Journal of Public Policy & Governance

The role of transport and logistics in promoting trade and regional integration within East African Community (EAC)

Emmanuel Butera Mwesigye

ISSN: 2616-8413

Stratford Peer Reviewed Journals and Book Publishing
Journal of Public Policy & Governance
Volume 5||Issue 2||Page 1-20 ||June||2021|
Email: info@stratfordjournals.org ISSN: 2616-8413

The role of transport and logistics in promoting trade and regional integration within East African Community (EAC)

Emmanuel Butera Mwesigye

CMILT (Chartered Member Institute of Logistics and Transport)

Email of the corresponding author: emmanuelbutera@ymail.com

***How to cite this article*: Mwesigye, E., B. (2021). The role of transport and logistics in promoting trade and regional integration within East African Community (EAC). *Journal of Public Policy & Governance,* 5 (2), 1-20**

Abstract

This paper examined the role of transport and logistics in promoting trade and regional integration in the EAC. The study is expected to be significant since transport and logistics are a major component of business process networks and part of the economic activities intended to satisfy human needs by means of geographical change of position by people and goods. The study was desktop research where it relied on the previous literature to make inferences. The data was analysed using descriptive and multiple regression analyses methods. The focus of the paper was on four items; transport and logistics related infrastructure that discusses the infrastructure by modes of transport in the EAC; trade facilitation initiatives that discusses the developments to facilitate transport and logistics sector and policy, legal and regulatory framework that talks about the transport and logistics policy environment at regional and national transport policies of EAC. The paper also included the challenges and constraints as well as the recommendations. The findings of the study established that EAC's transport and logistics infrastructure has not yet been developed even to the level of other Regional Economic Communities (RECs) on the African Continent and the rest of the world. The major challenges and constraints of the transport and logistics within the EAC region are; inappropriate national policies and limited implementation of national, sub-regional and regional agreements; low transport network connectivity and poor state of network among others. The paper concluded that since transport and logistics sector is among the key sectors that play crucial roles in promoting trade and regional integration, it has to be developed in a coordinated manner, with the ultimate aim of bringing about a reliable, efficient, safe and environmentally sound system of moving people and goods. The paper recommended that the EAC requires the right set of measures to be undertaken in the areas of national policies and regional agreements, human and institutional capacity-building, transport logistics safety and security, transport and logistics information systems.

Keywords: *Accessibility, Reliability, Affordability and Sustainability*

1.0 INTRODUCTION

The East African Community (EAC) is a regional intergovernmental organization of six (6) Partner States: Republics of Burundi, Kenya, Rwanda, South Sudan, Uganda and United Republic of Tanzania with its headquarters in Arusha, Tanzania. The EAC is home to 177 million citizens, of which 22% is urban population. With an area of 2.5 million square kilometers (including Water and land surface) and a combined Gross Domestic Product of US$ 193.7 billion (EAC, 2019), its realization bears great strategic and geopolitical significance and prospects for the renewed and reinvigorated EAC. This paper did not consider the Republic of South Sudan because of lack of data due to its internal civil conflict.

The Partner States are committed to enhance the competitiveness of their economies through increased production, trade and investment and to deepen their regional integration. The modernization of regional transport infrastructure and the removal of non-tariff barriers to trade are among the key priorities of the EAC (Goldman & Gorham, 2006). Transport and logistics is a system that allows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health and with equity within and between generations that is affordable, operates efficiently, offers choice of transport mode and supports vibrant economy, limits emissions and waste within the planet's ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise (Hummels, 2007). Transport and logistics simply mean the conveyance of people and goods using a variety of means, such as airplanes, ships, trains and trucks in air, water and on surface respectively.

In recent years, there has been considerable increased movement of cargo and passengers which has been made possible by the development of globalization and technological advancements and freight transportation has contributed to the economic development of countries through import and export of different goods across the world (Hulme, 2009). Transport and logistics are a major component of business process networks and part of the economic activities intended to satisfy human needs by means of geographical change of position by people and goods. Transport and logistics endeavor to remove obstacles brought about by distance and it is part of the productive activity as a segment of the production process through goods distribution. Transport and logistics play a big role in integration of societies and territories, displacement needs satisfaction, strategic reasons (to promote a region), establish connections between the productive system and the consumption regions, ensuring access to different geographical regions and economic activities that generate wealth and jobs (Kherbash & Mocan, 2015). Transport and logistics also influence efficiency through improvement and increase of infrastructures, travel time reduction, load capacity increase, specialization of transport means, negative environmental impact reduction, safety and security increase along the logistics chain (Meersman & Nazemzadeh, 2017).

Transport and logistics are an all-inclusive topic for it involves many players and comprises elements of both 'software' and 'hardware' that are mutually complementary. The 'software' aspects of transport and logistics include laws, regulations, procedures (like customs procedures, markets, services and institutions associated with the movement and storage of products along the production chains and from firms to their destination markets (Robeson, 1994). The 'hardware' aspects of logistics include the physical elements of transport and logistics infrastructure like ports, airports, roads, telecommunications networks, storage capacity, access facilities and inter-modal exchanges. Logistics can be defined in the broader sense of the process, as planning, implementing and controlling the efficient, cost-effective flow and storage of raw materials, pre-products, in-process inventory, finished goods and related information from point of origin to point of consumption or processing.

The EAC has already achieved the Common Market and the Customs Union status and this has facilitated the growth of businesses in the Community. There are quite a number of Industries that greatly benefit from this integration of the East Africa Markets such as cement, steel, milk, grain and cereals, veterinary drugs, just to mention but a few (Ng'ang'a, 2013). The EAC also poised to benefit from the auto-mobiles manufactured or assembled in East Africa, the pharmaceuticals and some electronic machinery plants. There are investment opportunities in East Africa in value addition to cereals, fruits, milk products, fish products, forest products, and beverages, minerals such as iron ore, copper, nickel, tungsten, cobalt and Coltan (World Bank, 2014). All these need an efficient and effective transport and logistics network.

1.1 Research Objectives

i. To analyze the transport and logistics related infrastructure that discusses the infrastructure by modes of transport in the EAC.
ii. To examine the trade facilitation initiatives that discusses the developments to facilitate transport and logistics sector.
iii. To establish the policy, legal and regulatory framework that talks about the transport and logistics policy environment at regional and national transport policies of EAC
iv. To examine the challenges and constraints facing transport and logistics in EAC.

2.0 RESEARCH METHODOLOGY

This was a desktop research where secondary data collected from related journals, articles and books were analysed using descriptive analyses method.

3.0 LITERATURE REVIEW

3.1 Transport and logistics related infrastructure

The East African Community treaty clearly states the determination and commitment of Partner States' cooperation in infrastructure and services in Article 89 through; Harmonization of standards and regulatory laws, Construct, maintain and integrates roads, railways, airports, ports,

pipelines in their territories, Grant special treatment to land-locked Partner States (in line with the Almaty programme of action), Provide security in the transport corridors to ensure smooth movement of goods and persons in the region (East African Community. 2007). The transport and logistics related infrastructure is an important pillar in the promotion of trade and regional integration within the EAC. The success of the transport and logistics is directly dependent on the physical infrastructure and its operation (Woolfrey, 2013). Such infrastructure includes; airports infrastructure, seaports infrastructure, rail infrastructure, road infrastructure and border infrastructure. The transport and logistics costs are directly related to the physical infrastructures and their operations and the success of trade and regional integration initiatives will depend on the availability and operations of these infrastructures (Africon Ltd, 2011). The transport and logistics infrastructure in the EAC by mode of transport can be classified as follows;

1. Airports: There are eight major airports in the EAC that link the partner states with the rest of the world via scheduled international services (Ombara, 2013). These are Jomo Kenyatta International Airport in Nairobi (NBO) and Moi International Airport in Mombasa (MBA) in Kenya; Dar es Salaam International Airport (DAR), Zanzibar International Airport (ZNZ) and Kilimanjaro International Airport (JRO) in Tanzania; Entebbe International Airport (EBB) in Uganda; Kigali International (KGL) in Rwanda and Bujumbura International Airport in Burundi. There are a number of small regional airports that also serve as links within the EAC, including Wilson, Eldoret and Kisumu Airports in Kenya; Arusha, Mwanza and Mbeya Airports in Tanzania; Arua and Kasese in Uganda; and Kamembe and Gisenyi Airports in Rwanda.

2. Sea Ports: The main ports in the EAC region are the Indian Ocean ports of Mombasa in Kenya and Dar es Salaam in Tanzania. There are number of other existing ports that need major facelifts like Lamu in Kenya and Tanga, Bagamoyo, Mtwara and Maruhubi in Tanzania which all have the potential for increased utilization. These Ports have master plans include handling equipment and port facility expansion and the World Bank will provide technical assistance, equipment and training for the development and installation of the community-based system (CBS) which will enable efficient submission of documents and execution of cargo verification, payments and releases, provide security surveillance and communication equipment, training and technical support and a consultancy on supervision and oversight.

3. Railways: The regional rail network links the major economic centres in the EAC, as well as Zambia. The network is substantially run down and requires reinvestment, which was intended to be achieved by concessioning off the Northern and Central systems but has not borne noteworthy results yet. The total length of rail network in East Africa is some 7 400 km, of which about 6 000 km is operational. The systems are mostly meter gauge railway and were built between the 1890s and the 1950s. The railways have lacked the necessary funds for investment and maintenance particularly in recent years, and this is reflected in the overall poor condition of the fixed infrastructure. There are numerous speed restrictions on the EAC network due to the poor

condition of rails, sleepers, ballast and bridges. The signaling and telecommunication systems are very rudimentary and are in a state of disrepair.

The East African standard gauge plan has as its objective to reinstate or rebuild the network at a higher service level. Plans are underway to connect Rwanda and Burundi by rail to the other EAC partner states. The Kenya Railways Corporation (KRC) and Uganda Railways Corporation (URC) railway infrastructure and rolling stock are in need of rehabilitation and modernization to provide an efficient component of the regional transport network. The Tanzania Railway Limited (TRL) system comprises some 2,700 km of mainline infrastructure (including non-operational lines), at 1 000 mm (meter) gauge. The system connects the port of Dar es Salaam with Tabora, branching off to Mwanza (Lake Victoria) and Kigoma (Lake Tanganyika) (Ombara, 2013).

The EAC partner states are providing support for the Kenyan, Tanzanian and Ugandan Railways concessions, which includes among others, technical support, investment support, and provision of a partial risk guarantee (Booth, Cooksey, Golooba-Mutebi & Kanyinga, 2014). The potential advantages of an improved regional railway system were identified in the EAC Railways Master Plan. Traffic was projected to grow from about 3.7 Mt in 2007 to 16 Mt by 2030. The existing narrow-gauge network could meet this demand for the next 10 to 20 years, given that the necessary investment is made. The most important factors currently limiting the network's effectiveness is the low speeds at which trains can operate, and limits to the permissible axle loads on the network. There are also fleet restrictions on capacity.

4. Roads: The definitive purpose of a road network is to support and sustain social and economic development. In order to achieve such a goal, roads must be classified and managed in a sustainable way to optimize safety, reduce congestion and maximize road efficiency by way of standardizing road classification and road design. Africon Ltd (2011). As a result of differences in legal and historical backgrounds and administrative requirements, there are variations between the road classification systems currently in place in the Member States of the EAC. However, in spite of these differences, the current road classifications that are in place within the EAC Member States and which focus on high mobility are similar in terms of their function. The EAC Road network corridors are summarized below;

Mtwara Corridor, Dar es Salaam (TAZARA) Corridor, Coastal Corridor, Central Corridor, Sumbawanga Corridor, Gulu Corridor, Sirari Corridor, Northern Corridor, Namanga Corridor, Arusha (Tanga) Corridor and Gulu Corridor. Apart from the above main corridors there are corridor feeders which are not part of the corridor per se, but they link into the corridor and feed traffic onto and from the corridor. These EAC Road network corridor feeders are summarized below:

i. Taveta/Voi Northern Corridor feeder
ii. Kitui Northern Corridor feeder
iii. Narok Northern Corridor feeder

iv. Kisumu/Bugiri Northern Corridor feeder
v. Masindi Northern Corridor feeder
vi. Hoima Northern Corridor feeder
vii. Fort Portal Northern Corridor feeder
viii. Kabatoro Northern Corridor feeder
ix. Tukuyu Dar es Salaam (TAZARA) Corridor feeder
x. Garissa Namanga Corridor feeder
xi. Singida/Babati Namanga Corridor feeder
xii. Moroto Gulu Corridor feeder
xiii. Kagitumba/Kayonza to Kigali and to Burundi (Northern corridor feeder)
xiv. Gatuna/Kigali to DRC (Northern corridor feeder)
xv. Rusumo/Kayonza to Kigali and to DRC (Central corridor feeder)

The road infrastructure on the Northern and Central Corridor is being upgraded by the respective governments and donor funding. However, as indicated earlier, a coordinated framework for planning and operating cross border transport infrastructure is lacking. In order to systematically plan the regional transport network that will best facilitate intra-regional trade, the EAC needs a comprehensive study of modal development that will evaluate the transport requirements for achieving regional trade growth (Booth, Cooksey, Golooba-Mutebi & Kanyinga, 2014). It should provide the technical, financial and economic analysis necessary to prioritize projects for funding, to determine a phased development plan, to identify regional resources available to the EAC and to effectively present individual projects to donors for funding support. From the operational standpoint, an effective system of axle load control is crucial to insuring that overloaded trucks do not hasten the deterioration of the roads.

5. Pipelines: The regional pipeline network responds to the needs and requirements of the upstream (extraction and import/export) and midstream (refining and processing) sub-sectors. The Kenya Pipeline Company (KPC) system distributes petroleum products through Kenya and towards Uganda. Recent developments in Uganda could lead to the region becoming an oil producer and exporter. Events in South Sudan could furthermore result in crude exports transiting the region. Petroleum products are used across the entire economy in every East African country. Petrol and diesel are the primary fuels used in road transport. Oil and natural gas are used in power generation and the manufacturing industry whereas kerosene and liquefied petroleum gas are used in households for lighting, cooking and heating water.

The East African Region has a total of 22 sedimentary basins on which there are approximately 75 exploration blocks, 48 of which have been licensed to various companies or consortia. In Uganda however, licensing has been suspended awaiting update of the country's regulatory Framework, while in Rwanda, the Government is still undertaking a technical evaluation to define the country's oil potential. Existing oil production and recent oil finds are located to the North-Western edge of the EAC and into Southern Sudan. The KPC owns and operates the country's

white products pipeline network. White petroleum product shipments are not allowed by road for the domestic Kenya market or for export if pipeline capacity exists.

Road and rail are however the only option for transporting black products (mainly fuel oil) and for onward transport of white products from Nairobi, Eldoret or Kisumu to Uganda (mainly Kampala), Rwanda, Burundi and beyond. The KPC pipeline has a length of 895 km, from Mombasa to Nairobi (the mainline) and through the western pipeline extension to Nakuru, Eldoret and Kisumu. There are strategic terminals at Nairobi, Nakuru, Eldoret and Kisumu, and intermediate pump stations at Maungu, Mtito Andei, Sultan Hamud (the original stations) and Konza, Makindu, Manyani and Samburu (new pump stations) (Ombara, 2013).

There are major pipeline projects under consideration in the EAC and these include; Uganda Petroleum Products Export Pipeline; KPC Proposed Extension to Kampala; Uganda-Rwanda Oil Pipeline Extension; Dar es Salaam-Mwanza Petroleum Products Pipeline; South Sudan–Lamu Crude Oil Pipeline and Dar es Salaam – Mombasa Natural Gas Pipeline (World Bank, 2014).

6. Border posts: Although not a transport and logistics infrastructure entirely, border posts are the nodes where national and regional networks connect. Time delays at border posts contribute to the overall transport and logistics users' experience, and from the transport modeling exercise it is known that users avoid border posts where they are likely to meet delays by selecting routes that cross fewer borders. Border posts operations are influenced by factors such as the geography of the location of the border post, the different agreements in place with the neighboring country or the region, the number of officials and agencies available including the procedures they follow, the equipment available to them, and the infrastructure in place. The challenges typically faced at border posts in the EAC include;

i. Data Capturing–Although ASYCUDA/SIMBA is used, some of the capturing is still manual, thus there are still discrepancies in the data between corresponding countries. Data capturing methods should be harmonized;
ii. Not all border posts have water and electricity;
iii. Not all border posts have access to a national/regional IT network
iv. Lack of adequate number of staff members, and in some cases lack of adequate training;
v. Infrastructure issues leading to delays – adequate parking and office buildings;
vi. Harmonization of all system, and increased bilateral agreements and synergy in legal frameworks.

In this analysis, the composite level of service indicator is delay (time to clear at the border posts) and since the focus is transport and logistics, the delays considered relate to freight traffic. The causes of the delays may be found in two broad areas of infrastructure issues (the border post facilities) and processes (e.g., staffing levels). The average delay for customs clearance on the Northern Corridor is between one and-a-half and two hours, and less than half-an-hour for immigration clearance. The busy Kenya-Uganda (especially Malaba, Uganda) border posts

contribute most to the delays even though they are staffed at similar levels (i.e., staff per demand) as the other border posts. The Northern Corridor is the main route for goods coming from the Mombasa port to Uganda and Rwanda, and also to the Eastern provinces of the DRC. Malaba and Busia border posts are the main gateways to Uganda from Kenya. The Malaba and Busia border posts carry the largest share of traffic. Rwanda is linked to the Northern Corridor through the Katuna/Gatuna border post with Uganda, and Burundi is linked to the Northern Corridor through the AKanyaru/kanyaru Rwanda–Burundi border post with Rwanda (Booth, Cooksey, Golooba-Mutebi & Kanyinga, 2014).

Delays on the Central Corridor border posts are around three-quarters of an hour for customs and half-an-hour for immigration (Cooksey, 2016). The Central Corridor from Dar es Salaam port through mostly Tanzania competes with the Northern Corridor for the traffic to/from the West of Lake Victoria. The Central Corridor enters Burundi through the Kobero border post, Rwanda through Rusumo and Uganda through Mutukula. The following are the major border posts within the EAC region;

i. Malaba Kenya – Uganda
ii. Busia Kenya – Uganda
iii. Katuna/Gatuna Uganda – Rwanda
iv. Kanyaru/Akanyaru Burundi – Rwanda
v. Mutukula Tanzania – Uganda
vi. Rusumo Rwanda – Tanzania
vii. Kobero/Kabanga Burundi – Tanzania
viii. Namanga Tanzania – Kenya
ix. Sirari/Isebania Tanzania – Kenya
x. Lunga-Lunga/Horohoro Tanzania – Kenya
xi. Gisenyi/Goma Rwanda – DRC
xii. Mirama Hills/Kagitumba Uganda – Rwanda
xiii. Rusizi/Bukavu Rwanda – DRC

3.2 Policy, Legal and regulatory framework

The transport policy environment includes the EAC Treaty at regional level and national transport policies of partner states. The EAC policy on Transport has largely been summarized in the EAC Treaty, which has a high degree of similarity with other treaties establishing regional economic communities on the African Continent (Booth, Cooksey, Golooba-Mutebi & Kanyinga, 2014). The EAC Treaty covers all the modes of transport and logistics except pipelines. Particular onus is placed on partner states to engage in a long list of activities, yet little guidance is provided to bridge the gap between national interest and the more overarching regional issues. It is acknowledged that commendable objectives such as 'harmonization of policies, standards, rules and practices' or 'coordination of implementation programs occur at regular intervals in the transport and logistics sections of the Treaty, but it is not indicated how they will be achieved or

what nature of institutional arrangements to facilitate the process on a regional basis (East African Community Secretariat. 2011a). Notwithstanding the qualities of the Treaty, based on the fundamental role played by transport there is a need to intensify strategic policies in this sector to promote the free movement of goods and people

International treaties, especially those establishing Regional Economic Communities (RECs) are by nature static law instruments which do not necessarily keep track with best practice trends and developments. Developments such as liberalization of transport and logistics services, alternative funding scenarios or public-private participation, let alone the separation of institutional entities responsible for selected functions at regional as well as national level, have become important focus areas (Ombara, 2013). What is needed at regional level is a policy instrument that will respond to the dynamics of best practice trends in transport and logistics sectors infrastructure development and the provision of services specifically relating to issues such as minimizing costs, financial viability and institutional reform (East African Community, 2007).

The East African Community treaty clearly states the determination and commitment of Partner States in co-ordination and harmonization of policies pertaining to transport and logistics and expresses the desire for cooperation by the states in implementing those policies. The areas identified for co-ordination and co-operation in the treaty in the transport and logistics and allied sectors are covered by the following articles of the treaty:

> *Article 90: Roads and Road Transport, Article 91: Railways and Rail Transport, Article 92: Civil Aviation and Civil Air Transport, Article 93: Maritime Transport and Ports, Article 94: Inland Waterways Transport, Article 95: Multimodal Transport, Article 96: Freight Booking Centres, Article 97: Freight Forwarders, Customs Clearing Agents and Shipping Agents (World Bank, 2014).*

The institutional arrangements for Partner states differ with respect to overall transport management as well as the approach to mode-specific administration. There are, however, a number of similarities and trends, especially regarding the establishment semi-autonomous agencies/authorities. The EAC is served by two major transport and logistics corridors namely; (i) Northern Corridor- which starts from the main sea port of Mombasa in Kenya, through to Uganda, Rwanda and Burundi, and (ii) Central Corridor -which starts from the sea port of Dar es Salaam in Tanzania through to Burundi, Rwanda and Uganda. The landlocked countries of Burundi, Rwanda and Uganda are connected through these corridors by both rail and road links. These corridors are run by autonomous institutions namely; Northern Corridor Transit Transport Coordination Authority (NCTTCA) and Central Corridor Transit Transport Facilitation Agency (CCTFA) (World Bank, 2014).

The transport and logistics industry in the EAC is structured according to modes of transport and draws its policy, legal and regulatory framework from international and regional organizations responsible those modes of transport such as; International Civil Aviation Organization (ICAO)

for the air transport, International Maritime Organization (IMO) for the Maritime (Sea) transport, International Federation of Freight Forwarders Associations (FIATA) for Freight forwarding and Customs clearance and Union Internationale des Transports Publics (UITP) for surface transport. At the EAC level, all the transport and logistics modes are coordinated by the EAC secretariat through partner states national institutions responsible for the transport and logistics modes (Cooksey, 2016).

Such institutions at the Partner states level include; ministries responsible for EAC affairs, ministries of transport and infrastructure, National regulatory authorities such as; Civil Aviation Authorities (CAAs) for the Air transport, Surface transport regulators, maritime transport regulators, customs authorities, airports authorities, airlines companies, seaports authorities, railways corporations, shippers' councils, freight forwarders associations, customs clearing agencies, truckers' companies and consumer associations.

Table 1: Policy, legal and regulatory environment ranking in East Africa, 2016 (among 185 economies)

	Burundi	Kenya	Rwanda	Tanzania	Uganda	Average
Doing Business Rank	164	80	41	137	122	109
Protecting Investors	132	62	16	129	108	89
Getting credit	177	29	6	55	55	64
Enforcing Contracts	150	90	85	58	64	89
Paying taxes	138	92	31	154	84	100
Construction Permits	168	124	112	156	148	141
Starting a business	42	117	78	162	165	113
Registering Property	95	125	2	142	124	97
Resolving Insolvency	144	95	78	108	113	107
Getting electricity	182	71	119	82	173	135
Trading across Borders	164	106	87	182	127	133

Source: World Bank (2016)

3.2.1 The EAC and Partner States' Trade Facilitation Initiatives

The EAC and Partner States' trade facilitation initiatives for the smooth running of the transport and logistics industry are anchored on the two main trade Corridor Authorities (Central and Northern Corridors) which play and important role in policy, planning, harmonization, advocacy and implementation of the Customs Union and facilitation measures for transport and logistics on their respective corridors in promoting trade and regional integration. The main goal of the trade corridors is to promote trade, economic growth and regional integration within the EAC and

enhance the competitiveness of their economies through the modernization of regional transport infrastructure and the removal of non-tariff barriers to trade (Woolfrey, 2013).

The Corridors' objectives are twofold; (i) Improve trade environment through the effective implementation of the EAC Customs Union Protocol; and (ii) Enhance transport and logistics services efficiency along key regional transport corridors by reducing non-tariff barriers, delays, and uncertainty of transit time (Ombara, 2013). Since transport and logistics have fundamentals like; shipping space reservation on ships or airplanes, foreign trade processing with export and import permits, customs fees and restriction checks, dangerous goods processing with various national or transport mode-specific regulations, coordination and seamless planning of goods movement at the various load transfer points and on various modes of transport, cost calculation, processing and risk responsibility according to various Incoterms and thus international air and sea transport can become very complex as a result.

Logistics costs limit the competitive participation of the EAC in trade since the delivered costs of imports are higher, exports are less competitive and attraction for foreign direct investment is diminished. This is mainly due to poorly maintained transport and logistics infrastructure; inefficient operational processes and poor access to key transport hubs; overlaps in administrative processes and unclear management structure and outdated processes and insufficient human resource capabilities.

One of the EAC Development Partners: **Trade Mark East Africa (TMEA)** intends to unlock the transport and logistics potentials in the trade networks by addressing the key identified challenges to ensure improved business competitiveness. TMEA's interventions focus on reducing the cost and time of doing business in the region as well as expanding trade opportunities to enhance the business environment (Cooksey, 2016). This can be achieved through augmenting the capacity of the logistics sector along the trade networks in the EAC and whose impact will be reflected the regional integration. Key expected results include; EAC's logistics sector is efficient for improved trade services, increased performance of the Transport Key Regional Result Area (KRRA) implementers, improved engagement between the public and the private sector on freight logistics matters, improved coordination of logistics stakeholders from the private sector.

The logistics platform is the key mechanism through which the enhancing capacity of logistics players, adopting a strategy for logistics; implementing a monitoring mechanism for the strategy; improving coordination of logistics stakeholders and influencing policy will be handled. Initiatives by Kenya Ports Authority (KPA) and Tanzania Ports Authority (TPA) to open up coordination offices in partner states and increasing collaboration with other stakeholders, not only aims at promoting excellence in service delivery, but also appreciate exceptional contribution to the industry and economy as well as encouraging innovation and thus improve industry performance, thus promoting trade and regional integration within East African Community

In the transport and logistics industry in the EAC, progress is most visible in cooperation to reduce non-tariff barriers (NTBs) on the Northern Corridor, the construction of Standard Gauge Railway (SGR) and port efficiency improvements and regional trade is the central component of the overall integration agenda, assessing progress towards implementation of the regional agenda has been of greater concern in all forums and structures of EAC.

The Single Customs Territory (SCT) is a milestone towards integration of the EAC region. It is a stepping stone towards the attainment of a Customs Union. In a bid to enhance the clearance of goods, minimize controls at internal borders and decongest the ports to boost trade facilitation in the East African Community, the presidents of the EAC partner states agreed to fast-track the implementation of the SCT, which was later launched in October 2013 and implemented by revenue authorities in January 2014. Under the new SCT Processes, only one export declaration is required to clear goods from EAC partner states to the ports, there is no need to make other declaration when the exports arrive at ports (Woolfrey, 2013).

The export declaration is made in the partner states custom's system and automatically shared with Ports Authorities the customs Authority where the port is located. Exports will take a maximum of two hours at the borders for cross border clearances. The new process is simplified and harmonized throughout the EAC and will result into improved clearance times of three days from partner states to ports of Mombasa and Dar el salaam, down from an average of seven days. Exporters will also enjoy reduced costs of clearance and documentation fees, since the required customs declared have been reduced from four to one declaration. The new clearances are part of the several enhancements that are being implemented by partner states to boost trade facilitation, including the Authorized Economic Operator, the One-Stop-Border Post and the Central Document Processing Centre, among others.

One-Stop Border Posts (OSBPs). The basic concept of OSBP is aimed at achieving the principle of simplifying and joining procedures by agencies in both countries at their border post. Thus vehicles and goods make a single stop to exit on country and enter the other. The motivation is more efficient border post processing and a reduction in delays. The above challenges can be achieved by the introduction of One Stop Border Posts. The construction of OSBPs produces many benefits that improve operations as opposed to maintaining conventional border posts which will eliminate delays on regional corridors through effective facilitation. It was therefore imperative to introduce OSBPs in order to improve the transport system by increasing efficiency and thus reducing transport costs in the EAC.

Targeting the regional integration and increasing regional market participation, it is crucial to analyze transport and logistics in view of the production and the trade supply chain as well as the transport and logistics costs. Logistics costs encompass a much wider range of activities than transport costs and include transaction and process costs (related to transport and trade processing of permits, customs, and standards), financial costs (such as inventory, storage, and security), and nonfinancial costs (such as insurance). Logistics costs can be broken down along the following types.

Table 2: Components of transport and logistics costs

Costs = 1. Transportation Costs (**Direct costs**)	Fees paid for actual freight and transit transportation service to truckers, rail, or ship operators
+ 2. Other Logistics Costs (**Direct costs**)	**(2a)** transport and transit overheads such as fees, procedures, road blocks, facilitation payments **(2b)** Fixed administrative costs of shipments
+ 3. Delay and Hedging Cost (**Process induced costs**)	**(3a)** in transit moving inventory costs (costs of good maintained on the road, or in clearance while already paid for, e.g. cost of average transit time) **(3b)** induced costs to hedge time unreliability (inventory and warehousing costs), or shift to faster/more reliable and thus more expensive mode of transportation **(3c)** induced costs to hedge quality unreliability and transport damage (inventory and warehousing costs), or to shift to more expensive mode of transportation **(3d)** false in cargo composition and wrong documentation

Source: World Bank (2016)

3.2.2 Challenges and Constraints

In spite of the efforts made by EAC Partner states and their development partners in formulating and implementing measures, polices, strategies and programmes to develop an adequate, safe, secure and affordable transport system that supports efforts to eradicate poverty and bring about sustainable development, a wide gap still exists between planned targets and the level of achievement. This can be attributed to the numerous challenges and constraints that the region aces in relation to the development of sustainable transport systems (Ng'ang'a, 2013). The major challenges and constraints include the following;

i. **Inappropriate national policies and limited implementation of national and regional agreements:** The lack of appropriate and well-formulated policies and strategies as well as the slow implementation of regional agreements remain major obstacles to the development of sustainable transport in Africa. The EAC Partner States do not have policies that allow and promote private sector participation in transport and logistics infrastructure development and operation. Liberalization and privatization in air, rail and maritime transport are still in their infancy. Efforts to harmonize policies and regulations pertaining to cross-border movement of goods, services and people have not yet been effective, as EAC Partner States have not fully implemented agreements aimed at facilitating cross-border movement of goods and passengers by road and rail, or the much anticipated and long overdue Yamoussoukro Decision (YD) in relation to air transport.

ii. **Low transport network connectivity and poor state of network**: In many EAC countries, transport and logistics networks are characterized by several missing links within each country and between countries, forcing a significant percentage of the rural population to live without access to market and essential economic and social services. Coupled with the problem associated with the missing links in the road, rail, inland waterway and air transport system, a large proportion of the existing infrastructure is aging and in a poor state.

iii. **Inadequate human and institutional capacity:** Although the number of workers in EAC public transport and logistics enterprises and agencies is relatively high, the availability of skilled personnel is limited in most transport and logistics organizations. In addition to lack of adequate skilled human resources, institutions are also lacking, that have appropriate powers and technical capacity to formulate, plan, and manage infrastructure development and services and to regulate and enforce policies and regulations. Lack of understanding of the proposed measure or lack of knowledge about the benefits of the measure like particular trade facilitation measures and its benefits for traders and/or for the administrations involved, were not understood or known by the trade facilitation stakeholders.

iv. **Lack of organizational framework:** Absence of a dedicated coordinating or responsible unit within a particular agency, the operation of which would be necessary for the proper implementation of the measure.

v. **Lack of inter-agency cooperation**: The lack of a dialogue and cooperation between governmental agencies involved, especially in the absence of a well-established mechanism for such cooperation or "turf" issues between the respective institutions. Negative impact of transport on the environment: Despite the critical importance of the transport system in economic development and poverty reduction, it is also associated with significant adverse effects on the environment. The most serious environmental concerns usually associated with the construction of roads, railways, airports and seaports are the destruction of forests and other ecosystems including: wildlife habitats; land degradation particularly through soil erosion on land adjacent to the infrastructure; and changes made to drainage systems and geological formations.

vi. **High transport costs:** EAC has the highest transport costs on the Continent. Transport and logistics services are unaffordable to many EAC citizens as transport costs are high compared to the average incomes of the citizens. Freight costs in EAC are significantly higher than the average cost in other regional groupings. The already high transport costs have been exacerbated in the last few years by the energy crisis associated with high and volatile oil prices. Factors, including limited skills of managerial and operational staff as well as poor transport facilitation, play significant roles in the high transport costs in Africa.

vii. **Poor transport safety and security**: The prevailing poor state of road safety remains a serious challenge in Africa, as accidents and the resulting loss of life and destruction of property has assumed intolerable proportions. A major weakness in this area is the absence in some countries and the weakness in other countries of lead institutions that are responsible

for road safety. Coupled with this, there appears to be a lack of consistent enforcement of traffic regulations. In most cases, the major constraint common to all the weaknesses in the management of road safety is the lack of adequate financial resources. The poor safety record of many African airlines is another area of major concern in Africa.

viii. **Poorly developed transport information systems:** Statistical information is a key input at every stage of the development process, including in the planning and implementation of programmes and projects. Adequate and well-organized statistical information provides tools for making informed decisions in identifying gaps, formulating policies and strategies, developing effective investment programmes and for monitoring and evaluation. However, in Africa, such data availability is at best limited and poorly organized. ICT in use and infrastructure in place effectively prevent the application of the measure. A frequent example is the lack of interoperability of the information technology (IT) platforms used by the administrations involved in a particular transport and logistics processes and procedures. Likewise, despite the importance of ICT in facilitating decision-making through rapid data processing, storing, retrieving, transferring over long distances, the transport sector has not taken full advantage of the technology due mainly to lack of a proper policy for ICT development and limited financial and human capacity.

ix. **Limited financial resources**: Despite efforts by EAC governments and their international and domestic development partners to mobilize financial resources for investment in transport infrastructure and maintenance of existing facilities, huge gaps remain between the demand and available resources. Sustainable transport development requires huge financial outlays to build infrastructure, and provide energy-efficient and environment-friendly transport equipment, among others.

4.0 DISCUSSIONS OF THE FINDINGS

Transport and logistics infrastructure and services are critical to EAC's sustainable development. Effective mobility and timely access to goods and services require well-developed, safe, secure and affordable transport and logistics networks and services. However, EAC's transport and logistics system has not yet been developed even to the level of other Regional Economic Communities (RECs) on the African Continent and the rest of the world. From the above challenges and ongoing initiatives, there exists potential room for speeding up implementation of commitments and achievement of goals and targets. This, however, requires the right set of measures to be undertaken in the area of policy, strategy, resource mobilization and capacity-building. The biggest challenge remains the translation of policies and strategies to concrete action in a timely manner. To address this aspect requires provision in a timely manner of financial and other resources, and strengthening and achieving good corporate and public governance. More specific lessons learnt and recommended policy and other measures necessary are presented under each of the major interventions below;

i. **National policies and sub-regional and regional agreements**

The EAC Partner States have to prove their commitment to improving the domestic investment environment by taking practical actions. There need to be fully liberalizing of the transport and logistics sector to attract private sector financing. Also, there is the need of the strengthening the regulatory and enforcement mechanisms in order to create level playing fields for infrastructure and services investment. Improve coordination in the development and implementation of regional and sub-regional agreements on transport facilitation and air transport liberalization.

ii. **Human and institutional capacity-building**

Efficient institutions having appropriate mandates and staffed with highly motivated and skilled human resources are key elements in the development of a safe, secure, affordable and environmentally sound transport system. To enhance the environment for improving and expanding transport and logistics infrastructure and services, they should ensure that appropriate institutional frameworks are put in place and separate regulatory and operational functions for all modes of transport, strengthen existing and establish new entities responsible for the planning, regulating and implementing activities that will support the development of sustainable transport and logistics sector and further strengthen and expand national and regional institutes and centers of learning and specialized training.

There is the need to eliminate physical and non-physical barriers to the movement of goods and passengers at ports, border crossings and inland terminals, including cumbersome clearance procedures and road checks along the corridors serving landlocked countries, among other reasons, to prevent transport sector workers from being exposed to HIV/AIDS. Also, the need to develop and implement capacity-building programmes to upgrade the knowledge and skills of staff involved in policy formulation, planning and implementation as well as those engaged in regulatory and enforcement functions and further raise public awareness and participation of key stakeholders in all phases of policy- making and implementation.

iii. Transport and the environment

The development of sustainable transport and logistics industry which adequately meets the mobility and access needs of the EAC Partner States and, at the same time, reduces greenhouse emissions has been demonstrated, albeit in a limited way, to be possible in the EAC. The EAC, although not by design, is a good example of the advantages of low motorized transport from the environment point of view. Because of its low motorized modes of transport compared to other regions of the world, EAC's contribution to global greenhouse gas emissions and the associated climate change impacts, air pollution, land usage for transport and logistics infrastructure, as well as impact on fauna and flora is low.

Although the EAC is not currently among the big polluters, if it continues along the path of business-as-usual, it will not only retard its own development but also significantly contribute to the global problem of climate change. The EAC should draw lessons from the other countries which have significantly contributed to global warming by avoiding the path they followed to

develop their fossil fuel-dependent transport and logistics system. Given the embryonic stage of the transport and logistics system in the EAC, the region has a unique opportunity to develop low carbon and environmentally sound transport and logistics systems.

Apart from mitigation measures based on thorough Environmental Impact Assessments (EIAs) that should be incorporated into infrastructure development plans, there should be ensuring that transport and logistics projects pass through rigorous EIA processes before approval and also the establishment of an appropriate incentives to encourage the development and use of more efficient and cleaner modes of transport, including use of energy-efficient modern vehicles, locomotives, vessels and aircrafts. There is the need of promoting the use of low-energy consuming passenger and freight transport systems and further removing obstacles and disincentives to the development of cleaner energy sources. Further, there is the need of developing properly planned infrastructure and upgrading existing ones to acceptable standards and improving traffic management to reduce congestion and delays and their associated emissions.

Strengthening measures to minimize the number of vehicles in operation, particularly aging fleets and other transport and logistics equipment with high emissions and integrating transport infrastructure planning into land use planning to ensure sustainable transport and logistics, which meets accessibility, mobility and environment needs and requirements need to be considered. There is the need of involving all stakeholders, including local authorities, ministries, airport authorities and representatives of residents in the neighborhoods of prospective airport locations to have their say about land use and airport planning and taking into account the International Civil Aviation Organization (ICAO) work on aviation and environmental protection when developing air transport and environmental policy. Another consideration is ensuring that wastes arising during the construction of transport and logistics infrastructure and operations, including oil spills and scraps are kept to the minimum and encouraging the reduction of travels through such mechanisms as the use of tele-conferencing and other electronic modes of message transfer as a substitution for air travel or driving to meetings, conferences, and so on.

iv. Transport logistics safety and security

The loss of human life and property caused by traffic accidents have assumed alarming proportions in all modes of transport in the EAC, but more so in road transport. The Road Safety Initiative underway in the EAC under the auspices of Sub-Saharan African Transport Policy (SSATP) has contributed to improving awareness of the impact of road accidents on human life and the economy. EAC Partner States need to build on such initiatives to improve safety in all modes of transport by establishing effective institutional framework and strengthening existing ones to manage traffic and ensure safety and allocating adequate funds for safety programmes in line with the call made by the Commission for Global Road Safety for the allocation of at least 10 per cent of the total road infrastructure investment for safety related activities. There should also be ensuring compliance with safety and security regulations and standards established by the relevant international and regional bodies in all modes of transport. The aspect of addressing

maritime security problems, particularly in relation to escalation of maritime piracy in recent years, in a holistic manner, including through an in-depth look at the root causes of piracy need to be taken into considerations.

v. **Transport and logistics information systems**

Given the high intensity of use of information in the transport and logistics sector and inadequacy of the necessary information in the EAC Partner States, ICT offers a powerful tool in accessing, processing and disseminating large volumes of information in the shortest time possible. ICT can also help save time and energy by avoiding trips to conduct meetings and collect data, with the associated reduction of emissions from road vehicles, railways and aircrafts. However, due to the global constraint of financial and skilled human resources, the transport and logistics sector in the EAC has not adequately embraced ICT. The transport and logistics sector in the region should take advantage of the possibilities offered by ICT by developing policies that promote increased use of ICT in all aspects of the transport and logistics system and building adequate databases of transport and logistics information. There should be developing strategies that encourage the use of ICT (e.g. video conferences and electronic information exchange mechanisms) as a substitute for trips and physical movement of goods and people.

vi. Financial resources

Despite the efforts of EAC governments to allocate resources for the transport and logistics development, the resources are still far below the required resources to finance even maintenance of the existing transport and logistics network and their operations. Following the policy reforms undertaken by EAC Partner States in the recent past, private sector participation in infrastructure development, although modest, is increasing. Involvement of the private sector in infrastructure development and operations, in addition to its contribution toward easing public resource constraints, has the potential of enhancing the productivity and efficiency of infrastructure services. However, as only few of past public-private partnership (PPP) arrangements, particularly in rail concessions, have achieved their objectives of improved services, enhanced efforts during the planning and implementation phases are required to make future PPPs succeed.

In order to secure adequate finance for the development and maintenance of transport and logistics infrastructure, there is the need of enhancing public source financing by ensuring that an adequate share of Gross Domestic Product (GDP) is allocated to the sector, either directly from the government budget or through government borrowings or guarantees and also raising external resource mobilization capacity to take advantage of resources from multilateral and bilateral donors, as well as other innovative funding mechanisms, including those related to the global Clean Air Initiative. The aspect of encouraging PPPS in the construction and operation of transport infrastructure to complement public funding need to undertake. This undoubtedly calls for improving the investment climate, by updating institutional and regulatory frameworks and eliminating unnecessary bureaucratic procedures and practices. There is the need of reducing the

rehabilitation and replacement funding requirements of infrastructure and rolling stock by proper and timely maintenance.

5.0 CONCLUSION

Transport and logistics sector is among the key sectors that play crucial roles in promoting trade and regional integration and the effort to achieve sustainable economic growth and poverty reduction thereby bringing about sustainable development in the EAC. In order for the transport and logistics sector to play its rightful role, it has to be developed in a coordinated manner, with the ultimate aim of bringing about a reliable, efficient, safe and environmentally sound system of moving people and goods. At regional level, the process of regional integration implies cooperation between partner states, and the increased upwards assignment of responsibility for issues of regional (supra-national) importance. The regional body must lead the process of integration and be resourced for this responsibility. Its main functions would be to provide guidelines on national policy in support of regional standardization and integration, draw up high-level regional transport infrastructure and service master plans to serve as a reference point for national planning and for support to the region, to develop the capacity of partner states, and to promote and coordinate the creation of regional associations and agencies for specific purposes, e.g. the regionalization of regulation and the creation of management agencies for cross border transport infrastructure.

6.0 RECOMMENDATIONS

The paper recommended that EAC requires the right set of measures to be undertaken in the areas of national policies and regional agreements, human and institutional capacity-building, transport logistics safety and security, transport and logistics information systems and financial resources mobilization to remedy the constraints hindering the role transport and logistics in promoting trade and regional integration within EAC.

REFERENCES

Africon Ltd, (2011). *EAC Regional Transport Strategy.* Princeton University Press.

Booth, D., Cooksey, B., Golooba-Mutebi, F., & Kanyinga, K. (2014). *East African prospects; An update on the political economy of Kenya, Rwanda and Uganda*. University of Nairobi.

Cooksey, B. (2016). Tanzania and the East African Community: A comparative political economy. *European Centre for Development Policy Management, Discussion Paper*, *186*.

East African Community Secretariat, (2011a). *EAC Development Strategy 2011/12- 2015/16.* Arusha: EAC Secretariat.

East African Community Secretariat, (2011b). *East African Trade and Transport Facilitation Project: Final Report.* Arusha: EAC Secretariat.

East African Community, (2007). Treaty for the Establishment of the East African Community (As amended on 14th December, 2006 and 20th August, 2007).

Goldman, T., & Gorham, R. (2006). Sustainable urban transport: Four innovative directions. *Technology in society*, *28*(1-2), 261-273.

Hulme, P. E. (2009). Trade, transport and trouble: managing invasive species pathways in an era of globalization. *Journal of applied ecology*, *46*(1), 10-18.

Hummels, D. (2007). Transportation costs and international trade in the second era of globalization. *Journal of Economic Perspectives*, *21*(3), 131-154.

Kherbash, O., & Mocan, M. L. (2015). A review of logistics and transport sector as a factor of globalization. *Procedia Economics and Finance*, *27*, 42-47.

Meersman, H., & Nazemzadeh, M. (2017). The contribution of transport infrastructure to economic activity: The case of Belgium. *Case Studies on Transport Policy*, *5*(2), 316-324.

Ng'ang'a, A. C. (2013). *Challenges Facing Kenya in the Implementation of Harmonized Custom Union under the East African Community* (Doctoral dissertation, United States International University-Africa).

Ombara, I. (2013). *Transport infrastructural development in Kenya towards enhanced regional integration: a case of Eastern Africa Region* (Doctoral dissertation, University of Nairobi).

Robeson, J. F. (1994). *Logistics handbook.* Simon and Schuster.

Woolfrey, S. (2013). Special economic and regional integration in Africa. *Cape-Cairo*, *108*.

World Bank. (2014). *Building integrated markets within the East African Community: EAC opportunities in public-private partnership approaches to the region's infrastructure needs*. The World Bank.

World Bank. (2016). *Doing business 2017: Equal opportunity for all*. The World Bank.