoted as saying that logistics is a critical yet easily neglected component of economic development in Africa. The article further states that investment in agriculture is futile if there is no supply chain in place to get produce to the market. Essential medication is rendered ineffective if it cannot be transported in the appropriate conditions. Consumer goods cannot improve people's lives if the cost of importing them means they are too expensive for people to access (Jackson, 2016).

As has been shown in previous sections of this document, currently Africa has a major infrastructure investment deficit and governments are not always able to meet this challenge.

Yet, innovative technology companies are taking up the challenge of fixing or playing a value-adding role in Africa's logistical problems. For instance, Uber not only had a huge impact on transportation globally but also in Africa. The 'Uber-model' of on-demand mobile services is also being adopted for other means in the logistics space. South African company WumDrop channels Uber to make it easier to move goods and documents around cities. Users can enter pickup and delivery information on their mobile application, connecting couriers with shippers and users can track and pay for all services via the application. More importantly for African consumers, WumDrop is also in the process of rolling out its 'Deliver to Me' solution, which

will allow e-commerce clients to delivery to their customers' mobile phone location rather than an address. This will allow for deliveries to areas with no formal address system. As this technology relies on smartphones to transmit geological data, this could be advantageous to African countries where physical addresses could be stellar, but smartphone usage is very popular and is still a growing market. This has already opened up the door for delivery in many African countries, including Kenya, South Africa and Nigeria (Jackson, 2016).

Transporting goods into and out of Africa, or from country to country, has long been a challenge while Africans remain unable to shop on international e-commerce stores because delivery to their homes was previously not possible. The application of delivery to geological location could address this area and promote inclusivity. Adetayo Bamiduro, co-founder of Nigerian company, Metro Africa Express, which runs a similar model to WumDrop states that the existing logistics infrastructure in most African cities is grossly inadequate and unable to support continued growth (Jackson, 2016). Unfortunately all indicators show that this problem will get worse due to insufficient infrastructure investments, increasing rural-urban migration and non-declining birth rates (Economic Commission for Africa, 2017).

Transportation, logistics and retail could be critical sectors that will determine the pace of development and economic growth in Africa (Jackson, 2016). The case study presented in Chapter four of this paper confirms this statement. This also opens the opportunity for tech companies to play a leading role in leveraging technology and mobile applications to provide powerful solutions to unlock growth. Furthermore, this allow companies to gather data in line with 'big data' which enables and assists decision-making (Jackson, 2016). This was also confirmed by the research presented in chapter four of this paper. Companies such as Swiftly, a Ghanaian start-up, offers a platform for users and shippers (or freight forwarders) to sign up and place requests for goods to be shipped or post available space. This platform thus provides a space for shippers to match up free space and arrange collaboration. This in turn leads to costs being cut, assisting small cargo owners, SMEs, importers and exporters, and stimulating the economic environment. Sufficient studies have been completed to show the importance of SMEs' growth and positive effects on economic growth. Another positive side effect from sharing space is that it also cuts down on the fossil fuel consumption involved in transporting cargo, which is a positive contribution in combating climate change. Connecting various parties also addresses another critical issue that hinders the transportation and distribution of goods in Africa, namely the lack of information. This could lead to market failures, elevated costs and

long delays in transport. The drive towards data-driven decisions is also applicable to the logistics industry (Jackson, 2016).

Another example of a tech company using technology to address development in Africa is that of Zipline, a California-based company that is getting medical supplies into rural areas in Rwanda. Zipline has launched the world's first national drone delivery service in Rwanda's Muhanga District with unmanned aerial vehicles being used to make on-demand emergency medical deliveries. These are usually life-saving medicines and the aim is to overcome last-mile delivery challenges in rural or remote locations due to the lack of adequate transportation, communication and supply chain infrastructure. CEO Keller Rinaudo states that drones have the potential to revolutionise the way we reach remote communities with emergency medical supplies (Jackson, 2016). Zipline has recently extended their service offering into neighbouring Tanzania and has been able to form a long-term working partnership with the government of Tanzania.

In summary, Africa's logistics problems are among the worst in the world and decision-making and investments need to take place around this issue in order to facilitate economic growth, especially in light of ambitious development goals set by the UN and AU. But relevant discussion, application and research can potentially 'leapfrog' Africa into development when value adding structures and technology are used to overcome these hurdles.

2.7 Logistics role towards Environmental Development and its Contribution to combating climate change

As mentioned in section 2.3 of this document, due to the nature of transport and its related energy use, transport can play a major role in the global fight against climate change. Applying green technologies and processes in transport logistics will be a crucial component of comprehensive strategies towards more sustainable ways of consumption and production of goods and services in the entire economy (UN-Habitat et al., 2015). This will lead to a positive contribution towards environmental development, in turn leading to sustainable development.

2.7.1 GHG emissions and climate change

The overwhelming consensus of scientific opinion, as reflected in the International Panel on Climate Change, is that climate change in the form of global warming is real and driven by emissions of greenhouse gases (GHG) caused by human activity. The single most important

GHG is carbon dioxide (CO_2) and the most important source of CO_2 emissions is the production and consumption of fossil fuels (Department of Transport, 2017). Mitigating the extent and the impact of climate change is a global priority. As a water scarce country, South Africa is particularly vulnerable to the risks of increased average temperatures, drought and rainfall variability associated with global warming. At the same time, as a developing country with a historical dependence on its extensive coal deposits for energy, South Africa faces particular challenges in reorienting to a low carbon economy (Department of Transport, 2017). The graph below highlights the source contribution of CHG emissions split per mode of transport. It is important to note that road transport is the single biggest contributor of GHG emissions, which makes it relevant for this study as the research of this study was specifically focused on road transport.

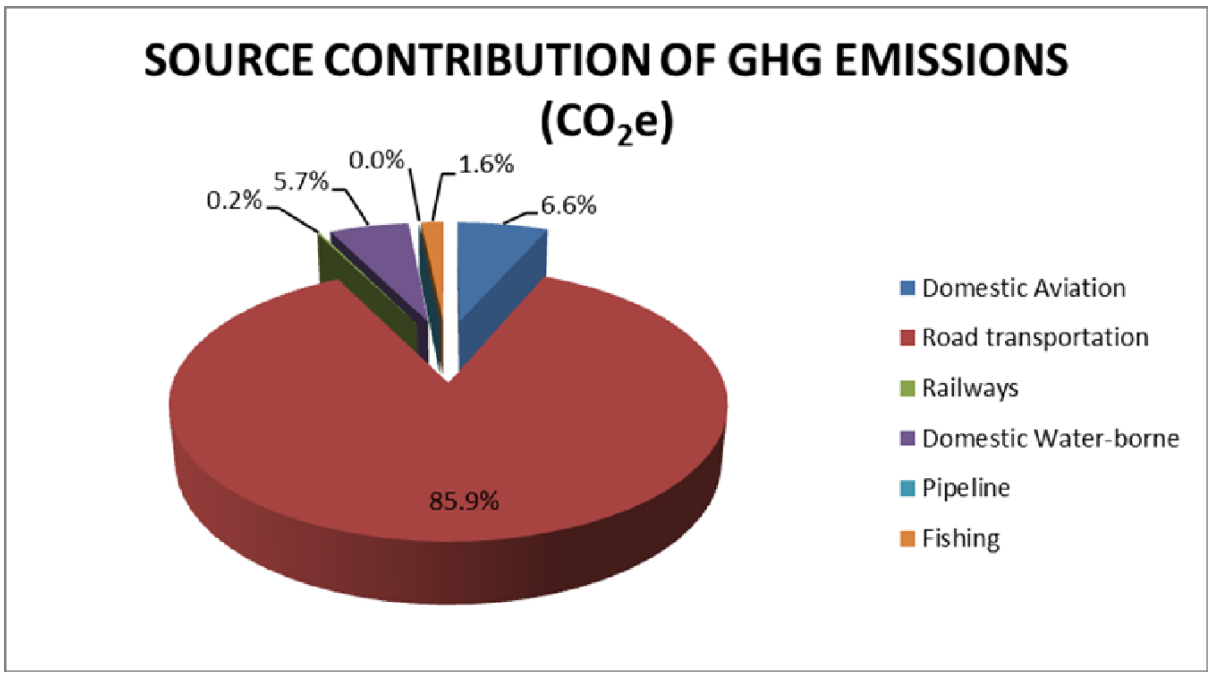

Figure 2: Source contribution of CHG emissions split per mode of transport: Source: South Africa Department of Transport, Draft Green Transport Strategy (2017-2050)

According to the Greenhouse Inventory for South Africa covering the period 2000 to 2010, GHG emissions from transport increased by 32%. According to the 2014 Mitigation Report prepared by the South African Department of Environmental Affairs, should these trends continue in the absence of mitigating legislation and policies, the transport sector is projected to have an ever-increasing role in GHG emissions. As a result, South Africa's government is

now targeting a 34% reduction in GHGs by 2020 and a 42% reduction by 2025 (Department of Transport, 2017). To address the significant contribution of transport to national GHG emissions, the Department of Transport (DoT) has undertaken to develop a five-year Green Transport Strategy (GTS) that aims to minimise the adverse impact of transport on the environment while addressing current and future transport demands based on sustainable development principles. Some of these steps will include transport mode shifts from private to public transport (for passenger transport) and shifting freight transport from road to rail. This also includes switching to cleaner fuels and adopting new technologies such as electric vehicles (Department of Transport, 2017). This will be important for logistics service providers in South Africa to take note of and align future operation models according.

The challenge of developing transport policies for sustainable development is to orient the sector towards a compromise that maximises the economic and social benefits of transport and minimises associated environmental, social and economic costs. Many of the measures required to achieve this balance are not new; the main difficulty is effective implementation. The approach to achieving sustainable development of the transport sector requires a combination of regulatory instruments (particularly for vehicle emissions); restructuring of charges and taxes based on marginal costs to provide incentives to reduce external costs to optimal levels; infrastructure development; and, education and awareness to drive behavioural change. It will require improved quality of transport, especially rail services (ensuring reliability and complete logistic services) and promotion of inter-modal services to achieve an integrated transit system (Department of Transport, 2017). At the same time as providing a five-year implementation plan, the DoT's approach has been informed by the need to avoid overinvestment of resources in technologies that are likely to be redundant in a future, low-carbon economy and the need to plan for potential new technologies that may result in disruptive, transformative change (Department of Transport, 2017).

Demir et al (2014) mentioned in their paper that road freight transportation is essential for economic development, but also harmful to the environment and human health. Until recently, the planning of freight transportation activities has focused mainly on cost minimization. With an increasing worldwide concern for the environment, logistics providers and freight carriers have started paying more attention to the negative externalities of their operations. These include pollution, accidents, noise, resource consumption, land use deterioration, and climate change risk. At the local and regional levels, a significant portion of freight transportation is

carried out by trucks, which emit a large amount of pollutants. While transportation technologies and fuels have improved over the years, most trucks run on diesel engines, which are major sources of emissions (Demir et al., 2014). At the global level, GHG's significantly contribute to global warming. In the transportation sector, GHG emissions are dominated by CO_2 emissions from burning fossil fuels. These cause atmospheric changes and climate disruptions that are harmful to the natural and built environments and pose health risks. The emissions of CO_2 are directly proportional to the amount of fuel consumed by a vehicle, which in turn is dependent on a variety of vehicle, environment and traffic-related parameters, such as vehicle speed, load and acceleration (Demir et al., 2014). These studies correlate with findings of the case study used in this research, presented in Chapter four.

Freight transportation planning has many facets, particularly when viewed from the multiple levels of decision-making. Arguably the most famous problem at this level is the well-known Vehicle Routing Problem (VRP), which consists of determining the least cost of particular routes for a fleet of vehicles to satisfy the demands of a set of customers, subject to side constraints. The traditional objective in the standard VRP is to minimize the total distance travelled by all vehicles, but this objective can be enriched through the inclusion of terms related to fuel consumption (Demir et al., 2014). This correlates with findings presented in Chapter four, section 4.3.5.

Road transport's impact on climate is gaining in importance. The expected efficiency improvements of vehicles and the introduction of biofuels will not be sufficient to offset the expected strong growth in both passenger and freight transportation. Technical measures could offer a significant reduction potential, but strong interventions would be needed as markets do not initiate the necessary changes. Further reductions would need a resolute expansion of low-carbon fuels, a tripling of vehicle fuel efficiency and stagnation in absolute transport volumes. Land transport will remain a key sector in climate change mitigation during the next decades (Department of Transport, 2017). This is important to note regarding the significant role that transport logistics can play towards environmental development. This is then also applicable to the case study and its findings presented as in Chapter four, and how transport logistics can contribute to sustainable development in various forms. The contribution of logistics towards social development has been reviewed below.

2.8 Corporate Social Responsibility (CSR) in Logistics

Corporate Social Responsibility (CSR) relates to business role in society. This can then also be applied to logistic service provider companies and their role towards social development, which was explored in Chapter four of this paper. The way for companies to think in a social and environmental manner, also known as corporate social responsibility (CSR) started in the 1960s and beyond. The idea of CSR is that companies have more responsibilities than to achieve a high profit for their shareholders. They should also care about society and act in a responsible way. However, it was not until the end of the 1980s and the publishing of the Brundtland report, which was written by the World Commission on behalf of the United Nations, that the debate about sustainability started gaining momentum. The report became a starting point for the world's environmental organisations when it introduced the term 'sustainable development' (Nordén & Ullerfelt, 2013). Sustainable development has three dimensions, social, environmental and financial, which are interdependent. The social part includes how to increase human welfare and fairness around the world. The environmental part focuses on how to minimize global warming and the emission of carbon dioxide in an attempt to slow down GHG's. The financial part focuses on maintaining a long-term economic profitability while addressing social and environmental issues (Nordén & Ullerfelt, 2013).

In work done by (Nikolaou, et al, 2013) they propose an integrated model for introducing CSR and sustainability issues in reverse logistics systems as a means of developing a complete performance framework model. This was done by developing a framework of performance indicators for measuring reverse logistics social responsibility performance based on the Triple Bottom Line approach (economic, environmental and social aspects). The motivations of the business community for applying reverse logistics practices can be divided into two categories: proactive and reactive. Some proactive incentives for adopting reverse logistics management practices by manufacturers would be cost savings, a better profile, to gain competitive advantage and improve environmental performance. Reactive motivations would be the legislative factors that also explain businesses' decisions to adopt reverse logistics practices in their daily operations (Nikolaou et al., 2013). Reactive motivations are presented in the findings of Chapter four, in order to assist with some of the development themes.

Porter and Kramer (2011) wrote an interesting piece on the emergence of 'Shared Value' as an alternative approach to CSR. They stated that in recent years business has increasingly been viewed as a major cause of social, environmental, and economic problems. Companies are

widely perceived to be prospering at the expense of the broader community. They further stated that most companies remain stuck in a 'social responsibility' mind-set where societal issues are at the periphery, not the core. They suggested that the solution lies in the principle of shared value, which involves creating economic value in a way that also creates value for society by addressing its needs and challenges (Porter & Kramer, 2011).

> *Businesses must reconnect company success with social progress. Shared value is not social responsibility, philanthropy, or even sustainability, but a new way to achieve economic success. It is not on the margin of what companies do but at the centre. Capitalism is an unparalleled vehicle for meeting human needs, improving efficiency, creating jobs, and building wealth. Businesses acting as businesses, not as charitable donors, are the most powerful force for addressing the pressing issues we face. Creating shared value represents a broader conception of Adam Smith's invisible hand. It is not philanthropy but self-interested behaviour to create economic value by creating societal value. If all companies individually pursued shared value connected to their particular businesses, society's overall interests would be served (Porter & Kramer, 2011, p.4).*

The authors do highlight that not all societal problems can be solved through shared value solutions. But shared value offers corporations the opportunity to utilize their skills, resources, and management capability to lead social progress in ways that even the best-intentioned governmental and social sector organizations can rarely match (Porter & Kramer, 2011). This concurs with the findings of this research paper, that private sector logistics service providers should be amalgamated in order to achieve development goals as set by governments and multilateral agencies.

The following example of creating shared value in the supply chain was highlighted by Porter and Kramer (2011):

> *Excess packaging of products and greenhouse gases are not just costly to the environment but costly to the business. Wal-Mart, for example, was able to address both issues by reducing its packaging and rerouting its trucks to cut 100 million miles from its delivery routes in 2009, saving $200 million, even as it shipped more products. Innovation in disposing of*

> *plastic used in stores has saved millions in lower disposal costs to landfills (Porter & Kramer, 2011, p.8).*

So far, however, few companies have reaped the full productivity benefits in areas such as health, safety, environmental performance, and employee retention and capability. But there are unmistakable signs of change. Efforts to minimize pollution were once thought to inevitably increase business costs and to occur only because of regulation and taxes. Today, there is a growing consensus that major improvements in environmental performance can often be achieved with better technology at nominal incremental cost and can even yield net cost savings through enhanced resource utilisation, process efficiency, and quality (Porter & Kramer, 2011).

Shared value thinking can also transform the value chain. These ways of thinking are not independent but are often mutually reinforcing. Efforts in these and other areas are still works in process, the implications of which will be felt for years to come. The use of energy throughout the value chain is being re-examined, whether it be in processes, transportation, buildings, supply chains, distribution channels or support services. Triggered by energy price spikes and a new awareness of opportunities for energy efficiency, this re-examination was under way even before carbon emissions became a global focus. The result has been striking improvements in energy utilisation through better technology, recycling, cogeneration, and numerous other practices, all of which create shared value. We are learning that shipping is expensive, not just because of energy costs and emissions but because it adds time, complexity, inventory costs, and management costs. Logistical systems are beginning to be redesigned to reduce shipping distances, streamline handling, improve vehicle routing, and the like. All of these steps create shared value (Porter & Kramer, 2011). The authors highlight British retailer Marks & Spencer's ambitious overhaul of its supply chain, for example, which involves steps as simple as stopping the purchase of supplies from one hemisphere to ship to another, is expected to save the retailer £175 million annually by fiscal 2016, while hugely reducing carbon emissions. In the process of re-examining logistics, thinking about outsourcing and location will also be revised (Porter & Kramer, 2011). Porter and Kramer (2011) also highlight Nestlé's approach to procurement of coffee beans in South America and Africa. In order to ensure quality of product procurement, Nestlé has invested in various sustainable agricultural training programs for farmers, in turn uplifting entire communities in procurement regions (Porter & Kramer, 2011). This makes a strong example and argument for businesses role in society.

2.9 Conclusion

The above literature review highlights the vital role that logistics play as a contributor towards development goals and, in particular towards developing and achieving the UN's 17 SDG's. Logistics either contribute directly or indirectly towards each of the individual goals, suggesting the importance of logistics on each of the development goals should not be overlooked. Decision-makers should acknowledge the necessary importance of logistics on development. Logistics, and its role on development, is a broad concept, and can encompass and influence many spheres of development in an economy. The 17 SDG's provide a useful tool for breaking down different development objectives to simplify the analysis of the role that logistics plays in development. It has been shown by the literature review that logistics plays a role in contributing to economic development in developing countries (refer to the China example) as well as developed economies (referring to the Belgium example). Logistics has a direct role in facilitating global trade, which in itself is one of the main development goals as set by the AU. Logistics allows for creation of jobs, infrastructure to be created and facilitation of trade. Logistics plays a role in global aid and relief efforts as well as peace-making efforts and maintaining the rule of law. Logistics is a vital contributor that should form part of any discussion on development and its impact should be given necessary attention. Logistics plays a role in Sustainable Responsible Investment (SRI) principles, for e.g. carbon emissions, carbon footprints and the concept of 'green' logistics in a green economy. The movement to, and disinvestment in fossil fuels to bio fuels is one such example. Lastly, logistic service provider companies could play a vital role in social development through its CSR programs and the creation of shared value.

The research completed in this paper aimed to investigate through the use of a case study, how logistics service providers, with operations within SADC, can potentially contribute to sustainable development within an African/SADC context, and contribute to the literature in an African context.

3. RESEARCH METHODOLOGY

3.1 Research Approach and Strategy

This chapter discusses the methodology that was utilised to conduct the research. This study was qualitative, incorporating a case study to draw comparisons with the literature reviewed. A case study was used in this research in order to contribute to the research that exists on the topic of logistics and its role as a contributor to economic development in Africa, and specifically the SADC trade region. An exploratory approach was followed to gain and allow insight into a research area that is not yet clearly understood (Tight, 2017). The case study focussed on RTT Style, a logistics service provider in SADC and its contribution towards sustainable development in a SADC context.

3.1.1 Motivation for using this case study

As Stake (1995), cited by Tight, (2017; p.6).) states, 'a case study is expected to catch the complexity of a single case'. The motivation of this research was ignited by a fair balance of interest on the research subject as well as experience in the field of logistics. The belief that logistics being applied towards sustainable development is a field of interest for the author and therefore also acted partially as motivation for this research. Secondly, motivation was derived from researching a specific subject and applying outcomes to improve logistics outcomes in the field. Tight, (2017; p.144, 145) mentions under his discussion of 'sampling and selection issues' that three main reasons for choosing a particular case study exist. The first one usually applies when you choose or are directed to study an area of expertise. Quoted below it reads:

> *You may choose it because you know a great deal about the case in question and you want to understand some feature of that subject'.*

Further in this paragraph it is stated that the motivation of familiarity is often accompanied by a desire to improve some aspect of an institution's operation: performance, efficiency or output. He maintains that studying the case in detail would improve understanding of the institution's operation; performance; efficiency and outputs, and consequently be able to make practical recommendations for improvements (Tight, 2017).

3.1.2 Factors considered in choosing this specific case study

The nature of this specific case study is descriptive, also known as exploratory-descriptive or focused-descriptive. This was a single case study, although comparisons and referencing have been made to studies correlating to the area of research, as covered in the literature review section. The case study that has been completed was that of a logistics service provider actively involved with logistics operations in the SADC trade region. The company is a specialised logistics service provider in the fashion and lifestyle industries, with an estimated 60% market share in South Africa (R.S.A.), the largest country of operation for the company. The company's top five clients were also used in the case study in order to increase the focus area of the case study. In line with Tight (2017) the study was a 'small-scale research with meaning.'

Tight (2017) provides guidance to therefore recognise the limitations and benefits of 'small-scale research with meaning' and emphasis is placed on why we do case study research, which is to use its meaningfulness and potential interest in a subject matter (Tight, 2017; p. 43). Tight (2017) highlights the strengths and desirable qualities of case studies which includes holistic views, in-depth analysis, detailed and particularity of the data, as well as feasibility or relevance to the area of research. Case studies also inherently contain some limitations, which include generalisability, reliability and validity. Tight warns to be mindful of these limitations. Desirable qualities of case studies should include rigour, theoretical framing and triangulation or comparison (Tight, 2017; p. 28, 29). Case studies are by definition, limited or bounded in their scope, they nevertheless aim to produce valuable data and analyses which are of broader interest and usefulness. It is in this way that they have the potential to make significant contributions to our understanding. For projects that do not allow time and funding and access to larger-scale research, case studies are ideal. It is important then to make it useful and meaningful (Tight, 2017; p. 1, 2)

3.1.3 Case study research area

The case study explored how a logistics service provider company could contribute to sustainable development in the SADC region and was compared with the development goals of the AU Agenda 2063 as well as the UN SDG's. The case study formed an argument on how business in the private sector could be utilised as partnership for development goals and how its potentially significant role is often overlooked by decision-makers. This is relevant as UN SDG goal number 17 is to form partnerships in achieving development goals. Keeping the

study in line with ‘small scale research with meaning’ (Tight, 2017), the case study focused on three main development themes, which are briefly discussed below. The first development theme was that of economic growth and development. The role of the company as enabler of trade as well as partnerships for development goals have been analysed and discussed. This is relevant when measured against the UN’s SDG’s number one (No poverty), number eight (Decent work and economic growth) as well as number nine (Industry innovation and infrastructure).

The second development theme discussed was on environment and the combat against climate change. This was discussed in the context of business’s attitude and role towards the environment and combating climate change. This relates to the UN’s SDG’s, specifically goal seven (Affordable and clean energy) and goal number twelve (Responsible consumption and production). The company’s outlook on carbon emissions and other relevant ‘green’ operations or strategies were discussed.

The last development theme discussed was that of social development. This discussion focused on the business’s CSR role which has a social development impact. This was relevant to various UN SDG’s covering various development aspects. Particular attention was given to goal number seventeen (Partnerships for the goals).

3.2 Data Collection, Frequency and Choice of Data

A combination of interviews and internal data collections from company records were used as primary methods for data collection. Interviews were emphasised as the method of gathering primary data. The motivation for this was to receive data in the correct contextual environment, ensuring a high applicability and reference to the case study. Semi-structured interviews were scheduled with executives of the company of the case study as well as the company’s primary clients. Below, the interviewees that were selected are explained in more detail. A total of fifteen interviews were conducted with interviewees. A combination of specific and open-ended questions was used to allow the interviewees to feel a sense of ease and share as much information on their topic of expertise, as possible. The interview script and a sample consent form can be found in Appendix F. The interviews lasted on average one hour, depending on the subject matter covered and, where needed, follow up interviews were scheduled if any clarifications were required. All interviews were transcribed electronically during the interview to allow qualitative analysis of data.

According to Aaker, Kumar, Day and Leone (2011) as cited by Tight (2017), semi-structured or focused individual interviews can be used when the interviewer attempts to present a specific list of topics or sub-areas. The timing of the questions is determined by the interviewer's discretion. This type of interview style is particularly effective when interviewing busy executives, technical experts and thought leaders. In this case study the interviewees were all part of senior or executive management and/or technical experts within their area of operation. Guided by Tight (2017), the interview process has multiple advantages, making it relevant in choosing interviews for this case study. Some of the benefits of interviews is that they avoid responses that are influenced by other people, unlike focus groups. It is also possible to retrieve twice the amount of information in an in-depth interview, which can capture all the relevance and salience of qualitative information. One-on-one, face-to-face interviews increase the amount of time each respondent has to share their insights.

Furthermore, it allows for respondents to be carefully selected to represent the topic and the marketplace as accurately as possible.

3.3 Sampling

Interviewees were selected based on their specific and technical knowledge to the relevant subject under research. This included topics of green logistics, corporate social responsibility and logistics companies' function as enablers of retail trade. The interviewees ranged from middle, senior and executive management within their respective companies of employment. The interviewees selected were representative to the areas of research for this study. A summary of all interviewees is presented in table 2 below:

Table 2: Interviewees used in case study

No.	Designation	Company
1.	Managing Executive	RTT Style
2.	Human Capital Executive	RTT Group of Companies
3.	General Manager: Vehicle Fleet	RTT Group of Companies
4.	General Manager: Health and Safety	RTT Group of Companies

5.	Regional Manager: Coastal Region	RTT Style
6.	Financial Manager	RTT Style
7.	Head of Transport and Engineering	The Foschini Group of Companies
8.	Senior Logistics Operations Manager	The Foschini Group of Companies
9.	Logistics Operations Manager	The Foschini Group of Companies
10.	Head of Projects Department	The Truworths Group of Companies
11.	Export Department Manager	The Truworths Group of Companies
12.	Supply Chain Fulfilment Director	Adidas South Africa
13.	Chief Operation Officer	Cape Union Mart
14.	Supply Chain Manager	Ackermans
15.	International Freight Department Manager	Ackermans

Table 2: Summary of interviewees used in case study

3.4 Data Analysis Methods

All interviews were transcribed electronically during the interviews to allow qualitative analysis and interpretation of data collected. This also allowed data to be reviewed and interviewees to be contacted should further clarification be required on answers that were provided to interview questions. Interviewees' answers were grouped into areas of relevance and in terms of corresponding vs. counter arguments. This was then critically analysed and is presented in Chapter four in the findings section of this paper.

3.5 Research Reliability and Validity

In a qualitative study, the systematic analysis and the soundness of the interpretation are very important when it comes to reliability. It is also important, according to Mouton (2005) that

the researcher refrains from common errors in questionnaire construction by avoiding ambiguous or vague items, double-barrelled questions, fictitious constructs and leading questions (Mouton, 2005). The validity of the research was also enhanced as the interviewees were informed of the theoretical background of the study prior to the interviews (Alexander, 2015).

3.6 Limitations

Every research methodology has its limitations. Some of the limitations of this research project are mentioned herewith. This research entailed a single case study and the findings and recommendations of this study should not be generalised across industries. The research area had a specific focus on the logistics of the fashion and lifestyle market segment. Although the company used in the case study has a representative market share, it is not representative of the entire industry that may have other operational models in its logistical operations. The study focused on the SADC trade region within Africa, and results could be different for other African territories and or countries. The author of this paper is employed at the company that was used as a case study in this research. This could implicate potential bias. This was counteracted where the author took an objective stance during the research of this paper and structured all interviews as open-ended interviews that allowed interviewees to freely discuss the relevant discussion points.

4. RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

4.1 Introduction

This research project concluded with a case study of RTT Style, a logistics service provider company that is operational in the SADC trade region. The focus area of the case study was quite specific, focusing on the logistics of the fashion and lifestyle market segment, of which this company has an estimated 60% market share in South Africa. The case study focused on three specific areas of the company's operation and its contribution to development themes, namely its role as an enabler of trade, discussed against the theme of economic growth and development. Secondly, its approach to the environment, discussed under the theme of combat against climate change, and thirdly, its corporate social responsibility (CSR) initiatives, discussed under the theme of social development.

4.2 Background: RTT Style and the RTT Group of Companies

RailIT Total Transportation (RTT) is a South African logistics service provider company headquartered in South Africa. Internal company records reflect that the company is established as a group of companies, currently consisting out of four divisions, i.e. RTT Distribution, RTT Warehousing, RTT Style and CourierIT. The group of companies is private equity funded, of which the main shareholder is ETHOS capital. Both RTT Style and CourierIT have their headquarters based in Cape Town, South Africa. RTT Distribution and RTT Warehousing, along with the group head offices, are situated in Johannesburg, South Africa. The four business divisions offer an interconnected bouquet of services in which each business unit is specialised in their area of expertise. RTT Style specialises in delivering services to the fashion and lifestyle retail industries, CourierIT focuses on express deliveries/courier services and RTT Distribution focuses on various general retail industries. RTT Warehousing focuses on outsourced warehousing and contract logistics.

In an interview with the Managing Executive of RTT Style, it was established that RTT Style is the leading distributor and logistics service provider of fashion retail in Southern Africa with an estimated 60% market share in the logistics of fashion retail in South Africa. RTT Style's client base includes various tier-one or major fashion retailers in the Southern African market, including The Foschini Group (TFG), The Truworths Group, Ackermans, Cape Union Mart (CUM) and Adidas. All of these companies have a presence in Southern Africa and have appointed RTT Style as their preferred logistics service provider in the SADC region.

RTT Style's biggest selling point or differentiator is that it offers a high consolidation model for distribution of fashion and lifestyle items in Southern Africa. This is achieved through long-term contracts with leaders in the fashion and lifestyle industry. Through creating economies of scale, RTT Style can offer high consolidation of freight, resulting in high frequency of delivery to various areas in Southern Africa. RTT currently has 22 branches located strategically across Southern Africa. A further advantage in creating economies of scale is that RTTS can offer competitive rates in the market.

4.2.1 Background: The relationship between RTT Style and its top five clients

From company records it was established that TFG was RTT Style's primary client, forming a 36% part of RTT Style's client base. This was followed by The Truworths Group, Ackermans, The Cape Union Mart Group and Adidas South Africa. Collectively, these five companies represent close to 85% of the company's client base. From TFG Company's website it was found that TFG started business in 1924 and the group now has 17 retail brands in its group. The company currently employs close to 18 000 people. TFG holds a host of well-known brands, and these brands currently consist out of five main areas, i.e. fashion, homeware, jewellery, sports and mobile. TFG is a leading fashion retailer in Africa and has operations in eight African countries as well as countries outside of the African continent. Its biggest country of operation is South Africa. This is followed by operations in BLNS countries (Botswana, Lesotho, Namibia and Swaziland) as well as Zambia. The company has also recently opened stores in Ghana, Nigeria and most recently Kenya. The group still has ambitious growth development plans in the rest of Africa and is currently looking at both Angola and Mozambique as developing opportunities. During interviews with the Truworths group management team, it was found that The Truworths Group has a very similar footprint in Africa as TFG, with the exception that they also have operations in Mauritius and Madagascar as part of the SADC region. They had a presence in Nigeria until 2016. Similar interviews with the Ackermans management team showed that Ackermans have a smaller presence in Africa, currently operating in BLNS and Zambia only. Ackermans is however part of Steinhoff Africa Retail (STAR) Group, of which this group had a high penetration within sub-Saharan Africa, servicing the value-conscious consumer and operated across retail sectors including apparel, footwear, household goods, furniture, appliances, consumer electronics and building materials, whilst also providing financial and mobile services. During an interview with the Chief Operations Officer of Cape Union Mart, the history of Cape Union Mart in South Africa was

shared. Cape Union Mart started as a family business in South Africa and proved to be very successful in South Africa. At group level they now have five retail divisions in South Africa, all within the fashion and footwear industries. It was, however, highlighted that the group is cautious regarding their expansion into the rest of Africa, and were currently operating only in Botswana and Namibia outside of South Africa. Lastly, interviews were completed with Adidas, which is a well-known and major international brand. During an interview with the Supply Chain Fulfilment Director from its South African office, it was highlighted that the South Africa office was responsible for the operations of the brand in Southern Africa. Its central and northern African operations were managed from Adidas regional office based in Dubai. Adidas was different to the other top four clients of RTTS used in this case study as the other four clients were all mainly corporate owned stores, whereas Adidas took the role of supplier to various importers across Southern Africa as well as Adidas franchise stores. RTTS handled shipments for Adidas to the BLNS region as well as shipments to Malawi, Mozambique, Zambia and Zimbabwe as part of the SADC region. All five of these fashion retailers have their head offices based in Cape Town, South Africa, hence the reason for RTTS to also have its head office based in Cape Town, separate from the group's head office in Johannesburg, South Africa.

During interviews with the Managing Executive of RTT Style it was explained that RTT Style started business in 1996 in South Africa. The company was originally called HRP Logistics. In 1997 HRP Logistics were able to secure a contract with Markhams, one of the original brands at TFG. Being a start-up business, HRP Logistics had cash flow challenges and Markhams offered RTT Style a seven-day payment term/agreement when they appointed RTTS as service provider for the brand. In an interview with the current Managing Executive of RTT Style, his opinion was that this action formed a pivotal point in the history of the company and allowed the company the cash flow necessary to keep business operations afloat and at the same time allow the business to expand. HRP Logistics was acquired in 2004 by the RTT Group of companies. The company was rebranded as RTT Style and at the close of the financial year of 2017, internal financial records reflected that RTT Style reported an annual turnover of ±R 500 million and employs ±1000 people in its operations. Collectively, as a group, RTT employs ±6000 people. TFG is still currently RTT Style's principal client. Interviews with TFG management team confirmed that in analysing the group's logistical requirements, TFG found value in the logistic solutions and business model that HRP Logistics offered to the Markhams' brand, and as a result TFG outsourced more of its brands to HRP

Logistics as service provider. HRP's logistics business model of fine distribution to shopping centres, which allowed for high consolidation, speed and frequency of delivery, resonated with decision-makers at TFG, as it created a competitive advantage for TFG in the industry. Today, TFG outsources all its 17 brands to RTT Style as logistics service provider.

4.2.2 RTT Style's Market Share in the Fashion and Lifestyle Industry

Below is a graphical depiction of the calculation used to establish RTT Style's close to 60% market share. This information was obtained from internal company records as shared by the RTT Style management team. As mentioned earlier in this paper, RTT Style have in the past 18–24 months managed to secure work from the STAR group under their Ackermans' division, that should increase their market share from the current estimated 57%. In calculating the estimated 57% market share, the following methodology was used. Fashion retailers in South Africa were grouped in three tier-groups based on their estimated spending on logistics services for distribution within South Africa. For example, from the graph below, nine fashion retailers in South Africa exist that spend more than R 20 million on a logistics service provider as cost expense. The graph shows the same for tier-two and tier-three clients and the market share of RTT Style in each of these market segments. The various retailers are also shown in a pie graph below.

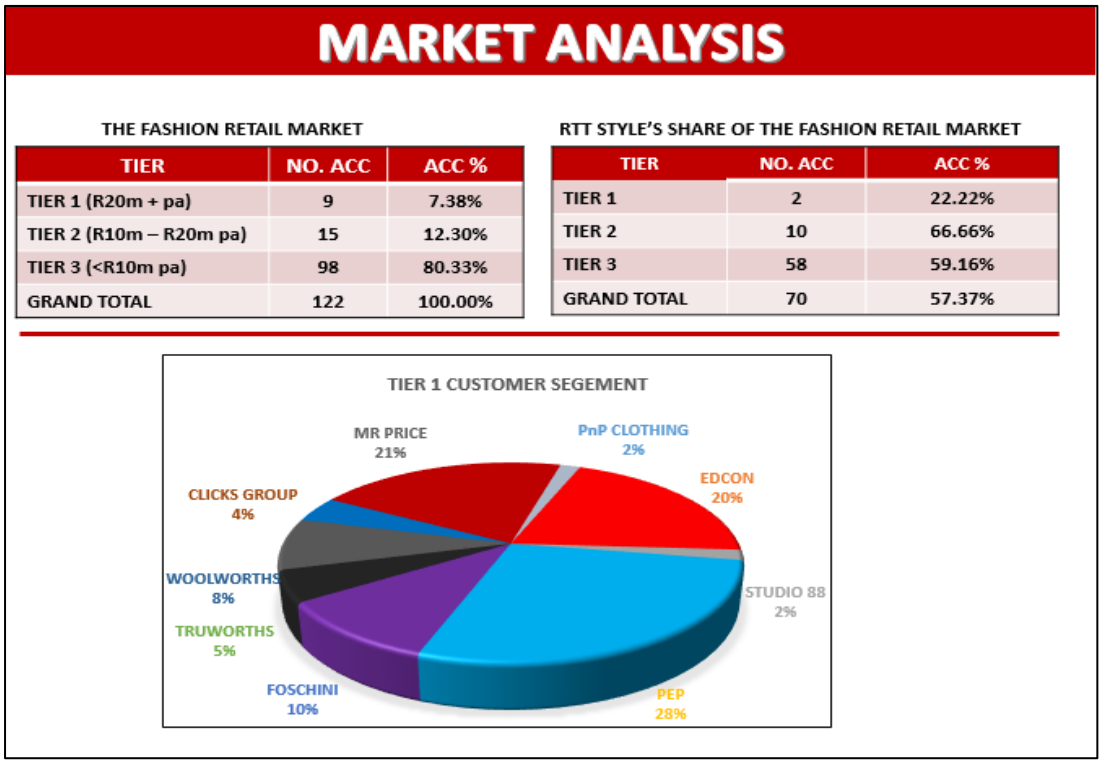

Figure 3: RTT Style's market share in fashion retail industry in South Africa.: Source: RTT Style internal records.

A summary is also presented below on the number of stores and shopping malls that RTT Style services. RTT Style delivers to over 500 shopping complexes across South Africa, which totals over 5600 retail stores and includes over 170 retail brands. The below summary graphs show RTT Style's footprint across South African provinces as well as its footprint across SADC countries. The graphs show the significance of RTT Style's footprint across the SADC regions when measured in terms of delivery points for fashion retailers.

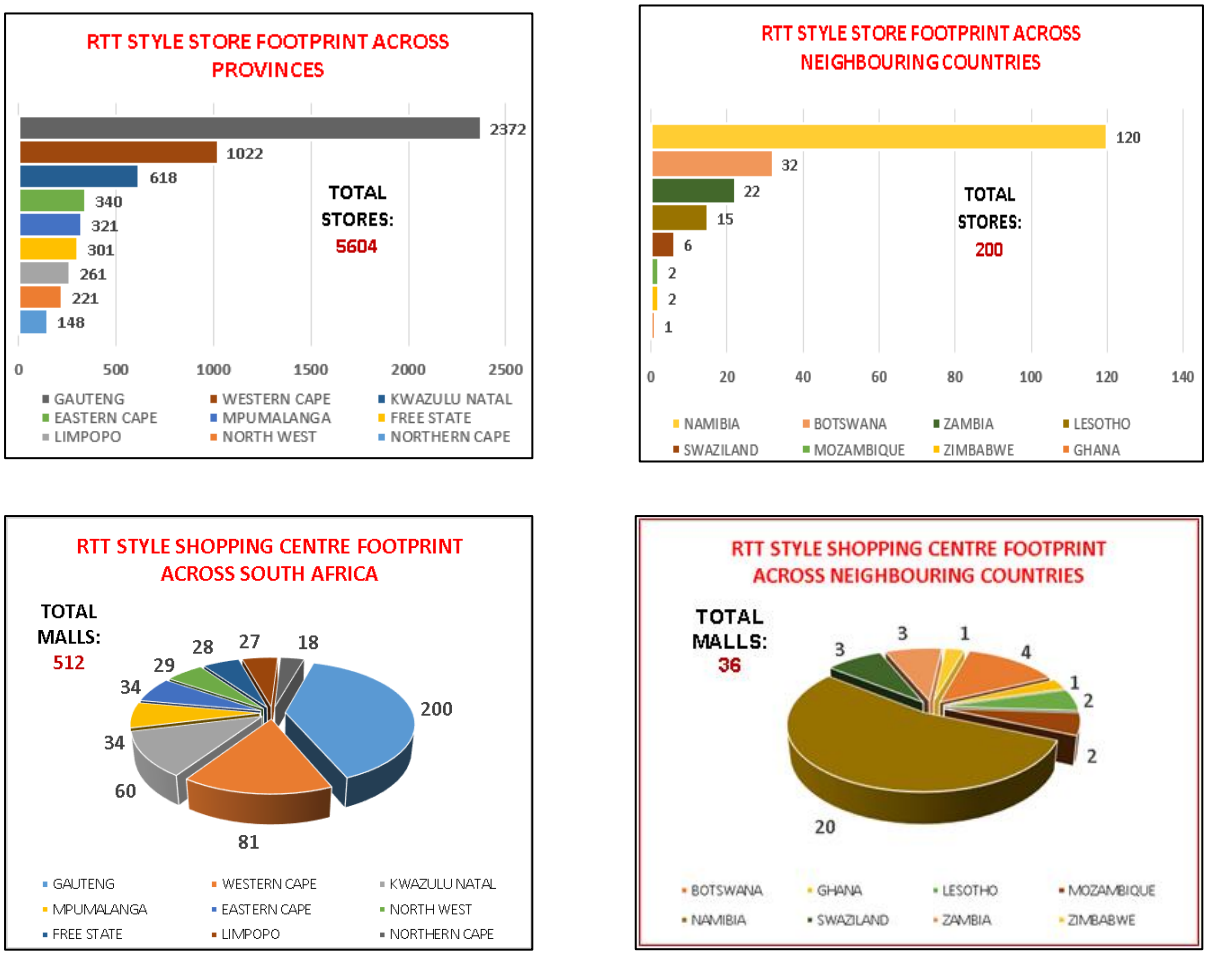

Figure 4: RTT Style's network footprint across SADC region. Source: RTT internal records.

4.2.3 Underlining the creation of shared value via competitive advantages and unlocking mutual benefits: A case of TFG and RTT Style

In analysing the data received from interviews with TFG and RTT Style management team, it can be argued that in working together, TFG and RTT Style have created a competitive advantage in their respective markets. Reciprocal value was created in the sense that through RTT Style's service offering, it now enables TFG to be a competitive retailer in SADC and allowing TFG to grow in these regions, on the backbone of the infrastructure and model that

RTT Style created. TFG on the other hand allowed RTT Style to create a presence and infrastructure in Southern Africa by offering favourable payment terms to the (then) start-up company. Perhaps the movement towards creation of shared value can also be discussed considering the above. Through RTT Style's logistics consolidation model, TFG not only created a competitive advantage for their logistical needs that suited their business model, but the impact on its operational cost, and more so the environment, should not be overlooked. Consolidation of freight has been identified as one of the most efficient ways to reduce a company's carbon footprint in its logistics operations (UN-Habitat et al., 2015). This point will be discussed in detail further in this paper. This argument can then also be applied to all clients of RTT Style as the benefit is applicable to and shared between all clients of RTT Style. The different benefits (both cost and environmental) are thus shared between RTT Style and all of its contracted clients.

In TFG's own operations, a perfect example of creating shared value is presented where TFG have recently opened a clothing factory in Caledon, ±100 km outside of Cape Town, South Africa. Through the establishment of a training school, employment opportunities for ±300 previously unemployed women in the area were created, contributing to gender equality which supports UN's SDG number four. Apart from the creation of employment and contribution to economic growth, other benefits such as introducing multi-skilling via training programs, as well as various employee wellbeing programs, have been introduced, which in turn also contributes to employee retention. From a supply chain viewpoint, having a factory closer to the market place resulted in several benefits being unlocked, such as reducing assembly time from an industry average of 15 days to four days, thus improving speed-to-market turnaround time. Lower shipping costs and less dependency on international imports were also realised. In bringing the source of procurement closer to the market, TFG has also reduced its global carbon footprint due to shorter distances of freight to be transported. One-third of the buildings' energy is provided by solar energy, thus placing a focus on reduced/responsible consumption. By creating this facility, TFG have reported growth and increased factory output through increased efficiencies. The move represents a vote of confidence in, and a substantial investment for, the local manufacturing industry, in turn contributing to employment and economic growth for South Africa's economy as a whole. Further, TFG as a business benefits from various cost savings and other benefits (employee retention, green score card, etc.) as mentioned above. This was a perfect example of creating shared value and hitting the triple bottom line, i.e. financial, social and environmental. RTT Style is the appointed service provider moving freight

to and from this new location. This is important to highlight, as it motivates the significant potential of the private sector's contribution as partner in achieving development goals, set by governments and multilateral agencies. This also correlates with research done by Porter and Kramer (2011) mentioned earlier in this paper, where retailers Wal-Mart and Marks & Spencer have been able to unlock various benefits in procuring from sources closer to market.

4.3 RTT Style's role as logistics service provider in contributing towards Economic, Environmental and Social Development

During all the interviews with different interviewees of this case study, one common theme was agreed upon overall, and that was the role of RTT Style as enabler of trade for retailers in the SADC region. The model that RTT Style offers to retailers via high consolidation, frequency of deliveries and speed to market is a critical enabling factor for its entire principal five clients. All clients interviewed also indicated their attention to cost to serve, which still remains one of the primary decision factors. During interviews, questions relating to the importance of aspects such as RTT Style's outlook/attitude towards the environment and 'green logistics' was explored. Interviewees were also questioned regarding the importance of RTT Style's role as a contributor to social development aspects. It was established that cost factors remained the major factor of consideration, whereas there is a growing focus towards the importance of 'green logistics' aspects. Social development aspects have become standard as consideration factors when choosing logistics service providers, mostly measured on RFQ scorecards based on logistics service provider's CSR roles. The findings are discussed in more detail in separate headings below.

4.3.1 RTT Style's role as Enabler of Trade, contributing to Economic Development

It was commonly agreed upon by all individual interviewees that logistics service providers act as an enabler of trade for retailers. When asked whether RTT Style's model of logistics was an enabler, there were mixed responses, mainly due to the availability of competitors offering similar services to retailers in the market. However, all interviewees indicated that they viewed RTT Style as the market leader or expert in fashion retail logistics. During my interview with Ackermans representatives, it was specifically highlighted that RTT Style was chosen as the service provider for the company's Zambia operations, mainly since RTT Style had an established and proven supply chain into this country, as well as an operational presence within the country. The service was also referable as RTT Style was at the time already providing a

service to the remaining top four clients into Zambia. Ackermans' decision-makers felt at ease appointing RTT Style as logistics service provider as they viewed RTT Style as experts in the field of transport logistics of specifically fashion retail into SADC countries. It was therefore established in this case study that a well-structured logistics model can create competitive advantages for companies and subsequently act as an enabler of trade for retailers. It was also established that the companies interviewed in this case study, outsourced their logistics function to expert service providers in the market, allowing retailers the benefit of receiving expert logistics, cost savings, less capital outlay, better consolidation of freight and higher frequency of deliveries to market. This in turn allowed retailers to focus on retail trade, which is their primary function. This concurs with (Sohail et al., 2004) that logistics is a specialised, capital intensive industry and usually dominated by companies who are specialists in their industries.

In this case study it was shown that in a close to 20-year relationship between the logistics service provider company and its primary client, shared value and competitive advantages were created via the forming of sensible partnerships. Both companies were able to streamline their focus on their core business, i.e. either fashion retail or fashion logistics and as a result could establish themselves as market leaders within the Southern African fashion retail markets in their respective industries. The aforementioned also matches with research done by Meersman and Nazemzadeh (2017) in Belgium, in which they mention that improved transport infrastructure reduces inventory costs of firms which led to implementation of just-in-time strategies and allowed for the realisation of economies of scale, together with interregional and global specialisation (Meersman & Nazemzadeh, 2017). Meersman and Nazemzadeh (2017) also found that cheaper transport initiates accessibility to the demand and supply markets, enlarging firms' markets, giving access to various and skilled labour, and cheaper and better neighbouring business services as input. The import and export activities thus become smoother. Increased imports increase local competition, which puts the firms under pressure to increase their productivity. Increased exports might result under certain conditions in expansion of sales, meaning more employment and higher profits for manufacturers. They mentioned that, in the long run, sustainability in transport technology and infrastructure would stimulate structural changes in national and regional economies, and also facilitate sustainable production systems, dynamic institutions, and integration into the globalisation process (Meersman & Nazemzadeh, 2017).

It was established that RTT Style enables retailers to have a competitive advantage through economies of scale. This allows a logistics model of high consolidation, high service frequency and speed to market as well as a competitive rate structure. Via efficient logistics processes, it allows retailer's products to reach retail stores across Southern Africa for end consumers to purchase. On the other hand, stores are not required to keep high amounts of stock, working on a just-in-time delivery principle. Exploring this concept further, RTT Style employs 1000 people in its operations and its principal client, TFG, employs close to 18000 people as mentioned elsewhere in this paper, making this a significant contribution to employment within a region. The creation of down-the-line employment or spill-overs of business involved in the value chain should also not be overlooked. Internal company records showed that one-third of RTT Style's cost of sales was to outsourced line haul (long-distance) service providers, creating further business and employment opportunities.

4.3.1.1 Trade Agreements, Infrastructure and Barriers of Trade

As per the AU Agenda 2063, goal number five of the first ten-year plan is to create a continental free trade area within Africa. Retailers TFG, Truworths and Woolworths are all primary clients of RTT Style. Although Woolworths is not primary client of RTT Style in South Africa, it is a major client as part of the company's SADC operations, outside of RSA. All three of these retailers have either partially or fully withdrew their stores from Nigeria during the last four years. These retailers stated that the business environment within Nigeria is not conducive to trade. The policies around import restrictions, trade and duty tariffs have all been cited as reasons for pulling out of Nigeria (Kew, 2016). Woolworths went further to state that inefficient supply chain conditions were a contributing factor for exiting Nigeria operations (Janice Kew; Robert Brand, 2013). Although there are counter arguments stating that these companies were forced out of Africa due to a lack of knowledge of the African consumer, the same author states that challenging supply chains in Africa is a determining factor of retailer's success in Africa (Pather, 2014). This highlights the importance of creating a favourable trading environment within Africa to allow for increased inter-continental trade. This also underlines the importance of supply chain and favourable inter-continental trade agreements to foster international trade.

In another example on the continent, these three retailers made use of air freight to import their fashion retail shipments into Kenya's capital Nairobi. This came at a much higher shipping cost when compared to sea freight costs. During research interviews, all three clients have

underlined the difficulties and challenges of using the Port of Mombasa in Kenya for the shipping of their products. Main challenges highlighted were the extreme congestion at the Port of Mombasa, significantly adding to delays in delivering shipments. The congestion was mainly prescribed to insufficient infrastructure at the port. Furthermore, infrastructure in the port's hinterland was also highlighted as a concern, connecting the Port of Mombasa with Nairobi. In another example, and in a SADC context, importing into Zambia from any of its neighbouring countries also remains a challenge. RTT Style makes use of the Kazangula border crossing, the border post between Botswana and Zambia when transporting products from South Africa to Zambia. Currently all trucks need to make use of a ferry crossing at this border post to enter Zambia, these ferries often do not have sufficient capacity for the number of trucks to be carried into Zambia, which can lead to delays of up to five to seven days, with trucks standing at the border crossing waiting their turn on the ferry crossing. This is usually seen in the peak season trading months for fashion retailers, i.e. March and April and from October to December. Although a bridge is currently being constructed at this border crossing, it is estimated to be in operation only from 2019. During interviews with RTT Style, it surfaced that RTT Style has trialled accessing Zambia via alternative border crossings during the past two years. Unfortunately, it seems that similar congestion exists at other border crossings, i.e. Livingstone and Chirundu border crossings. A case for the importance of investing in sufficient infrastructure in facilitating trade is presented here.

4.3.1.2 The case of documentation

When trading within the common customs union of BLNS territories in Southern Africa, there were numerous documents that needed to be completed to allow trade between these regions. The same applies, and to a greater extent, when trading between SADC regions. Each customs entry is accompanied by multiple hard-copy paper documents as proof of exports and imports. South African Revenue Services (SARS) launched a customs modernisation project in 2010 and one of the objectives was to create a paperless trade environment through this program. The project is still to be completed and currently, hard copy docs need to be printed, filed and presented to customs officials whenever trade occurs. Company records show that in the case of RTT Style, an average of ten clients' loads were consolidated on a truck crossing a BLNS border post. On average a truck contains 250 invoices, containing average four pages of export and import documents that are created per customs entry/invoice. Thus, on average, 1000 pages of customs documents are printed at border posts per RTT Style truck crossing the border post. RTT Style send on average three consolidation trucks to BLNS countries per week, meaning

±3000 pages of paper are created per country, per week, equalling ±12000 pages of paper for BLNS countries combined. The environmental impact of this could be concerning. The practice is also not conducive to trade, especially in view of the AU's ambition of an intercontinental free trade area.

4.3.1.3 Analysis: Trade constraints within Africa

This research has highlighted that various constraints exist to trade in Southern Africa and Africa in general. This causes potential concern, particularly in light of the AU's ambition to create a single market within Africa. These constraints can be grouped into three categories, i.e. infrastructural, regulatory and barriers to trade.

On the topic of infrastructural constraints, it has been shown that border crossings are still a concern for road freight transport within the SADC region. Although the handling of sea and air freight was mainly outside the scope of this study, an example of infrastructure constraints in Kenya was highlighted. This concurs with the concerns raised by the Economic Commission for Africa's report on tracking the progress and goals of AU 2063 and the UN's SDG's (Economic Commission for Africa, 2017). In this report it is stated that Africa's infrastructure is grossly inadequate to facilitate international trade and to compete on a global scale.

On the other hand, barriers to trade still inhibit trade within Africa. In this case study, the exit of retailers out of Nigeria was used as an example. The case study also highlighted the amount of paperwork and regulatory compliancy processes that are currently in place for moving freight between African countries. This correlates with research by Mbekeani, (2010) that better infrastructure with improved customs tariffs and standards will unlock many of the bottlenecks and stimulate international trade. He goes further to state that

> *Better infrastructure will facilitate exchanges between states (countries/regions) through integration within coherent regional trade agreements and harmonisation of infrastructure policies and regulatory frameworks. (Mbekeani, 2010)*

He goes further to state that an improvement in infrastructure would help reduce costs and improve the quality of services by removing barriers to free movement of goods and people and improving the maintenance of transport assets. This would include trade corridors without borders and barriers; better and safer roads; competitive rail services; efficient and safe ports and seaways. Better road conditions and fewer road blocks and delays at custom posts. will

reduce journey times and, more importantly, journey costs to ports and regional distribution centres. This means business and trade between adjacent countries will expand. (Mbekeani, 2010)

It is important to note that as part of the AU's Agenda 2063 ten-year plan, the free movement of people between African countries as well as removing trade barriers are top the agenda.

Improving trade and lessened dependency on aid, means that Africa as a continent should prioritise setting a conducive environment for trade, including the necessary infrastructure to facilitate trade (roads, border crossings, rail, airports, etc.) as well as a regulatory environment that will enhance trade (favourable duty tariff agreements, integrated import/export administration, etc.). In line with DeGhetto et al., (2016), the AU should look at established trade blocks such as the EU where successful integration of developed and developing nations have been facilitated into a single trade block. Important lessons in terms of regulation and infrastructure could provide valuable lessons for the AU's Agenda 2063.

In reviewing transport's relevance to the UN's SDG's, a working group wrote it this way:

> *Quality and cost of transport have a major impact on economic growth, on the ability of businesses to compete, on the movement of freight and on personal productivity. Efficient transport activity, logistics and supply chain and reduction of trade barriers is fundamental for a more efficient economy, particularly for developing countries (UN-Habitat et al., 2015)*.

They go further to state that, in order to achieve sustainable industrialization, trans-border connections and transport corridors for inclusion and connections between economic hubs, play a crucial role. A strong, sturdy transportation infrastructure is essential for a resilient supply chain, as disruption to the global, interregional, and local trade corridors could impact development, as transport costs may be increased and delivery delayed (UN-Habitat et al., 2015).

On the point of infrastructure, it would be wise for African leaders to take note of previous studies done in China. As shown by Hooi Lean et al., (2014), China is a stellar example for other developing countries. The results in their paper implied that in a developing country like China, the improvement of logistics infrastructure played an important role in developing the economy. They stated that…

Improved land transport conditions can lead to economic growth through reducing travel time and cost, increasing producers' access to distant markets and inputs, generating benefits by lowering firms' inventories, attracting investment, leading to spatial redistribution of economic activities and accelerating industrial agglomeration.

During research interviews, another mutually agreed upon aspect was the role of logistics in sustainable development. All interviewees confirmed that logistics acted as a vital enabler for development. In an interview with TFG representatives, a comment was made by one of the interviewees that logistics is often overlooked when decisions are made, especially in an African environment. When prompted for elaboration, taking into account that the UN have mentioned their neglect of transport logistics in the initial MDG's (UN-Habitat et al., 2015), the interviewee elaborated and highlighted the lack of African-specific material on logistics experienced during his pre-graduate studies in logistics. The relevance can be argued, that it concurred with earlier statements made, that the AU should be wary of not making the same mistakes and include logistics in its planning and decision-making.

4.3.2 RTT Style's Green Logistics Strategy

Interviews with RTT management revealed that RTT as a group had embarked on a process of 'greening' its operations. The view of company management was that this was an important aspect and the group needed to direct more focus towards this aspect of its operations. The group would now be taking a strategic approach towards greening their operations, as this would become a critical factor for business sustainability in the future. This could have significant advantages for the group. Although legislation was not currently forcing behaviour, the long-term view was that environmental conformance would become enforced in legislation and the company would therefore prefer to establish itself as a leader in green logistics long before it is enforced by authorities. Benefits would not only include a less negative impact on the environment but could also include significant cost savings as well as the creation of a positive perception of the company in the market. The findings below are important as logistic service providers could contribute to sustainable development not only in terms of economic or financial benefit, but also in terms of its contribution to climate change. The findings related to the UN SDG goals of affordable and clean energy (SDG goal seven), responsible consumption and production (SDG goal twelve) and climate action (SDG goal thirteen). This is important for governments and multilateral agencies to note, as the potential assembling of

streamlined efforts by private sector aligning with development goals, can have potential significant successful outcomes.

During an interview with TFG's Head of Transport and Engineering, it became apparent that TFG will require RTT Style as a service provider to become 'green' in their operations. TFG has in past years placed a major focus internally in becoming green in their operations. As indicated by their Head of Transport and Engineering, who also serves on an environmental committee for TFG, TFG would now strategically place the same focus externally and force their suppliers and service providers to become greener in their operations. Currently, these aspects did not play a major role on the Request for Quotation (RFQ) scorecards, but during the next RFQ process it would become an important consideration and aspect in awarding contracts. TFG's Head of Transport and Engineering confirmed that any responsible logistics company should already be taking the necessary steps in becoming green. This would ensure business continuity.

In interviews with RTT Style's other top four clients, most clients confirmed this opinion and indicated that, although cost-to-serve factors, still played a determining factor at this stage, the importance of a logistics service provider's stance towards environmental responsibility would become more important in future. Interviewees also indicated that they would probably not force a service provider to become more environmental responsible, but that it is expected from service providers that they take this responsibility on themselves. All interviewees confirmed the result could increase a positive perception of the company in the market.

During interviews with senior management of RTT Style, it transpired that RTT Style was paying little attention to this aspect of its operations. However, the Managing Executive of the company indicated that its clients are starting to engage with the business on environmental awareness concerns and that this would become an important aspect of the company's operations model. In line with this, project records from the company showed that the company recently undertook several environmental projects which included reducing, reusing and recycling of waste, reducing its carbon footprint through efficient energy use to minimise atmosphere pollution, as well as promoting environmental and sustainability awareness internally among employees. As the company's headquarters are based in Cape Town, which at the time of writing this paper, is experiencing one of the worst droughts in the last century, the company has embarked on an internal awareness campaign with all employees to reduce its water footprint and conserve this valuable resource in various ways.

As confirmed by the Group's Health and Safety Manager, a drive towards change within the organisation was already being launched and in order to create and define an environmental management framework for RTT's operations, an independent environmental risk assessment was conducted during 2012. This assessment established a baseline from which to proceed and served as a measure for progress and achievements. Through the implementation of several practical solutions from the list of recommendations, immediate and medium-term goals were identified. Some of these initiatives are discussed in more detail below.

4.3.2.1 Energy savings

All office equipment was replaced with energy efficient equipment. These included replacement of lights, motion detectors for lighting, timing devices, split-unit air conditioners and installation of metering systems to measure and record data on water and electricity consumption. The company was currently investigating the possibility of harvesting solar power to feed downstream into main line systems.

4.3.2.2 Green fleet vehicles and fuel usage reducing carbon emissions

The company's internal vehicle fleet was systematically being upgraded with more fuel-efficient vehicles. Research was also being carried out in the use of alternative fuel vehicles. The company also invested in a vehicle fleet system, allowing closer monitoring of fuel usage. New oil technology also allowed the extension of vehicle service intervals that in turn reduced the amount of oil used on the company's vehicle fleet annually. Lastly consultation on route optimisation was received for deliveries via IT technology applications. The company shared records where it plans to balance operational carbon emissions by 2022. A process was started in 2013 by conducting a carbon analysis identifying fuel as the largest emission, equating to 76.3% of total emissions by the company. Electricity emissions were calculated as the second largest emission source calculated at 23.8%. Remaining emissions were made up of water consumption, fugitive emissions (R-22 gas) and waste.

Considering the above, a process was started to conduct a follow-up carbon footprint analysis. The scope of this analysis included a three-step, or three scope process, as per company's records. This is highlighted below in a graphical representation. Scope one of the process underlines direct emissions from sources owned or under the operational control of RTT. Scope two addresses indirect emissions from purchased electricity and scope three address all other indirect emissions associated with, but not controlled by RTT.

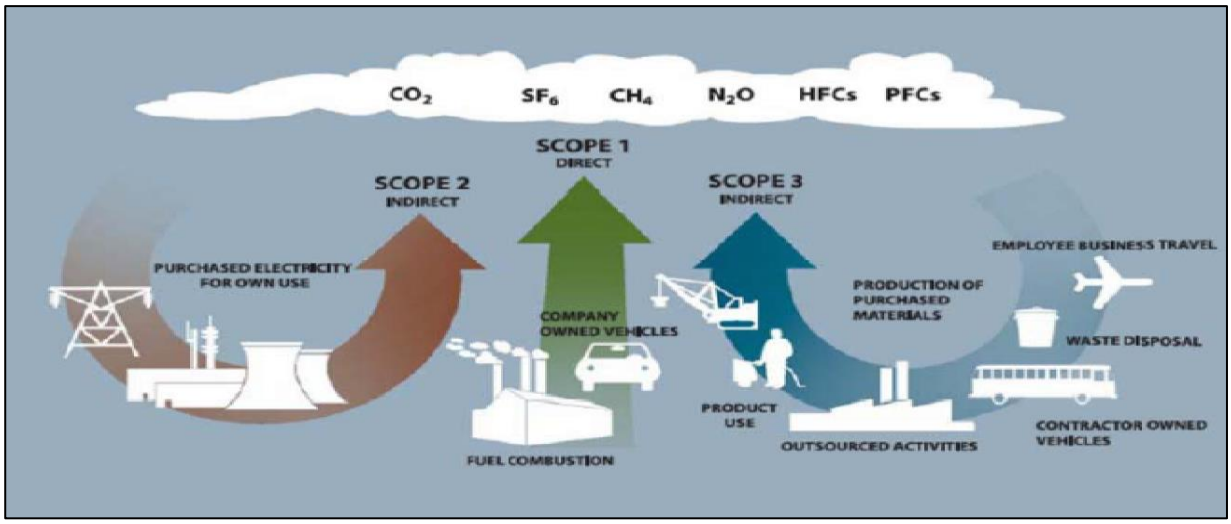

Figure 5: The three different scopes of RTT's carbon footprint analysis. Source: RTT internal records.

4.3.3 Environmental Legal Compliance Audit

As Southern Africa forms part of the global economy, subject to both international and local environmental legislation, RTT's Health and Safety Manager indicated that RTT is planning to conduct an environmental legal compliance audit in 2018 based on identified environmental risks and application to environmental law. Emphasis will be placed on the all areas of its operations, including environmental administrative requirements, air emission, water pollution, solid and hazardous waste, soil and groundwater protection, noise control and overall resource management. The scope of this audit will be conducted in line with identified environmental risks and application to environmental law. Apart from the above RTT group initiatives, RTT Style have also taken on additional initiatives in order to 'green' its operations.

4.3.4 RTT Style's Project on Fuel Usage and Carbon Emissions: Green Band Revolution Limiters

RTT Style has a total of 125 vehicles in their fleet. From 1 Sept. 2016 to 31 Aug 2017 (the company's financial year period), the company installed revolution limiters and idle stop devices on 52 vehicles in their fleet. The system allowed to keep maximum revolution of the vehicles at a minimum, below normal level. This is also commonly referred to as 'Green Band'. The idea was to phase these revolution limiters onto the entire fleet over the next two financial year periods (thus a three-year phase in period). Consumption of fuel was measured against (1) pre-instalment, (2) norm of revolution for specific vehicles, and (3) average consumption. The results of these implementations are summarised in a graph below:

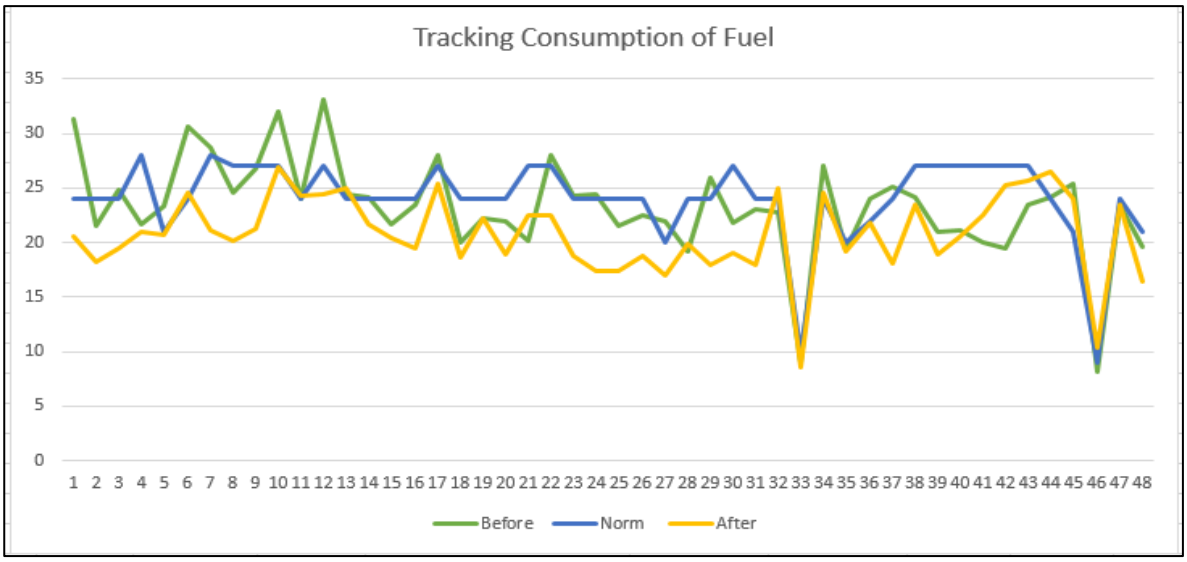

Figure 6: The effect of RTT Style's 'green band' revolution limiters.

Source: RTT internal records.

The result of above equates to a saving of almost 10% per vehicle, resulting in an R300 000 saving in year-one on fuel costs. This equates to less fuel being consumed, which would subsequently have a less harmful effect on the environment due to lower emissions. RTT Style's auditors, Deloitte were busy with the audit on emissions, the results of which will be published early 2018.

From a group perspective, the current fleet existed of about 900 vehicles and, out of these, 200 vehicles were fitted with similar technology. Although this study focused only on RTT Style and shows the potential impact for mass-scale roll-out. Apart from the advantage to the environment in installing this technology on vehicles, there is also a significant cost saving to the company in terms of fuel usage. This would allow for better planning and procurement of fuel for the fleet. The technology has been proven to 'pay for itself', whereas one such device costs ±R 4000 and from the figures above it can be seen that the nett savings have surpassed the initial cost of implementation.

4.3.5 RTT Style's Project on Vehicle Route Planning (VRP)

During an interview with RTT Style's Regional Coastal Manager it was established that the main objective was to shorten the distances travelled for each vehicle. This increases efficiency, but also reduces the emissions of each vehicle. Routes are being constantly reviewed in order to ensure the most effective routes were being used for RTT Style's fleet of 125 vehicles. For the most part, dedicated, pre-set routes are outlined for each vehicle, but in a

highly operational environment, this can often change, which makes it difficult to compare data. Training sessions with route planners were often undertaken to ensure that the shortest and most effective routes are planned for each vehicle. The idea here was to have the maximum volumes within minimum travelled kilometres. RTT Style has engaged with IT software companies to assist with enhancing route planning for its entire fleet and operations.

4.3.6 RTT Style's Project: Consolidation of Freight

Creating consolidation opportunities for cargo could be one of the most efficient steps in reducing emissions (UN-Habitat et al., 2015). As RTT Style is a high consolidator of freight, it automatically reduces emissions on a shared infrastructure basis, compared to when and if each client had to provide its own logistics infrastructure.

4.3.7 RTT Style's Project: Creating a Paperless Environment

In RTT Style's financial year of 2017 (Sept. 16 to Aug.17), internal company records reflect that RTT Style embarked on a process to develop and implement technology for moving away from signing hard copy, printed Proof of Delivery (POD) documents and moving to handheld, electronic POD systems. The first delivery on electronic POD's was done in August 2017 and currently +/- 100 delivery points are now being done electronically. The idea is to phase-in the electronic pod application across all delivery points in the next two financial years of the company.

Due to the nature of its operations, currently dependant on hard copy papers as proof of deliveries, RTT Style currently uses an average of 44 million pages of paper per annum. RTT Style would see a significant saving on operational costs and become much more environmental friendly. Not only would this decrease the amount of paper printed for every delivery that RTT Style makes, but the technology would allow for data to be collected from the devices, which in turn would lead to better planning and route optimisation. The data will assist RTT Style to analyse 'bid data' as the application runs on geo-coordinates, tracking and showing the route of the truck, travel times, times spent at each delivery point, and real time information feeding through, for e.g. when POD's get endorsed, etc.

4.3.8 RTT Style's Project: Alternative fuels and vehicles

An interview with RTT's General Fleet Manager reflected that RTT Style was testing one truck in its fleet running on a battery and one truck running on gas. This would be in line of moving

away from dependency on fossil fuels and aligning with the South African Department of Transport's Green Transport policy document. The results of this test are still inconclusive for decision-making.

Apart from technology as the green band limiters mentioned above, RTT Style was also looking at testing and trialling different aerodynamic options on vehicles in an effort to reduce fuel consumption and is still currently in progress. Presently, emissions released from vehicles are being reduced using Ad Blue, a non-toxic liquid injected into the flow of exhaust gases. When the solution combines with exhaust emissions, it produces nitrogen and oxygen which are less harmful gases in the natural environment. Vehicle maintenance specifications and intervals are strictly monitored and adhered to which allows for reduced fuel usage.

4.3.9 RTTS Project: Water usage

Lastly, it was established that a non-water-based detergent was used for cleaning of vehicles. This remains important as South Africa is a water scarce region (Department of Transport, 2017) and is also significant because during the time of writing this paper, Cape Town in South Africa was experiencing a severe draught and water shortage. Water restrictions were currently in place in Cape Town. During the past three years, both Johannesburg and Durban in South Africa have had water restrictions in place, making recent water restrictions applicable in South Africa's three biggest metropolitan areas.

4.3.10 Analysis: Transport logistics contribution to the environment

As road transport is one of the biggest contributors to greenhouse gas emissions (Demir et al., 2014), it is self-explanatory that logistics companies can play a significant role in combating climate change. This case study has also shown that logistics companies, as other business, holds enormous potential for being an overall contributor to a green economy. Due to the nature of its operations, logistic companies, especially road freight transport or distribution companies, are capital intensive industries and a significant part of their capital structure comprises vehicle fleets. Demir et al. (2014) mentioned in their paper that road freight transportation was essential for economic development, but it is also harmful to the environment and human health. They stated that until recently, the planning of freight transportation activities was mainly focused on cost minimization. They concluded that with an increasing worldwide concern for the environment, logistics providers and freight carriers

have started paying more attention to the negative externalities of their operations (Demir et al., 2014).

Earlier in this document it was shown that investment in technology can potentially have a significant effect on making the operations of logistics companies' greener, thus contributing to combating climate change. The potential effect of technology applications in reducing emissions should not be underestimated, as mentioned by Liimatainen et al., (2014). In this case study, technology was being implemented on a small scale to monitor and reduce emissions, but the potential impact could be significant. The application of technology in other areas of the company's operations could also have a significant effect on internalising negative externalities in the company's operational environment. An example that can be highlighted is the company's movement from hard copy proof of delivery documents to electronic proof of delivery documents.

Some other initiatives to reduce emissions that were highlighted in the case study included the regulation of fuel usage with new technology, looking at alternatives to fossil fuels as well as investing in consultation and review of proper route planning. This correlates with research by Demir et al., (2014) that emissions of CO_2 are directly proportional to the amount of fuel consumed by a vehicle, which is in turn dependent on a variety of vehicle, environment and traffic-related parameters, such as vehicle speed, load and acceleration. Freight transportation planning has many facets, particularly when viewed from the multiple levels of decision-making. As mentioned earlier in this paper, arguably the most famous problem at this level is the well-known Vehicle Routing Problem (VRP), which consists of determining the least costly routes for a fleet of vehicles to satisfy the demands of a set of customers, subject to side constraints. The traditional objective in the standard VRP was to minimize the total distance travelled by all vehicles, but this objective can be enriched through the inclusion of terms related to fuel consumption (Demir et al., 2014). In this case study, similar challenges were highlighted in section 4.3.5 of this paper.

All other areas of operation were also under review as highlighted in this case study, which will correlate to research by Porter & Kramer (2011) that the use of energy throughout the value chain is being re-examined. This is applicable to processes, transportation, buildings, supply chains, distribution channels, and/or support services. Triggered by energy price spikes and a new awareness of opportunities for energy efficiency, this re-examination was under way even before carbon emissions became a global focus. The result has been striking

improvements in energy utilization through better technology, recycling, cogeneration, and numerous other practices. As stated by Porter & Kramer (2011), shipping is expensive, not just because of energy costs and emissions but because it adds time, complexity, inventory costs, and management costs. Logistical systems are beginning to be redesigned to reduce shipping distances, streamline handling, improve vehicle routing, and the like (Porter & Kramer, 2011).

4.4 RTT Style's Corporate Social Responsibility (CSR) Role, contributing to Social Development

During interviews, most interviewees indicated that service provider's CSR role was reflected in RFQ scorecards. Although this was an important aspect in the RFQ process, it is not the determining factor when choosing logistics service providers. It is important, however, to note that during interviews it surfaced that clients will not force CSR behaviour, but rather 'expect' that service providers should take responsibility with regards to their CSR role. This concurs with the view that business should take a more active role in society (Nordén & Ullerfelt, 2013). Through its CSR role, RTT as a group contributes to social development in many ways. Extracted from company records, below are some of the initiatives with which RTT is involved.

4.4.1 Initiative 1: BBEEE Program

In line with South Africa's legislation and Broad Based Economic Employee Empowerment (BBEEE) program, RTT Group of companies formed an employee trust that 8% of employees who qualify for BBEEE status have a shareholding in the company. This is apart from the relevant representative management structures in place to comply with BBEEE legislation. RTT currently has a level two BBEEE rating, one level below the primary rating. This empowers historically disadvantaged groups in South Africa and assists with uplifting previously marginalised demographic groups in South Africa.

4.4.2 Initiative 2: Owner-driver program

RTT as a group has implemented an owner-driver employment program in which drivers become owners of the vehicles. RTT assists the drivers with financing these vehicles and provides the necessary business and related training to drivers on this program. A mutual benefit exists for RTT and the drivers, whereas RTT empowers its drivers and the drivers can take advantage of opportunities for personal development and creation of personal wealth. RTT as a company takes advantage of more responsible drivers in its operations. This also forms an argument for the creation of 'shared value'.

4.4.3 Initiative 3: Enterprise Development Project

The RTT Group has allocated R3 million to an internal enterprise development project, managed by the RTT Human Resources Department in conjunction with industry experts. Sixty previously unemployed people from local townships in the Johannesburg area of South Africa were encouraged to apply for the program. Candidates were then put through an interview process against a set of pre-determined criteria. The allocated candidates were then put through a venture-creating program and business coaching programs to enhance entrepreneurial skills. The end goal was to equip these candidates or students with the necessary skills to become either entrepreneurs in their own ventures or to have the option to apply for positions at RTT. The program had a good success rate where roughly 50% of these candidates are now employed at RTT and where some of these staff members have already moved into junior management positions in the company. The remaining 50% have created various independent entrepreneurial businesses, which include small-scale farming and other small enterprises.

4.4.4 Initiative 4: Sweetwater Home

RTT's founder has started a children's home in Johannesburg, South Africa. Two properties were purchased in Johannesburg which provided accommodation to six previous street children placed in the children's home via the relative public sector and social development channels. A former, now retired employee of RTT was given the necessary training and is now employed full-time managing the children home. RTT has committed to paying for the education of children until grade 12 and perhaps further tertiary education, which will be assessed closer to the time. The program might also have the option to provide full-time employment to the children at RTT, once their education is complete.

4.4.5 Initiative 5: Employee wellness programs

4.4.5.1 RTT Crèche

RTT has an on-site care centre for children of employees at RTT. Preference is given to employees with critical roles which entails working long hours in the company. Preference is also given to positions to which lower salary brackets apply. The crèche is subsidised by RTT and can form part of employee's cost-to-company salary packages. The single largest advantage for the employee is that this creates ease of work for these employees, having their children travelling to and from work with them on a daily basis. This avoids logistical challenges in households where both parents are working full-time and must travel large

distances to get to their places of employment. As this program is subsidised, the employees benefit from a cost perspective. Educational programs are also being offered at this site. From a company perspective, advantages in terms of employee retention, knowledge transfer and overall wellbeing of employees were recorded. Supporting the idea of creating shared value, some of the children in this crèche have been employed at RTT after finishing their primary and secondary education.

4.4.5.2 RTT Medical Tests

RTT offers free screening of critical and chronic diseases twice annually to all its 6000 employees. Free consultation sessions on management of these diseases is also offered. All employees are eligible for a free optometrist testing and consultation once per annum.

4.4.5.3 RTT Training Programs

RTT places a major focus on the skills development of all its employees. RTT offers regular training sessions to all levels and areas of its operations. Employees wishing to pursue further post-graduate studies can apply for bursaries through the company's Human Resource department. Due to the nature of the company's operations, various ongoing Health and Safety (HSE) related training and awareness programs are continuously conducted as per guidance and in compliance with local legislation in the country of operation.

4.4.5.4 Subsidisation of Medical Aid & Provident Fund Programs

RTT offers a 50% contribution to all employees wishing to go onto a medical aid or provident fund platform. RTT has a relevant employee-elected committee that meets twice annually, reviewing these programs and investments.

4.4.5.5 RTT ESG committee

RTT has an internal Environmental, Social and Governance (ESG) committee that forms part of the company's corporate governance structure. Regular audits are completed by relevant parties, as RTT subscribes to the KING III corporate governance measures. As established during an interview with company management, one of RTT's group shareholders is an international investor with ties to the World Bank. As such, relevant compliancy audits in line with World Bank governance were frequently conducted at RTT. One such example was that RTT in a group structure, is a service provider for tobacco products distribution in SADC. The

World Bank has strict guidelines on the handling of this cargo and frequently audits RTT on this part of its business.

4.5 Analysis: Logistics role in Social Development

It has been shown from this case study that a logistics company (as other businesses in private sector) can contribute to social development in many ways. Apart from the direct contribution of creating employment, this case study has highlighted social development through the company's CSR program. It was established that society expects this from companies and concurs with research done by Nikolaou et al., (2013), highlighted in Chapter two. More importantly, a shift in focus is starting to emerge towards the creation of shared value as a new approach to CSR and capitalism in its traditional sense. On shared value, Porter and Kramer (2011), state that the purpose of the corporation must be redefined as creating shared value, not just profit per se. They stated that this will drive the next wave of innovation and productivity growth in the global economy and will also reshape capitalism and its relationship to society (Porter & Kramer, 2011).

In this case study, examples of the creation of shared value can be accentuated where the company has empowered employees through, e.g. driver-owner programs and grass-roots development programs, where both the company and society benefit from these programs. It has been highlighted that TFG has created shared value in opening a clothing manufacturing facility in South Africa and, in turn, has been able to achieve or improve on its triple bottom line. This is closely correlated to the example used by Porter and Kramer (2011), highlighted in Chapter two of this paper, where Walmart improved their triple bottom line by bringing suppliers closer to the market, creating efficiencies on financial, environmental and social fronts (Porter & Kramer, 2011). Perhaps this is a good opportunity for companies operational in SADC to take note of these examples and analyse their own supply chains to establish whether similar opportunities for the creation of shared value might exist. All of the above ties back to existing literature that companies can no longer just operate on financial interests alone, but need to incorporate a triple bottom line approach (Nikolaou et al., 2013). In this case study, Cape Union Mart and other retailers in Southern Africa were using similar methods to create competitive advantages, in turn also increasing their triple bottom line. This was done via procurement of finished textiles from Mauritius, which forms part of the SADC trade region. CUM can take advantage of favourable duty structures within SADC, and in turn contribute to economic growth within SADC. Shipping from Mauritius to South Africa vs shipping from the

Far East to South Africa is also more cost effective. Due to the shorter shipping distances, carbon emissions from shipping is also lower, having a positive contribution to the environment. This also underlines the potential significance of creating favourable inter-continental trade structures. In this case study, the growing importance of reporting on a triple bottom line, especially when conducting RFQ's, has been highlighted. Clients are placing a growing focus on service providers' approach to reporting on a triple bottom line. This is no longer a 'nice to have' aspect but becomes a requirement for creating sustainable businesses. This was highlighted by all the interviewees in this study. Any responsible business, should without being forced to, give the necessary attention to this aspect of business in creating a truly long-term sustainable business. Milton Friedman's argument that business's only responsibility in making a profit is being challenged in the business milieu of today (Porter & Kramer, 2011).

5. RESEARCH CONCLUSIONS

In this paper the role of logistics on sustainable development was explored. Apart from focusing on economic development as an individual concept, the research took a broader view in line with a popular shift for organisations to report on the so-called 'triple bottom line', which includes financial, social and environmental aspects. In line with the aforementioned, the research focused on logistics' role towards economic, environmental and social development. The literature reviewed in chapter two explored this concept on a global basis, whereas the case study presented in chapter four had an African, and in particular, a Southern African (SADC) focus. Throughout the research, common outcome seemed to exist that logistics played a vital role in contributing to sustainable development. The literature reviewed in Chapter two supported this on a global context, whereas the research findings in Chapter four supported this in an African context. Although the research presented in chapter four might be small-scale, the potential opportunity for a significant contribution to various development goals on various development aspects has been highlighted. The case study has also shown that by forming sensible and strategic partnerships, mutual beneficial goals exist, and can be achieved with collaborated efforts. A concern was emphasised, in that an apparent misalignment, or lack of awareness might exist between the private sector and multilateral agencies. The research in this study has compellingly shown that the private sector is not actively aware of development goals set by multilateral agencies and governments. This creates a potential concern for missed opportunities, as the forming of partnerships could unlock mutually beneficial goals. During the research, all interviewees confirmed their interest in engaging with these agencies, should mutually beneficial goals exist. This could form a strong argument for companies to incorporate a 'shared value' approach towards business, which in turn would benefit multilateral agencies in advancing the accomplishment of development goals. The creation of awareness platforms involving the private sector to align with development goals, and the formation of strategic partnerships, could be a defining factor towards achieving development goals.

The important role of logistics in facilitating international and inter-continental trade has been highlighted. Increasing trade to and from the continent could be a significant contributor to development. The need for African decision-makers to establish an environment conducive to inter-continental and international trade has been underlined. A recommendation was made for

the AU to look at successful inter-continental/international trade regions such as the EU and determine its relevance for implementation in Africa.

Lastly, the important role that logistics can play in the environment as well as its contribution to social development aspects has been recognised. Logistics can play a significant part in the global fight against climate change. Forcing behaviour through legislation and regulation could have a significant impact on meeting environmental sustainability goals. Businesses acting responsibly towards the environment and society could be the tool that could potentially 'leapfrog' Africa into developed status. Decision-makers on the continent are advised to take note of the potential impact of business's role towards sustainable, inclusive development for Africa as a continent.

6. RECOMMENDATIONS FOR FUTURE RESEARCH

As this study placed a substantial focus on the fashion retail market segment, it would be interesting for future studies to establish the impact of the rising e-commerce movement in this specific market segment. It would also be interesting to establish, whether and how, this changing retail and supply chain environment, would have an impact on commercial, environmental and social development aspects. In line with the aforementioned, the rise of technology in logistics could be an interesting avenue for further research. The impact of automated vehicles and technology applications in supply chain and logistics environments could form an interesting research subject.

A further area of research would be to study the impact of disinvestment or increased regulation in non-sustainable supply chain and logistics practices, in line with Sustainable Responsible Investment (SRI) principles. This could be applied to overall supply chain practices of the textile and fashion industries as well as logistics service providers servicing this market segment. Fashion and lifestyle companies, such as Patagonia, have done significant groundwork in greening their entire supply chain and product offering, as well as paying close attention to social and environmental aspects in their operations.

Lastly, the focus of this study was restricted to a single case study in order to form small-scale research with meaning. It would be interesting if this research could be extended to include a larger sample size across different industries, establishing if the findings concur with the research of this study.

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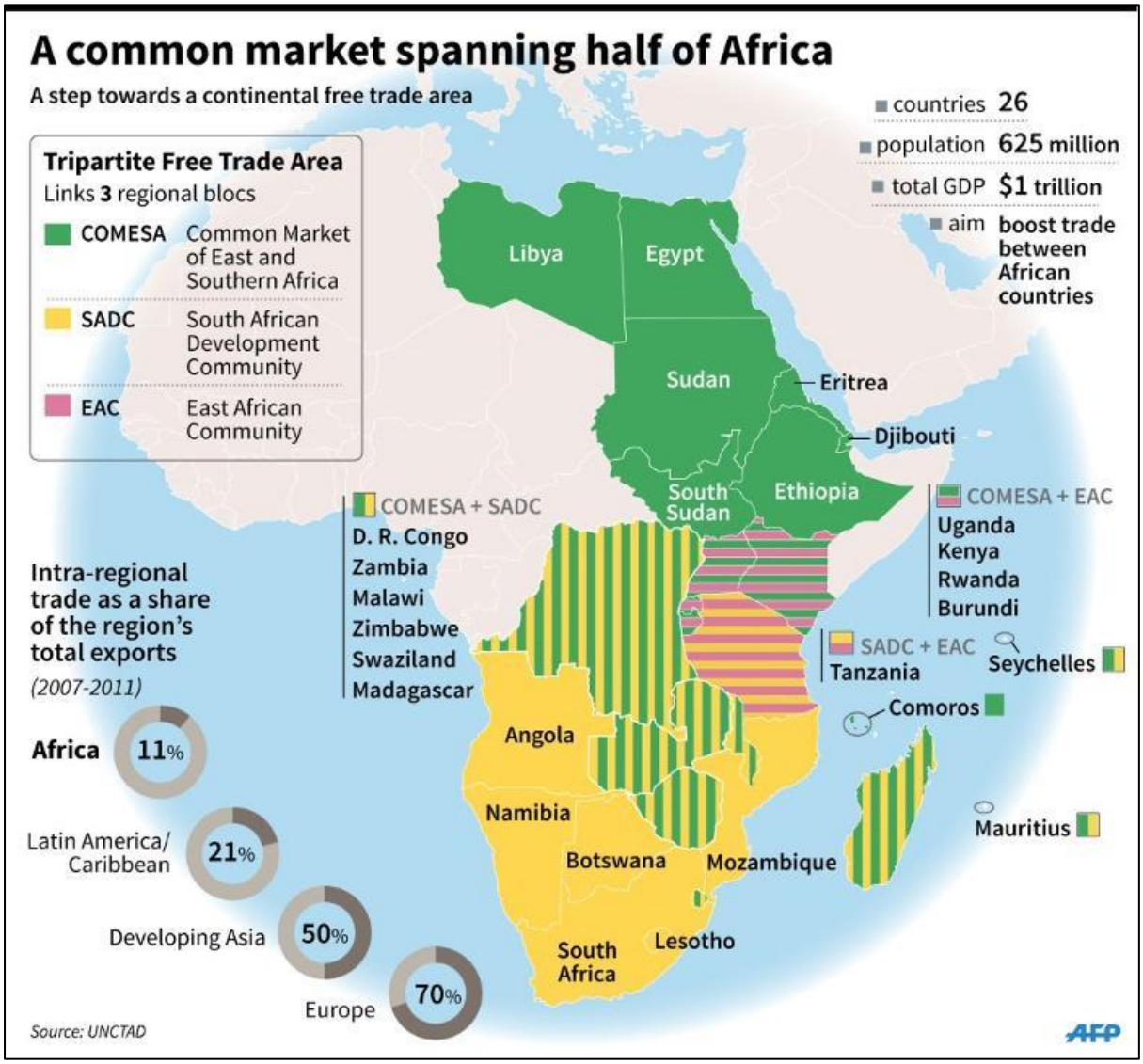
APPENDICES

Appendix A: SADC Country Member States

Appendix B: Millennium Development Goals (MDG's)

Appendix C: United Nations Sustainable Development Goals (SDG's)

Appendix D: Africa Trade Blocks



Appendix E: Sample Interview Questionnaire

Interview with representative from company: '*insert client name*'

Interview date: *'insert interview date'*

Interview duration: *'insert interview duration'*

History and Background between 'CLIENT' and RTTS:

1. How long partnership been between the two companies?
2. How did the relationship start?
3. Validity of the current contract with RTTS as LSP?
4. How do 'CLIENT' choose RTTS as LSP?
5. Why do 'CLIENT' choose RTTS as LSP?

Theme one: Economic Development

1. Do you think LSP's play an important role as 'enablers' of economic development?
2. Do you think RTTS play this role in enabling 'CLIENT' as fashion retailer in SADC?
3. Do you think the value proposition from RTTS (high consolidation, speed to market, frequency of delivery) allow / enable 'CLIENT' as retailer in SADC and allow a competitive advantage in the market?
4. Are you aware of the United Nations Sustainable Development Goals?
5. Are you aware of the African Union's Agenda 2063?
6. Would 'CLIENT' consider aligning themselves with multilateral agencies (such as AU & UN) development goals and as a result become a partner for achieving these goals? (in whichever form)

7. Have any of these agencies approach your company group to align with any of these goals / or are you aware of any awareness programs being undertook with LSP's in the industry?
8. Do you think LSP's can be more involved to assist with economic development in a country? (in whichever form)
9. The concept of 'shared value' is becoming increasingly popular. Can shared value be created between clients (such as 'CLIENT') and LSP's (such as RTTS)? Possible ideas on how this can be constructed.
10. Are 'CLIENT' currently involved in / or investigating any shared value initiatives (outside of normal CSR initiatives) which could influence their logistics operations? (Examples could include unlocking markets / suppliers in certain regions of SADC.)
11. Do you think advancements in tech could assist to lead to economic development in a country / region?
12. Countries that 'CLIENT' is operational in?
13. How many stores does 'CLIENT' currently have in Africa? And SADC countries?
14. Employment internationally, Africa and SADC?
15. Parcel volumes and Revenue figures?
16. International shipping statistics?

Theme two: Green Supply Chain / Logistics:

1. Does 'CLIENT' consider any 'green' factors in logistics when choosing LSP's?
2. Will 'CLIENT' encourage RTTS to be more involved in being a green logistics LSP? Even if at higher cost?
3. Are there any incentives for SP's for 'going green'?
4. Does the company place any emphasis on this aspect and level of importance?
5. How much emphasis does 'CLIENT' place on a 'green supply chain'?
6. Do you think if RTTS will become greener it will create a positive perception and increase its value proposition?
7. Would you agree that via a consol model, RTTS and 'CLIENT' have created 'shared value' and thus becoming greener in its logistics operations?
8. Would you support RTTS in initiatives such as better route planning, application of technology in operations and increased consolidation to increase its green logistics strategy?

9. It is reported that the textile industry as well as shipping industry is both significant contributors to emissions and as a result global warming. Does 'CLIENT' support this research and does this form part of decision-making? (e.g. shipping, supply chain decisions, closer to market, etc.)
10. Do you think 'Green' Logistics will become a more important consideration in the future (SRI Principle?)
11. Are there any considerations to reduce the carbon footprint in your logistics operations?
12. How can RTTS assist? Is this a focus point / important?
13. Do you think advancements in technology can lead to improvements in green logistics strategies?
14. Does 'CLIENT' belong to Fair Trade practices with procurement of items?
15. Would you be interested in further research from RTTS to be implemented in their supply chain and logistical operations and its possible impact on 'CLIENT'? (Directive for further research)

Theme three: CSR Role

1. Does RTTS CSR projects play a role in decision-making for 'CLIENT'? Does 'CLIENT' consider RTTS CSR role?
2. Have RTTS assisted 'CLIENT' in any CSR related activities in logistics? (No fee deliveries for charities, CSR projects, etc.)
3. Can RTTS and 'CLIENT' create 'shared value', in line with popular industry thinking, moving away from a pure CSR role?
4. Does 'CLIENT' choose RTTS pure on rates and service delivery or are there other considerations that also plays a role?
5. In South Africa, all companies need to publish their BBBEE rating. Does 'CLIENT' consider this when choosing RTTS as LSP? (RTTS has a level 2 BEE rating)

Appendix F: Sample Consent Form

Research Ethics: Consent Form

Title of research: Enabling Sustainable Development through Logistics: A case of Southern Africa

Contact details of researcher:

Name: Gerhard Rothmann (G.R.) Fourie
Tel. 072 577 9942
E-mail: frxger006@gsb.uct.ac.za / grfourie81@gmail.com

Please Initial Box

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason. ☐

3. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Name of Researcher	Date	Signature