"MOVING" SOUTHERN AFRICA DEVELOPMENT COMMUNITY: SOME TRANSPORT INSIGHTS

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ABSTRACT

The paper introduces the concept of "SADC on the move" as an alternative way to tackling transport growth and development deficits in the region. The paper further discusses transport challenges in the Southern African development community. Making use of combined experience and knowledge drawn from working in the region for over 50 years, the authors sketch the existing situation and highlight transport deficiencies slowing the transport sector growth and development sectors. Key intervention areas to facilitate "SADC on the move" as a concept are presented. At the same time potential obstacles and hurdles impeding and impacting on the failure by SADC to move towards greater regional competitiveness, integration and prosperity are discussed. Some options and alternatives regarding "moving SADC" towards better and more efficient transportation systems are presented. The growing challenge is to upgrade, construct and structure a transportation network that is amenable to anchoring seamless transportation in the region and by extension in Africa. The theme of an integrated SADC and by extension Africa is at the centre of this discussion.

Key Words

Southern Africa Development Community, transport, integration, competitiveness, Africa

1 INTRODUCTION

In Africa, the launch of the New Partnership for Africa's Development (NEPAD) in 2001 and birth of the African Union (AU) in 2002 confirmed that regional integration is viewed as an essential vehicle in the quest to achieve sustainable development and assist in efforts geared towards poverty reduction and wealth creation (JICA, 2009). Furthermore, "Regional Integration, Trade and Infrastructure Development" stand out as one of the eight priority structural intervention areas of for example the European Union (EU) - Africa Strategic Partnerships within the 2008 - 2010 Action Plans (SADC, 2010).

In Sub-Sahara Africa, poverty reduction and wealth creation are important developmental goals. Regional transportation infrastructure and the concomitant development of such have great potential to contribute to the achievement of the Millennium Development Goals (MDGs), which is an international commitment concerning poverty reduction and

wealth creation. The departure point of this article is to argue that the development of SADC regional transportation infrastructure and services will reinforce and improve the quality and quantity of the existing physical transportation network infrastructure, reduce transportation costs, and improve transport system reliability and thereby by extension increase traffic capacity to support increased cargo and traffic volumes (Chakwizira et al, 2008; DBSA, 2008). Such a scenario heralds the need for better facilitation for regional industrial development, trade, and economic growth and thereby contributing to poverty reduction, i.e., pro-poor growth; increased competitiveness and making significant contributions towards reduction of regional development disparities. In order for example for SADC member states to approach or achieve the MDGs, it is estimated that by 2015 an annual economic growth rate of 7% and an annual trade volume growth of 12% will be required (JICA, 2009; AfDB, 2006). To provide this increase in trade volume, a 2.4 fold increase in traffic volumes is required by 2015. To achieve this, it becomes important that the existing SADC transportation network be evaluated and bottlenecks be resolved (JICA, 2009).

Infrastructure is one area where the “costs of non-integration” are particularly acute for Africa (UNECA, 2006). This is precisely because lack of efficient infrastructure networks in Africa at regional and continental levels is credited with generating excessively long transport time and high transport costs causing major hurdles for trade, investment, growth and economic development. As an illustrative example, a study presented at the NEPAD Transport Summit of November 2009 finds that average waiting time at key ports in Africa (Dar es Salaam and Mombasa) is 23-26 days compared to 3-5 days at other major world ports, while average transport costs are 2-3 times higher in Africa than in other parts of the world, including Brazil and China (CSIR, 2009).

1.1 Aim of the paper

This paper aims to introduce the concept of “moving SADC” as an important component in efforts geared towards accelerating and increasing the competitiveness of the SADC region for investment attraction, infrastructure deployment and financing as well as widening growth and development options in the region. The application of the concept and its capability to fast track the development of solutions to overcome some of the existing regional infrastructure and services constraints is highlighted. The paper also serves to act as a departure point in contributing further to discourses in regional integration, economic development and infrastructure development in the SADC region.

1.2 Research methodology

The paper is largely desktop based and makes use of SADC member states as the primary unit of analysis. Detailed secondary data analysis collected from prime infrastructure, transportation, logistics, growth and development agency/organizations sites such as the World Bank (WB); African Development Bank (AfDB); African Union (AU); UNECA; European Union (EU); Development Bank of Southern Africa (DBSA) and Southern African Development Community (SADC) is analysed using a synthesis approach. A mixed research method approach including fieldwork in terms of key informant interviews and consultations with SADC regional infrastructure stakeholders was employed in seeking to unpack the regional transportation issues. This paper represents the outcome of the synthesis of these repertoires of methods.

1.3 Literature Review

Regional transportation infrastructure can be viewed as being important in facilitating production of goods and services (Chakwizira et al, 2009; World Bank, 2005). Roads for example, enable transportation of various forms of raw materials from areas of extraction or production to centres of processing or manufacturing such as a factory/industry. In addition road and transportation networks are critical for distribution of finished products to markets. Consequently, investment in regional transportation infrastructure and services in SADC region can therefore be viewed as part of capital accumulation and spatial investment interventions required for enhanced economic development and growth.

1.3.1 SADC Regional Transportation Infrastructure Socio-economic Dimensions

Overall, SADC is a region that exhibits great economic disparities (refer to table 1). Table 1 presents that South Africa (with a GDP per capita of US$ 9,693), Botswana (with a GDP per capita of US$ 13,367) have high GDP per capita. On the other extreme end we have countries such as DRC (with a GDP per capita of US$ 313) and Zimbabwe (with a GDP per capita of US$ 177), have low GDP per capita. The standard of living and degree of prosperity in the region is therefore largely unbalanced and skewed.

Table 1: SADC Member States Headline Economic Indicators

Country	GDP		GDP Growth %		GDP Per Capita	
	2007 US$M	2010 US$M	2007	2010	2007 US$	2010 US$
Angola	61,402	96,317	21.10	7.30	5.216	6,912
Botswana	12,336	12,494	4.40	3.50	13,367	13,322
DRC	97,000	115,000	7.00	5.90	313	314
Malawi	2,441	2,675	7.90	5.30	505	598
Mozambique	7,800	9,400	7.40	6.00	794	920
Namibia	8,841	10,426	5.50	3.50	6,214	6,568
South Africa	283,679	281,875	5.10	3.10	9,693	10,397
Tanzania	16,399	24,401	7.10	5.50	1,188	1,354
Zambia	11,582	13,400	6.20	4.20	1,291	1,441
Zimbabwe	17,000	15,000	-5.60	1.90	177	159

Note: World GDP 2008, US $60.6 Trillion and annual change 2.01%
Source: Economist Intelligent Unit, 2010

1.3.2 Overview of SADC region economic wealth potential & the regional infrastructure dimension

In addition, SADC is a region of vast rich mineral and natural resources, bulk of whose resources are still largely undeveloped. Table 2 presents a quick overview of some of the minerals resources that are found in SADC member states. Exploiting the potential of these resources requires a sound transportation network coupled with good logistics to ensure that regions products and business ventures are viable and competitive.

Table 2: A snapshot of mineral resources in SADC member's states

Country	Mineral resource
Angola	Oil & Diamonds
Botswana	Diamonds, Coal, Nickel, Uranium & copper
DRC	Oil & Diamonds
Malawi	Uranium, Tantalums, Titanium
Mozambique	Bauxite, Coal & gold
Namibia	Diamonds, Uranium, Copper & Zinc
RSA	Gold, Diamonds, Platinum, Uranium, Iron Ore, Coal, Copper, Chromium, Manganese, Asbestos
Tanzania	Gold, Uranium & Tanzanite
Zambia	Copper, Cobalt, Zinc, Lead, Coal & Uranium
Zimbabwe	Platinum, Chromium, Asbestos, Nickel & Gold
Lesotho	Diamonds
Swaziland	Diamonds, Asbestos, Gold & Coal
Madagascar	Bauxite, Chromium, Nickel, Iron Ore, Coal, Oil & Copper

Source: DBSA, 2008; AfDB, 2006; UNECA, 2006

1.3.3 Overview of SADC Regional Infrastructure Deficits

Generally, SADC region currently faces infrastructure deficits and gaps that require urgent attention, if better economic performance and service delivery is to be realized (SADC, 2010). The infrastructure funding backlog gap requirements is currently estimated at US$100 billion (World Bank, 2010). It is therefore important to explore and conduct an infrastructure deficit study of Southern Africa as a way of facilitating targeted interventions to address these growing infrastructure challenges. Without tackling these headline transportation infrastructure and services issues, SADC will continue to face challenges in business, economic, human and social development.

2 CONCEPTUAL FRAMEWORK

In this study, the concept of "moving SADC" is based on the need to encourage and foster high growth rates, reduce transport and logistics costs, brand and market the region as the first choice destination for investment and capital inflows (domestic and foreign) and in the process enhance competitiveness of SADC's region products and services. This can be approached from a tripartite perspective. Firstly, measures that need strengthening in the area of regional industrial development and trade promotion strategies require top implementation priority. Secondly, it is crucial that regional infrastructure development strategies that seek to resolve the under-listed components are supported, namely;

1. The consistent phased reduction and ultimately elimination of various barriers to promote market expansion within and outside the SADC region,
2. The prudent development of the agro-processing industry and promotion of export of primary agricultural products, and
3. The establishment and consolidation of effective forward and backward linkages with mineral resource development in the SADC region.

Thirdly, for SADC region to be much more competitive, the concept of "SADC on the move" proposes that the development of a regional infrastructure and services critical mass of industrial human resource and employment creation should be implemented as a sub-strategy to complement the above mentioned three focus strategic intervention areas (SADC, 2010; JICA, 2009). The scope and infrastructure application areas of the concept are summarized in table 3.

The transport ideas and initiatives explored in table 3 require well appointed and sustainable deployment and provision of regional transportation infrastructure to secure higher rates of growth and development.

Table 3: Moving SADC Concept – Searching for Sustainable Regional Infrastructure and Services Solutions

Concept Scenarios	
"Do Nothing" Concept Pathway Approach	"Moving SADC" Pathway Approach
SADC Expected Regional Infrastructure and Services Outcomes	
Status Quo undisturbed	Pushing regional infrastructure and services obstacles back
Existing growth, development and transport logistics bottlenecks remain largely unresolved	Growth, development and transport logistics improvement
SADC Alternative Regional Infrastructure, Transportation & Services Pathways	
Insufficient regional development.	Enhancing and deepening regional infrastructure and services development
Underdeveloped agricultural and backward manufacturing base and industry.	Accelerating industrial growth, competitiveness and regional development
Underdeveloped regional transportation infrastructure (both physical "hard "and institutional "soft").	Transportation travel speed and delivery performance improvement
High transportation and logistics costs	Transportation and logistics costs reduction
Lack of public and private investment in regional infrastructure and services	Strategic maintenance and expansion of existing regional transportation and services infrastructure
"Moving SADC" Potential Regional Infrastructure and Services Intervention Levers	
Development, maintenance and upgrading of Traffic Infrastructure Capacity & Performance Levels (roads, air, maritime, rail, energy and ICT)	
Reduction on traffic and infrastructure constraints on time and cost of business/investment	
Improvement in infrastructure and services performance indicators such as reliability, competitiveness, safety and security	
Derived Motivation for the "Moving SADC" Concept/Application	
Improvement of regional infrastructure and services in the road sector and cross-border related laws and regulations	
Improvements of regional infrastructure and services in the ports and rail transport on the corridors	
Development of selected corridors within SADC to complement corridors elsewhere such as EAC, ECOWAS, COMESA regional economic corridors (RECs)	
Need to improve the effective linkage of the transportation sector with industrial development aimed at increasing the intra-regional market for subsistence crops and consumer crops for example	
This will also include the linkage with and promotion for the competitive export products. The strategic target would be mineral resources/strategic agricultural products.	
Generation of sustainable solutions to addressing outstanding issues on PPP projects in the rail and port (sub) sectors including the need to implement measures to reduce the business risks of the private sector through the thorough evaluation of their needs.	

Sources: Japan International Co-operation Agency, 2009; DBSA, 2008; World Bank, 2006

3 DISCUSSION

3.1 The historical context to understanding SADC regional transportation challenges

In Southern Africa, national borders were established artificially as a consequence of the colonization experiment (JICA, 2009; UNECA, 2006). This experiment led to the creation of a number of small countries in terms of both economic scale and population. Consequently, seven (7) out of the fifteen (15) SADC member states are land-locked. Invariably interregional co-operation and integration has emerged as areas requiring attention. The question of migrating and collapsing the fragmented economies into a single economic bloc has always charmed development practitioners in the region (DBSA, 2008; Chakwizira et al, 2008). As a result, member states belong to numerous regional economic communities (RECs) that have been established in Africa and the region such as SADC, Southern African Customs Union (SACU), and Common Market for Eastern and Southern Africa (COMESA) etc. The overall broad aim of such regional groupings is to integrate the economies of neighbouring nations and to promote the establishment of custom unions, introduction of a common currency, cross-border trading, and the creation of common markets. Most of these regional bodies are funded by their member states, and their decisions are not legally binding (World Bank, 2010; JICA, 2009).They therefore often face a number of challenges in promoting effective regional integration.

It is critically important to consider the historical background of regional transportation infrastructure and services in the SADC region. Ports and land transport system that were established by former colonizers were meant to serve inland areas and connect them with the rest of the World in terms of facilitating trading and exchange of various goods and commodities. However, as these African colonies gained independence and or democracy starting from early 1960s to 1990s, their transport infrastructure progressively degraded due to insufficient investment which manifested itself in terms of inadequate maintenance (World Bank, 2005; World Bank, 2007; World Bank, 2010). Under the import substitution industrial policy at the time, the public sector played a leading role in imports of raw

materials and exports of agricultural products (World Bank, 2005). The transportation system, which was integrated into this industrial policy, played a vital role in supporting economic growth. From the latter half of the 1960s other industrialized nations rapidly underwent a transport revolution which witnessed the introduction of containerization in the sector thereby significantly improving their transport efficiency. It was not until the 1990s that the containerization "revolution" began in Africa and by extension Southern Africa (Yepes et al, 2008). However, containerization also meant increasing port maintenance costs and a shortage of large-scale port facilities supporting the efficient utilization of container carriers and trucks. Due to these factors, the full cost reduction benefit from containerization has yet to been fully realized in Africa and Southern Africa in particular.

Most of the railways and highways in Southern Africa were constructed and established during the colonial period, and they form a major component of the regional transportation network that provides trading links between densely populated inland areas and coastal ports (World Bank, 2005). An interesting observation is that SADC has few areas suitable for port development due to natural constraints of water depth. Consequently SADC has few ports where large containers can be unloaded.

In addition, due to poor maintenance of roads, railways, and ports after independence or the dawn of the new democracy, most of the region's infrastructure is deteriorating. A high percentage of highways are unpaved, and even paved roads are often degraded (World Bank, 2010). Regarding railways, since the repair and renewal of rolling stock and track has been delayed, transport volumes have been decreasing. The shortage of port capacity and low port operational efficiency is also a factor, with cargo concentrated in the region's limited ports. These factors have resulted in high transport costs, which in turn has caused a decline in competitiveness and increased living costs (refer to figure 2, 3 & 4 overleaf). Especially inland nations tend to face longer transport times, higher transport costs, and (as a consequence) lower GDP growth rates. Therefore, inadequate transport infrastructure is a major cause of intra-regional economic disparities between and among corridors in Sub-Saharan Africa, e.g., the Trans-African Highway (TAH) and Sub-Sahara Africa Transport Policy Program (SSATP) regional economic corridors.

Figure 2: Average Import Time

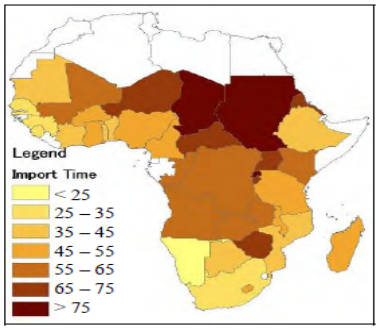


Figure 3: Average Import Costs (US$)

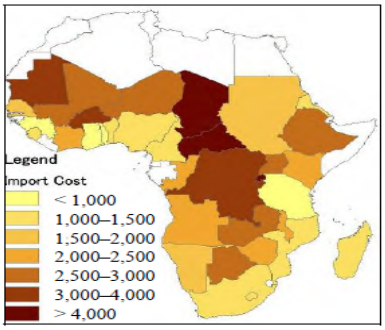
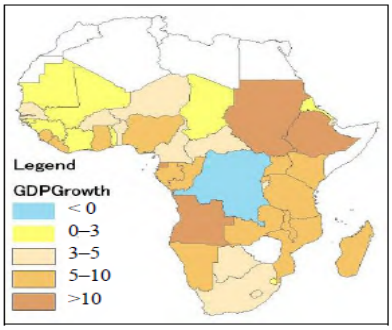


Figure 4: GDP growth rate for year 2007



Note: Time and costs for transporting a 20-foot container from the nearest port

Source: SADC, 2010; World Bank, 2010; World Bank 2007; AfDB, 2006; UNECA, 2006

Figures 5 and 6 present the comparison of roads and railways infrastructure in Sub-Sahara Africa, Southern Africa included, with the rest of the world. Average transport costs of Sub-Sahara Africa as compared with the rest of the World are also presented. What stands out is that if Southern Africa and by extension Africa intends to be competitive and "catch" up in terms of growth and development with rest of the World, massive investment in infrastructure maintenance, rehabilitation and new construction in the road, rail, water

and air sector has to be prioritized. This should be undergirded by transportation and logistics cost reduction measures.

Figure 5: Comparison of Road and Railway Infrastructure

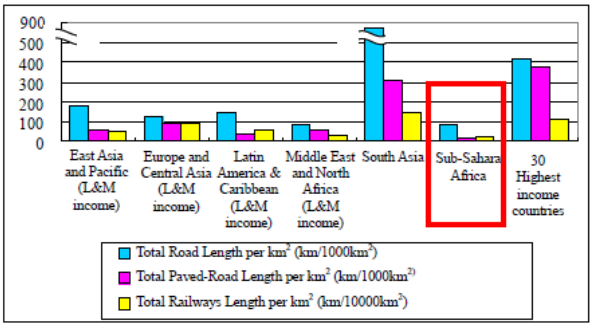
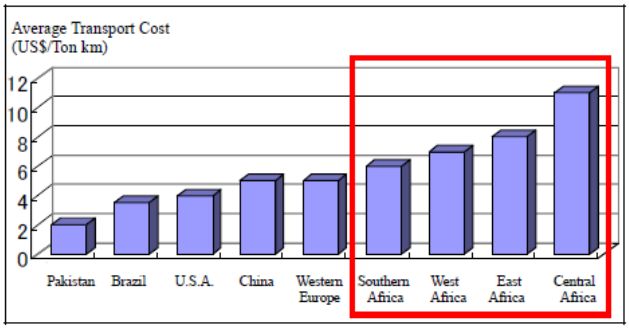


Figure 6: Comparison of Average Transport Cost in 2007



Source: World Bank, 2010; JICA, 2009; World Bank, 2007

3.2 SADC Member States Competitiveness

In terms of ease of doing business, table 4 presents that trading across borders is an area that member states in Southern Africa face challenges. In terms of the World rankings, African countries feature in either middle or lower ends of rankings per every indicator analyzed. This speaks to various challenges relating to regional transportation and services infrastructure.

Table 4: Ease of doing Business in SADC Member States

Economy	Ease of doing Business	Starting a Business	Dealing with Construction Permits	Employing Workers	Registering Property	Getting Credit	Protecting Investors	Paying Taxes	Trading Across Borders	Enforcing Contracts	Closing a Business
South Africa	34	67	52	102	90	2	10	23	148	85	76
Botswana	45	83	122	71	44	43	41	18	150	79	27
Namibia	66	123	38	43	134	15	73	97	151	41	55
Zambia	90	94	151	116	94	30	73	36	157	87	83
Tanzania	131	120	178	131	145	87	93	120	108	31	113
Malawi	132	128	163	92	101	87	73	24	172	142	130
Mozambique	135	96	159	156	151	127	41	98	136	129	136
Zimbabwe	159	145	178	142	84	113	119	131	167	78	156
Angola	169	165	123	178	173	87	57	139	171	181	144
DRC	182	154	146	174	157	167	154	157	165	172	152
Comparatives											
Singapore	1	4	2	1	16	4	2	5	1	13	2
CAR	183	159	147	144	138	135	132	179	181	171	183

Source: World Bank Doing Business Project, 2010

3.3 Cross Border Institutional and Governance Infrastructure Review

Developing and generating a robust regional infrastructure plan and strategies to turnaround the competitiveness of the region is therefore an area that deserves high priority. Table 5 presents the current situation regarding cross-border transport in some of the major transport corridors of southern Africa. It is important that development and maintenance of existing and new regional transportation infrastructure be balanced with an appropriate improvement in institutional and governance systems especially focusing on cross border infrastructure and services.

The broader issues affecting regional transportation corridors include the capacity of the network, maintenance and upgrading of existing network as well as integration of transportation network to facilitate what ultimately others term seamless and effortless transportation. Table 5 (above) presents the status quo and transportation bottlenecks associated with some of the major transport corridors in SADC.

Table 5: SADC Cross Border Institutional and Governance Infrastructure Review

Border Crossing Identity	Trucks (Trucks per day)	Delay Time	Institutional Readiness	Possible Project Scope	Potential Partners & Donors
Chirundu	High (270)	High (various)	High	Risk management, integrated border management, ICT, monitoring, community development	JICA; DfID
Kazungula	Medium (115)	High (1.0 – 2.5 days)	High	Potentially all aspects with co-financing from AfDB	DfID; JICA
Beitbridge	High (287)	High (1-2 days)	Medium	Infrastructure/facilities, legal aspects and training	DfID; JICA
Kasumabalesa	High (170-350)	High (1-3 days)	Medium	ICT, legal aspects, document harmonization, procedure simplification, implementation of OSBP procedures	France; DBSA; DfID; JICA
Lebombo/Ressano Garcia	High (200-300)	Medium (6-7 hours)	Medium	Immediate need for a proper master planning and feasibility studies	DfID, DBSA; JICA
Wenela/Katima Mulilo	Low (20-25)	High (1-3 days)	High	All aspects, except for possibly legal aspects	DIFD; DBSA; JICA
Oshikango/Santa Clara	Low (50)	High (3-5 days)	Low	All aspects	USAID
Trans Kalahari/Mamuno	Low (60)	Low (1 hour)	High	Facilities, ICT, and specification/implementation of OSBP operational procedures	USAID
Mwani/Mchinji	Low (25)	Low (1 hour)	Medium	All aspects	AfDB; EU; Japan Export-Import Bank
Mandimba (Milange)/Chiponde (Muloza)	Low (6-7)	Low (30 minutes)	Medium	All aspects	AfDB; JICA
Dedza/Calomue	Medium (80-160)	Low (2-8 hours)	Low	All aspects	AfDB; JICA
Mwanza/Zobue	Medium (100)	Low to medium (4-8 hours)	Low	All aspects	-
Forbes/Machipanda	Medium (70)	No data	Medium	-	DFID, EU; JICA
Nakonde/Tunduma	Medium (148)	High (4-5 days)	Medium	Legal aspects	DFID
Songwe/Kasumulo	No data	No data	No data	All aspects	JICA
Negomano/Mtambaswala	No data	No data	No data	All aspects	JICA; AfDB

Source: Japan International Cooperation Agency, 2009; SADC 2010

3.4 Transport and Development Corridors in the SADC region

The road network in southern Africa is the region's major asset, offering SADC a relatively significant competitive advantage, compared to similar regions for example, in West Africa (World Bank, 2010). However, certain sections of the road network suffer from deterioration due to a protracted period of under-funding, lack of maintenance and relative neglect (World Bank, 2010; JICA, 2009). These problems are especially apparent in countries such as the DRC, Zimbabwe and Angola, which have until recently witnessed socio-political upheavals. Even those countries that have enjoyed relative political calm but are generally poor such as Mozambique, Malawi and Zambia also fall in this category. Spatial maps show the extent of road development in Angola, Botswana, Mozambique, Zambia and Zimbabwe (refer to works by CSIR, 2009; DBSA, 2008).

Trade enhances development and can foster growth. Improvement of trade routes for regional and international trade is an important issue. Adverse transport costs can have an impact on trade efficiency if they are not addressed. According to UNCTAD studies, 11.5 percent of total value of imports is transport related in Africa compared to 6.7 percent for North America and 7.2 percent in Asia (World Bank, 2010). Transport costs in southern African countries are at 12.7 percent, which is above the Africa average. On exports, many countries in southern Africa spend 20 percent of their earnings on transport related costs; Botswana, Zambia and Zimbabwe spend 17.1 percent. In order to make Botswana's, Zambia's and Zimbabwe's commodities more competitive on the regional and international markets and to mitigate against such challenges as distance from the major markets and being landlocked, the development of transport infrastructure is critical. For landlocked countries like Zambia, the development of transport infrastructure focusing on corridor development is more plausible. It is for the above reason that the country is fully committed to the regional approach to infrastructure development under the Regional Economic Communities (RECs), such as SADC, COMESA, and NEPAD. Botswana,

Zambia and Zimbabwe are centrally located, which means it is the hinterland and transit point of many corridors to the sea.

With regard to transport infrastructure other than roads such as rail, air and sea ports, the quest for seamless integration with road infrastructure, to meet multi-modal service demand, as well as demand for freight transport in accordance with the socio-economic development needs of the respective municipalities, is yet to be achieved. In addition, maintenance and operation of rail, aviation and ports infrastructure is argued to be sub-optimal (World Bank, 2010; JICA, 2009). Angola has crafted an ambitious surface transport programme focussing on developing corridors which would ultimately enable it to participate in the SADC Free Trade Area launched in August, 2008 (JICA, 2009; DBSA, 2008). Key corridors which have been adopted as regional corridors include:

- The Lobito Corridor (as part of the North–South Corridor);
- Trans-Kunene Corridor; and
- Malanje Development Corridor.

There are extensive plans to expand, modernise and rehabilitate the ports of Lobito and Luanda for expanded capacity and enhanced efficiency. Regarding aviation sector, the sheer size of Angola and underdeveloped surface transport has given rise to a vibrant air transport sector. Angola also intends to relocate current airport from its current location to 60 km north of Luanda. Table 6 presents a summary of major transport and development corridor challenges in SADC region.

4 CONCLUSIONS

Regional integration is an essential driver for political stability, sustainable development and poverty eradication, and is thus an overarching goal guiding the SADC member states action in trade policy, business development and political dialogue. The SADC region can pursue vigorously partnership already in place with such institutions as the EU; AfDB; GtZ; JICA; SIDA; World Bank; DBSA etc in order to have stronger partners in pursuing regional integration in SADC and by extension Africa. Overall, intra-regional infrastructure network should focus on expansion of flow of goods from south to north. Deepening regional development requires the adoption of total development policies, which must include the development of a distribution network in line with industrial development in the region. Adopting the “moving SADC” concept and approach is one way towards contributing to the realization of greater growth and development outcomes in SADC.

4.1 Recommendations

The study major recommendations relate to namely:

- ***Maintaining and expansion of existing regional transportation infrastructure*** so that delay times and better turnaround times can be enjoyed. Most of the regional transportation infrastructure has deteriorated owing to years of either under-funding, lack of maintenance combined with neglect (World Bank, 2010).
- **Facilitating better business development by improving the regulatory environment, strengthening productive capacities, and mobilising capital** and most important reducing the transport logistics costs in the SADC region;

- ***Developing regional policies for sustainable development***, especially with regards to regional transportation networks so as to secure food security, ensure the common management of natural resources and social cohesion.
- ***Attracting donor funds to participate in the rehabilitation and development of missing regional infrastructure links***. This can be approached from a partnership and collaborative perspective.
- ***It is essential to improve cargo handling volumes at existing ports*** in the short term to address shortage in number of ports and their capacity. Both "hard" infrastructure development and "soft" infrastructure improvement will be crucial for this subsector, especially regarding specific measures for container terminal improvement.
- ***Railways should be a focus for improving long-distance transport between ports and inland countries as well as providing access to mine resources***. To address the aging infrastructure, efficient implementation of the operation system/framework (including privatization) is urgently required.
- ***Construction of missing links and development of rural roads is important from a pro-poor perspective***. Also, strengthening of the operation and maintenance capacity is still needed. Cross-border transport laws/regulations are recognized as a bottleneck area to be addressed through coordination by the RECs.

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Table 6: Present Status and Issues of Major Transport and Development Corridors in SADC

Major Corridor	Present Status	Transportation Bottlenecks & Issues
Maputo (Beira) Corridor	Progress in infrastructure rehabilitation was made in the 1980-1990s mainly through assistance from Scandinavian countries and cargo transportation is increasing annually.	Major bottleneck is the border crossing at Lebombo and Ressano Garcia where high traffic volumes of between 200-300 trucks per day are recorded. The delay time is between 6-7 hours and these needs to be reduced down. Critical in any improvements is the need for proper feasibility study to inform the generation of an appropriate cross border comprehensive infrastructure master plan that will seek to resolve existing and anticipated border requirements. The limited depth and sedimentation of the Port of Maputo causes delays in port clearance. Even though the distance between Maputo and Johannesburg is only about 600km, shorter than from Johannesburg to the major ports in South Africa, the long border crossing time reduces the competitiveness of the Port of Maputo. Only small feeder vessels have been able to enter the Port of Beira due to the critical sedimentation of the port's approach channel and dredging measures are required. There are two railway routes to inland countries, one of which, the Sena line, is now under rehabilitation/reconstruction. No financing source has been identified for the Sena corridor road, which has a long unpaved section that trucks avoid by taking a roundabout route to Malawi.
North-South Corridor	Cargo transported to the north far exceeds those in the south. There are some exports from South Africa, but mostly imports unloaded at ports in South Africa and transported to landlocked countries. Export volume from Zambia and Congo is limited (copper, cobalt etc).	Problems in service capacity and operation hours/frequency of Kazungula ferry. Low handling efficiency at Durban port because of insufficient capacity. The railway network is not operated efficiently due to issues related to "hard" infrastructure and operations. The only missing road (bridge) link is currently at the Kazungula border crossing. The longer border crossing times of the order of 1-2 days at Chirundu and at Beitbridge are being addressed by ongoing projects but these efforts must continue. Similarly long border crossing times (1-3 days) at Kasumbalesa between Zambia and the DRC must be addressed.
Dar es Salaam Corridor	Developed as a transportation route for copper from Zambia, but cargo transportation volume is gradually decreasing.	Operational capacity of ports. Operational capacity of railways. Rolling stock availability of TAZARA has been decreasing with consequent adverse effect on line capacity in recent years. The long clearance time involving various stakeholders at the Port of Dar es Salaam is more critical for the dry bulk cargo hauled. The Nakonde/Tunduma border crossing is moderately busy and has relatively long border crossing times (4-5 days on average). Since some heavy minerals are transported by road due to a shortage of railway capacity, road conditions have deteriorated rapidly along this corridor.
Nacala Corridor	Despite progress in railway rehabilitation in the 1990s, cargo transportation volume is not so large.	Trunk route from neighbouring countries to the port currently serves low traffic volumes. Due to track deterioration, railway operating speeds and capacity are relatively low. Most roads sections along the corridor are unpaved and or have high roughness levels. Considering potential industrial development and the improvement of inland transport in the near future, traffic at the port is expected to increase rapidly beyond its current capacity.
Lobito Corridor	Not functioning consequent to the impact of civil war.	Although the Copperbelt in southern DRC and Zambia was connected with the Port of Lobito by railway before, the railway service has been terminated since the Angolan civil war. Rehabilitation of the railway section between Munhango and Luau was commenced in February 2009.
Trans-Caprivi Corridor	Important as an alternative route for Botswana and South Africa.	Even though the route has high potential for bulk cargo transport from inland areas in Namibia and neighbouring countries, the railway link is available only for 600km from the port to Grootfontein. Congestion at the container terminal at the Port of Walvis bay is expected to become an issue in the near future.
Trans-Kalahari Corridor		Although this corridor traverses a route with high mining potential, currently railway service is available only between the Port of Walvis Bay and Gobabis in Namibia. Since the Port of Walvis Bay provides a high level of service and its containerized traffic has been increasing rapidly, container traffic there is expected to exceed the current terminal capacity in the short term.

Sources: SADC, 2010; JICA, 2009