



FINAL REPORT

A Comprehensive Study on Modalities for the Promotion of Automotive Industries in the East African Community

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JUNE 2017

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LIST OF ACRONYMS

AA	AUTO ANCILLARIES
AAGR	ANNUAL AVERAGR GROWTH RATE
AFDB	AFRICAN DEVELOPMENT BANK
AGOA	AFRICAN GROWTH AND OPPORTUNITY
ASEAN	ASSOCIATION OF SOUTHEAST ASIAN NATIONS
ASYCUDA	AUTOMATED SYSTEM FOR CUSTOMS DATA
AVA	ASSOCIATED VEHICLE ASSEMBLERS LTD
AVM	ASSOCIATION VEHICLE MANUFACTURERS
BRA	BURUNDI REVENUE AUTHORITY
CAGR	COMPOUNDED ANNUAL GROWTH RATE
CAR	CENTRAL AFRICAN REPUBLIC
CARMATEC	CENTRE FOR AGRICULTURAL MECHANIZATION AND RURAL TECHNOLOGY
CET	COMMON EXTERNAL TARIFF
CIF	COST, INSURANCE AND FREIGHT
CKD	COMPLETE KNOCK DOWN
COMESA	COMMON MARKET FOR EAST AND SOUTHERN AFRICA
COMTRADE	COMMON FORMAT FOR TRANSIENT DATA EXCHANGE
CTN	COMMON TARIFF NOMENCLATURE
DFR	DRAFT FINAL REPORT
DRC	DEMOCRATIC REPUBLIC OF CONGO
EAC	EAST AFRICAN COMMUNITY
FBU	FULLY BUILT UNIT
FDI	FOREIGN DIRECT INVESTMENT
GDP	GROSS DOMESTIC PRODUCT
GHG	GREEN HOUSE GAS
GM	GENERAL MOTORS
GMEA	GENERAL MOTORS EAST AFRICA LIMITED
GVC	GLOBAL VALUE CHAIN
HSC	HARMONIZED SYSTEM CODES
ICT	INFORMATION COMMUNICATION TECHNOLOGY
ILO	INTERNATIONAL LABOUR ORGANIZATION
IMF	INTERNATIONAL MONETARY FUND
ISTEEBU	BURUNDI STATISTICAL AND ECONOMIC SCIENCES INSTITUTE

ITC	INTERNATIONAL TRADE CENTRE
JAMA	JAPAN AUTOMOBILE MANUFACTURING ASSOCIATION
JICA	JAPAN INTERNATIONAL COOPERATION AGENCY
KMC	KIIRA MOTORS CORPORATION
KMIA	KENYA MOTOR VEHICLE INDUSTRY ASSOCIATION
KRA	KENYA REVENUE AUTHORITY
KVM	KENYA VEHICLE MANUFACTURES
LDC	LEAST DEVELOPED COUNTRIES
LLDC	LANDLOCKED DEVELOPING COUNTRIES
MIDP	MOTOR INDUSTRY DEVELOPMENT PROGRAMME
MW	MEGA WATTS
NAAMSA	NATIONAL ASSOCIATION OF AUTOMOBILE MANUFACTURERS OF SOUTH AFRICA
NAFTA	NORTH AMERICAN FREE TRADE AGREEMENT
NAIDP	NATIONAL AUTOMOTIVE INDUSTRY DEVELOPMENT PLAN
NISR	NATIONAL INSTITUTE OF STATISTICS OF RWANDA
NMC	NUMERICAL MACHINES COMPLEX
NTB	NON-TARIFF BARRIERS
OECD	ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT
OEM	ORIGINAL EQUIPMENT MANUFACTURER
OICA	ORGANISASION INTENATIONALE DES CONSTRUCTEURS D’AUTOMOBILES
QCD	QUALITY, COST AND DELIVERY
RRA	RWANDA REVENUE AUTHORITY
SADC	SOUTH AFRICAN DEVELOPMENT COOPERATION
SIDS	SMALL ISLAND DEVELOPING STATES
SKD	SEMI-KNOCK DOWN
SUV	SPORT UTILITY VEHICLE
TAPCO	TRANS AUTOPARTS CO. LTD
TATC	TANZANIA AUTOMOTIVE TECHNOLOGY CENTRE
TCRA	TANZANIA COMMUNICATION REGULATORY AUTHORITY
TMEA	TRADE MARK EAST AFRICA
TRA	TANZANIA REVENUE AUTHORITY
TVET	TECHNICAL AND VOCATIONAL AND TRAINING AND EDUCATION INSTITUTIONS
UAE	UNITED ARAB EMIRATES
UK	UNITED KINGDOM
UMIA	UGANDA MOTOR INDUSTRY ASSOCIATION
UNCTAD	UNITED NATIONS COMMODITY TRADE STATISTICS DATABASE

UNDP	UNITED NATIONS DEVELOPMENT PROGRAMME
UNEP	UNITED NATIONS ENVIRONMENT PROGRAMME
UNIDO	UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
URA	UGANDA REVENUE AUTHORITY
USA	UNITED STATES OF AMERICA
USD	UNITED STATES DOLLAR
USSR	UNION OF SOVIET SOCIALIST REPUBLICS
VAT	VALUE ADDED TAX
VETA	VOCATIONAL EDUCATION AND TRAINING AUTHORITY
VW	VOLKSWAGEN
WDI	WORLD DEVELOPMENT INDICATORS
WHO	WORLD HEALTH ORGANIZATION
WTO	WORLD TRADE ORGANIZATION

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1.0 EXECUTIVE SUMMARY

1.1 Background

The Heads of State of the East African Community (EAC) in cognizance of the need to promote motor vehicle assembling in the region, during the 16th Ordinary Summit of the East African Community Heads of State of 20th February 2015 “**directed the EAC Council of Ministers to study the modalities for promotion of motor vehicle assembly in the region, and to reduce the importation of used motor vehicles from outside the community, and to report progress to the 17th Summit**”. In pursuit of the above, the EAC Secretariat in collaboration with JICA Tanzania commissioned BDO East Africa Advisory Services Limited (the Consultant), to carry out a comprehensive study on modalities for the promotion of automotive industries in the EAC.

For purposes of this study: “**Automotive**” is defined as all self-propelled wheeled vehicle, excluding trains and trams. Automotive consists of motorcycle and auto vehicle. “**Automotive industry**” is defined as the industry that manufactures automotives and their parts. It consists of “**parts manufacturing Industry**” and “**assembly industry**”.

1.2 Purpose of the study

The purpose of the study is to assess the status of automotive industry with a view to informing the EAC and potential private sector investors on policies, strategies and modalities needed to promote and develop the automotive industry in the region. The study is expected to make an important contribution to the transformation of the industry, and realization of the EAC industrialization objectives on employment creation and value addition.

1.3 Methodology and Approach

To undertake the study, the Consultant adopted a four (4) pronged approach that entailed desk literature review, study mission to EAC, Japan and Vietnam, and carried out field surveys and analysis of EAC Partner States.

- i. Literature review: Reviewed existing policies, regulations and national, regional, international frameworks and performed comparative analyses to draw lessons from other countries including Vietnam, Japan, Thailand, India, South Africa, Nigeria, Ethiopia, Brazil, and Malaysia.
- ii. Benchmarking Case Study of Vietnam and Japan: Involved undertaking a study tour to Vietnam and Japan. The missions were conducted by a delegation, comprised of experts from Partner States of EAC, the EAC Secretariat, representatives from JICA, and the Consultant — to study experiences to compare with the automotive industry, in the EAC.
- iii. EAC Partner States case studies: Involved undertaking a consultative study within all EAC Partner States. Interviewing various industry players, government and quasi-government institutions including ministries and departments in charge of industrialization, education and technology, finance and planning; investment authorities; revenue authorities; local automotive manufacturers and major assemblers; as well as selected major dealers; research technology institutions and the academia.
- iv. In-depth analysis of the EAC situation.

1.4 Study Findings

1.4.1 State of Automotive Industry

The automotive industry has a substantial impact on economic development and technological advancement in both developed and developing countries. The industry is estimated to contribute 3% of global GDP.¹ In 2014, the global number of vehicles in use was 1.24 billion units and the average motorization rate was 180 vehicles per 1,000 inhabitants. During the same period, the vehicles in use in Africa was 42.5 million with a motorization rate way below the global average at 44 vehicles per 1,000 inhabitants. In the EAC, with about 2.2 million vehicles the average motorization rate was 15 vehicles per 1,000 inhabitants, which is low compared to Africa average of 44 vehicles per

¹AT Kearney, 2014; The contribution of the Automotive Industry to technology and value creation.

1,000 inhabitants. Kenya had the highest level at 28 followed by Uganda at 12, Tanzania at 7, while Rwanda, Burundi had the least at 6 vehicles per 1,000 inhabitants. This in itself presents a potential for growing motorization in EAC region. It was also reported that most (85%) of the vehicles in use in the EAC region are second hand and only about 15% are new, with an average fleet age ranging from 15 to 20 years. The table below provides some basic data on automotive industry.

	<i>Number of vehicles in use</i>	<i>Motorization rate</i>	<i>GDP per capita</i>
Global	1,236.2 million units	180 units / 1,000 inhabitants	US\$10,057
Africa	42.5 million units	44 units / 1,000 inhabitants	US\$ 1,585 (Sub-Sahara Africa)
EAC	2.2 million units	15 units / 1,000 inhabitants	US\$ 974

The total worldwide market size for motor cycles was estimated to be 52 million units in 2015². Asia dominates the world motorcycles market at 80%. In Africa the market is fairly small estimated at less than 3million. In 2015, South Africa, Nigeria and Tanzania accounted for more than 30% of the African motorcycle market.

1.4.2 Macro-economic environment in EAC

The EAC is home to 151.4 million of which 22% is urban population. The five (5) country combined GDP stood at US\$ 147.5 billion. The region’s economic growth performance during the past decade has been impressive growing at 6.2% on average since 2000. Although East Africa’s growth decreased in 2015 to 5.6% from over 7% in 2014, the 2015 growth still placed it among the fastest growing regions. This growth presents a potential for developing automotive industry which is influenced by both GDP and population expansion.

1.4.3 Auto vehicle Industry in EAC

The industry is largely dominated by retail and distribution of finished vehicles, and after-sales support in servicing and spare parts; with small-scale assembly of motor vehicles mainly in Kenya. According to available statistics, total sales volumes increased by 63%, reaching over 257,000 units in 2015, compared to 158,000 units in 2011. The analysis of data for the last five (5) years shows that passenger vehicles took the higher percentage at 67% compared to commercial vehicles’ 33%.

The EAC motor vehicle sales are projected to grow to over 600,000 units by 2032. Passenger vehicles will continue to dominate accounting for 67% of the total vehicle sales. It is expected that the growing economies and expansion of the middle class will continue to spur the demand of vehicles in the EAC region. Analysis of the future estimation of market for the new vehicles premised on suitable policy implementations shows that by 2032 the market for new vehicles will have grown to over 500,000 units³.

The motorcycle industry in EAC has also witnessed a remarkable growth in the last three (3) years, witnessing annual average growth rate of 17% over the period. In terms of volume, the motor cycle market size increased by 100,000 units from 340,000 units in 2011 to reach 440,000 units in 2015. In terms of market share, Tanzania has the highest at 47%, followed by Kenya at 31%, Uganda 19%, and Rwanda and Burundi at 3% and 1% respectively. However, the size of market volume in each country and EAC (aggregate) is still small; 134,000 in Kenya; 206,000 in Tanzania; 83,690 in Uganda; 11,000 in Rwanda; and 4,500 in Burundi. In that sense, the current stage of the motorcycle industry of each EAC member country can be categorized in the Stage 1⁴ (which entails assembly of finished motorcycle parts and maintenance). The motorcycles in the EAC region⁵ is expected to more than double in the next 15 years from 440,000 units in 2015 to over 1 million units in 2032. Tanzania will continue to command the largest motor cycle market share.

²The world-wide motorcycle demand in units as estimated by Yamaha Motor Co., Ltd - Table 3.4 .

³ Refer to table 5.12

⁴ Refer to Chapter 4.0 Chart on “Relationship Between Market Size and Import Substitution)

⁵ Excluding Burundi

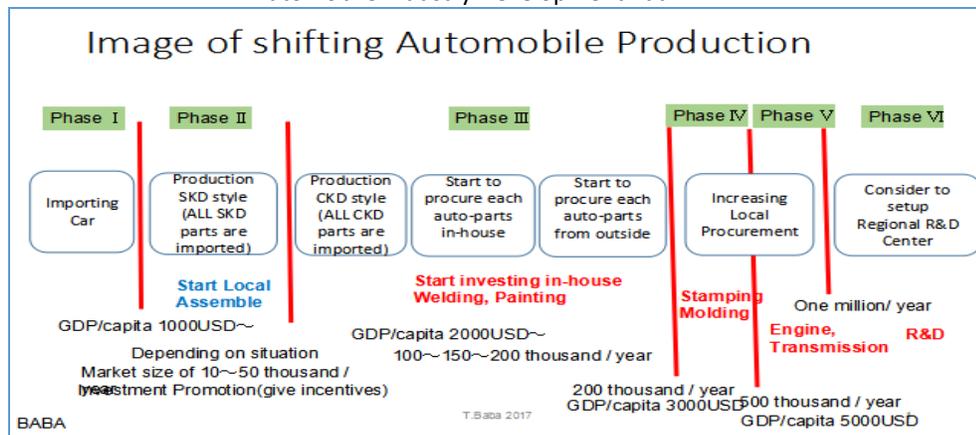
Comparison of automotive production (2015)



(Source: OICA, Yamaha Motor Corporation)

As seen in the graph above, the current development stage of the EAC automotive industry is relatively at the early stage. It will be essential to carefully design, introduce and implement necessary policy framework to grow the sector accordingly. Considering the nature of the automotive industry, a suitable entry point is to join the global and regional value chains (GRVCs) established by Original Equipment Manufacturers (OEMs). The market size of a region is generally measured by production volume and GDP per capita. The figure below shows the image of development stage. EAC's auto vehicle industry is between Phase I and Phase II (Baba, presentation (2017)) and motorcycle industry is between Stage 1 and Stage 2 (Mishima, presentation (2016)).

Automobile industry Development Path



(Source: Baba (2017))

Motorcycle industry Development Path

Stage	Period		Major localization of products and process	Effective minimum production scale	Market size of finished motorcycles	Japanese-affiliated companies' capacity building activities	
	Thailand	Vietnam				Finished motorcycle company	Supplier
1st	After late 1960s	1960s	Parts that involve assembly of finished motorcycles and maintenance	Several ten thousand level	100,000 level	Building organizational capacity to conduct routine manufacturing (especially manufacturing capacity)	Building organizational capacity to conduct routine manufacturing (especially manufacturing capacity)
2nd	after 1989	After 2000	OEM parts that require casting, pressing, and machine processing	From around 200,000 to 300,000 level	500,000 level	Building organizational capacity to conduct routine manufacturing. Building capacity to build capacities partially started.	Building organizational capacity to conduct routine manufacturing (mainly manufacturing capacity and partially improving capacity)
3rd	From 1993 to 2000	After 2004	OEM parts and OEM electronic components that require casting and forging process	From around 500,000 to 1,000,000 level	Not less than 1,000,000 level	Establishment of organizational capacity to carry out routines. Building capacity to build capacities partially started.	Building organizational capacity to conduct routine manufacturing (especially maintenance capacity)

Source: Based on Mishima (2010)

Note: The effective minimum production scales show figures of annual sales scale of applicable products and process in the same line of the graph calculated at a unit of finished motorcycle. In addition, the periods for Thailand and Vietnam show when annual sales of Honda's finished motorcycles in each country fulfilled the effective minimum production scale for the first time in their production history.



(Source: Mishima presentation (2016))

Considering the nature of the automotive industry, EAC should embrace the global and regional value chains (GRVCs) established by OEMs so as to grow their local automotive industries.

1.4.4 Quality of Infrastructure (Both Physical and Soft Infrastructure) and Labour in the EAC

The cost of doing business in the EAC is fairly high relative to other regional blocs. The inadequate state of regional transport infrastructure and sub-optimal mix of transport modes contribute substantially to this unfavorable fact.⁶ Local human capacity and technological advancement in the area of infrastructure development is insufficient and requires to be upgraded. Safety standards need to be intensified, especially road and air transport. Policy harmonization is necessary to streamline the regional transport infrastructure development, regulation and operations. To support its infant automotive industry, EAC partner states will need to improve their port infrastructure, customs processes and capacity to track and trace freight goods. Land supply chains (from ports of entry to destination points and vice versa) will also need to improve by developing a better road network, reducing roadblocks, improving security, and improving railway network.

1.4.5 Emergence of global value chains (GVCs)

Up to mid-20th century, each original equipment manufacturer (OEM), had its own supply chains in their respective countries. Countries like Japan and Korea had by then already developed their supply chains. Gradually, the OEMs internationalized their value chains, and in the 21st century emerged as global value chains (GVCs) in which OEMs chose the best site globally for each part of the value chain. This trend presents an opportunity for developing countries, to gradually enter the GVCs, step-by-step, starting with producing less to more complex auto products along the value chain.

1.4.6 Importance of market size and consistency of policy and regulations to attract FDIs

Market size is a very important factor in the promotion of an automotive industry. FDI/OEMs put a lot of emphasis on the market size to select a location for production. However, the current population size of respective EAC Partner

⁶ https://www.researchgate.net/publication/235951776_Challenges_Facing_Transport_Infrastructure_in_the_East_Africa_Community

States is rather small compared to other emerging markets such as Indonesia. But as unified single market, EAC is large enough to attract sufficient investors. To foster market growth, it is imperative for EAC to work towards making the Common Market fully functional to support investment in large scale automotive assembly industries. Therefore, EAC needs to develop deliberate policies to increase demand for auto vehicles and motorcycles. The fact that EAC has been growing in terms of the population and GDP per capita presents a potential which needs further consistent and predictable policy support.

1.4.7 Importance of the downstream industry

The downstream of auto vehicle supply chain such as dealers and repairs makes a major contribution in terms of employment and support to aftersales services. EAC Partner States will need to pay attention to the contribution of the users, repairs, sales and other related activities. To fully reap the benefits, EAC Partner States will need to take deliberate steps to attract investments in these sectors. As previously pointed out, to attract major OEMs as well as develop the local parts industry the EAC region will need expand its market size.

1.4.8 FDI and OEMS

FDI by automotive OEMs, mainly seek for markets, and business facilitation. As the development of automotive industry grows in a step-by-step manner, the motive of OEMs changes by the stage. In the stages from importation of vehicles to production of CKDs, the main motive is in market seeking. In order to advance to the next stage of parts manufacturing, the host countries need to appreciate the OEMs' motive of resource/asset seeking and efficiency seeking.

1.4.9 Impact of Used Imported Vehicles -

Estimates indicate that there were a total of 2.2 million road vehicles in East Africa in 2014. This fleet comprised locally assembled, new and used vehicles. About 1.87 million (85%) originally entered the EAC market as used vehicles and only about 330,000 vehicles (15%) originally entered the EAC market as new vehicles. The average fleet age of these vehicles ranges from 15 to 20 years. The jobs created by used vehicles are much fewer than those which would be created through local assembly/manufacture. This is besides other negative effects of used vehicles including emissions, higher rates of accidents and using up of scarce foreign exchange through import bill. This report recommends a step by step approach/ phased out action plan on how to reduce the used vehicles and gradually replace them with new ones made within EAC.

1.5 Policy Recommendations

In order to ensure development of automotive industry in EAC, a realistic and achievable development path is needed. The study has established the following issues that require strategic policy considerations.

1.5.1 A Well-Designed Step-by-Step Strategy to Promote Vehicle Manufacturing in EAC

i. Necessity for a Systematic Approach

EAC should have a well-designed systematic step by step strategy towards the promotion of automotive industry in accordance with international agreements such as GATT⁷. Since automotive industry has a complex and multilayered structure, the strategy to promote it needs to be systematic. Each policy has both positive and negative impacts. Policies should be based on the step-by-step approach.

ii. Structure and Approach

The automotive industry has a multilayered structure which is composed of:

- **Products:** motorcycles, auto vehicles (commercial) and auto vehicles (passenger vehicles).
- **Process:** CBUs, parts for CBUs, replacement parts and other services

⁷ EAC as developing countries may seek remedies and exemptions from agreements.

- **Market:** imported used, imported new, domestic used, and domestic new
- **Stakeholders:** citizens including users, government, OEMs, local capitals, importers, dealers

iii. Step-by-Step Approach

The systematic approach should have the sequence from premise to result and easy to difficult. The EAC approach should be to focus on building upon what is already existing within the region in both motor vehicle and motorcycle sector systematically in a step-by step manner, with new entrants also expected to follow the same approach.

1.5.2 Fostering Market Growth

As earlier stated, each EAC Partner State individually has a small market in terms of population and GDP per capita, EAC should front itself as unified market and pursue a coordinated approach to the development of automotive sector. The market expansion starts from users/downstream, which attracts assembly as FDI, and then parts.

i. Regional Approach to Develop the Sector and Leverage on the EAC, COMESA and SADC Tripartite

For the automotive industry to grow, there is need for high volumes that can lead to economies of scale. The volumes can easily be achieved if a regional approach is adopted focused on production for supply to the region. The regional approach should however look beyond the EAC to exploit the opportunities presented by the tripartite arrangement between EAC, COMESA and SADC to provide for an expanded market while taking a strategic approach to manage the competition from countries such as South Africa and Egypt.

ii. Strategic Approach to reduction of Importation of Used Automotives

The importation of used automotives has a positive and negative impact to the automotive manufacturing industry in the region. In the earlier stage when the EAC region needs to expand the potential market, importation of used automotives is welcomed. However, in the later stage, it needs to be reduced, albeit gradually to avoid shocks, owing to issues of affordability due to the price differential between new and used vehicles. A strategic and harmonized policy for used vehicles of all categories i.e. commercial vehicles and trucks, prime movers as well as passenger vehicles should be developed and implemented in consultation with the relevant stakeholders. In this regard EAC should:

- Harmonize Vehicle Age Limit for all imports to the EAC Partner States
- Harmonize Pre-Shipment Regional Inspection standards for automobiles
- Conduct regular Audits and sharing of information on Pre-shipment inspection to enhance credibility and performance of approved inspection companies.
- Enforce Road worthiness inspections within Partner States.

iii. Government policy support

In order to promote new vehicle market, EAC should also create a policy to encourage Government procurement of new locally produced vehicles and disposal of vehicles after a period of three (3) to five (5) years in order to support the local industry and generate a local market for used vehicles. The above should be pursued in the context of the proposed 60% local procurement policy in EAC currently under development.

iv. Automobile Purchase Scheme

Introduce Automobile Purchase Scheme across the EAC Partner States to encourage citizens to buy new vehicles manufactured within the region. This fund can draw financing from an Automotive Development Levy, slapped on Automotive Imports (a percentage of FOB value of imported automotive)

1.5.3 Promotion of FDI and joining GVC to develop automotive industry

EAC should develop policies geared towards promotion of FDI of OEMs and ensuring a conducive business environment. Governments should concentrate on addressing OEMs preferences and concerns. Considering that even China with a huge market took the route of joining GVCs by introducing FDIs, EAC should therefore concentrate on the introduction of major OEMs' CKD in order to promote automotive industry. This should entail the following:

i. Comprehensive National Investment Strategies to Support Automotive Industry

Introduce comprehensive and clear investment strategies to attract FDI in the automotive industry in the region. Other prerequisites to attracting FDI should include; development of infrastructure such as road, electricity, gas and water.

ii. Tax Regime to Promote Investment

Review and revise existing tariff policies to ensure suitable taxes are in place to promote the local automotive industry.

1.5.4 Business Environment to attract FDIs, and OEMs including the assembly of SKDs & CKDs

i. Regional Automotive Development Council

It is recommended a Regional Automotive Development Council be established, to be charged with coordinating the development of automotive industry in the region. This council will be multidisciplinary, and should be composed of both the public and private sector. The specific objectives of the Council and the terms of reference will be developed after approval by the policy organs. The council will also spearhead formal consultations to agree on the phased out plan for identified component lists/ local content manufacture (comprising assemblers, franchise owners/OEM, finance, revenue authorities, representatives of automotive associations, potential investors etc. and to oversee the implementation of the 15 year Action Plan⁸.

ii. Some global successful strategies EAC can borrow to promote motor vehicles industry

EAC should consider also following newer and more achievable automotive development models used by such countries as China, Thailand and Indonesia among others of utilizing the FDI to speed up the process of the development. To attract investments by major OEMs in the region, EAC needs to prepare favorable conditions and attractive incentives for OEMs'. This includes expansion of potential market, the stability of rules and regulation and training of workforces among others.

iii. Develop a harmonized definition of CKD and SKD for motor vehicle and motor cycles respectively, which should be linked to the regulations.

iv. Vehicle Models Rationalization: There is a need to identify and prepare a list of models outside of which additional duties will be introduced. Any other models which are imported outside this list should attract additional excise duty of 50%.

v. Synergies need to be developed with the Regulations governing local assembly and manufacture of local content⁹;

vi. Establishment of Automotive Industrial Parks and Clusters for the automotive industry within common facilities e.g. paint shop. There is need for a feasibility study and master plan for such facilities.

⁸ Refer to Chapter 8 for the 15 year Automotive Development Action Plan

⁹ It is important that all local content policies implemented in EAC ensure compliance with WTO rules.

1.5.5 Skills, Technical Support Infrastructure and Industry Governance

There is a need to expand and promote the relevant skills required by the industry. EAC Governments, academia and industry should undertake initiatives to develop the skillsets that will be required in the automotive sector including foundries for casting, precision machining, corrosion treatment plants, composite and plastic, glass windscreens, fiber technologies, electrical and electronics technologies, systems design and development and core fabrication skills among others. Furthermore, respective EAC governments and other stakeholders should:

- i. Select and upgrade some key existing polytechnic institutions into centres of excellence.
- ii. Establish secondment/attachment, on- the- job training to OEMs and advanced local industries in the EAC Partner States; and
- iii. Focus on development of skills and retooling the informal sector that undertakes 80% of all the auto repairs in the region;

1.5.6 Manufacture of a Low Cost Utility Vehicle

EAC should consider mass production of a low cost basic utility vehicle. A notable example of where this has succeeded is in China where GM-Wuling partnership produced a minivan retailing at US\$5,000. The EAC can support manufacture of such utility vehicles and provide incentives to further reduce the cost and make them more affordable to a larger number of users.

1.5.7 Development of the Motorcycle Industry

In the recent past, the motorcycle sector in EAC region has experienced a rapid growth with the current market demand estimated at about 440,000 motorcycles annually and projected to grow to over 1 million units in next 15 years. This sector therefore offers opportunity for rapid development and needs to be prioritized for rapid development.

1.5.8 Development of Parts and Components Manufacturing

Considering that 90% of the parts sales in the EAC region comes from after the sales market, EAC Partner States have the potential to develop the after sales market of spare parts and components. The region's thriving domestic market for auto parts and components presents a great opportunity for local enterprises to get involved in the production. To meet the ever-growing demand, the region needs to explore and adapt measures that will spur the development of the local parts industry. Technically there are bulky components which local production can have an edge. OEMs are more likely to purchase locally such components e.g. chassis and body frames, provided that the local manufactures meet the minimum requirement. It is important to have initiatives of enhancing the local firms to meet the requirements of QCD (quality, cost and delivery) by OEMs.

1.5.9 Vehicle Models Rationalization

From the indicative figures of used vehicles imported into the EAC, assembly of selected models e.g. one salon model and one station wagon model, one mini bus model and one pick up model can form an entry point for local assembly, which will act as a form of model rationalization to create economically viable volumes for assembly. This can further be supported by having a regional policy approach of limiting the number of models imported into the EAC such as was adopted by Algeria in 2013.

1.5.10 Develop a harmonized regional auto inspection system¹⁰

The EAC region should harmonize and put in place a regular regional auto inspection system to ensure that road worthiness and safety issues are enforced. As a consequence, vehicle owners will have to comply with the stringent requirements and in turn contribute to the development of local replacement parts manufacturing. The replacement part manufacturers will gradually gain technological expertise and in the long run are able to supply parts to OEMs.

1.5.11 Traffic Safety

To develop automotive industry, the negative effects such as traffic accidents should be minimized. In the EAC region thousands of people die every year as a result of road accidents. In 2010 traffic fatalities reported and estimated in the EAC were 10,386 and 32,202 respectively with an average fatality cost of about US\$ 12,000. In addition, average cost per vehicle and injury was US\$ 3,000 and US\$ 2,700 respectively costing the region a total of about US\$ 730 million. Traffic accidents occur by complex factors such as poor maintenance of the cars, lack of timely road maintenance, un-updated road design, short of drivers' skill, lack of road safety education at schools and at community level. As the region embarks on promotion of the automotive industry, social effects of further motorization need to be prioritized and responded to.

1.5.12 Development of an integrated motor vehicle e-register and production information system.

There is need for the EAC Partner States to develop an integrated vehicle register similar to what Kenyan National Transport & Safety Authority (NTSA) has recently adopted. The system is totally on-line/paper less for registration and applications of all motor vehicle services. This can be adapted to capture and provide all relevant data required by government agencies as well as automotive agencies and associations and be standardized across the entire EAC region.

1.5.13 Collaboration among Institutions developing the automotive industry

The EAC Partners States have several government sponsored institutions involved in the development of automotive industry such as Tanzania Automotive Technology Centre (TATC), Numerical Machining Complex (NMC) in Kenya and Kiira Motors Corporation in Uganda. It is prudent for these organizations to collaborate for the development of the sector. EAC should support development of a framework of collaboration between the above and any other institutions with mandates to develop the automotive industry in the region in order to exploit synergies and facilitate learning.

1.6 Way forward.

- a) Establish a Regional Automotive Development Council composed of both public and private sector to coordinate the promotion of the Automotive Industry in EAC region. The body will oversee the development of the automotive industry in the EAC starting with the implementation of a 15-year automotive development action plan¹¹. The region to embark on harmonization of policies aimed at developing the automotive sector – to grow FDI, develop local content¹² and reduce the importation of auto vehicles.
- b)

¹⁰ Baba, presentation (2016)

¹¹ Refer to Chapter 8 for the 15 year Automotive Development Action Plan

¹² EAC to ensure that all the policies touching on promotion of local content are implemented in compliance with WTO rules.

2.0 BACKGROUND AND STUDY CONTEXT

2.1 Background

The East African Community (EAC) has made significant progress in its integration agenda. A Customs Union has been established and a Common Market created in 2010. Challenges, however, persist on how EAC partner states can shift to the prevalence of primary production activities in their economic structures and to the manufacture of higher value products. In response to the challenges to economic development in the region, and with the aim of enabling structural transformation to take root, a regional industrialization policy and strategy framework has been formulated outlining sectoral priorities to be promoted and the enabling interventions. Automotive sector is one of the sectors that has potential for value addition in the region.

The automotive industry in EAC is primarily involved in the retail and distribution of automotive products, although there are also a few automotive assembly plants. The industry in the region is still relatively at early stage but can become a major contributor to economic growth and structural transformation. This is particularly pertinent as EAC economies strive to transition to middle income countries where the rise in per-capita income is expected to boost demand for production and sale of new vehicles.

To this end, EAC has made a strategic decision to invest in the automotive industry as a way of diversifying the regional manufacturing base which at the moment relies heavily on raw agriculture commodities. The Community intends to draw up a plan for long-term and sustainable development of automotive industry and its supporting industries in alignment with the EAC industrialization policy and Strategy.

The Heads of States of the East African Community having in cognizance of the need to promote motor vehicle assembling in the region, during the 16th Ordinary Summit of the East African Community Heads of State of 20th February 2015 **“directed the EAC Council of Ministers to study the modalities for promotion of motor vehicle assembly in the region, and to reduce the importation of used motor vehicles from outside the community, and to report progress to the 17th Summit”**

It is anticipated that the development of an automotive industry will create jobs and contribute to foreign exchange savings, and especially so if some of the vehicle parts currently imported are competitively produced within the EAC Region. To reap the benefits, it will be vital to nurture the industry. To do so, the EAC Secretariat was tasked to work on a comprehensive study on the bloc’s automotive industry to help decision makers plan better and put in place modalities that will help promote the automotive industry. The EAC Secretariat in collaboration with JICA commissioned *BDO East Africa Advisory Services Limited* (the Consultant) to carry out a comprehensive study on modalities for the promotion of automotive industries in the EAC.

2.1.1 Definitions of key concepts of the study

The key contextual and mainstream strategic concepts of this study are defined as below:

Automotive industry: According to the International Standards on Industrial Classification (ISIC), automotive industry covers: manufacture of automotive; manufacture of trailer and semi-trailers and; manufacture of parts and accessories for automotive products. In the context of this study, the assembly of motorcycles has also been included. Therefore, the automotive industry is defined as follows;

- Auto vehicle production and assembly – passenger cars, Light Commercial Vehicles (LCVs) and pick-ups, and Heavy Commercial Vehicles (buses and trucks)
- Motorcycles production and assembly
- Automotive parts and component manufacture

The terms can be further defined as follows:

- **“Automotive”:** All the self-propelled wheeled vehicle, excluding trains and trams. Automotive consists of motorcycle and auto vehicle.
- **“Motorcycle”:** Self-propelled vehicle with two (2) or three (3) wheels.
- **“Auto vehicle” or simply “vehicle”:** Self-propelled vehicle with four (4) wheels or more.
- **“Automotive industry”:** The industry that is involved in the manufacture of automotives and their parts. It consists of **“assembly industry”** and **“parts manufacturing Industry”**.

- **“Automotive and supporting industry”**: All the industry specified¹³ to the production, sales and use of automotive. In addition to automotive manufacturing it entails, imports and domestic dealership in new and used automotives, and parts for Original Equipment Manufacturer (OEM) or replacement, financial services such as loans, leases or insurance, repairs, fuels, etc.

2.2 Objectives of the Study

Broadly, the purpose of the study is to inform the EAC and potential private sector investors (both foreign and domestic) on policy options and modalities to promote and develop the automotive industry in the region. The study is expected to make an important contribution to the transformation of the industry and to the increased value addition in the region. Specifically, the study will:

- Compile key knowledge and experiences on:
 - Major characteristics of automotive and supporting industry comprising auto vehicles and motorcycles in general
 - Global foreign direct investment (FDI) patterns and localization process in the automotive and supporting industry
 - Automotive and supporting industry development in other regions in particular ASEAN region and African sub-regions other than EAC
- Analyse market and impact of the used automotives in the region and propose modalities/mechanisms to reduce importation of these vehicles into EAC market
- Propose policy options and examine pros and cons of each including economic and social implication
- Identify and analyse modalities to promote automotive and supporting industry in the region and develop an action plan for the development of regionally and integrated automotive and supporting industry.

A vibrant and sustainable automotive industry in the region need to be anchored on scalable volumes of production/assembly (large market to guarantee scale), competitive parts and component manufacturing capacity, and right incentives and policy frameworks. There is therefore a need to investigate the prevailing market demand and policy environment for automotive manufacture in order to identify potential viable vehicle types that can be produced/assembled in the region; and the policy option/incentives that should be embraced to ensure sustainable development of the industry.

2.3 Methodology and Approach

In delivering this report, the following methodology and approach was adopted:

- Literature review: Review of existing policies, regulations and national, regional, and international frameworks related to the promotion and development of the automotive and supporting industry. This also entailed review of global and regional trends in the automotive industry, as well a comparative analysis to draw lessons from countries such as India, Thailand, South-Africa, Ethiopia, Brazil, Egypt, Nigeria, Korea and Japan.
- EAC Partner States case studies: Undertook a consultative study within all EAC Partner States. Visiting and interviewing various industry players, government and quasi-government institutions such as ministries and departments in charge of industrialization, education and technology, finance and planning, investment authorities, revenue authorities; local automotive manufacturers and major assemblers, as well as major dealers, research and technology institutions, and the academia.
- Benchmarking Case Study of Vietnam and Japan: Undertook a study tour to Vietnam and Japan. The Missions were conducted by a delegation, comprised of experts from the EAC Secretariat, representatives from JICA, officials from the Partner States of EAC, and BDO—to study experiences that lessons on the automotive industry, at the EAC national and regional levels with Vietnam an ASEAN developing country on one hand and Japan a major successful country in the automotive manufacturing and a source of many vehicle OEMs whose products are in wide use within the EAC. In-depth analysis of the EAC situation drawing lessons from other countries studied, and determining the

¹³The example of NOT specified are steel manufacturing for general purpose. On the other hand, the manufacturing of steel sheet specified for automotive is included in the automotive and supporting industry.

applicability of the policy lessons and best practices in the promotion and development of automotive industry in the EAC region.

3.0 OVERVIEW OF THE GLOBAL AND REGIONAL AUTOMOTIVE INDUSTRY

3.1 Global Automotive Industry

3.1.1 Auto vehicle Overview

The automotive industry has a substantial impact on economic development and technological advancement in both developed and developing countries. The sector supports a wide range of business segments that have a multiplier effect on economic development. The industry is important for both up and downstream industries. In the upstream, this includes metal, steel, fuel, mining, plastic, leather, rubber and electronics among others, while on downstream, it supports growth to financial and insurance services, auto parts, transportation, Information Communication and Technology (ICT), advertising, warehousing, and vehicle hire among others. The industry also contributes to other important pillars of national building such as government revenue through taxation and fostering Research and Development (R&D) and innovation.

The automotive industry is estimated to contribute 3% of all global GDP.¹⁴ The share is estimated to be even higher in emerging countries, for example China and India at around 7%. Global exports of automobile in 2015 stood at US\$ 672.9 billion trailing only exports of crude oil.¹⁵ Organisation Internationale des Constructeurs d'Automobiles (OICA) estimated that building 60 million vehicles requires direct employment of at least nine (9) million people in manufacturing of the vehicle and components that goes into it representing 5% of total employment of the global manufacturing industry. For example, the employment of Japanese auto-related industry is shown in the Table 3.1, which shows the importance of downstream and user sectors—such as bus and truck transport.

Sectors	Number of Employees	Percentage (%)
Materials (metal, glass, electronics etc.)	396,000	7.5%
Manufacturing (OEMs/Parts)	814,000	15.4%
Sales/Repair	1,031,000	19.5%
Related Services (gas stations/insurance)	352,000	6.7%
Users	2,694,000	51.0%
Total	5,287,000	100.0%

Source: Japan Automobile Manufacturing Association Inc. (JAMA)

Data from OICA shows that auto vehicle (passenger vehicles, light commercial, heavy trucks, buses and coaches) production increased from 89.7 million units in 2014 to 90.8 million units 2015¹⁷ (see Table 3.2). Along with China, the United States counted among the largest automobile markets worldwide, both in terms of production and sales. In terms of revenue, Toyota, Volkswagen and General Motors top the list of major automobile makers, while the parts manufacturing industry is dominated by Bosch, Continental, Denso and Magna. For Africa, although the production is less than 1% of global, it had the highest growth of +13.9% over the previous year.

¹⁴AT Kearney, 2014; *The contribution of the Automotive Industry to technology and value creation.*

¹⁵<http://www.worldstopexports.com/vehicle-exports-country/>

¹⁶http://www.jama.or.jp/industry/industry/industry_1g1.html (Written in Japanese)

¹⁷<http://www.oica.net/>

Table 3.2: Global Auto Vehicle Production¹⁸			
ALL-AUTO VEHICLES	2014	2015	% change
EUROPE	34,254,938	36,354,962	+5.8%
RUSSIA, TURKEY & OTHER EUROPE	5,330,717	4,395,262	-21.3%
AMERICA	21,222,463	20,964,654	-1.2%
NAFTA	17,422,866	17,949,038	+2.9%
SOUTH AMERICA	3,799,597	3,015,616	-26.0%
ASIA-OCEANIA	47,404,769	47,786,156	+0.8%
AFRICA	719,608	835,937	+13.9%
WORLDWIDE	89,776,465	90,780,583	+1.1%

Source: OICA

The global number of vehicles in use in 2014 was 1.24 billion (see Table 3.3) and the average motorization rate was 180 vehicles per 1,000 inhabitants. The rate was 464 in Europe, 414 in America and 44 in Africa. In the EAC, average motorization is about 15 per 1,000 inhabitants.

Table 3.3: Worldwide Auto Vehicles in Use (Thousand units)								
COUNTRIES/REGIONS	2009	2010	2011	2012	2013	2014	2014	
							Region % VOL	Vehicles/ 1000inh.
EUROPE	348,498	354,469	361,587	368,107	374,943	382,160	22.74	464
RUSSIA, TURKEY & OTHER EUROPE	65,091	67,666	71,192	75,304	79,391	82,806	4.93	277
AMERICA	363,158	368,338	376,147	385,021	392,482	403,759	24.03	414
NAFTA	299,456	299,945	302,513	306,495	309,919	316,630	18.84	661
CENTRAL & SOUTH AMERICA	63,702	68,393	73,634	78,526	82,563	87,129	5.19	176
ASIA/OCEANIA/MIDDLE EAST	275,714	299,504	324,685	352,231	379,981	407,874	24.27	100
AFRICA	34,086	35,887	37,249	39,002	40,644	42,511	2.53	44
WORLDWIDE	1,021,455	1,058,198	1,099,675	1,144,365	1,188,084	1,236,273	100	180

¹⁸The data for America – includes NAFTA and Central & South America - the same applies for Table 3.3.

Source: OICA

3.1.2 Motorcycle Overview

The total worldwide market size for motor cycles was estimated to be 52 million units in 2015¹⁹ (Table 3.4), which is about 60% of that of all automobiles. Asia controls the bulk of world motorcycles market at 80%.

ALL MOTOR CYCLE	2014	2015	% change
EUROPE	1,515,000	1,525,000	+6.6%
NORTH AMERICA	539,000	559,000	+3.7%
ASIA	44,255,000	41,344,000	-6.6%
OTHER	9,360,000	9,209,000	-1.6%
WORLDWIDE	55,669,000	52,637,000	-5.4%

Source: Yamaha Motor Co., Ltd. <https://global.yamaha-motor.com/jp/ir/library/report/pdf/2015/2015explain.pdf>

The global market for motorcycles has witnessed a steady growth in past few years and is expected to grow at a higher pace during 2014-2019. This growth will be driven by personal mobility needs of the relatively affluent population in developing countries. Key macroeconomic variables supporting growth in these countries include rapid urbanization, rising employment levels and improving disposal incomes, and a rise in dual income households.

The ongoing fast-paced urbanization in several developing countries in Asia-Pacific region, Latin America and the Middle East, lack of effective public transport systems and chronic traffic congestion are also spurring growth in the motorcycle sector. Improvement in infrastructure and development of motorcycle lanes in several parts of the world are also encouraging the demand for the motorcycle. Globally, the major contributors to the demand of motorcycles are the countries in Asia-Pacific region, which will continue to dominate the worldwide demand in the future. This region is the home to the top six markets in the world, with China as the largest national market of motor cycles and is expected to remain at the top and to be followed by India and Indonesia. Regions like Americas, Africa, Middle East and Europe will contribute to the remaining minor portion of the worldwide demand.

Box 1: Snapshot Summary of Trends and Drivers for the Motorcycles

- Need for sustainable personal mobility in densely populated countries
- Lack of efficient public transport systems in emerging markets to increase the adoption of motor cycles
- Inadequate road infrastructure and chronic traffic congestion to spur demand growth
- Development of motorcycle lanes to encourage demand
- Rise in the number of women motorists to fuel a boom of the market

¹⁹The world-wide motorcycle demand in units as estimated by Yamaha Motor Co., Ltd - Table 3.4 .

²⁰It should be noted that the data is on the demand, not production like the data of auto vehicle. Moreover, the data of Africa is not specified and is included in "other"

3.2 Overview of the African Automotive Industry

3.2.1 Auto vehicle Overview

As discussed in 3.1.1, automotive market in Africa is small compared with other continents.²¹ With a population of one (1) billion, the number of vehicles registered in the entire continent in 2014 was 42.5 million. The motorization rate is 44 vehicles per 1,000 inhabitants which is way below the global average of 180 vehicles per 1,000 inhabitants. In 2014, Libya had the highest motorization rate with 416 vehicles per 1,000 inhabitants, followed by Republic of Congo South Africa, Mauritius, Botswana, Algeria and Tunisia, in that order, all indicating relatively high rates of over 100 vehicles per 1,000 inhabitants. Among the EAC partner states, the average is 15 vehicles per 1,000 inhabitants, which is much lower than the continent's average of 44 vehicles per 1000 inhabitants. Kenya leads the region with 28 vehicles per 1,000 inhabitants followed by Uganda, Tanzania and Burundi, in respective order and—see Table 3.5.

COUNTRIES/REGIONS	2010	2011	2012	2013	2014	Motoriza tion rate 2013	Motoriza tion rate 2014
EAC Countries							
BURUNDI	52	54	60	60	60	6	6
KENYA	961	1,022	1,084	1,190	1,250	27	28
RWANDA	45	51	59	65	71	6	6
TANZANIA	330	340	350	360	370	7	7
UGANDA	366	380	400	430	460	12	12
EAC*	1,754	1,847	1,953	2,105	2,211	15	15
Leading African Countries							
LIBYA	2,122	2,229	2,352	2,480	2,610	395	416
CONGO	1,631	1,669	1,723	1,760	1,830	401	405
SOUTH AFRICA	8,472	8,794	9,168	9,319	9,600	176	180
MAURITIUS	170	180	191	205	220	162	172
BOTSWANA	297	300	310	330	340	152	155
ALGERIA	3,981	4,130	4,533	4,835	5,133	123	129
TUNISIA	1,259	1,269	1,279	1,330	1,390	121	125
MOROCCO	2,760	2,920	3,088	3,248	3,397	98	101
EGYPT	4,391	4,501	4,612	4,832	5,126	59	61
ZIMBABWE	747	780	810	853	900	57	59
AFRICA	35,887	37,249	39,002	40,644	42,511	43	44

Source: OICA

*Rwanda data based on 2015 Year book, NISR/Authors computation

In, 2015, 1.55 million new vehicles were sold or registered in the continent (see to table 3.6). The majority of these were sold in South Africa, Egypt, Algeria and Morocco, which accounted for over 80% of the African total sales²². However, the four (4) countries produced about 900,000²³vehicles in 2015 accounting for only about 1% of global total production. The rest of the continent is mainly working on downstream market such as retailing of automotive and

²¹ Excluding motorcycles

²² Deloitte (2016) Navigating the African Automotive Sector: Ethiopia, Kenya and Nigeria

²³ <http://www.oica.net/>

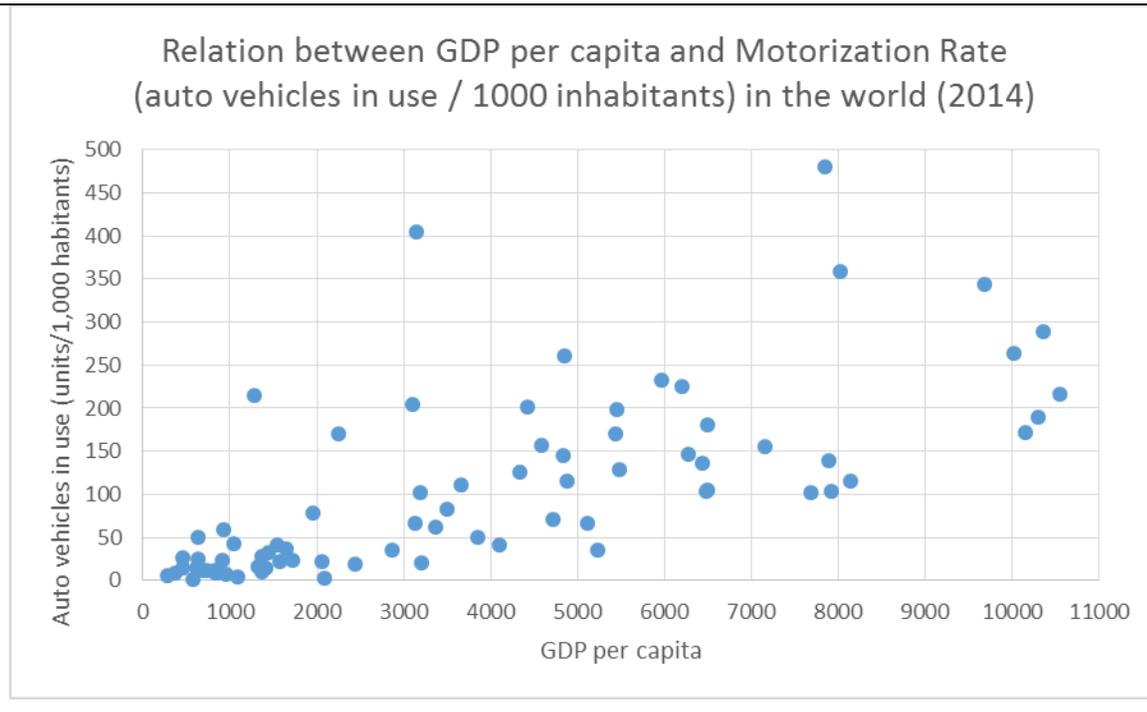
parts. In the EAC region, Kenya accounted for the largest volume of new vehicle sales reaching 14,100 vehicles, followed by Uganda, Tanzania and Burundi—see Table 3.6. Going forward, analysts at Deloitte predict that as income raises and emergence of middle class, Africa would be the final frontier for automobile industry in the world.

Table 3.6: Registration or Sales on New Vehicles, 2011-2015					
COUNTRIES	2011	2012	2013	2014	2015
EAC Countries					
BURUNDI	500	510	530	400	400
KENYA	6,000	9,500	13,000	13,500	14,100
TANZANIA	4,500	6,000	6,700	5,800	2,200
UGANDA	4,000	4,500	5,000	4,900	3,100
Leading African Countries					
SOUTH AFRICA	572,241	623,921	650,745	644,504	617,749
EGYPT	271,900	286,300	283,000	349,100	332,100
ALGERIA	227,925	255,167	304,854	246,400	181,400
MOROCCO	112,093	130,306	120,755	122,060	131,910
LIBYA	56,500	29,000	45,000	45,000	54,100
TUNISIA	47,500	49,000	47,000	50,900	48,500
BOTSWANA	32,411	38,130	38,456	34,800	38,600
REUNION	26,268	24,949	24,233	25,757	27,697
NIGERIA	45,000	50,000	52,000	53,900	26,400
ANGOLA	15,000	28,000	29,000	35,700	18,000
AFRICA TOTAL	1,473,138	1,600,993	1,685,143	1,699,621	1,550,256

Source: OICA

It is generally observed that the rate of motorization tends to increase as the nation's GDP per capita increases. Analysis of done on 131 countries/regions including 31 African countries on data motorization rate and GDP per capita, apart from a few cases, the results supported the conventional wisdom that high rate of motorization occurs when the country's GDP per capita breaks US\$ 3,000—see Figures 1 and 2.

Figure 1: Relation between GDP per capita and Motorization Rate (worldwide with GDP per capita below US\$11,000)



The situation of EAC partner states indicates Kenya with the highest GDP per capita has highest motorization rate, followed by Uganda, Tanzania, Rwanda and Burundi—see Table 3.6.

	GDP per capita (US\$/capita)	Motorization Rate (units/1,000 inhabitants)
Burundi	315	6
Kenya	1,428	28
Rwanda	718	5
Tanzania	969	7
Uganda	711	12
EAC Average	974	15

Source: Authors using the data from OICA, Nation Master and World Bank

Currently, most OEMs have dealer networks across Africa, with roughly half of them located in South Africa. Many OEMs originally established their local retail footprints years ago, mainly in South Africa and in the North African region due to the strategic importance they attach to both markets. Not only do OEMs serve local market demand, but also act as export bases (e.g., from Algeria to Europe and from South Africa to all right-hand-drive markets – see Table 3.8). For example, in 2015, South Africa vehicle exports were worth US\$ 5.6 billion, Morocco’s vehicle exports amounted to US\$ 1.7 billion, Egypt—US\$ 9.1 million and Algeria vehicle exports were slightly over US\$ 1 million.²⁴

No	South Africa	Egypt	Algeria	Morocco
1	Toyota	BMW	Renault	Renault
2	Scania	Jeep	Volkswagen	Somaca
3	Volkswagen	GM	Peugeot	
4	Nissan	Citroen	Nissan	
5	GM/Isuzu	Mercedes	Hyundai	
6	Renault	Suzuki	Mercedes	
7	BMW	Daewoo		
8	Mazda	Nissan		
9	Honda	Fiat		
10	Chrysler			
11	Mitsubishi			
12	MAN			

Source: NAAMSA

Africa has achieved impressive economic growth over the past 15 years with the average gross real domestic product (GDP) rising from just above 2% during the 1980-90s to above 5% in 2001-14.²⁵ In 2015, Africa remained the world’s second fastest growing economy after East Asia. Growth in real GDP was estimated at 3.6%, higher than the 3.1% for the global economy. Regionally, the East Africa led the way at 6.3% growth.²⁶ Africa’s overall GDP is expected to grow at 5% a year through 2020.²⁷

24 <http://www.worldstopexports.com/vehicle-exports-country/>

25 <http://www.africaneconomicoutlook.org/en/outlook/africa-s-macroeconomic-prospect>

26 http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AEO_2016_Report_Full_English.pdf

27 <http://foundrygate.com/en/noticias/ver/3141/prepared-for-takeoff-assessing-africas-car-markets>

Typically, the entry strategy of OEMs attracted by the GDP growth has been, partnering with existing vehicle dealers to initially import their brands. Subsequently, these companies establish local dealerships to sell their own brands and gradually move on to semi-knocked down (SKD) assembly facilities and completely knock down (CKD) production. In cases where the potential market is large enough like China, OEMs tend to establish full production, both to increase local parts and to get closer to the market. In markets like Nigeria and Angola, most OEMs focus on third-party imports due to low volumes and high levels of uncertainty.

3.2.2 Motorcycle Overview

As indicated in section 2.1.1, “motorcycle” refers to self-propelled vehicle with two (2) or three (3) wheels. The motorcycle market in Africa has been growing. More so, they offer easy maneuverability in urban centers and are even able to reach places with inadequate road networks in rural areas. In 2015, South Africa, Nigeria and Tanzania accounted for more than 30% in the African motorcycle market, their dominance was attributed to rapid urbanization, and growing disposable incomes and population in these countries— see Table 3.9.

No	Countries	Volume (Thousand Units)	Value (US\$ million)
1	South Africa	365.58	2,641.38
2	Nigeria	269.80	175.37
3	Tanzania	206.32	190.49
4	Kenya	134.65	146.92
5	Algeria	99.65	251.55
6	Uganda	83.69	78.86
7	Morocco	41.67	122.41
8	Egypt	41.50	99.69
9	Angola	20.30	26.11
10	Ethiopia	24.00	28.17

3.3 Structure, Characteristics and Drivers of Automotive Industry

3.3.1 Structure and Characteristics

There are features that automotive industry share with other globalised industries and other which are unique to the industry. The first common feature is that global production and cross-border trade and FDI flows in the automotive industry has witnessed accelerated growth from the late 1980s. This has been fuelled by market growth and a huge surplus of low-cost but relatively skilled labour in countries like Brazil, China and India, which has attracted large FDI flows to supply local markets and to export back to developed countries.

Secondly, similar to other globalized industries, the automotive industry has increased outsourcing and bundling more value chain activities in supplier firms. As a result, developed country suppliers have increased their own involvement in FDI and trade. The largest suppliers, all based in developed countries, have become ‘global suppliers’, with multinational operations and an ability to provide goods and services to a wide range of lead firms²⁸. The automotive industry has got the following features that set it apart from other globalised industries:

i. Concentrated Firm Structure

Generally, major players in the automotive industry have concentrated firm structure. The industry globally comprises of a small number of companies accounting for a significant share of production and sales. As for auto vehicles, 11 lead firms from three (3) countries, Japan, Germany and the USA, dominate production in the main markets. These few giant firms exert large amount of influence over the industry. The global scope of both lead firms and the largest suppliers was enhanced by a wave of mergers and acquisitions, and equity-based alliances in the 1990s. Lead firm concentration has largely diminished efforts to establish the sort of industry-level technical and business process

²⁸ Sturgeon and Lester, 2004

standards that prevail in less concentrated industries.

ii. Closeness to End Markets

A second characteristic specific to the automotive industry is that final vehicle assembly, and by extension, parts production, has largely been kept close to end markets due to number of reasons. Market saturation, high levels of motorization and the tendency for automakers to 'build where they sell' have also encouraged the FDI in developing countries and the dispersion of final assembly, which now takes place in many more countries, than it did decades ago.

iii. Strong Regional Structure

A third distinctive feature is its strong regional structure. Although the automotive industry has become more integrated globally since the mid-1980s, it has also developed strong regional-scale patterns of integration. Automakers and large supplier of vehicle parts are deeply engaged in multiple regional production systems. For instance, in North and South America, Europe, South Africa and Asia, regional parts production tend to feed final assembly plants that produce finished vehicles for the regional market.

iv. Limited value chain modularity

The industry is also characterized by a few fully generic parts or subsystems that can be used in a wide variety of end products without extensive customisation. Parts and sub-systems tend to be specific to particular vehicle models in contrast to memory chips and microprocessors in the electronics industry and to fabric and thread in the apparel industry. The absence of open, industry-wide standards undermines value chain and ties suppliers to lead firms, limiting economies of scale in production and economies of scope in design. Suppliers are often the sole source for specific parts or module variants. This creates the need for close collaboration, raises the costs for suppliers that serve multiple customers and concentrates most design work into a few geographic clusters, typically near the headquarters of lead firms. Therefore, linkages between lead firms and suppliers tend to be relational or captive in character.

3.3.2 Industry drivers

i. Economic Conditions

Ideally, people are more likely to purchase new vehicles when economic conditions are favorable which gives momentum to the automotive industry. Companies plan their capacities based on their sales predictions which are dependent on economic condition. The capacity issue has a strong influence on industry economics as vehicle prices are calculated on forecast capacities and reduced capacity means higher unit costs. In the past decades, the global balance of economic power has been shifting from developed to developing countries. As this trend continues, it will have an increasing impact on where growth opportunities arise for companies – and on where they invest to capitalize on those opportunities.

ii. Consumer Demand and Interests:

There is a growing demand for more option by consumers. The market for niche vehicles is growing, as consumers demand more variation of body shape and styling. This has led to a variety of body shapes being constructed on standard platforms. Further, there is an increased awareness of occupant and pedestrian safety, and consumers also look for greater fuel economy given the rising fossil fuel prices. Consumer are also becoming more aware of specifications and looking for inclusion of more on-board electronics and telecommunications systems. Currently, automobile safety is more important to consumers as reflected in their increased willingness to pay more for vehicles with safety features than before.

iii. Technological Innovations

Automotive companies seek to take advantage of sophisticated technology to address the competitive pressure and to meet increased customer expectations on quality and cost. Technological advances help them add value to their vehicles and offset the squeeze on costs and profit margins. Technology also helps them meet the demands of environmental legislation and address consumer demands for increased safety and sophistication.

iv. Globalization

Today, the modern global automotive industry operates in a global competitive marketplace resulting from globalization of the automotive industry. The world's largest automobile manufacturers invest into production facilities in emerging markets in order to reduce production and transportation costs. Automakers, have merged with, and in some cases established commercial strategic partnerships with other automobile manufacturers, enabling them to expand in overseas markets. Increasing global competition amongst the global manufacturers and positioning within foreign markets has led the world's automakers into mergers and acquisition to pursue larger size.

v. Government & Regulations

Legislations for instance those relating to emissions and recycling have a strong impact both on vehicle technologies and production. Many governments globally have imposed strict environmental regulations dealing with fuel economy and emissions control on auto manufacturers. These environmental legislations vary in different countries and define standards that are compulsory for all vehicles sold in those countries. This has a large impact on global auto manufacturers as they must keep updating the products to comply with the relevant regulations in different parts of the world.

3.3.3 Automotive Industry in the Globalization Era

Global production and cross-border trade in the automotive industry has accelerated dramatically since the late 1980s. Real and potential market growth and a large surplus of low-cost but relatively skilled labour in countries like Brazil, China and India have attracted large FDI flows to supply local markets and to export back to developed countries. The emergence of such global sourcing patterns has been facilitated and encouraged by trade and investment liberalisation through World Trade Organization (WTO) agreements.

Similar to other globalized industries, the automotive industry has increased outsourcing and bundling more value chain activities in supplier firms. As a result, developed country suppliers have increased their own involvement in FDI and trade. The largest suppliers, all based in developed countries, have become 'global suppliers', with multinational operations and an ability to provide goods and services to a wide range of lead firms.²⁹

3.3.4 Globalization and Localization of Automotive Industry

A greater degree of global integration in the automotive industry has developed at the level of design, as global firms have sought to leverage design efforts across products sold in multiple end markets. The work of vehicle design and development continues to be concentrated in, or near, the headquarters of the leading firms. In addition, suppliers of parts have taken on a larger role in design and have established their own design centres close to their major customers to facilitate collaboration. Because centrally designed vehicles are tailored to local markets and parts are manufactured in multiple regions to the degree possible, design activities and buyer-supplier relationships typically span multiple production regions. This has resulted in local, national and regional value chains in the automotive industry being 'nested' within the global organisational structures and business relationships of the largest firms.

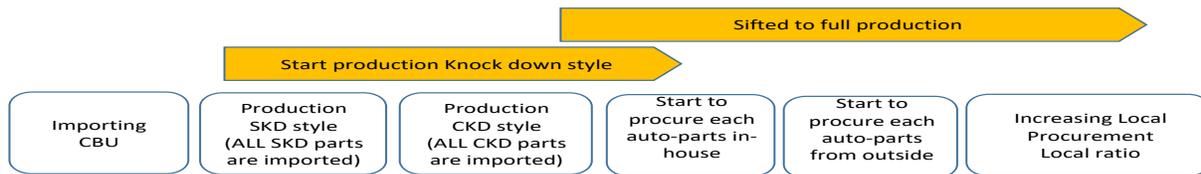
Globally, the industry comprises of wide range of companies and organizations involved in the design, development, manufacturing, marketing, and selling of auto vehicles and motorcycles spanning over five (5) continents. For many decades automobile companies in the US and in particular General Motors (GM), dominated the world in total automobile production.³⁰ As for motorcycle, according to Research Markets, the top five (5) global leading companies in performance, strategy and competitive analysis are Honda, Yamaha, Hero MotoCorp, Bajaj Auto, and Harley-Davidson.

The Figure below shows the basic flow of shifting automobile production.

²⁹ Sturgeon and Lester, 2004

³⁰ Data by OICA

Basic Flow of shifting Automobile Production



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T.Baba 2017

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(Source: Baba presentation (2017))

3.3.5 Global and Regional FDI investment patterns in the industry

3.3.5.1 Theory on the FDI

(1) FDI in automotive industry as a middle-skilled manufacturing

Dr. Theodore Moran of Georgetown University discusses the usage of FDI to build supply chains in middle-skilled manufacturing, citing the automotive industry as an example of middle-skilled industry.³¹ He notes that the emergence of GVCs in the world today is a direct response to technological innovations and which have lowered the cost of coordinating complex activities at great distances and rendered the geographical dispersion of supply chains feasible and profitable (Baldwin 2014). This has been further enhanced by the decline in transportation costs that previously propelled trade in goods in the late 19th and 20th centuries. The above has simplified the development strategy for emerging market authorities – as they do not have to build supply chains on their own; rather, they can join already existing supply chains.

Moran also observes that the conventional wisdom of “foreign direct investment in manufacturing and assembly as a global search for lowest wage sites for low-skill production” is not true. “The reality in today’s world is quite different. “He presents 2014 UNCTAD FDI database which indicates that the flow of manufacturing FDI to medium-skilled activities such as transportation equipment, industrial machinery, electronics and electrical products, scientific instruments, medical devices, chemicals, rubber and plastic products is nearly 10 times larger than the flow to low-skilled, labor-intensive operations like garments, footwear, and toys; and this flow has been speeding up over time”. “The ratio between higher- and lower-skill-intensive activities was roughly five (5) times larger in the period 1990-1992, and became approximately 14 times larger in 2005-2007.”

(2) Difficulties in attracting FDI

Moran highlights poor business conditions and harsh treatment of investments as obstacles to attracting FDIs. Ricardo Hausmann and Dani Rodrik (2003, 2005) observes that manufacturing investors are discouraged from trying out unproven production locations springs due to a combination of information asymmetries and the need for cost discovery in the midst of appropriation problems. Specifically, the cost of trying out novel activities is private and must be absorbed by the entrepreneur when unsuccessful, whereas the benefits that result from success are socialized as imitators rush in to take advantage of any profitable discovery. The market failure that hinders self-discovery therefore is an appropriation problem for first-mover investors, which must be overcome by subsidizing first-mover activity.

However, evidence shows that the fundamental concepts in this model are slightly – but significantly – off-base, with important implications for host country policy design. These four (4) case studies highlight the need for aggressive

³¹ <http://voxeu.org/article/fdi-and-developing-nation-supply-chains-four-case-studies>

investment promotion to overcome serious imperfections in information markets. Critically, the key ingredient that pulls in first-mover investors is not more information that one side already has and the other does not (information asymmetry). Rather what first-mover investors need is concrete reassurances that they can integrate new production sites smoothly into their global supplier networks, reassurances that take the form packages of infrastructure improvements plus public-private partnerships for vocational training.

(3) Host country Determinants

Padma Mallampally and Karl P. Sauvant presents the importance of FDIs as follows, in the quarterly magazine of the International Monetary Fund (IMF) in March 1999³².

Table 3.10: Host Country Determinants of FDI

Motives of Investors	Principal Economic Determinants in Host Countries	Fundamental Host Country Determinants
Market seeking	<ul style="list-style-type: none"> • Market size and per capita income • Market growth • Access to regional and global markets • Country-specific consumer preferences • Structure of markets 	<ul style="list-style-type: none"> • Policy framework for FDI • Economic, political, and social stability • Rules regarding entry and operations • Standards of treatment of foreign affiliates • Policies on functioning and structure of markets (especially competition and policies governing mergers and acquisitions) • International agreements on FDI • Privatization policy • Trade policy (tariffs and nontariff barriers) and coherence of FDI and trade policies • Tax policy • Business facilitation • Investment promotion (including image-building and investment-generating activities and investment-facilitation services) • Investment incentives • Hassle costs (related to corruption and administrative efficiency) • Social amenities (for example, bilingual schools, quality of life) • After-investment services
Resource or asset seeking	<ul style="list-style-type: none"> • Raw materials • Low-cost unskilled labour • Skilled labour • Technological, innovative, and other created assets (for example, brand names), including as embodied in individuals, firms and clusters • Physical infrastructure (ports, roads, power, telecommunications) 	
Efficiency seeking	<ul style="list-style-type: none"> • Cost of resources and assets listed above, adjusted for labour productivity • Other input costs, such as transport and communication costs to/from and within host economy and other intermediate products • Membership of a regional integration agreement conducive to the establishment of regional corporate networks 	

Source: The Team modified the table by Mallampally/Sauvant. Original source is UNCTAD.

As the development of automotive industry advances in a step-by-step manner, motives of OEMs changes by the stages. At the stages of importation of vehicles, to CKD, the main motive is in market seeking. In order to advance to the next stage of parts manufacturing, the host countries need to appreciate the OEMs' motive of resource/asset seeking and efficiency seeking. The host country determinants need to be sustained to ensure that FDI is attracted otherwise, they will choose alternative with better conditions.

³²"Foreign Direct Investment in Developing Countries"(Padma Mallampally and Karl P. Sauvant)
<http://www.imf.org/external/pubs/ft/fandd/1999/03/mallampa.htm>

3.3.6 Global and Regional FDI investment patterns in the industry

Overall, global flow of Foreign Direct Investment (FDI) in 2015 grew by 38% to US\$ 1.76 trillion the highest level since the global economic and financial crisis of 2008–2009³³ (see table 3.11) below. FDI inflows to developed economies grew two fold to US\$ 962 billion in 2015 accounting for 55% of the global FDI. FDI inflows to developing economies reached a new high of US\$ 765 billion, a 9% growth from 2014. Service sector accounted for more than half of the FDI inflows in 2015 followed by manufacturing and primary sector.

Table 3.11 FDI Flows, By Region, 2013–2015

Region	FDI inflows in USD Billions				FDI outflows in USD Billions			
	2013	2014	2015	%Change	2013	2014	2015	%Change
World	1,427	1,277	1,762	38.00	1,311	1,318	1,474	12.00
Developed economies	680	522	962	84.00	826	801	1,065	33.00
Europe	323	306	504	65.00	320	311	576	85.00
North America	283	165	429	16.00	363	372	367	-1.00
Developing economies	662	698	765	10.00	409	446	378	-15.00
Africa	52	58	54	-7.00	16	15	11	-27.00
Asia	431	468	541	16.00	359	398	332	-17.00
East and South-East Asia	350	383	448	17.00	312	365	293	-20.00
South Asia	36	41	50	22.00	2	12	8	-33.00
West Asia	46	43	42	-2.00	45	20	31	55.00
Latin America and the Caribbean	176	170	168	-1.00	32	31	33	6.00
Oceania	3	2	2	0.00	2	1	2	100.00
Transition Economies	85	56	35	-38.00	76	72	31	57.00
Structurally vulnerable and weak, small economies	52	55	56	-2.00	14	14	8	-43.00
LDCs	21	26	35	35.00	8	5	3	-40
LLDCs	30	30	24	-20.00	4	7	4	-43.00
SIDS	6	7	5	-29.00	3	2	1	-50

On regional trends, inflows to North America more than doubled to US\$ 429 billion driven by newly 250% growth in FDI into US in 2015. FDI inflow to Europe surged by 65% to US\$ 504 billion driven by 50% increase in FDI into European Union. Asia attracted a new record FDI of US\$ 541 billion, a 16% growth compared to 2014. The growth was attributed to strong performance by East and South Asian Countries. FDI into Latin America and the Caribbean remained flat at US\$ 168 billion in 2015. Africa recorded a 7% decline in FDI to US\$ 54 billion in 2015. Growth in inflows to North Africa

³³http://unctad.org/en/PublicationsLibrary/wir2016_Overview_en.pdf

was offset by declines in inflows to Sub-Sahara Africa especially central and west regions³⁴. In the EAC region, inflows declined by 1.6% to US\$ 4.5 billion in 2015 compared to 4.6 billion in 2014.

Automobile industry in Asia continues to grow and its sustainability has been assured by increase in foreign direct investment³⁵. Auto manufactures from US and Europe have targeted Asia in recent past to establish a greater presence in the Asian marketplace. While some have expanded their production capacity into Asia, other automakers have collaborated with Asian makers.

Though Africa has historically been an importer of automobiles, the continent is expanding its manufacturing base. FDI projects in the automotive sector continued to grow in 2016, with Morocco, South Africa and Algeria being the largest recipients³⁶. Other countries receiving automotive FDI include Egypt, Tunisia, Nigeria and Kenya.

Below are some of the current promising automotive markets in Africa that have attracted FDI³⁷:

- **South Africa:** The automotive sector is the country's largest contributor to manufacturing GDP. The South African Government's auto-incentive program has prompted many automakers including Toyota Motor Corp., Ford Motor Co. and BMW AG to set up operations in the country. The sector has potential to expand production to more than 900,000 vehicles annually by 2020. In August 2016, Chinese state-owned Beijing Automotive International Corp. reached agreement with the operator of an industrial development zone in Port Elizabeth, to invest US\$819 million in a new plant. Other investments underway include: additional US\$444 million by BMW in its Rosslyn plant in the north of Pretoria; Investment by Nissan of a new model Bakkie at its local plant; Investment of US\$44 million by Chinese First Automotive Works in a truck assembly plant in Eastern Cape.³⁸
- **Morocco:** Between January 2003 and May 2015, 12 automotive OEMs invested a total of US\$ 3.14 billion in Morocco³⁹. The country has positioned itself as an export base for Europe, the Middle East and Africa. In 2015, Ford Motor Co. and PSA Peugeot Citroen announced plans to expand operations in Morocco. Peugeot is planning a US\$632 million assembly plant near Kenitra, with capacity to build 90,000 vehicles a year, scheduled to start production in 2019. Following Peugeot's investment announcement, Morocco expects its annual automotive exports to reach US\$10.2 billion by 2020. France's Renault, which already has two plants in Morocco has also committed to invest US\$1 billion in the country, creating 50,000 jobs.⁴⁰
- **Algeria:** Between January 2003 and May 2015, 20 automotive OEMs invested a total of US\$ 1.25 billion in Algeria.⁴¹ In a bid to reduce dependence on expensive imported vehicles, the Algerian government is promoting investments and creating a pro-business climate for the automotive sector. French manufacturer Peugeot-Citroën and Italy's Iveco have already outlined plans to build new assembly factories in the country over the next few years.

³⁴http://unctad.org/en/PublicationsLibrary/wir2016_Overview_en.pdf

³⁵<https://www.loc.gov/rr/business/BERA/issue2/industry.html#asia>

³⁶https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.automotiveworld.com/analysis/north-africa-next-frontier-vehicle-manufacturing/&ved=0ahUKEwiA1P3Jn-TRAhWJAsAKHQ_dBTYQFggzMAQ&usq=AFQjCNH3hTEQAYLHqM6o4aCRp_8PN1KndA

³⁷https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.ey.com/Publication/vwLUAssets/ey-africa-attractiveness-program-2016-year-end-update/%24FILE/ey-africa-attractiveness-program-2016-year-end-update.pdf&ved=0ahUKEwiA1P3Jn-TRAhWJAsAKHQ_dBTYQFggxMAM&usq=AFQjCNFy9I9iKIoQcuS-ptgIC_QAMd0MLQ

³⁸https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.gov.za/blog/foreign-investors-flock-sa-shores&ved=0ahUKEwiF6vjN-OnRAhWC7iYKHVKSAIL4FBAWCCswBg&usq=AFQjCNFxf5rGzL8V0e4C_hjo_22I2fT4Q

³⁹<https://www.google.com/url?sa=t&source=web&rct=j&url=http://dhaman.net/wp-content/uploads/2016/02/Morocco.pdf>

⁴⁰https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.ey.com/Publication/vwLUAssets/ey-africa-attractiveness-program-2016-year-end-update/%24FILE/ey-africa-attractiveness-program-2016-year-end-update.pdf&ved=0ahUKEwiA1P3Jn-TRAhWJAsAKHQ_dBTYQFggxMAM&usq=AFQjCNFy9I9iKIoQcuS-ptgIC_QAMd0MLQ

⁴¹<https://www.google.com/url?sa=t&source=web&rct=j&url=http://dhaman.net/wp-content/uploads/2016/02/Algeria.pdf>

- **Nigeria:** In a move designed to cut imports and reduce the economy's dependence on oil, Nigerian government is offering incentives including lower import tariffs, tax holidays for producers and clamping down on vehicle smuggling. Automakers including Honda Motor Co., Nissan, Ford and Hyundai are already building capacity in Nigeria. Over the next five years, the country plans to assemble 500,000 vehicles annually.
- **EAC:** Within the EAC, Investments by automotive OEMs have mainly been in Kenya. Out of a total US\$ 989 million FDI received by Kenya in 2014, the automotive sector was among the top recipient.⁴² Companies which have shown interest in making further investment in Kenya include Toyota, Volkswagen, Mobius Motors and Hyundai. It is expected that the EAC region will develop attractive policies which will increase automotive FDI flow into the region.

3.4 Case Studies of the Automotive Industry in the ASEAN Bloc

As part of this study a delegation from EAC undertook a study tour to Vietnam and Japan. The Missions were conducted by a delegation, comprised of experts from the EAC Secretariat, representatives from JICA, officials from the Partner States of EAC, and BDO—to study experiences that lessons on the automotive industry, at the EAC national and regional levels with Vietnam an ASEAN developing country on one hand and Japan a major successful country in the automotive manufacturing and a source of many vehicle OEMs whose products are in wide use within the EAC.

3.4.1 Key Lessons from Vietnam's Experience

Prior to 1991, Vietnam had little demand for passenger vehicles which was met through the import of fully assembled Soviet-built sedans. Other state-run companies manufactured agricultural vehicles, freight trucks, and construction vehicles. However, these companies struggled to compete with imports from the Soviet Union and China, and later used trucks from Korea. In 1991 the Vietnamese automotive industry began to change mainly through formation of joint-venture partnerships between Vietnamese companies and foreign OEMs. Over the years, the Vietnamese government has taken steps to develop and promote the automotive industry and supporting industries. Nevertheless, the sector has largely stagnated with vehicle production averaging about 95,000 units annually between 2007 and 2013, compared to Thailand whose production grew from 630,000 units to over 1.3 million units over the same period⁴³. Local production in Vietnam is currently dominated by FDI mainly from Japan. The automobile industry has a low localization rate, of less than 30%. Trucks and buses have a higher localization rate than passenger cars.

Compared with the motorcycle industry, the market size and growth rate of the automobile industry in Vietnam are lower. The Vietnamese motorcycle assembly and production industry, which formed since 1990, initially based on the investment of Japanese and Taiwanese motorcycle manufacturing corporations has developed rapidly recently. The localization policy of the Vietnamese government has strongly contributed to the rapid formation of the motorcycle assembly industry. In general, the localization rate in motorcycle products is relatively high, at around 70-80%, even amounting to above 90% in some enterprises⁴⁴.

It is vital to formulate a clear policy and strategy for the automotive sector early enough in the development path to provide clarity to government and give a stable long-term view to investors. Policies should be:

- i. Clear, specific, comprehensive and unambiguous
- ii. Coherent and not at cross purpose with those of other sectors

⁴² <https://www.google.com/url?sa=t&source=web&rct=j&url=http://investinggroup.org/snapshot/268/kenya-fdi-kenya/&ved=0ahUKEwj9spOtiurRAhUFicAKHe9TC1sQFgg5MAM&usg=AFQjCNHaBNGZUWPfs3JOnwzpkmuVoLPswg>

⁴³ https://www.google.com/url?sa=t&source=web&rct=j&url=http://ifeama.org/ifeamaspcp/selected%2520papers/12th%2520in%2520Hanoi/12th%252008%2520Y_Ichida_final%2520.pdf&ved=0ahUKEwihwLu5PrRAhXLAsAKHbNWChIQFggZMAA&usg=AFQjCNF-T_1NVzCqhPY_iDDdnSqV7VBcgw

⁴⁴ https://www.google.com/url?sa=t&source=web&rct=j&url=http://s3.amazonaws.com/zanran_storage/www.vdf.org.vn/ContentPages/17133892.pdf&ved=0ahUKEwi2iOe64PrRAhXqDcAKHcGnB_UQFggvMAM&usg=AFQjCNH5Mgbn_BqHSHzhKDzE4a-1-XoECQ

- iii. Stable and predictable to give investors' confidence to plan ahead. Compliance with international law is important to give predictability and investors' confidence.
- iv. Well thought out within the national and regional vision and domesticated to suit the local conditions in a global context
- v. Market volume is a precondition for successful growth of the automotive industry including parts manufacturing. Other factors important for these include: GDP per capita, infrastructure development, consumer behavior, local firm capabilities etc.
- vi. To foster the development of parts manufacturing, there need to be other support factors like linking learning and research institutions with industrial needs.
- vii. Also important is attractive FDI policies for well-established OEMs which will gradually nurture local industries.
- viii. Governments should consult with various stakeholders and industry experts for an effective process of formulating and implementing relevant policies, which is compliant with international rules, to develop a competitive automotive industry. This will help to create harmony and synergy and avoid undue delays and missed opportunities.

3.4.2 Key Lessons from Japan's Experience

Japanese automobile industry is one of the well-known and largest industries in the world. Japanese zaibatsu (business conglomerates) began building their first automobiles in the middle to late 1910s. The companies went about this by either designing their own trucks as the market for passenger vehicles in Japan at the time was small, or partnering with a European brand to produce and sell their cars in Japan under license. The demand for domestic trucks was greatly increased by the Japanese military buildup before World War II, causing many Japanese manufacturers to start designing their own vehicles. From mid 1950s, the production of cars by Japanese makers increased. At the same time, Japanese government imposed restriction on importation of vehicles. Under the guidance of the Ministry of International Trade and Industry, the Japanese automobile industry started to flourish. In 1953, the numbers of vehicles manufactured were 10, 000, but the number reached to 20, 000 in 1955. By the end of 1950s, Japan began to export vehicles to different countries every year.⁴⁵

In the 1970s Japan was the pioneer in robotics manufacturing of vehicles. The automotive industry in Japan rapidly increased from the 1970s to the 1990s when it was oriented both for domestic use and worldwide export and in the 1980s and 1990s, overtook the U.S. as the production leader with up to 13 million cars per year manufactured and significant exports. After massive ramp-up by China in the 2000s and fluctuating U.S. output, Japan is now currently the third largest automotive producer in the world with an annual production of 9.9 million automobiles in 2012.⁴⁶

Japanese automakers always focus on product enhancement, technological innovation, and safety improvement. Today the Japanese auto industry has grown into one of the most respected and popular manufacturing industries in the world. The increase in demand for Japanese vehicles has increased the competition among vehicle manufacturers. Japan has been in the top three of the countries with most cars manufactured since the 1960s, surpassing Germany.⁴⁷

The motor cycle industry in Japan began in the post WW2 period. Honda and Suzuki were the pioneers. The Japanese government supported further research of Suzuki through subsidy. In 1968 Yamaha became the first company to

⁴⁵ <https://www.google.com/url?sa=t&source=web&rct=j&url=https://ictjapan.wordpress.com/history-of-japanese-automobile-industry/&ved=0ahUKEwj3wc3I5vrRAhVMCsAKHAdMBH4QFgg4MAM&usg=AFQjCNGAzeXvoGloPpz3Im-uKi0Zlyfivg>

⁴⁶ https://en.m.wikipedia.org/wiki/Automotive_industry_in_Japan

⁴⁷ <https://www.google.com/url?sa=t&source=web&rct=j&url=https://ictjapan.wordpress.com/history-of-japanese-automobile-industry/&ved=0ahUKEwj3wc3I5vrRAhVMCsAKHAdMBH4QFgg4MAM&usg=AFQjCNGAzeXvoGloPpz3Im-uKi0Zlyfivg>

produce a motorcycle for use both on and off road. Japan's motorcycle companies continue to produce high quality, innovative machines which sell in huge quantities the world over.⁴⁸

(1) To be one (1) market

Japanese auto related enterprises note that the market of EAC, although growing rapidly, is still very small and the industry is in the very early stage of development. Also, they say that there is a need to assure manufacturers high volumes and lower production costs necessary for creating economies of scale.⁴⁹

Doing business with individual countries is not cost effective and that many Japanese companies have the view that African countries are too small by themselves with low volumes of product demands. They suggest that it is easier to do business with an integrated regional block.

(2) To follow the cases of China, Thailand and Indonesia

The success story⁵⁰ of Japan, Korea and Taiwan is instructive but it is a very old story well before the globalization, and so copying the model of creating national brand under the strong protection government at this moment seems too costly.

EAC should follow newer and more achievable model of China, Thailand and Indonesia of utilizing the FDI to speed up the process of the development. To attract investments by major OEMs in the area, EAC needs to prepare proper condition for OEMs' business. It includes expansion of potential market, the stability of rules and regulation and training of workforces. Also EAC need to develop proper incentives as the OEMs have to benchmark with other existing plants in Africa like in South Africa and Egypt. For example, a plant of pick-up truck assembly moved from Kenya to South Africa because of economies of scale and better investment environment. Where there are enough volumes of demand, stable policy situation and competent workforce, Japanese companies (OEMs) are ready to invest in those markets.

As the industry grows and matures, EAC will need to be aware that innovations lead to competitive advantage. This was demonstrated by Japanese firms that consistently introduced highly reliable and increasingly stylish products at low prices, out competing most the manufacturers in the USA and Western Europe, leaving only a few premium European producers with a defensible market niche.

(3) Local contents

According to the requirements of investors in automotive assembly industry, any parts manufacturing firm that meets the required quality levels can supply automotive companies. In addition, there are higher chances for business collaboration with the big suppliers who have economies of scale and are able to automate their processes and maintain quality at affordable prices. EAC parts suppliers that can meet requirement of quality and cost by the OEMs can take advantage by supplying parts made locally.

It needs to be noted that the requirement of quality, which is closely related to safety, is very important in the automotive industry. It should also be noted that improvement must be one of an incremental, continual and integrated effort: Japanese companies introduced a fundamental concept of *Kaizen*: continual rather than one-time improvement, achieved through successive process refinements and a greater integration of workers and suppliers into the production system.

⁴⁸ https://www.google.com/url?sa=t&source=web&rct=j&url=http://eamdemo.blogspot.com/2010/05/the-history-of-japanese-motorcycle.html%3Fm%3D1&ved=0ahUKEWjkb8uy7_rRAhXiDMAKHVb3BOQQFgg0MAU&usg=AFQjCNFw-acDWhAFmbay5ry5_IQ7A25Lbw

⁴⁹ Dr. Toshiyuki Baba, Lecture (2016)

⁵⁰ The lecture by Dr. Kimura of Keio University made some observations that need to be considered for the development path of the automotive industry of EAC.

Critical to the Japanese success in auto manufacturing was their ability to respond to specific market conditions, creatively applying techniques first developed in the U.S. in new ways. Ultimately, by seeking a better solution to a fundamental problem, the Japanese set new standards of efficiency in automotive manufacturing industry.

A summary of Key Lessons include the following;

- Active promotion of technical education
Extensive technical education is bound to raise the general level of technology. Reserving scientific and technical labor force and placing them to the important positions in economic organizations as a supplement to marketing activities, are extremely useful to promote technology diffusion and market competition.
- Establishing and sensing of global competition and accelerate technology diffusion
It is imperative to closely participate in the international market, establish an aspiration for competition and promote industrialization under the open system.

3.5 Recent Developments in the Automotive Industry in Other Areas in Developing Countries

(1) Trend of the automotive industry in Developing countries

The import substitution industrialization (ISI) strategies were commonly pursued by developing countries before the collapse of the Union of Soviet Socialist Republics (USSR) in the early 1990s. It gave way to liberalization and globalization of 1990s. This ensuing globalization shaped the industry until the financial crisis of 2008.⁵¹ Following the crisis, the global automotive industry has increasingly been characterized by global mergers and relocation of production centers to emerging developing economies and utilization of global value chains (GVCs).

Within the GVCs, it is common for innovation and design functions of OEMs, which are considered as higher value added activities in the chain to remain in developed countries while production migrates to the developing countries. This scenario helps firms in developing countries to upgrade their capabilities by participating in GVCs. Large emerging economies such as India, China and Brazil offer large real and potential markets, and have a large advantages of low cost labour. These factors have made these countries to attract FDI with the aim of supplying local markets and also exporting back to developed countries.⁵²

The most noteworthy feature of the 1990s was the growth of what became known as the emerging markets. These included Brazil and Mexico in Latin America, the ASEAN countries, Eastern Europe, China and India. The fast-growing emerging markets taken together, increased vehicle sales by 80% and production by 93%. It is hardly surprising that the attention of the auto industry was focused on the potential of the emerging markets and, in this way, to achieve increased economies of scale and spread the costs of developing new models.⁵³

Despite increasing globalization, regional, national and local market conditions have remained important. Local conditions necessitate local adaptations, which impacts on the knowledge requirements for local models, local production, and local innovation activities. This calls for lean production practices, which often favour geographical proximity to suppliers and specific markets. Other factors, which influence OEMs investment decisions in developing countries, include purchasing power, road and driving conditions, labour market regulations, standards and industry regulations, and public policies such as incentives, taxation and tariffs.⁵⁴

(2) Situations in the Medium Sized Developing Countries

Some medium sized developing countries, such as South Africa, Thailand and Turkey, supported vehicle assembly for their domestic markets as well as to export to their wider regions. Other smaller developing countries are close enough to developed countries to supply parts on a just-in-time basis within regional trade blocs, such as Mexico in NAFTA and

⁵¹ <http://www.hsrc.ac.za/en/research-outputs/ktree-doc/11960>

⁵² http://siteresources.worldbank.org/DEC/Resources/84797-1154354760266/2807421-1255556544915/6476708-1280516928024/Automotive_Industry.pdf

⁵³ http://www.ijstm.com/images/short_pdf/1459926098_262V.pdf

⁵⁴ <http://www.hsrc.ac.za/en/research-outputs/ktree-doc/11960>

several Eastern European countries in the European Union. These countries have become export hubs for labor-intensive parts and low-cost vehicles as well.⁵⁵

As the markets for automotives shift to the developing world and production inevitably follows, more development and design work will shift as well. For example, the automotive cluster in Shanghai has a few important design centers with local Chinese firms trying hard to fill the vacuum. In India, domestic firms have deeper engineering capabilities, including of small vehicles segment that dominate the local market. India's position is unique being home to a vibrant automobile of more than 28 million vehicles in use.⁵⁶ It has enjoyed an upward growth of passenger vehicle growth, a trend believed to be sustained in the foreseeable future due to a strong domestic market and increased thrust on exports.⁵⁷

(3) Asian Countries

Some Asian developing countries, including China, India, Indonesia and Thailand, have developed their automotive sectors through different paths with direct and indirect influence of government through innovative policies and trade liberalization programmes. Government policies towards investment liberalization brought significant benefits to the selected countries as private players stepped in with modern technology and FDI started pouring in mainly through the hands of Japanese automotive majors. With every major shift in policies made by the Indian government, the automotive industry has come out stronger and better.⁵⁸

A close examination of the automotive sector in the developing countries reveal four (4) categories. Firstly, there are the large developing countries, such as China, India and Brazil, which offer large and growing markets, making it profitable and strategically desirable for assemblers either to produce cars specifically for these market requirements, or to adapt existing models for use in these markets. In these countries, assemblers establish facilities for regional headquarters as well as regional design and innovation centres; and attract lead suppliers, particularly those linked to assemblers by global follow-sourcing agreements, to also establish local engineering and innovation capabilities. This in turn incentivizes global suppliers to source inputs from local second tier suppliers.⁵⁹

Secondly are the mid-sized advanced developing countries, with a sufficiently large market to justify local assembly, but not large enough to incentivize local adaptation or market-specific products – examples here include South Africa, Thailand and Turkey. These countries tend to become assembly hubs for their regions and creates opportunities for local suppliers. These activities can also open up opportunities for export. For example, South Africa has a mature assembly sector that evolved capabilities from the basic assembly of fully imported kits through to regional supply and global export, and a component sector that uses comparative advantages in leather (for seats), platinum (for catalytic converters), inexpensive labour (for harnesses), and heavy components (for wheel hubs, engine blocks and other metal-bashing components).

The third category consist of developing countries that are proximate to large developed-country markets and can supply on a Just In Time (JIT) basis with a regional trade block. Examples here include Mexico-serving North American Free Trade Agreement (NAFTA), the Czech Republic-serving the European Union and Thailand-serving the Association of Southeast Asian Nations market (ASEAN). These countries tend to become hubs for labor-intensive components. If capabilities upgrading occurs, opportunities can arise for the production of capital-intensive parts and even assembly. However, the proximity to developed economies can close off such opportunities.⁶⁰

⁵⁵http://siteresources.worldbank.org/DEC/Resources/84797-1154354760266/2807421-1255556544915/6476708-1280516928024/Automotive_Industry.pdf

⁵⁶ <http://www.oica.net/category/vehicles-in-use/>

⁵⁷http://siteresources.worldbank.org/DEC/Resources/84797-1154354760266/2807421-1255556544915/6476708-1280516928024/Automotive_Industry.pdf

⁵⁸ http://www.ijstm.com/images/short_pdf/1459926098_262V.pdf

⁵⁹<http://www.hsrc.ac.za/en/research-outputs/ktree-doc/11960>

⁶⁰ <http://www.hsrc.ac.za/en/research-outputs/ktree-doc/11960>

A fourth dynamic, described as ‘nascent’, is ‘for local lead firms to leverage the new, relatively open local and global supply-base to rapidly become more competitive locally and perhaps on world markets’. The example of Chery Automobile is illustrative: Volume production of the Chery brand began in 2001, and by 2007 production had grown to 600,000 units, making it China’s largest vehicle exporter. This is a remarkable achievement.

Government policy has played important roles in growing the automotive sectors in many developing countries. For example, the Chinese government focused on the development of technological capabilities in local firms. The Chinese focus on local capability building – in product and process technology as well as the requisite human resources to drive it – is central in explaining the rapid technology transfer and localization achieved by the automotive industry in China. In other countries like Malaysia, the emphasis has been limited largely to incentives, and has been less successful.⁶¹

(4) Selected Africa Cases

South Africa

The South African vehicle industry was built up from the 1960s through protectionist policies. However, in the 1980s and 1990s demand stagnated, and total vehicle sales of less than 250,000 units per year were fragmented across seven different assemblers. In 1995 a new policy, the Motor Industry Development Programme (MIDP), shifted the industry towards increasing integration into the global value chains of the transnational auto companies. (Details in Annex 1)

As already seen in 3.5.0 (2) South Africa is a medium sized developing country which is able to support vehicle assembly for domestic markets as well as to export to African region and other markets. As of 2015, the South African industry had 55 brands of passenger vehicles offering over 2,800 models and over 31 brands of light vehicles. Total domestic sales for the year stood at 617,749 units⁶². Also in 2015, South Africa exported vehicles worth US\$5.6 billion and was ranked 19th car exporter globally.⁶³ Over the years, Government of South African has undertaken deliberate interventions to develop a globally competitive automotive industry. The table 3.12 below presents the trends of the automotive policy in South Africa—including the key policies and their respective impacts on the sector.

Phase	Objective	Policy Developed	Policy Impacts	
			Successes	Challenges
Automotive Sector Protectionist policies (1924-1995)	Emergence of the South African Auto Assembly Industry (1924-1960)	<ul style="list-style-type: none"> • Import Duty on cars at 15% ad valorem and 20% after market components in 1910 • Monetary quotas introduced to create a balance of payments and import control (1948) 	<ul style="list-style-type: none"> • Increased presence of automotive subsidiaries • Boom in sales and Import control measures increased number of OEMs • 80% of an average passenger car was built from imported components 	
	Complete Inward Orientation Transformation to Full scale manufacturing through protection: The Domestic	<ul style="list-style-type: none"> • Incentives included high tariffs (15% in 1961 to 66% in 1980), tax incentives and import permit. 	<ul style="list-style-type: none"> • Increase in number of OEMs from phase I (8) to phase II (16) and phase III (13) • Tremendous increase in the number of 	<ul style="list-style-type: none"> • Increased overhead costs associated with the localization of automobiles • High import bill despite the intention of the domestic content program • Increased (12%)

⁶¹<http://www.hsrb.ac.za/en/research-outputs/ktree-doc/11960>

⁶² <http://www.oica.net/>

⁶³ Source: <http://www.worldstopexports.com/car-exports-country/>

	Content Program (Phase I to Phase III (1961-1980))		component producers (200 by 1967 alone) • Proliferation of model variants.	automotive trade deficit increased during this period due to continued dependence on imports for technology intensive components.
	Protected Export Promotion Phase V to Phase VI (1981-1994)	<ul style="list-style-type: none"> • Excise duty rebate in exchange for value of domestic content of a locally produced export vehicle/component • Allowance to trade export credits among producers 	<ul style="list-style-type: none"> • Created a small and locally oriented automotive industry Significantly increased vehicles and component exports, continued proliferation of model variants (200 by the end of phase V) and a decline in the number of OEMs (7 in phase V) 	
Sector Liberationist Policies	Integration with the Global Market through export subsidies (1995-2012)	<ul style="list-style-type: none"> • Introduced a Motor Industry Development Program to encourage integration in the global market. • Gradual reduction in import tariffs between 1992 and 2002 was from 65% to 40% on imported passenger vehicles and from 49% to 30% on original equipment components. • Duty free on imported components in exchange for an equivalent value of domestic content exported, trade in export credits among producers and duty free incentive for the production of smaller fuel efficient vehicles • Introduced a small vehicle incentive duty draw back for producing small vehicles 	<ul style="list-style-type: none"> • Strong export growth rates • Improved reorientation to the global market, employment generation and lower cost of domestic consumers. 	<ul style="list-style-type: none"> • Import Duty rebates as export subsidies sustained the weak base for domestic production of components • Incentives created space for rent seeking OEMs • High cost of export subsidy born by tax payers. • Credits were tradable which forced component manufacturers to sell them to OEMs meaning they used points to import duty free while selling them at duty inclusive prices. • Small Vehicle Incentive was failed to produce affordable cars
Automotive Sector Global Integration Policies	<ul style="list-style-type: none"> • Replaced the MIDP and to abolish local content requirements and encouraged international Competitiveness through production incentives • (2013- To date) 	<ul style="list-style-type: none"> • Reduced nominal rate to 25% for CBU's and 20% components. • Introduced production incentives 55-50% of value added support through duty rebate credits • Awarded duty credits based on 20-18% of value of light motor vehicles produced locally. • Introduced an Automotive Investment Scheme to enhance competitiveness of component suppliers through improvement of processes, products and quality standards 	<ul style="list-style-type: none"> • Increased global competitiveness • Wide exportation base 	

Source: Uganda Automotive Industry Development Policy and Institutional Structures: Case Studies of Automotive Industries (undated)

Examples of OEMs which have production plants in South Africa include BMW, Ford (incorporating Mazda), General Motors, Mercedes Benz, Nissan, Renault, Toyota and Volkswagen. Also, component manufacturers such as Arvin Exhaust, Bloxwitch, Corning, and Senior Flexonics have established production bases⁶⁴.

⁶⁴<http://www.southafrica.info/business/economy/sectors/automotive-overview.htm#.WC0wftJ97IU>

Ethiopia

The automotive sector shows a presence in Ethiopia's economy. In 2015, the country opened its first vehicle manufacturing and assembly factory, Bushoftu Automotive Industry, run by the Ethiopian military, to manufacture between 10,000 to 20,000 vehicles annually.⁶⁵ The Government also established an engine and body manufacturing plant to produce a various types of engines for light and heavy-duty vehicles and tractors. The Ethiopian automotive sector is still in its infancy with very little participation of the private sector due to a myriad of factors including, foreign exchange controls, limited disposable income (with a per capita income, of only US\$702 in 2015 and absence of an automotive policy)⁶⁶ among others.

Most recently, in July 2016, a new vehicle assembly line built by Mesfin Industrial Engineering was inaugurated and it will assemble Peugeot auto vehicles.

Key interventions aimed at developing Ethiopia's automotive sector include:

- Providing fiscal incentives for new investors in the manufacturing sector. This would include incentives comprising of income tax exemptions for a period of five (5) years if more than 50% products or services are exported, or if more than 75% of the product is supplied to an exporter as a production input while investors who only supply the local market or export are less than 50% of their product are tax exempt for two years.
- Local government patronage, especially for buses used for public transport schemes in Addis Ababa.
- Tax breaks for Ethiopian assembled vehicles when local input exceeds 10%.

Nigeria

Nigeria started assembling motor vehicles in the 1970s, with the federal government of Nigeria partnering with six (6) European/international automotive and commercial vehicle manufacturers to produce passenger and commercial vehicles locally from CKD kits. This initial arrangement resulted in an initial installed capacity of 149,000 units per annum during the 1970s and 1980s. Further, the Federal Government entered into five (5) more agreements with four (4) Japanese and one (1) European automotive companies to establish assembly plants in 1982. However, these plans did not materialize, while the output and capacity utilization of the six (6) existing plants declined rapidly due to a number of reasons including inconsistent policy implementation, corruption, declining patronage by local and federal government departments and lack of reliable power supply,⁶⁷ .

In 2014, the government of Nigeria developed the national automotive policy known as the National Automotive Industry Development Plan (NAIDP) aimed at encouraging domestic production of vehicles as described in Annex 1. The launch of Nigeria's NAIDP and the subsequent hike in import tariffs for vehicles has attracted the interest of leading international carmakers and has led to the resumption of small scale vehicle assembly in the country. Although it is too early to discuss the result of this policy, it should be noted that the registration of new vehicle in Nigeria plunged to 26,400 of 2015 from 53,900 of 2014 (See Table 3.6 of 3.1.2). Also, 4,000 vehicles were assembled when the policy was launched in 2014, but his figure dropped to 2,500 in 2015.⁶⁸

Currently, 35 companies are licensed to produce in Nigeria. Among them, the main producers are Nissan, Hyundai, Volkswagen, Kia Motors, Ford, Honda and Peugeot. At present the vehicles are assembled from imported SKD kits with a limited degree of local inputs-sourcing due to the lack of a reliable and adequate domestic supplier base.⁶⁹

⁶⁵ <http://afkinsider.com/126810/ethiopia-wants-to-be-africas-no-1-auto-manufacturer/#sthash.X20wt9v2.dpuf>

⁶⁶ <https://www.google.com/url?sa=t&source=web&rct=j&url=http-s://www2.deloitte.com/content/dam/Deloitte-Africa-automotive-insights-Ethiopia-Kenya-Nigeria-Apr16.pdf>

⁶⁷ <https://www.google.com/url?sa=t&source=web&rct=j&url=http-s://www2.deloitte.com/content/dam/Deloitte-Africa-automotive-insights-Ethiopia-Kenya-Nigeria-Apr16.pdf>

⁶⁸ <https://www.autoreportafrica.com/nigerias-local-vehicle-production-dropped-2500-units-2015/>

⁶⁹ <https://www.google.com/url?sa=t&source=web&rct=j&url=http-s://www2.deloitte.com/content/dam/Deloitte-Africa-automotive-insights-Ethiopia-Kenya-Nigeria-Apr16.pdf>

4.0 IMPERATIVES AND PATHWAYS FOR THE DEVELOPMENT OF AUTOMOTIVE INDUSTRY

The growth of automotive industry brings with it immense benefits as well as drawbacks to the economy. While job creation and technology transfers are among the main benefits, pollution and traffic congestions are among key drawbacks of the industry. Experiences from countries with developed automotive industry show that benefits of manufacturing localization far much outweigh the drawbacks it creates. This has incentivised governments to create and implement policies and strategies to support development and growth of automotive industry.

Developing of local automotive industry entails having domestic manufacturer of automotive products and so having domestic producers. The production ought to provide vehicles of different technological to cater for average and higher than average incomes. Flow of foreign direct investments (FDI) in domestic automotive industry can become an effective tool of modernization and development.

From the above it shows that the current development stage of the EAC automotive industry is relatively at the early stage. In this regard it is quite essential to carefully design, introduce and implement necessary policy framework to grow the sector accordingly.

Considering the nature of the automotive industry, a suitable entry point is the developing countries, aiming to grow the industry is to join the global and regional value chains (GRVCs) established by OEMs. The market size of a region is generally measured by production volume and GDP per capita. The figure below shows the image of development stage. EAC's auto vehicle industry is between Phase I and Phase II (Baba, presentation (2017)) and motorcycle industry is between Stage 1 and Stage 2 (Mishima, presentation (2016)).

Relationship between market size and import substitution

Stage	Period		Major localization of products and process	Effective minimum production scale	Market size of finished motorcycles	Japanese-affiliated companies' capacity building activities	
	Thailand	Vietnam				Finished motorcycle company	Supplier
1st	After late 1980s	1990s	Parts that involve assembly of finished motorcycles and maintenance	Several ten thousand level	100,000 level	Building organizational capacity to conduct routine manufacturing (especially manufacturing capacity)	Building organizational capacity to conduct routine manufacturing (especially manufacturing capacity)
2nd	after 1989	After 2000	OEM parts that require casting, pressing, and machine processing	From around 200,000 to 300,000 level	500,000 level	Building organizational capacity to conduct routine manufacturing. Building capacity to build capacities partially started.	Building organizational capacity to conduct routine manufacturing (mainly manufacturing capacity and partially improving capacity)
3rd	From 1993 to 2000	After 2004	OEM parts and OEM electronic components that require casting and forging process	From around 500,000 to 1,000,000 level	Not less than 1,000,000 level	Establishment of organizational capacity to carry out routines. Building capacity to build capacities partially started.	Building organizational capacity to conduct routine manufacturing (especially maintenance capacity)

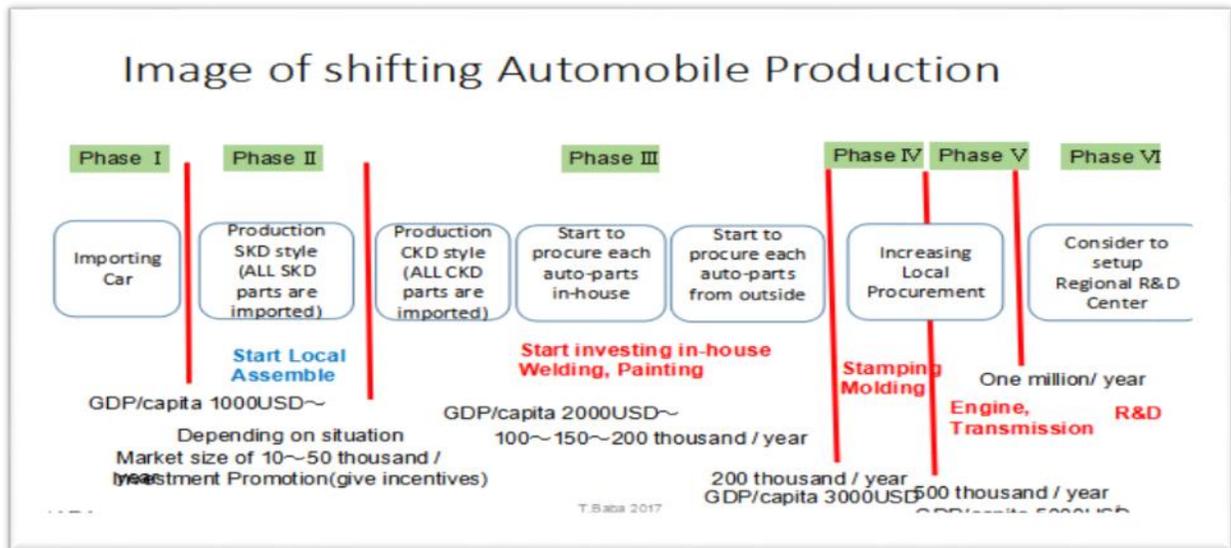
Source: Based on Mishima (2010)

Note: The effective minimum production scales show figures of annual sales scale of applicable products and process in the same line of the graph calculated at a unit of finished motorcycle. In addition, the periods for Thailand and Vietnam show when annual sales of Honda's finished motorcycles in each country fulfilled the effective minimum production scale for the first time in their production history.





Motorcycle industry: (Source: Mishima presentation (2016))



(Source: Prof. Baba (2017))

Vietnam, with low population and low GDP per capita in 1990s⁷⁰ compared with present EAC, took the strategy to introduce FDI of CKD and laid more emphasis on motorcycle. Vietnam expanded its market gradually and then expanded production, and localization is around 70% to 80%. On the other hand, auto vehicle industry in Vietnam, starting with joint-venture of local and foreign companies, did not develop well compared with auto vehicle industry in Thailand. EAC should benchmark with the motorcycle industry of Vietnam on clear cut strategy to introduce FDI and expanding market.

Over the years, most countries and especially developing ones, have utilised two (2) approaches to create policies to develop their nascent auto industries. One for market enhancement and the other is development of industries including attracting of FDIs. The idea is to start with growing the local supply through importation, gradually developing the local capacities to assemble through both SKD and CKD, and eventually establishing the necessary capacities to produce automobiles locally. In the process and in order to grow the local capacities devise ways of exploiting the huge potential for localization through necessary capacity development for quality, cost and delivery (QCD).

Experiences of China and Vietnam are instructive. Other countries such as Nigeria, Ethiopia and South Africa are trying to follow the path to grow their respective auto industries. EAC can follow a similar route to promote and develop her automotive industry.

1. Market Enhancement

The bigger the potential market, the more likelihood of success for the development of manufacturing industry. At this policy, the import of new and used automotives are welcomed, which helps enhancement of auto vehicle users, which enlarge the potential market of domestic manufactured vehicles. However, it should be noted that the importation of automotives drains foreign exchange earnings and could also contribute to trade deficit.

⁷⁰ Population was 66million in 1990 and 76million in 1999. GDP per capita was US\$98 in 1990 and US\$ 374 in 1999. (World Bank)

2. Development of industries

Policies to be adopted include:

i. Introduction of FDI

As the policies are implemented towards supporting the local automotive industry, parallel initiatives should be put in place to devise appropriate incentives to invite FDI to facilitate the growth and technology transfer. This approach worked well in Vietnam.

ii. Harmonized import tariffs

EAC governments will need to come up with a harmonized import tariffs on fully assembled autos (passenger vehicles to start with) with a higher tariff on used vehicles. The import tariff are to be on a sliding scale-starting high and reducing over time as the industry takes off. However, favourable import tariff is to be developed for semi-assembled imports with no or very low tariff on products substantially transformed from CKD to full assembly. Vehicles assembled in Kenya are not recognised to have met the provision of EAC CET. If partner states renegotiate these to ensure that vehicles assembled in either state access other markets duty free. This is expected to support development of the automotive industry early stages.

iii. Components and Parts manufacturing enhancement

To further deepen the development of the industry within the EAC, member states will need to develop Components and parts manufacturing industries on all automobile assembled and/or manufactured within the EAC. Such industries consists of OEM component - and replacement parts manufacturing. Generally, parts manufacturing develops from replacement of component. If total value of vehicles assembled within the EAC have in them components and parts manufactured within the EAC, the benefit of the development of automotive industry becomes bigger. If OEMs can access components locally that of good quality and at reasonable prices, this will encourage investments by the automakers within the region. The growth of firms with products and services supporting auto assembly will improve the Region's chances of becoming an automotive hub. Progression from basic SKD assembly to CKD or manufacturing is highly dependent on growth of auxiliary industries and supporting infrastructure.

iv. Affordable consumer financing scheme

For the aforementioned policies to work, the demand side ought to be strengthened. Despite the region having over 130 million persons, per-capital levels are very low making it difficult for majority to afford new vehicles. Financial options offered by commercial banks are a bit expensive making it unattractive to most consumers. Due to the limited accessibility to and expensive financing of vehicles, new vehicles will remain out of reach for most EAC residents. Therefore, the region should come up affordable financial solutions such as encouraging in-house financing by the automotive companies among others.

3. Liberalization Stage

Among the three (3) African countries mentioned, only South Africa tries to be in the liberalization stage. In 1995 a new policy, the Motor Industry Development Programme (MIDP), shifted the industry towards increasing integration into the global value chains and opening the industry for competition - in 1995. The policy was further refined in 2002 to 2007. In both policies, several of fiscal incentives were introduced including significantly reducing tariffs on import of vehicles and components, duty-free allowance of 27% of the wholesale value of vehicles was granted to assemblers and scheme that allowed vehicle and component manufactures to offset import duties against exports. Further local content requirement was abolished. In long term, the EAC would employ such a programme with well thought out incentives to further grow the industry while integrating it to global chains. Import substitution should be replaced with export led strategy given that the industry would have developed the capacities needed to export automobiles around the world.

5.0 STATE OF DEVELOPMENT OF AUTOMOTIVE INDUSTRY

5.1 Current Status of the Automotive Industrial Development in the EAC Partner States

The Automotive Industry Value Chain is typically a diverse entrepreneurship ecosystem with a wide range of business opportunities of value chain actors from parts manufacturing (metal, exiles, leather, plastics, rubber etc.); engineering and vehicle product development; assembly; vehicle retail and servicing; and logistics and supply chain business opportunities.

The EAC automotive industry value chain is primarily dominated by product support tier involved in the retail and distribution of motor vehicles and dealerships and selling auto-parts or components. As a result, a number of economic activities have been developed to support the industry including dealerships, finance and credit, logistics, repairs and maintenance, petrol stations and insurance.. The auto vehicle production of EAC was 9,295 units in 2015, assembled in Kenya. In addition to this, the region has other local craftsmen and enterprises manufacturing spare parts, reconditioning of vehicle components and building car bodies. The table below presents some key auto parts and components being manufactured in the respective countries in the EAC region,.

Country	Motor Vehicle Parts	Motorcycle Parts
Kenya (Source: Kenya Motor Vehicle Assemblers Association; Various Industry Players)	<ul style="list-style-type: none"> Oil Filters Leaf springs U-bolts Centre Bolts Bushes Vehicle Seats Bus Bodies Bus Seat Fabrication Painting Spares for railway industry especially the brake pads Various gears & shafts 	<ul style="list-style-type: none"> Side stand Right and left foot rest Centre stand Rear carrier Leg guard
Tanzania (Source: TATC, Superdol)	<ul style="list-style-type: none"> Trailer beds Cargo containers/trailers Painting Armored car bodies Spares for railway industry especially the brake pads 	
Uganda (Source: UMIA, Kiira Motors)	<ul style="list-style-type: none"> Vehicle Seats Bus Bodies Bus Seat Fabrication Agricultural Tractor beds and carrier Painting Bio-fuels (no commercial production yet) 	<ul style="list-style-type: none"> Motorcycle front & rear light guards Anti-rain/sun top adjustable umbrella
Rwanda (Source: NIRDA)	<ul style="list-style-type: none"> Bio-diesel 	

The EAC automobile industry is growing and this expansion is largely attributed to rapid ascent of the region's economy resulting from economic integration and its growing middle class (KPMG, 2016); and demand for transportation in the construction, mining, agri-business, tourism, energy and retail sector. The region is witnessing entry of new automotive

brands (manufacturers and sellers), new facilities being set up and old players are returning⁷¹. As discussed in chapter 3, in 2014 2.2 million vehicles were in use in EAC. The motorization for the region was 15 vehicles per 1,000 inhabitants, which is still low compared to Africa average of 44 vehicles per 1,000 inhabitants. Kenya had the highest level at 28 followed by Uganda at 12, Tanzania at 7, while Rwanda, Burundi had the least at 6 vehicles per 1,000 inhabitants. This in itself presents a potential for growing motorization in EAC region.

COUNTRIES/REGIONS	2010	2011	2012	2013	2014	Motorization rate 2013 (/1000 inh.)	Motorization rate 2014 (/1000 inh.)
EAC Countries							
BURUNDI	52	54	60	60	60	6	6
KENYA	961	1,022	1,084	1,190	1,250	27	28
RWANDA	45	51	59	65	71	6	6
TANZANIA	330	340	350	360	370	7	7
UGANDA	366	380	400	430	460	12	12
EAC*	1,754	1,847	1,953	2,105	2,211	15	15

, Source: OICA

*Rwanda data based on 2015 Year book, NISR/Authors computation

Today, the industry is largely dominated by retail and distribution of finished vehicles, and after-sales support in servicing and spare parts with small-scale assembly of motor vehicle especially heavy commercial vehicles only in Kenya. According to available statistics, total sales volumes increased by 63%, reaching over 257,000 units in 2015, compared to 158,000 units in 2011. The analysis of the data for the last five years shows that passenger vehicles took the largest percentage at 67% compared to Commercial vehicles 33%. —see Table 5.2.

Vehicle Type	2011	2012	2013	2014	2015	2011-2015	2011-2015
BURUNDI (5)							% Share
Passenger Vehicle Sales	480	502	929	1,353	1,067	4,331	47%
Commercial Vehicle Sales	1,043	833	933	1,024	987	4,820	53%
Sub-total	1,523	1,335	1,862	2,377	2,054	9,151	100%
KENYA (2)							
Passenger Vehicle Sales	42,225	52,847	65,005	64,444	68,489	293,010	67%
Commercial Vehicle Sales	18,537	22,629	27,561	30,629	36,750	136,106	31%
Sub-total	60,762	75,476	92,566	100,073	105,239	434,116	100%
*RWANDA (4)							
Passenger Vehicle Sales	4,061	6,177	4,715	4,174	4,072	23,199	74%
Commercial Vehicle Sales	1,619	1,698	1,554	1,617	1,866	8,354	26%
Sub-total	5,680	7,875	6,269	5,791	5,938	31,553	100%
TANZANIA (1)							
Passenger Vehicle Sales	34,577	39,468	64,484	76,349	80,935	295,813	69%
Commercial Vehicle Sales	19,967	28,787	32,242	35,751	36,967	153,714	36%

⁷¹ Volkswagen announces return into production in Kenya.

http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2016/09/Afrika_Strategie.html

Sub-total	53,644	59,435	93,271	108,591	116,686	431,627	100%
UGANDA (3)							
Passenger Vehicle Sales	24,400	23,688	25,450	24,752	18,520	116,810	68%
Commercial Vehicle Sales	11,560	9,737	12,980	11,700	7,840	53,817	32%
Sub-total	35,960	33,425	38,430	36,452	26,360	170,627	100%
EAC							
EAC Passenger Vehicle Sales	105,743	122,682	160,583	171,072	170,877	730,957	67%
EAC Commercial Vehicle Sales	52,726	63,684	75,270	80,721	84,410	359,017	33%
TOTAL SALES	158,469	186,366	235,853	251,793	257,493*	1,089,974	100%

Source: OG Analysis/Relevant Revenue Authorities/Authors Analysis

*Rwanda estimates computed from vehicle stock data (2015 Rwanda Yearbook)

The motorcycle industry in EAC has also witnessed a phenomenal growth in the last three (3) years, witnessing annual average growth rate of 17%, and 53% growth over the period. Taxis (boda⁷²) have become a popular mode of transport in urban centers and in the rural areas, driving demand in the EAC region. During 2015, the motorcycle market size value increased by US\$ 130 million to over US\$ 430 million, compared to US\$ 302 million in 2011—see Table 5.3. In terms of volume, the motor cycle market size increased by 100,000 units from 340,000 units in 2011 to reach 440,000 units in 2015—see Table 5.3. In terms of market share, Tanzania has the highest at 47% followed by Kenya at 31% and Uganda 19%.

Table 5.3: EAC Motor Cycle Market Size in Value US\$ millions and Volume (Thousands Units) , 2011-2015										
	2011		2012		2013		2014		2015	
	USD millions	'000s Units								
BURUNDI*	3.56	3.56	5.11	5.11	3.00	3.00	6.33	6.33	4.56	4.56
KENYA	131.8	140.22	92.2	93.97	127.8	125.06	118.1	111.21	146.9	134.65
RWANDA	15.5	17.22	12.3	13.67	8.0	8.89	7.0	7.78	10.2	11.33
TANZANIA	94.0	114.74	98.8	118.08	139.3	154.94	166.1	185.11	190.3	206.32
UGANDA	58.1	65.96	63.2	70.27	68.9	75.10	74.9	80.02	79.9	83.69
TOTAL	302.6	341.70	271.1	301.10	346.7	366.99	371.8	390.45	431.4	440.55

Source: TechSci Research /Relevant Revenue Authorities

*Authors estimates - Calculations based on an average EAC selling price of US\$ 900 per unit

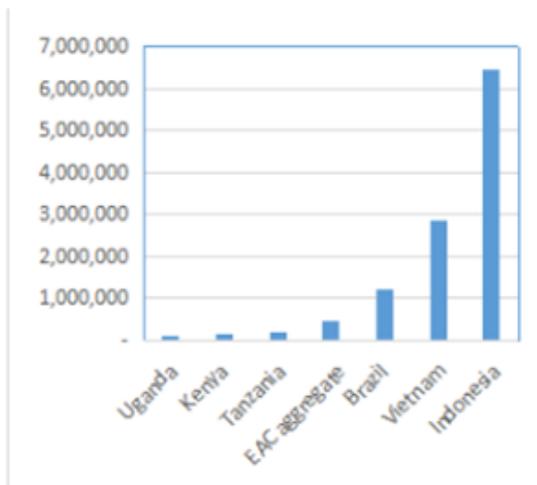
*Using value of imports as a proxy to market size

*Authors estimates - Calculations based on an average EAC selling price of US\$ 900 per unit

However, the size of market volume of EAC (aggregate) is still small; 134,000 in Kenya; 206,000 in Tanzania; 83,690 in Uganda; 11,000 in Rwanda; and 4,500 in Burundi. In that sense, the current stage of the motorcycle industry of each EAC member country can be categorized as Stage 1. In this sense, it could be assessed that the current development stage of the motor cycle industry is still at the early stage. It is quite essential to carefully design, introduce and implement policy framework to meet the current condition.

⁷² This is the local name for the motorcycle taxis

EAC Motorcycle Production in relation to Selected Global Players



(Source: OICA, Yamaha Motor Corporation)

Country by Country Synopsis

Burundi

Regarding the motor vehicle sector, Burundi is fully reliant on imported automotive products (passenger, cars, light commercial vehicles, heavy trucks, buses, vans, and motor cycles). Imported cars on wheels in complete form, and these are merely sold, serviced and repaired. There are no known importers of CKDs and SKDs for assembling, and no OEMs in the country. There are no local enterprises with the capacity to supply required raw materials i.e. metals, plastics, rubber, paints, glass, electronics, textile wood in the quantity and quality to assemblers/ manufacturers of motor vehicles.

Regarding motor cycles, there is SKD for 2 wheeler and 3 wheeler motorcycles; namely LADAK and TVS Companies.

Table 5.5: Burundi Automobile Snap Shot, 2015

Motor Vehicles		
1	Automobile Sales (Units)	2,054
2	Commercial Vehicle Sales (Units)	987
3	Passenger Car Sales Volume (Units)	1,067
4	Passenger Car Import Value (US\$ millions)	15.9
5	Passenger Car Export Value (US\$ millions)	1.0
6	Leading Automobile Company	Toyota
Motor cycles		
1	Value of Imports (US Thousands)	4,092
2	Value of Export (USD Thousands)	167

Kenya

Kenya is highly dependent on imports to meet domestic demand, with imports making up 94% of bilateral automotive trade and used vehicles accounting for over 80% of those imports. In comparison to other EAC partner states, Kenya's motor vehicle assembly industry is fairly well developed. There are three (3) assembly plants, namely: Kenya Vehicle Manufacturers (KVM) located in Thika, Association Vehicle Assemblers (AVA) based in Mombasa, and General Motors East Africa Limited (GMEA) in Nairobi. The total installed production capacity of the three (3) companies is close to 29,000 units—but have only been utilizing just over 20% of the installed capacity since 2010. Other global franchises are also exploring possibilities of setting up assembly plants in Kenya.

GMEA, KVA and AVA seem to have the technological capacity and skills to produce and maintain high quality vehicles. Specifically, GMEA—assembles and distributes vehicles, parts and services for Isuzu, Chevrolet, Opel, Hummer and Acdelco brands. In terms of parts, GMEA is currently working with local enterprises to produce automotive components, and to date 30% and 50% of the GMEA components for trucks and buses are produced in Kenya

KVM builds bus bodies as well as assembles a wide range of vehicles including; Nissan trucks, Hino Trucks and Buses, HB Trucks, Hyundai Trucks, Ashok Leyland trucks, MAN Trucks Buses, Trailers and Semi-Trailers. KVM are also the assemblers of CMC and DT Dobie's trucks and heavy commercial vehicles such as the Nissan double-cab pick-ups, Land Rover, Mazda, IVECO and Mercedes Benz. Most notably, on the production front in 2014, KVM started assembling of the Mobius Motor vehicle which is designed for Africa's rough terrain and off-road driving. Kenya has an established auto parts and components manufacturing base supported by the existing legal framework. Despite this framework, local manufacturers do not operate at full capacity. There are currently 50 enterprises manufacturing auto parts, another 50 involved in bus body building and other numerous automobile distributors, dealers and appointed agents that sell auto parts and components in Kenya. Some players in the local automotive industry like Numerical Machines Complex (NMC) and Auto Ancillaries (AA) have the capacity to produce high quality motor vehicle parts. NMC designs and manufactures suspension blackest for buses, Lorries and trailer and various gears and shafts, and AA produces vehicle springs and U-bolts.

Table 5.5: Key Players in the Automobile Industry in Kenya

No	Category	Company
1	Retailers	<ul style="list-style-type: none"> • Toyota East Africa/Toyota Kenya • Cooper Motor Corporation, • General Motors East Africa (GMEA) • Simba Colt • DT Dobie
2	Assemblers	<ul style="list-style-type: none"> • Kenya Vehicle Manufacturers (KVM)—and also Assembles for Hyundai Motor Corp • General Motors East Africa (GMEA) • Honda Motorcycle Kenya Ltd • Associated Vehicle Assemblers Ltd (AVA)—the largest in EAC region assembles for Toyota (East Africa)/ Toyota Kenya Ltd

There are 21 motor cycle assemblers in Kenya, and about 55 different types of motorcycles. Some of these plants have a fully integrated manufacturing system involving design, component manufacture and assembly. The annual market for motor cycles is close to 125,000 units. The most prominent motor cycle dealerships in Kenya include: TVS, Yamaha, Hero and Suzuki.

During 2015, the composition of the motor vehicle market share indicates that Isuzu accounted for the largest market share (32%), Toyota (18%), Mitsubishi (16%), Tata (6%), Ford (5%) and other automobile players captured (23%) of the market. Over the same period, various Chinese brands dominated the motorcycles market share, accounting for 45%, Bajaj (20%), Others (16%), TVS (8%), Hero (7%) and Honda (4%).

Table 5.6: Kenya Automobile Snap Shot, 2015		
Motor Vehicles		
1	Assembled Vehicles (Units)	9,295
2	Automobile Sales (Units)	105,239
3	Commercial Vehicle Sales (Units)	36,750
4	Passenger Car Sales Volume (Units)	68,489
5	Passenger Car Export Value (US\$ millions)	3.9
6	Passenger Car Import Value (US\$ millions)	496.4
7	Leading Automobile Brand	Isuzu
Motor Cycles		
1	Volume (Thousand Units)	134.65
2	Value (USD million)	146.92
3	Average Selling Price (USD Thousand)	1.09
4	Leading Brands	Chinese

Source: OG Analysis and Compilation by the Consultant

RWANDA

Rwanda relies on imported automotive products (passenger cars, light commercial vehicles, heavy trucks buses, and motorcycles). The imported vehicles are largely used cars but to protect the environment, the Rwandese authorities moved to increase duties on used auto vehicles to discourage their purchase and reduce carbon emissions. As part of the EAC agreement among member countries, the duties which came into force in April 2016 are charged basing on the depreciation rate of the vehicle. The tight laws on used car with high gas emissions could potentially increase market for new cars once it is fully enforced.

Even with Rwanda's improved public transport system, people still prefer to own private vehicles rather than rely on public transportation. Given that the fast rate of development in Rwanda, it is likely that the demand for new private cars will increase in the next 5-10 years, since according to IMF, vehicle ownership accelerates quickly when countries reach an income level of about US\$ 2,500 per capita.

The most sold automotive in Rwandese market in 2015 were passenger vehicles. These are largely individual transport cars. The leading brand of cars in Rwanda is Toyota (over 70%) and most cars are directly imported from Japan. Table 5.7 presents automotive sales in Rwandese market.

Table 5.7: Rwanda Automobile Snap Shot, 2015

1	Total Automobile Sales value (US\$, 000s)	103,366
2	Commercial Vehicle imports (US\$, 000s)	30,621
3	Commercial vehicle exports (US\$, 000s)	5,406
4	Passenger Vehicle imports (US\$, 000s)	47,268
5	Passenger Vehicle exports (US\$, 000s)	9,848
6	Motorcycles (US\$, 000s)	10,223
7	Leading Automobile Company	Toyota

Source: Primary data from ITC/COMTRADE 2016

TANZANIA

Tanzania is heavily dependent on imported automotive products (passenger, cars, light commercial vehicles, heavy trucks buses, vans, and motorcycles) but potential markets exist for establishing more plants to assemble vehicles and produce spare parts for domestic and regional markets. In 2015, Tanzania's auto vehicle market share was dominated by Toyota brand (55%), followed by Ford (13%), Nissan (9%), Land Rover (7%), Tata (4%), Volkswagen (3%) and others (9%). Like in other EAC partner states, demand for commercial motorcycle taxis in Tanzania, is driving up sales of motorcycles. During 2015, the motorcycle market share was distributed as follows: Bajaj (22%); Suzuki (6%), Honda (4%), TVS (4%) and Others (58%⁷³).

As many other EAC countries, Tanzania has other local craftsmen and enterprises manufacturing spare parts, reconditioning of vehicle components and building car bodies. For example: TAPCO has machines to re-bore, re-sleeve engine blocks of various sizes, rebuild and regrind crank shafts and several lathe, milling, shaping and drilling equipment to produce parts to customer requirements.

Table 5.8: Tanzania Automobile Snap Shot, 2015

Motor Vehicles		
1	Motor vehicle Sales (Units)	116,686
2	Commercial Vehicle Sales (Units)	35,751
3	Passenger Car Sales Volume (Units)	80,935
4	Passenger Car Export Value (US\$ millions)	0.9
5	Passenger Car Import Value (US\$ millions)	231
6	Leading Automobile Company	Toyota
Motorcycles		
1	Volume (Thousand Units)	206.32
2	Value (USD million)	190.49
3	Average Selling Price (USD Thousand)	0.92
4	Leading Brands	Chinese

Source: OG Analysis/ TechSci Research

⁷³ 58% consists of 35% of Chinese and 23% of others.

To develop local content for the automotive industry, the Government of Tanzania is planning to:

- Commercialize Tanzania Automotive Technology Centre (Nyumbu);
- Revamp General Tyre in Arusha;
- Develop large size foundries at Liganga, Kilimanjaro Machine Tools and Tanzania Automotive Technology Centre (Nyumbu); and
- Develop a plant for tractors and agricultural inputs at Centre for Agricultural Mechanization and Rural Technology (CARMATEC) in Arusha.

UGANDA

Uganda automobile industry is largely dependent on imported used vehicles which account for 80% of total imported vehicles and only 20% are new vehicle registrations. The industry comprises of wide range of small segments, including vehicle wholesalers and related auto service companies. Some of the key players dealing in brand new vehicles include are shown in the Table below.

No	Company	Dealership
1	Africa Motors and Machinery/Mantrac Uganda Ltd	Caterpillar products
2	CFAO Motors (U) Ltd	Volkswagen and Hyundai
3	Farm Engineering Industries Ltd	JCB, Bell, Landini, Fieldking, CLASS and Baldan
4	Foton East Africa (U) Ltd	Foton
5	Kampala Motors Ltd	SUBARU and Bashan Motorcycles
6	Mac East Africa	Chevrolet and Isuzu
7	Motorcare (U) Ltd	Nissan, BMW, and Suzuki Motor cycles
8	Motorcenter East Africa	KIA, Sino Truck, King Long and ZX Auto
9	Skenya Motors Ltd	Scania
10	Spear Motors Ltd	Mercedes-Benz, Fuso, Jeep, Chrysler and Dodge
11	Tata Uganda Ltd	Tata
12	The Cooper Motor Corp (U) Ltd	Land Rover, Jaguar, Ford, Mazda, Suzuki, Maruti, Nissan Diesel (Buses and Trucks) and MAN Trucks and Trailers), IVECO, Bobcat, New Holland and Case tractors and an extensive range of NARDI farming implements.
13	Toyota Uganda Ltd	Toyota and Yamaha Motorcycles
14	Victoria Motors Ltd	Mitsubishi and Renault Trucks

Source: Uganda Motor Industry Association

On the production front, the Government recently embarked on the process of establishing vehicle manufacturing capabilities in Uganda. Related to this, Kiira Motors Corporation (KMC) was incorporated in 2014. KMC is a Presidential Initiative for Science and Technology Innovations aimed at establishing vehicle (Pickups, SUVs, Sedans, Light and Medium Duty Trucks, and Buses) production capabilities in the country. Clearly, Uganda's automotive manufacturing

sector is still in its infancy. With the exception of Uganda Batteries that supplies car batteries to the Ugandan market, there no local enterprises that have the capacity to supply parts and materials.

However, the country has a number of enterprises supplying imported auto-parts and components to various individual car owners and firms. Additionally, there are local craftsmen manufacturing spare parts and reconditioning of vehicle components in Uganda. The most prominent ones are Musa Body Group, Rubaga Bus Boy Builders, Godfrey Namunye's body modification workshop and Jussy Coaches and Pro-Ride.

Motorcycle taxis have increasingly become a popular mode of transport due to their ability to beat lengthy delays caused by heavy traffic jams in the urban centres. They are also heavily deployed in rural areas because of their flexibility and ability to reach places with poor road networks. This thriving motorcycle market has attracted investments in Uganda. For example, local distributors for Yamaha motor cycles have opened up an assembly plant with a production capacity planned to reach 250 units per day. Astarc Group and TVS Motor Company are also planning to set up motor cycle assembling plants to produce new models that will be tailored for Uganda's conditions.

In 2015, the composition of the motor vehicle market share indicates that Toyota accounted for the largest market share (36%), Tata (17%), Mitsubishi and Nissan both at (12%), Ford (8%) and remaining (15%) was taken up by other automobile players in Uganda. During the same period, Bajaj dominated the motor cycle market share, accounting for 72%, TVS (9%), Hero (4%), Chinese (3%) and Others (12%).

The rapid growth in Uganda's automotive industry resulted into an increased demand and importation of auto parts and components—including tyres, lubricants, ball bearings, water pumps, batteries, filters, helmets, riding gear etc. According to the 2010 UBOS, Census for Business Establishment over 5,500 businesses were dealing in motor vehicles spare parts. Most of which are imported used parts, with a small percentage representing new parts, mainly brought in and sold by new car dealers. Despite these gains, the auto parts sector has continued to witness an unregulated influx of counterfeit spare parts for Japanese brands and it will be necessary to tackle this problem in the years ahead.

5.1.1 State of Local Suppliers to Meet Requirements of Assemblers in the EAC

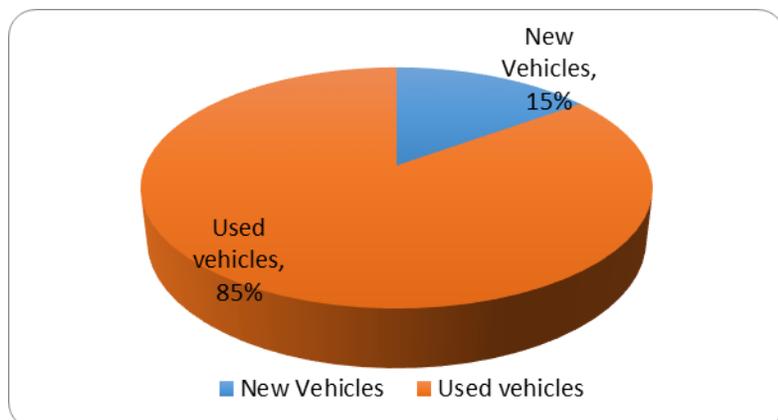
Informal enterprises with limited local value addition: Most of the initiatives that are aimed at local capacity for value addition (body builders, parts manufacturers etc.,) still exist in an informal setting with no platform for intellectual engagement.

Technical Competencies: Training institutions are still underpinned by the need to avail technicians to service or repair the more popular used vehicles. This has in turn created a deficit for highly trained technicians who can interact with more recent technologies.

5.1.2 Impact of Used Automotive Imports and Dumping of Second Hand Vehicles on the Domestic Market in EAC

Estimates indicate that there were a total of 2.2 million road vehicles in East Africa in 2014 (see table 3.5). This fleet comprised locally assembled, new and used vehicles. About 1.87 million (85%) of which originally entered the EAC market as used vehicles and only about 330,000 vehicles (15%) originally entered the EAC market as new vehicles. The average fleet age of these vehicles ranges from 15 to 20 years.

Fig 4.13 Percentage of used vehicles versus new vehicles entering into the EAC annually



The high proportion of used vehicles in the region is largely influenced by the relative cheaper initial costs required for purchase of the vehicles. However, an aging and inefficient fleet may result substantially in overall transport and operating costs over the entire life of a vehicle. Below are a number of ways in which the EAC region has been impacted by import of used motor vehicles:

- High fuel consumption
- High maintenance and insurance costs
- Low air quality from vehicle emissions
- Road-safety issues

Furthermore, regional analysis indicates that the EAC region currently spends more than US\$ 2.01 billion in foreign exchange for importation of motor vehicles per year. The import of used vehicle in the region has, in some meaning, hampered development of the local automotive manufacturing industry with the associated industry jobs, technology transfer and support to industrialization, skills training to local youth, manufacture of products suited for the region.

Environmental, Safety, and Health Costs: Older vehicles tend to emit substantially higher levels of pollutants, which seriously affect human health. Several studies in the EAC region have also shown that most auto vehicle related pollutants were above WHO recommended limits and are major contributors to acute respiratory diseases. In Kenya, Green House Gas (GHG) emissions from the transport sector were projected to grow from 6MtCO₂e in 2010 to about 18MtCO₂e in 2030, older vehicles being a major cause of this poor air quality.

Older vehicles also tend to cause more traffic accidents. Africa region has the highest road traffic fatalities of 26.6 per 100,000 populations.⁷⁴ Some of these accidents are attributed to increased motorization without commensurate infrastructure development and other regulatory capacity. In 2010 traffic fatalities reported and estimated in the EAC were 10,386 and 32,202 respectively with an average fatality cost of about US\$ 12,000. In addition, average cost per vehicle and injury was US\$ 3,000 and US\$ 2,700 respectively costing the region a total of about US\$ 730 million. Uganda was leading with accident fatality risk of 28.9 (deaths in 10,000 population) followed by Tanzania at 22.7. Burundi had an accident fatality risk of 21.3, Kenya 20.9 and 19.9 for Rwanda⁷⁵.

Table 5.10 below shows that as vehicle population has increased in the EAC, (mainly through second hand vehicle imports), fatalities from road accidents have also increased.

Table 5.10 Fatalities from Road accidents in the EAC

⁷⁴ Global status report on road safety: 2015

⁷⁵ <http://www.unep.org/Transport/new/pcfiv/pdf>. 'A Study of Motor Vehicle Age Limit for Importation of Used Motor Vehicles in East Africa Region'

Country	Road Traffic Deaths per 100,000 populations	
	2010	2014
Burundi	21.3	21.83
Kenya	20.9	25.11
Rwanda	19.19	24.06
Tanzania	22.7	29.12
Uganda	28.9	37.14

Source: WHO Global status report on road safety: 2013 & 2014

With regards to motor cycles, the region has lost a lot through motor cycle accidents and the associated increasing medical bills. Some countries e.g. Kenya have even established special wards in public hospitals to cater for motor cycle accident victims.

Social and Economic Costs: Although the used motor vehicle industry has made a significant contribution to the livelihoods of domestic car dealers, who are predominantly small and medium entrepreneurs, spawned a number of related activities including servicing and repairs, vending of spare parts, graphics, and the provision of ancillary services such as alarm systems, vehicle audio systems and other accessories, the negative impact is also created as stated above.

Evidence also shows that the age of a vehicle has a direct impact on its productivity and on its maintenance costs, hence on total vehicle operating costs. In addition, road safety studies in the EAC have demonstrated that great economic losses result from road accidents. For example, these losses are estimated to be 5% of GDP in Kenya, 3.4% in Tanzania and about 3% in Uganda (WHO 2013).⁷⁶

Importing vehicles as Fully Built Units (FBU) without any Domestic Value Addition also inadvertently contributes to unemployment or underemployment and does not help the desired industrialization interventions toward middle-income status prospected by the most countries in the EAC region.

⁷⁶ <http://www.unep.org/Transport/new/pcf/v/pdf>. 'A Study of Motor Vehicle Age Limit for Importation of Used Motor Vehicles in East Africa Region'

5.1.3 Prospects and Potential for the Development of Regional Automotive Industry in EAC

5.1.4 Overview of Macro-Economic Environment

The EAC is home to 145.5 million of which 22% is urban population⁷⁷. The five (5) country region combined Gross Domestic Product (GDP) stood at US\$ 147.5 billion (See Table 5.1). The region's economic growth performance during the past decade has been impressive growing at 6.2% on average since 2000. Although East Africa's growth decreased in 2015 to 5.6% from over 7% in 2014, the 2015 growth placed the region among the continent's fastest growing regions. Most of the growth among the partner states was driven by the services sector, although construction and industry also played a significant role in economic growth.⁷⁸ The EAC's inflation slightly eased to 5.5% in 2015 compared to 5.6% rate in 2014. The current account as a percentage of GDP improved from a deficit of 12.7% in 2014 to a deficit of 9.5% in 2015⁷⁹

	Population (millions)	GDP growth rate (%)	GDP, current prices (US billions)	GDP per capita (current US\$)	Inflation
Burundi	9.4	-4.1	2.9	277	5.5
Kenya	44.2	5.5	63.4	1,377	6.0
Rwanda	11.2	7.5	8.1	697	3.8
Tanzania	50.2**	7.0	48.3	879	5.9
Uganda	39.9	5.3	24.3	705	5.2
EAC TOTAL	151.4	5.6	147.5	974	5.5
Africa	1,184	3.6	1,590*	1,588*	3.8
Worldwide	7,347	2.6	73,891.9	10,057	1.4
South Africa	55.9	1.2	314.6	5,723	4.6
Egypt	91.5	4.2	330.8	3,615	10.4

Source: African Development Bank/World Bank

*Sub-Saharan Africa

**Updated as per Census 2012 for Tanzania

The region has made considerable progress in institutional reforms, investments in both national and regional infrastructure and fast-tracked regional integration. Today, the regional integration process is in full swing as reflected by the encouraging progress of the East African Customs Union, the establishment of the Common Market in 2010 and the implementation of the East African Monetary Union Protocol.⁸⁰ Moreover, the region continues to enjoy much greater political stability, which includes the compliance to international rules, and peace has been restored in most of the countries.

Currently in the EAC region, the automotive sector is making a significant contribution to the livelihoods of domestic car dealers, who are predominantly small and medium entrepreneurs. For example, according to the Census of

⁷⁷<http://www.eac.int/about/EAC-quick-facts>

⁷⁸ EAC Trade Report 2015

⁷⁹ KNBS, 2016

⁸⁰<http://www.eac.int/about/overview>

Business Establishments Report in 2010, a total of 42,000 persons were employed in the sale, repair and maintenance of motor vehicles and motor cycles sub-sector. The highest proportion (31%) of these employees were engaged in the sale of motor vehicle parts and accessories. This was closely followed by the repair of motor vehicles with 30% of the employees. The least number of employees were in sale of vehicles activities accounting for only 2% of the total employees, Table 5.10.

Table 5.12: Employees in the Sale, Repair and Maintenance of Motor Cycles subsector, 2010			
Activity	Businesses	Number of Employees	%
Sale of Motor Vehicles	128	1,024	2
Repair of Motor Vehicles	1,731	12,749	30
Car Washing Bays	508	3,737	9
Sale of Motor Vehicle parts	5,527	13,060	31
Sale, Maintenance & Repair of Motor cycles	4,938	11,473	27
Total	12,832	42,043	100.0

Source: UBOS, Census of Business Establishment report, 2010

The automotive sector contributes government tax revenues to all the countries in the EAC region. For example, in Uganda the Cost, Insurance and Freight (CIF) value of the imported motor vehicles to country reached 327 million USD in 2012/2013 and 493 million USD in 2013/14. The taxes collected amounted to 125 million USD and 136 million USD during the same respective periods.

Table 5.13: Value and Tax on imported vehicles in Uganda, US\$ '000								
Period	Age	No. of vehicles	Value	Total Tax	Import Duty	VAT	Withholding Tax	Environmental Tax
2012/13	Less than 8 years	12,353 (30.4%)	235,264 (72.0%)	59,558 (47.5%)	24,242 (51.6%)	31,618 (60.6%)	3,698 (45.7%)	
	Over 8 years	28,242 (69.6%)	91,707 (28%)	65,902 (52.5%)	22,733 (48.8%)	20,585 (39.4%)	4,390 (54.3%)	18,194
Total		40,595	326,971	125,460	46,975	52,203	8,088	
2013/14	Less than 8 years	13,661 (29.5%)	383,473 (77.7%)	57,725 (42.2%)	20,861 (43.5%)	32,538 (56.9%)	4,326 (45.0%)	
	Over 8 years	32,633 (70.5%)	109,753 (22.3%)	78,990 (57.8%)	27,138 (56.5%)	24,604 (40.1%)	5,295 (55.0%)	21,953
Total		46,294	493,226	136,715	47,999	57,142	9,621	

Source: Uganda Revenue Authority

5.1.5 Overall Investment Flows in the Region and Supportive Frameworks

Available data indicates that only a few firms are doing production in the automotive sector in the EAC and that these firms are mainly in Kenya.

The Motor Vehicle Subsector.

According to the Kenya Association of Manufacturers, the Kenya government invited investors in the 1970s for joint venture partnership in setting up Motor Vehicle Assembly plants with capacity to satisfy regional demand and contribute to economic growth through wealth creation, employment and technology transfer. Substantial tariff protection and other incentives were introduced to offset high cost of doing business in Kenya and spur industrialization through backward linkage with local component manufacturers with the overall vision of eventually moving from assembly to fully integrated manufacturing system involving design, component manufacture and assembly. This was in line with the import substitution strategy and later the export oriented strategies which were also being pursued by other developing countries e.g. South Africa, Egypt, China, India, Thailand and Brazil.

Kenya's support mechanism was substantially reduced in 1990s with introduction of used vehicles into the economy and later in 2005 upon the launch of the customs union when import duty was harmonized at 25% under the EAC Common External Tariff which was a substantial reduction from the pre-EAC customs union import duty rates in Kenya of 35% and a surcharge of 20% for used Motor Vehicles.

As mentioned earlier, there are three (3) assembly plants, namely: Kenya Vehicle Manufactures (KVM) located in Thika, Association Vehicle Assemblers (AVA), based in Mombasa and General Motors East Africa Limited (GMEA), The total installed production capacity of the three companies is close to 29,000 units—but have only been utilizing less than a third of the installed capacity since 2012. However, other global franchises are also exploring possibilities of setting up assembly plants in Kenya.

Other existing enterprises in the region involved with automotive manufacture though not at full commercial level include the following government institutions.

(1) Tanzania Automotive Technology Centre (TATC) – a public facility established under the Ministry of Defence that aims to be a centre of excellence for both military and civilian automotive engineering.

(2) Uganda's Kiira Motors Corporation (KMC) which is a Presidential Initiative for Science and Technology Innovations aimed at establishing vehicle (Pickups, SUVs, Sedans, Light and Medium Duty Trucks, and Buses) production capabilities in the country.

(3) Kenya's Numerical Machines Complex (NMC), a facility under the Ministry of Industrialization co-owned by University of Nairobi and Kenya Railways. NMC specializes in the production of steel and engineering designs including automotive spare parts.

⁸¹ Components and Parts Manufacturing

Kenya has an established parts and component manufacturing base supported by the existing legal framework (LN 363 and 489 which prescribes what items should be sourced locally). There are currently 50 enterprises manufacturing auto parts, another 50 involved in bus bodybuilding and other numerous automobile distributors, dealers and appointed agents that sell auto parts and components in Kenya. However, local component manufacturers do not operate at full capacity because of the low volumes within the assemblers. They are also not able to serve the spare parts market effectively due to presence of too many vehicle models as well as pressure from illegitimate or undeclared spare part imports. Consequently, Kenya's and thus the region's manufacturing supply base for auto parts is extremely thin and includes none of the world's top ten suppliers.

In Tanzania, there are also engineering companies that fabricate or produce auto-parts and components. For example, TAPCO has machines to re-bore, re-sleeve engine blocks of various sizes, rebuild and regrind crank shafts and several lathe, milling, shaping and drilling equipment to produce parts to customer requirements. As earlier observed, other

⁸¹ Promotion of local content should be done in adherence with relevant WTO rules

EAC Partner States also produce some parts and components, presenting an opportunity to grow local content through expansion, improvement and adoption of some of the parts already manufactured in East Africa.

Motorcycle assembly

Motor cycle assembly follows a similar trend in the EAC with the sector being more established in Kenya. There are 21 motor cycle assemblers in Kenya, and about 55 different types of motor cycles. Some of these plants have a fully integrated/ semi-automated manufacturing system.

In Tanzania, motor Cycle assemblers include Kishen Enterprises Ltd. while in Uganda, Astarc Group and TVS Motor Company are planning to set up motor cycle assembling plants to produce new models that will be tailored for Uganda's conditions. Details on motor cycle sector have been seen earlier in this section.

Regulatory and Policy Environment;

Though not well developed or properly implemented, there are relatively more policy support and regulations for the automotive sector within Kenya than in the other EAC states.

- Kenya has Regulations for motor Vehicle assembly under LN 363 and 489 but the EAC regulations are not yet approved and implemented.
- Motor cycle Assembly regulations are being drafted in Kenya.
- Regulations for motor Vehicle standards are not harmonized in EAC in respect to quality, inspection and age, though Kenya has KS1515 Standard that deals with age of used vehicle imports as well as motor vehicle inspection among others.
- Preference for government procurement of vehicles is given to locally assembled vehicles under the Kenya Public Procurement and Disposal Act, though the benefits are yet to be fully realised.
- There is provision of specific tax and non-tax incentives to assembly firms to encourage local production as indicated below:

Incentives Currently Enjoyed by the Sector

- i. 40% local procurement by Kenyan Government Departments under Public Procurement and Disposal Act
- ii. Preferential market access in the region following revised rules of origin encourages automakers to produce to sell to the wider EAC market.
- iii. Zero (0) % duty on CKD vehicle imports.
- iv. Duty exemption on industrial spare parts used as replacement parts for installed machinery/jigs.
- v. VAT exemption of chapter 84 and 85 Machinery, Plant and Equipment.
- vi. Exemption from Pre-verification on Conformity of raw materials and machinery for use in production
- vii. The 25% EAC CET differential for all vehicle imports -Locally produced vehicles have an advantage over imported vehicles within the EAC as they attract 0% duty and fully built imported vehicles attract 25% duty. Source: OG Analysis and Compilation by the Consultant

5.1.6 Emerging Developments in Infrastructure/Transport and Energy Developments and How These Support the Automotive Industry

Article 89 of the EAC Treaty gives prominence to regional infrastructure development as one of the major areas of cooperation to facilitate the movement of traffic within the Community, promote integration within the regional and global markets and further the physical cohesion of the Partner States. The Treaty calls on Partner States to "... evolve and expand the existing transport and communication links and establish new ones". The EAC Transport Strategy and Road Sector Development Program (2010–2020), and the 4th EAC Development Strategy for the period 2011/12-2015/16.

The automotive manufacturing industry requires a highly developed integrated infrastructure. However, the economic infrastructure in the EAC Partner states is not sufficient by global standards – and even by African standards. Inadequate energy supply is the most significant infrastructural problem in the region: Eastern Africa has the lowest per capita energy generating capacity on the continent and stakeholders identify inconsistent supply (which results in power outages and the requirement for expensive supplementary generation equipment) as a major cost factor. In terms of surface transport, Eastern Africa has serviceable regional trunk road networks, but the conditions are often poor resulting in high transportation costs when the combination of speed and distance covered are jointly taken into account. Very limited availability of rail transport compounds the problems. Finally, logistics probably remains the single biggest inhibitor of industrialization of any of the infrastructure problems. In terms of telecommunications, some Eastern African countries have among the highest costs and lowest penetration rates for fixed telephone lines, mobile phones and especially Internet services in Africa.

EAC partner states recognize that infrastructure development is costly and requires mobilization of significant resources. EAC integration provides an opportunity to pool resources to develop regional infrastructure projects which are capable of increasing its connectivity. These include regional road networks, regional railway networks, regional water ways, ports and other facilities. Efforts are already underway for Uganda, Kenya and Rwanda to jointly improve the quality of the road connecting the three countries and linking them to the sea at Mombasa. The Exim Bank of China and the three (3) governments are also jointly financing the construction of the regional standard gauge railway from Mombasa to Tororo and further to Kampala-Kigali and a branch from Tororo to Gulu, Nimule to Juba.

EAC partner states have also made commitments at regional and international level to improve electricity generation and sharing among partner states through the Eastern Africa Power Pool (EAPP) in a bid to rationalize the generation and use of modern energy sources. Countries are also investing in energy infrastructure for example, the Government of Uganda is planning to finalize the construction of the hydro power dam at Karuma and Ayago will commence; and the 400KV, 220KV and 132KV transmission lines will also be constructed to develop the national electricity grid. The Government of Tanzania has embarked on substantial investments in gas to reduce overdependence on hydropower, such as the ongoing gas pipeline project and also has allowed the private sector to generate power (Symbion, Songas, and IPTL) who together are able to generate 500MW. All these efforts to address the infrastructure deficit by EAC partner states will go a long way in supporting the development of the automotive industry in the region.

An efficient trade logistics system is important for trade facilitation and trade competitiveness. To support its infant automotive industry, EAC partner states will need to improve their port infrastructure, customs processes and capacity to track and trace freight goods. Land supply chains (from ports of entry to destination points and vice versa) will also need to improve by developing a better road network, reducing roadblocks, improving security, and improving railway network. Currently, EAC partner states making efforts to address the inefficiencies in logistical chain. For example, Uganda recently introduced an Automated System for Customs Data (ASYCUDA) that has significantly reduced border-crossing times from 27 hours to three (3) hours at Malaba border post (Kenya to Uganda) and from about three (3) hours to an average of one (1) hour at Katuna border post (Uganda to Rwanda). Similarly, the EAC partner states have set up One Stop Border Post (OSBP) which have simplified and harmonized border control regulations and procedures. The EAC OSBP Act came into effect in October 2016, of which draft was supported by JICA. This has enabled expeditious and more effective border control mechanisms and in so doing reduced transit costs in the region. In Tanzania plans are underway to decongest the Dar es Salaam port by, inter alia, establishing an Inland Container Depot, as well as improving linkages with the road and rail network.

5.1.7 Regional Approach to Promotion of Automotive Sector

For the EAC automotive industry to grow, there is a need for high volumes that can lead to economies of scales. These production volumes can easily increase if a regional approach is adopted focused on production for supply to the EAC region. Furthermore, recognizing, the EAC is part of Tripartite COMESA-EAC-SADC Free Trade Area covering 26 African countries, which had a GDP of US\$ 1.3 trillion in 2014. The regional approach should exploit the opportunities presented by the tripartite arrangement between EAC, COMESA and SADC to provide for an expanded market while introduce competitors from COMESA and SADC. Globally, most of the EAC partner states have preferential market access to the United States under the African Growth and Opportunity Act (AGOA) and to the European Union under the Generalized System of Preferences. These potentially present a huge market for region's manufactured automotive products in the years ahead.

To fully benefit from this large potential market, initially there is a need for uniform regional policy incentives for buying goods manufactured within the region. 'Buy EAC-build EAC' – which should support both purchases by private and public sectors. We also need Governments policy to support locally assembled.

From this viewpoint, there is a need to define common approaches to promote the sector and pursue uniform regulation/policies at both the EAC regional level and at respective partner states to boost demand for the automotive products. In the long run, it will be necessary to pursue the possibilities of specialization of roles by EAC partner states based on comparative and competitive advantage.

5.1.8 The Regional Market for Automotive Industry and Outlook

The automotive industry has a high potential to propel economic and social transformation of the EAC region through technological improvement, employment, deepening of credit markets, and upstream supplier development. Developing a strong automotive sector could potentially result in spill-overs into agricultural and construction equipment manufacturing as well as other specialist equipment manufacturing.

The favourable macro conditions and growing middle class is raising demand for luxury vehicles and passenger vehicles while the promising economic growing calls for more commercial vehicles. Steady growth in EAC's sectors of agriculture, tourism and construction is and will continue to fuel demand for pick-ups and heavy commercial vehicles. Even though the industry has remained underdeveloped, analysts recognise the potential in the region and foresee room for growth across the automotive value chain including vehicle sales, aftersales, vehicle assembly and finally local production.⁸² This will be possible given per capital levels are growing as well as financial market development making automobiles accessible for a greater share of population. However, the region must streamline its policies, regulations and laws relating to manufacture and sale of automobiles within the region; improve infrastructure as well as development of auxiliary sectors.

In recent past there has been a surge in multinational firms who have attracted to the EAC region due to emergence of middle class consumer society resulting from raising income. This has been supported by EAC's impressive economic growth which has remained one of the fastest growing regional economic blocs in the world over time. The region's population is growing and urbanization rate stands at 22%. With South Sudan recently joining the bloc, the EAC population has grown by an additional 11 million people potentially growing the demand of the automobiles in the region.

5.1.9 EAC Vehicle Sales and Motorcycles Outlook, 2015-2032

Vehicles: The EAC motor vehicle sales are projected to go close to over 600,000 units by 2027. Passenger vehicles will continue dominate accounting for 67% of the total vehicle sales. It is expected the growing economy and expansion of the middle class will continue spur the demand of vehicles in the EAC region—see Table 5.12

⁸² Deloitte (2015); "Deloitte Africa Automotive insights" <https://www2.deloitte.com>

Table 5.12 (a) EAC vehicle sales projections , 2015-2027																		
Vehicle Type	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Burundi																		
Passenger Vehicle Sales	1,067	1124.618	1185.347	1249.356	1316.821	1387.93	1462.878	1541.873	1625.134	1712.892	1805.388	1902.87885	2005.634	2113.939	2228.091	2348.408	2475.222	2608.884
Commercial Vehicle Sales	987	1040.298	1096.474	1155.684	1218.091	1283.868	1353.196	1426.269	1503.287	1584.465	1670.026	1760.20752	1855.259	1955.443	2061.037	2172.333	2289.639	2413.279
Sub-total	2,054	2,165	2,282	2,405	2,535	2,672	2,816	2,968	3,128	3,297	3,475	3,663	3,861	4,069	4,289	4,521	4,765	5,022
Kenya																		
Passenger Vehicle Sales	68,489	72187.41	76085.53	80194.14	84524.63	89088.96	93899.76	98970.35	104314.7	109947.7	115884.9	122142.708	128738.4	135690.3	143017.6	150740.5	158880.5	167460
Commercial Vehicle Sales	36,750	38734.5	40826.16	43030.78	45354.44	47803.58	50384.97	53105.76	55973.47	58996.04	62181.82	65539.6417	69078.78	72809.04	76740.72	80884.72	85252.5	89856.13
Sub-total	105,239	110,922	116,912	123,225	129,879	136,893	144,285	152,076	160,288	168,944	178,067	187,682	197,817	208,499	219,758	231,625	244,133	257,316
Rwanda*																		
Passenger Vehicle Sales	4,072	4291.888	4523.65	4767.927	5025.395	5296.766	5582.792	5884.263	6202.013	6536.921	6889.915	7261.97064	7654.117	8067.439	8503.081	8962.247	9446.209	9956.304
Commercial Vehicles Sales	1,866	1966.764	2072.969	2184.91	2302.895	2427.251	2558.323	2696.472	2842.081	2995.554	3157.314	3327.80875	3507.51	3696.916	3896.549	4106.963	4328.739	4562.491
Sub-total	5,938	6,259	6,597	6,953	7,328	7,724	8,141	8,581	9,044	9,532	10,047	10,590	11,162	11,764	12,400	13,069	13,775	14,519
Tanzania																		
Passenger Vehicle Sales	80,935	85305.49	89911.99	94767.23	99884.66	105278.4	110963.5	116955.5	123271.1	129927.7	136943.8	144338.8	152133.1	160348.3	169007.1	178133.5	187752.7	197891.3
Commercial Vehicle Sales	36,967	38963.22	41067.23	43284.86	45622.24	48085.85	50682.48	53419.34	56303.98	59344.39	62548.99	65926.6377	69486.68	73238.96	77193.86	81362.33	85755.89	90386.71
Sub-total	117,902	124,269	130,979	138,052	145,507	153,364	161,646	170,375	179,575	189,272	199,493	210,265	221,620	233,587	246,201	259,496	273,509	288,278
Uganda																		
Passenger Vehicle Sales	18,520	19520.08	20574.16	21685.17	22856.17	24090.4	25391.28	26762.41	28207.58	29730.79	31336.25	33028.4127	34811.95	36691.79	38673.15	40761.5	42962.62	45282.6
Commercial Vehicle Sales	7,840	8263.36	8709.581	9179.899	9675.613	10198.1	10748.79	11329.23	11941.01	12585.82	13265.46	13981.7902	14736.81	15532.59	16371.35	17255.41	18187.2	19169.31
Sub-total	26,360	27,783	29,284	30,865	32,532	34,288	36,140	38,092	40,149	42,317	44,602	47,010	49,549	52,224	55,045	58,017	61,150	64,452
EAC																		
Passenger Vehicle Sales	173,083	182,429	192,281	202,664	213,608	225,142	237,300	250,114	263,621	277,856	292,860	308,675	325,343	342,912	361,429	380,946	401,517	423,199
Commercial Vehicle Sales	84,410	88,968	93,772	98,836	104,173	109,799	115,728	121,977	128,564	135,506	142,824	150,536	158,665	167,233	176,264	185,782	195,814	206,388
TOTAL SALES	257,493	271,398	286,053	301,500	317,781	334,941	353,028	372,091	392,184	413,362	435,684	459,211	484,008	510,145	537,693	566,728	597,331	629,587

Analysis/Revenue Authorities

*Rwanda estimates computed from vehicle stock data (2015 Rwanda Yearbook)

Author's projections based on IMF projections data on GDP and population

Analysis of the future estimation of market for new vehicles premised on suitable policy implementations shows that by 2032 the market for new cars will have grown to 500,000 units. See table 5.13.

5.12 (b) MARKET POTENTIAL PROJECTION FOR EAC UPTO 2017																		
PHASE				PHASE I		PHAE II			PHASE III					PHASE IV		PHASE V		
				YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
YEAR	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Auto vehicles sales	257,493	271,398	286,053	301,500	317,781	334,941	353,028	372,092	392,185	413,363	435,685	459,212	484,009	510,145	537,693	566,728	597,331	629,587
New vehicles imports	11,187	11,791	12,428	13,099	13,806	14,552	15,338	16,166	17,039	17,959	18,929	19,951	21,028	22,164	23,361	24,622	25,952	27,353
Used vehicles imports	236,536	249,309	262,772	276,962	291,918	292,298	292,678	293,059	277,996	263,706	250,151	224,111	200,781	158,717	125,466	85,957	58,889	40,345
Subtotal (vehicles import)	247,724	261,100	275,200	290,061	305,724	306,850	308,016	309,225	295,035	281,665	269,080	244,062	221,809	180,881	148,827	110,579	84,841	67,698
Potential EAC Market for Regional Car Makers	20,957	22,089	23,281	24,538	25,863	42,643	60,350	79,033	114,189	149,657	185,534	235,101	283,228	351,428	412,227	480,771	538,442	589,242
Projected Regional Production	9,769	10,298	10,853	11,439	12,057	28,091	45,012	62,867	97,150	131,698	166,605	215,150	262,200	329,264	388,866	456,149	512,490	561,889

NB: Projections based on compounded annual 5.4% increase in Per capita income in the EAC region

The assumption is that in year 3 (2020)- after policy implementations the import of used vehicles will decrease by 5% for (phase II - 3 years)

In Phase 4 (2028-2029) - a regional production plant implementation, harmonization of local content law - assumption is that import of used vehicles will reduce by 20% annually

In Phase 5 (2030-2032) - it expected that we shall have fairly well developed purchasing scheme and developed local production - reduction of used car imports by 35% annually

Motorcycle: The motorcycles in the EAC region⁸³ is expected to increase almost double from 430,000 units in 2015 to over 1million units in 2032. Tanzania will continue to command the largest motor cycle market share – see Table 5.13.

Table 5.13 EAC Motor cycles sales, 2015-2022

⁸³ Excluding Burundi

Country	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Burundi	4,600	4,848	5,110	5,386	5,677	5,984	6,307	6,647	7,006	7,385	7,783	8,204	8,647	9,114	9,606	10,124	10,671	11,247
Kenya	134,650	141,921	149,585	157,662	166,176	175,150	184,608	194,577	205,084	216,158	227,831	240,134	253,101	266,768	281,174	296,357	312,361	329,228
Rwanda	11,552	12,176	12,833	13,526	14,257	15,027	15,838	16,693	17,595	18,545	19,546	20,602	21,714	22,887	24,123	25,425	26,798	28,245
Tanzania	206,320	217,461	229,204	241,581	254,627	268,376	282,869	298,144	314,243	331,213	349,098	367,949	387,819	408,761	430,834	454,099	478,620	504,466
Uganda	83,690	88,209	92,973	97,993	103,285	108,862	114,741	120,937	127,467	134,350	141,605	149,252	157,312	165,806	174,760	184,197	194,144	204,627
EAC Motor cycle sales*	442,827	466,632	491,722	518,167	546,040	575,418	606,383	639,019	673,418	709,675	747,889	788,166	830,619	875,364	922,525	972,233	1,024,625	1,079,846

Projections based on GDP and Population growth

Analysis of the future estimation of market for new vehicles premised on suitable policy implementations shows that by 2032 the market for new cars will have grown to 500,000 units. See table 5.13.

5.1.10 Taxation and duty regime for the industry; Tariff Regime; Rules of Origin; EAC Transport Sector Program including vehicle safety and inspection

TAXATION

The East Africa States have Revenue Authorities, which are in charge of tax administration, within their existing broad taxation system covering income taxes, value-added tax (VAT) and Customs and excise duty. These are Burundi Revenue Authority (BRA), Kenya Revenue Authority (KRA), Rwanda Revenue Authority (RRA), Tanzania Revenue Authority (TRA) and Uganda Revenue Authority (URA).

The EAC treaty and protocols require tax harmonization among the partner states to facilitate all the integration processes, which include: customs union; common market; monetary union and political federation. Relevant articles on taxes in the EAC Treaty include: **Article 32** of the Protocol on the Establishment of the EAC Common Market, which requires partner states to progressively harmonize their tax policies and laws to remove tax distortions in order to facilitate the free movement of goods, services and capital and to promote investment within the Community; **Article 80 1 (f)** that requires partner states to harmonize and rationalize investment incentives relating to taxation of industries; and **Article 83 2 (e)** which requires partner states to harmonize their tax policies. In spite of the foregoing, a big challenge exists in the pace of implementation of the agreements. For example, under the Common Market Protocol signed in 2010, tax harmonization was meant to be achieved by April 2015 but this has not been realized.

Currently, each member state is still responsible for administering various forms of domestic taxes. Apart from corporate tax, which is uniform in all member states at 30%, other domestic taxes differ. For example, Kenya charges VAT at 16% while Rwanda, Uganda and Tanzania charges VAT at 18%. Member countries at times also do not charge VAT on the same sectors. In 2014, Trade Mark East Africa commissioned an '**EAC Excise Tax Harmonization impact assessment study**'⁸⁴. According to the study's findings, the EAC lacks a common list of excisable products including motor vehicles, which causes variations across the partner states. The study recommended definition of a common list of excisable goods for adoption across the EAC. The foregoing indicates incoherence in tax policies which has prompted the private sector e.g. through the East African Business Council to call for harmonization of all types of taxes to advance the aspirations of a common market.

The Customs Value (CIF Value)

CIF refers to the Cost, Insurance and Freight paid for the automobile. In classification of the motor vehicles, some of the main features of the customs union include a common coding and description of tradable goods Common Tariff Nomenclature (CTN) and Harmonized System Codes (HSC) that is used to classify imported vehicles. Various motor vehicles are classified and taxed differently depending on age and type. Table 4.51 summarizes the taxes levied by EAC member states on imported vehicles.

Custom Duty Levied by EAC Partner States

Type of tax or fees	Burundi	Kenya	Rwanda	Tanzania	Uganda
Import Duty	25%	25%	(0%,10%, and 25%) —depending on the engine and seating capacities	25%	25%
VAT	18%	16%	18%	18%	18%
Withholding tax	18% or 10%		5%		6%
Excise tax			5%	0% for 1000 cc engine capacity, 5%, for 2000 cc for engine capacity and 10% for > 2000 cc engine capacity	

⁸⁴<http://www.eabc.info/uploads/TMEA- Amended Draft report 26 11 14p.pdf>

Depreciation rate		5%-70%	20%-80%		
Administrative Relevance	0.5%				
Safety Tax	3%				
Flat Levy rate	1.5%				
Railway Development Levy		1.5%		1.5%	
Import Declaration Fees		2%		\$ 10	
Infrastructure Development Levy			1.5%		
Environmental Levy					50% of CIF if > 10 years 'old 35% of CIF 5-10 years' old 0% for Goods vehicles
Registration Fees*					UGX. 1,200,000 < 3000 cc UGX. 1,700,000 ≥ 3000 cc

*Excluding Burundi, all EAC Partner States charge fees for vehicle registration and issuance of the number plate

Source: Respective National Revenue Authorities

Source: <http://www.carpasport.ug/importing-a-car-to-uganda-through-mombasa/>

Tariffs

The EAC has been successful in eliminating internal tariffs, which has lifted some of the trade barriers among its member states. The organization has also created a Common External Tariff (CET) on imports, which sets different tariff rates on three types of goods. However, this CET has created some debate among member states and is not yet uniformly implemented.

Internal tariffs

The 2005 EAC Customs Union set to remove internal tariffs amongst EAC member states. Most internal tariffs were removed immediately, but certain tariffs on Kenyan exports to Uganda and Tanzania were to be gradually removed, reaching 0% by 2010.

External tariffs

The EAC has a “three-band” Common External Tariffs (CET) on all imports: a 0% tariff on primary goods (including raw materials and agricultural inputs), a 10% tariff on intermediate goods, and a 25% tariff on finished goods. The CETs are a source of debate among member states, mostly focusing on the tariffs and the rate of duty remissions (or how quickly they come into force). In 2015, for example, Kenya requested the EAC allow it the delay implementation of the CET on several products to protect local industries from cheap imports. The table 4.55 indicates CET rates that are applicable in the EAC’s automotive sector

Table 5.6: Common External Tariff		
Item	EAC CET Rate	Rate Applied by Individual Country

		BR	KY	RW	TZ	UG
Road tractors for semi-trailers	10%	0%	10%	0%	10%	0%
Motor vehicles for transport of goods – 5 tones but not exceeding 20 tones	25%	10%	25%	10%	25%	10%
Motor vehicle for transport of goods – exceeding 20 tones	25%	0%	25%	0%	25%	0%
Buses for transportation of more than 25 persons	25%	10%	25%	0%* & 10%*	25%	10%

***Buses transporting more than 25 people but less than 50 passengers apply 10% rate. Buses that transport more than 50 passengers attract 0% rate.**

Non-Tariff Barriers (NTBs)

These measures include costly administrative measures such as import licensing requirements, fees, quotas, rules of origin and technical barriers to trade. Article 13 of the 2005 East African Community Customs Union encourages EAC member states to remove all NTBs. In March 2015, the EAC Elimination of Non-Tariff Barriers Act 2015 came into force, supplementing the EAC's anti-NTB efforts. Despite these measures, NTBs remain a problem in the EAC. This is mainly because regulations that the national governments enact are not enforced. . Such NTBs limit the flow of automobiles across the region and in essence the regional market.

A 2012 report '*The East African Community after 10 Years – Deepening Integration*⁸⁵, observes that an agreement was reached to gradually remove NTBs and mechanisms are in place in each country to monitor implementation, actual progress has been limited. Customs procedures and harmonized regulations are yet to be agreed upon, while delays exist in issuance of certificates of origin and standards are not applied uniformly. In addition, weak administrative capacity hinders the application of existing rules.

RULES OF ORIGIN:

Article 14 of the EAC Protocol ensures that there is uniformity among the partner states in the application of the Rules of Origin and that to the extent possible the process is transparent, accountable, fair, predictable and consistent with the provisions of the Protocol. Goods traded amongst partner states are tax-free provided they meet the Origin Criteria.

Rule of Origin criteria

1. Goods shall be accepted as originating in a Partner State where the goods are-
 - Wholly produced in the Partner State as provided for in rule 5; or
 - Produced in the Partner State incorporating materials which have not been wholly obtained there, provided that such materials have undergone sufficient working or processing in the Partner State as provided for in rule 6.
2. For the purposes of implementing these Rules, the Partner States shall be considered as one territory.

NB: Motor vehicles assembled in a member state in the region with local content qualifies under rule 4b

5.1.11 EAC TRANSPORT SECTOR PROGRAM

The EAC Partner states have signed and ratified a Tripartite Agreement on Road Transport. The main objectives of the agreement are to facilitate interstate road transport through reduced documentation for crews and vehicles at border

⁸⁵ <http://www.imf.org/external/np/afr/2012/121712.pdf>

crossing, harmonized requirements for operation licensing and customs and immigration regulations, among others. Also included in the agreement are improvement of East African Infrastructure and addressing road safety issues in the region.

Vehicle inspection

The region lacks both a harmonized structure and capacity for conducting vehicle inspection. In *'A Study of Motor Vehicle Age Limit for Importation of Used Motor Vehicles in East Africa Region'*⁸⁶, commissioned by the EAC in 2014, regular and mandatory inspection of auto vehicles and motorcycles was recommended. The study also recommended harmonization of the testing and inspection regimes and technical regulations on road vehicles.

Global trends on emissions are focusing on reducing GHG of which about 13% comes from the transport sector (World Bank, 2010). The East African countries of Kenya, Uganda, Tanzania, Rwanda and Burundi have from 2015 implemented harmonized low Sulphur standards. This has led to the need for a systems approach to maximize emissions reductions by matching the new fuel quality with vehicle standards with the aid of the newly developed Clean Fuels and Vehicles Regulatory Toolkit which is under test in the EAC, starting with Kenya (UNEP 2015).

Used Vehicles Age Limit

The EAC does not have a harmonized age limit requirement for used vehicle imports. Prior to commissioning the study on age limit of used vehicle noted above, the EAC had noted that the variation in controls on age limits posed challenges on harmonization of East African Standard, 500:2008, Code of Practice which is used for testing of motor vehicles for roadworthiness regimes and technical regulations on road vehicles. This variation also poses difficulties in the standards and procedures for controls of imported used vehicles and hence jeopardizes regional integration.

Increased importation of used cars has also negatively affected the growth of vehicle assembly in the region which hampers industrialization, as over 80% of vehicle imports are used. Limiting the age of used vehicle imports is one (1) key way of reducing the demand of used vehicles and increasing the demand for new ones.

Studies have also shown that older vehicles cause more fatal accidents than newer ones. Modernizing vehicle fleets is therefore one way of reducing road accidents.

5.1.12 Strengths and Gaps in the regulatory and policy framework for the promotion of the EAC automotive industry

Owing to its integration process, the EAC provides an attractive market for new vehicles that can be assembled in the region. This market with a population of over 160 million can be scaled even higher through the tripartite agreements being worked on between EAC, SADC and COMESA. However, in some instances negotiations have been slow and implementation inadequate on several agreements, which discourages investments in the region. To address some of these challenges, the following interventions will be required:

- (1) Strengthen the structural and institutional reforms – to create harmony and to quicken the implementation of agreed decisions. This will specifically address the following areas: customs administration; trade facilitation; revenue management; customs trade partnership; human and capital resources; relationships with the private sector and international organizations, strengthen industrial synergies for exploitation of economies of scale in production; coordination between private and public sector initiatives; information and institutional support framework, research and technological capabilities;
- (2) Accelerate the legal and regulatory reforms - which will positively influence the rule of law, reduce the level of corruption and fasten dispute resolution mechanisms. It will also eliminate a huge number of administrative barriers. This will specifically address the following areas: Harmonization and application of Rules of Origin, unfavorable business environment including counterfeiting; elimination of NTBs, duty remission regulations, trade laws and regulations.

⁸⁶ <http://www.unep.org/Transport/new/pcf/pdf>.

- (3) Make clear, deliberate and coherent policies to attract investments – This should include: Policies to attract private sector investments, policies on value addition; FDI attracting policies, skills development policies and tax policies.

6.0 Key Challenges and Business Environment Factors for Automotive Industry

Emerging Challenges for the Auto Industry in EAC

The following summarises the current challenges facing the automotive sector in the EAC region from the observation mission and in-depth study.

Policy and regulatory environment challenges

(1) Lack of Policy and Policy Coherence

- Policy in-coherency is observed, in particular among industrial policy, tariff policy and environment policies, i.e. gas emission reduction. These would impede the sound development of the automotive industry. Many auto ancillary companies have been closing down owing to cheap import of second hand parts.
- There are inadequate national policies to support investments in the sector. For instance, in the motorcycle sector, it is currently difficult to build local content like suspension parts. This would require attracting an international investor who can only come when there are enough volumes.
- There exists a gap in regulation of the auto industry in the EAC. This includes lack of harmonization for standards and age limit of used vehicles imported into the region. For example, Kenya has 8 years' age restriction while other countries have more or none.
- There is lack of a harmonized vehicle registration system within the EAC, which makes capturing uniform automotive data for policy decisions difficult.
- EAC has no regional policy on vehicle inspection. This increases the risks of having dangerous vehicles on the roads which also increases the risks of causing accidents. Also this increases environmental and associated health risks emanating from emissions.
- Influx of used vehicles of too many models due to inadequate regulation has driven down demand for new vehicles and discouraged local manufacture. (Industry players talk about over 5,000 models).
- There is no policy on imported spare parts for the used vehicles into the region. Many owners of used vehicles are unable to access the appropriate spares either because of their unavailability or because of their cost, which leaves them to turn to the used parts market whose quality cannot be guaranteed, thus increasing risks of such vehicles causing accidents. The used spares market has encouraged stealing of vehicles which are often broken down and sold as parts. This fragmented and uncoordinated spare parts market has not been able to attract component manufacturers as the models are too varied, thinly spreading volumes of spares required for the various vehicle models.
- In the motorcycle sector, there is a gap in the definition SKDs/CKDs that need to be well defined for duty remission. Anyone assembling less than 90 parts should not qualify as a CKD assembler.
- EAC governments often introduce unpredictable crippling policies especially on excise duty. Policy clarity and predictability is critical in attracting investments.

(2) Lack of strong Regional Coordination body for Automotive Sector

- Automotive sector players in East Africa have associations at National level with a loose networking relationship with counterpart associations in partner states. Comparing the sector with other industrial associations in East Africa for example Pharmaceutical Industry Association, Women in Business Council and others, portrays a rather uncoordinated and unprotected automotive sector yet EAC Governments have earmarked automotive sector as a major driver for industrialization to grow. A common strong voice is needed at regional level to push an automotive agenda for a common cause.

(3) Taxation Issues

- Ad hoc imposition of taxes in the automotive sector remains a big issue in the EAC region.
- Introduction of VAT on transit cargo has negatively affected the tracking business and therefore reduced demand for trailers in Tanzania. Government imposed VAT on sea freight cargo pushing cargo companies to Durban Port in

South Africa, which they view as more competitive. This has pushed out business opportunities for logistical companies away hence reducing demand for trailers.

- Lack of a comprehensive and harmonized automotive tax regime for EAC as a region create un-level playing field among the partner states.
- Though the EAC has granted a 10% duty remission, there is lack of a differentiation between mild and special steel in tax codes, which causes manufacturers to continue paying heavy import duties, which should not be the case.
- Tanzania imports raw materials at zero rates from South Africa. This disadvantages Kenya's local manufacturers as Tanzania is an EAC member and SADC making it a route for cheap imports into other EAC countries.
- The Ugandan government re-introduced VAT on Tourist vehicles, inadvertently, affecting the sales of new vehicles. Taxation of tractor parts also discourages local manufacturing.
- The current EAC Rules of Origin (ROOs) requirements are not suitable for promoting automotive assembling within the region. Private assemblers have reported incidences where vehicles assembled in region were denied tax free entry into other EAC Partner States, this has largely undermined the development of the regional automotive industry.

(4) Market Related Challenges

- Market size is one of the most important factor for the automotive industry. Due to high investments involved in setting up manufacturing/assembly plants there is a need for big auto vehicles production volumes and requisite market to sustain the investments. There is need for policy measures to facilitate expansion of the market volumes.
- There are two (2) key points. One is whether the EAC region is considered as one market. As mentioned before, the market of EAC countries are smaller than other countries in Africa, which market in total is small. However, the investor considers the EAC region as one market, the size becomes bigger.
- The other key point is that the market size can be enhanced. The market size is based on population, GDP per capita and other environment. The population cannot be controlled by the industrial policy and GDP per capita is the outcome of the efforts of industrial policy not the measure to improve the market. However, the other element such as infrastructure such as roads and the culture to ride cars can be changed by the industrial policy.

(5) Integrating EAC regions to the global and regional supply chain of FDI automotive industry

- The process of integration of the EAC partner states need to be fast-tracked. Automotive industry is among the most advanced manufacturing industries. The history of automotive industry shows that the growth of the industry is led by FDI by global OEMs that make investment decision based on investment patterns of agglomeration and fragmentation of their global and regional supply chain. In other words, investors want to invest in a market with a good condition. The criteria of a good market is as follows.
 - Market Size
 - Policy coherence and stability
 - Labour cost
 - Level of QCD of local parts supplier
 - Taxation
- A key question here is whether and to what extent the host countries can be integrated into those global and regional supply chains. From this perspective, it is important to present a clear and realistic medium and long-term roadmap to OEMs. Otherwise, FDI cannot have confidence of the outlook of the market development of the automotive industry and would be reluctant to expand its operation in the region.

(6) Financing Challenges

There is inadequate funding for investing in the sector and the related research and development activities, which requires huge capital outlays. Also R&D institutions and technology development activities in the region are public financed. It will be necessary to prioritize automobile manufacturing related research and explore innovative ways of funding these activities.

(7) Research, Technology, Innovation and Development Challenges

Harnessing Science, Technology and Innovations opportunities to modernize the automotive manufacturing sector in EAC countries faces a number of challenges including the following: a lack of entrepreneurship development for, and institutions supportive, of SME development along the automotive value chain; inadequate industrial institutional support services for the development of a competitive automotive manufacturing sector; and limited number of engineering industries, particularly to produce capital and intermediate goods, spare parts, and components, the absence of which adversely affects the region's ability enhance product design, production, and maintenance know-how. Also, the education system and research institutions are not aligned to address the technological needs of the automotive sector as well as the lack of adequate testing stations make it impossible to implement even the basic motor vehicle standards.

6.1.1 Scope for New Investment in the Automotive Industry and Strategies to Attract Investors

6.1.1.1 Investment Opportunities based on gaps along the automotive value chain

The EAC with a total population of over 150 million is geographically located with a long Indian Ocean coastline, which provides ease of connectivity to the rest of the world via sea transport. It is also connected to large and growing regional markets such as COMESA (390 million people) and SADC (260 million people). The three regional blocks have a combined population of about 600 million, which will be accessible to EAC through the EAC-COMESA-SADC ongoing tripartite negotiations.

Natural Resource Development

The East Africa states are endowed with Iron ore deposits, which can be harnessed and exploited for industrial development. With ongoing explorations, 219 million metric tons⁸⁷ and 260 million metric tons⁸⁸ of iron ore deposits have already been ascertained in Tanzania and Uganda respectively. The other EAC states have un-quantified deposits, which are expected to be added into the current tonnage as exploration progresses.

There is also huge investment opportunity for oil and gas exploration. Kenya and Uganda have also established existence of commercial oil deposits that once exploited will grow the petrochemical and related industries. This could also lead to cheaper cost of petrol and diesel that could inherently support the growth of the automotive sector.

Motor Vehicle sub-sector

Motor Vehicle Production

Industry figures show that total vehicles assembled in the EAC by the existing assemblers in Kenya fell below 10,000 units in 2015, out of an installed capacity of 29,600. Table 5.2 indicates that total annual vehicle sales in the EAC region is close to 260,000. Out of these, about 220,000 units are used vehicles imported in the region which is about 85%. Available data indicates that about 86% of used vehicles imported in Kenya are passenger i.e. 64.2 % station wagons and 21.8% saloons. In Uganda, more commercial vehicles are imported being 62%, out of which 45% are mini buses, 16% trucks⁸⁹. In Tanzania, about 66.3% of registered vehicles are passenger (light passenger vehicles of less than 12 persons) and 23.4% are commercial vehicles (8.8% heavy commercial, 5% heavy passenger – 12 or more persons, and 9.5% light load vehicles)⁹⁰.

From the indicative figures mentioned above, assembly of selected models e.g. one salon model and one station wagon model, one mini bus model and one pick up model can form an entry point for local assembly, which will act as a form of model rationalization to create economically viable volumes for assembly. This can be further supported by having a regional policy approach of limiting models allowed for importation into the EAC such as was adopted by Algeria in 2013⁹¹.

Produce a low Cost Utility Vehicle

EAC can make a key consideration for entrance into mass vehicle production through manufacture of a low cost basic utility vehicle. The idea of a low cost utility vehicle has been explored in many parts of the world especially for the rural agricultural communities, such as which form the bulk of EAC and African population. The Sub-Saharan Africa Transport Policy Program (SSATP) observes that improved rural transport is a prerequisite for poverty alleviation, and calls for manufacture of low cost utility vehicle to enable rural farmers reduce their cost and time in accessing agricultural

⁸⁷ <http://www.theeastafrican.co.ke/business/Tanzania--2bn-coal-and-iron-ore-projects-to-start-soon/>

⁸⁸ <http://www.mining.com/260-million-tonnes-of-iron-ore-discovered-in-uganda-45276/>

⁸⁹ <http://www.unep.org/Transport/new/pcfiv/pdf>. *'A Study of Motor Vehicle Age Limit for Importation of Used Motor Vehicles in East Africa Region'*

⁹⁰ Computed by Consultant from TRA data on registered vehicles between 2012 and 2016.

⁹¹ <http://www.africatopsuccess.com/en/2014/09/05/automobile-algeria-no-more-like-foreign-brands>

inputs and markets⁹². Examples of where this has been tried and succeeded include China under GM-Wuling partnership who have succeeded in making a minivan retailing at US\$5,000⁹³. Kenya is also trying this through the manufacture of Mobius car whose Mobius I model retails at US\$ 9,500⁹⁴ and an upgraded Mobius II retails at US\$ 11,000⁹⁵. The EAC can support manufacture of such a utility vehicle and provide incentives to make the cost even lower and thus affordable by more users who would otherwise be unable to afford standard vans or pick up trucks.

Besides a utility vehicle, manufacture of a car costing less than US\$ 10,000 is also a viable option as observed through the same partnership between GM and Wuling in China which has facilitated production of cars priced as low as US\$ 6,400⁹⁶. In spite of this being a case of China with huge market and developed parts suppliers, it is indicative that there is a possibility of manufacturing cheaper vehicles within EAC than presently available. If such affordable vehicles can be produced in EAC, the used vehicle imports can be replaced enabling the EAC population to continue accessing affordable vehicles.

The EAC should also create a policy to encourage disposing vehicles after a period of three (3) to five (5) years in order to support the local industry and generate a local market for used vehicles.

Auto components and spare parts manufacture

Industry players in Kenya indicate that over 75% of spare parts sold in the country are counterfeit. This has proliferated due to unregulated spare parts market. Most of these spares are consumed by used vehicle owners who usually look for cheap spares outside the established spare part dealers. This situation is similar in the other EAC partner states. Establishing a vehicle manufacturing industry in the EAC with clear policy support including vehicle model rationalization and regulating spare parts market in the region to reduce the volumes coming through the counterfeit market will increase demand for genuine spare parts and therefore provide opportunities for local manufacturing. This will invigorate the existing component/spare parts manufacturers and attract new ones who will progressively supply OEMs as well as after sales market.

Motorcycle sub-sector

Over 90% of motor cycles coming into the region are new. Majority of these come from three (3) major assemblers, which include TVS, Bajaj and Hero. According to industry players, there are more than 50 models of motor cycles in the region. Motorcycle industry is very young in the region but growing at a fast rate. A further increase of motor cycle models may cause a challenge in the near future in developing a stable motor cycle assembly industry in the region. In the meantime, however, the EAC should encourage the industry in the region to borrow from what the Kenyan assemblers are putting in place, by agreeing on selected five (5) simple components for local manufacture to encourage local components/parts manufacture development. This should go hand in hand with properly harmonizing the definition of SKD/CKD for motorcycle assembly across the region.

⁹² https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.cigrjournal.org/index.php/Ejournal/article/download/3075/2058&ved=0ahUKEWju6K_x5ufRAhXEYiYKHZOaBao4FBawCC0wCA&usg=AFQjCNGRI3cdeqg5BRvLb3CVFQ8Q0HgtPQ

⁹³ https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.npr.org/templates/story.php%3FstoryId%3D12382387&ved=0ahUKEwiE_qD7lunRAhXHJsAKHF-IDrQQFggBMAA&usg=AFQjCNEoVhxrIYA8c8WcaCdO6WkEja-v3w

⁹⁴ <https://www.google.com/url?sa=t&source=web&rct=j&url=http://qz.com/875306/kenya-s-mobius-motors-like-uganda-s-kiira-motors-area-to-provide-africa-a-homemade-vehicle/&ved=0ahUKEWjH8frUounRAhXpBcAKHdUDBzqQFggZMAA&usg=AFQjCNFEaxyLROuQCsh4wVkxfSp1bmBzSg>

⁹⁵ <https://www.google.com/url?sa=t&source=web&rct=j&url=http://www.blog.kpmgafrika.com/east-africas-changing-auto-industry/&ved=0ahUKEWj6h4zlwuTRAhJUEKsAKHTDZAo4HhAWCClwBA&usg=AFQjCNFDACiNkle6yDdhNeb5UiNrXMQRlg>

⁹⁶ <https://www.google.com/url?sa=t&source=web&rct=j&url=http://amp/mobile.reuters.com/article/amp/idUSBRE8AH07E20121118&ved=0ahUKEWjDpLjmquRAhUIJMAKHcarAzQQFggZMAA&usg=AFQjCNFqiS9xMiovCsEn5ecYi0rkwtI-1g>

6.1.1.2 Strategies and outreach plan to attract both public and private investment (global motor assemblers and OEMs)

In order to grow the local auto industry, deliberate implementation of tax policy seems to be reasonable. A balancing act must therefore be applied to encourage growth of the local industry. To assure investors volumes, EAC can adopt a model rationalization approach as well as age limit restrictions on used vehicles. EAC can further restrict imports by imposing import quotas on the allowed models as done by Algeria.⁹⁷ This also includes offers of long term tax reductions and other incentives to companies willing to invest in this area.⁹⁸ Also EAC can borrow from the South East Asian Country of Thailand which uses a combination of tax and non-tax incentives to grow its automotive sector.

Joint Ventures

Well negotiated joint ventures are another avenue that can work for EAC. Some examples of joint ventures which have worked elsewhere include the following:

- Between Volkswagen, the government of People's Republic of China and other Chinese private investors. This partnership has lasted over 30 years since 1984 and has been a great success, becoming the largest German-Chinese partnership in the automotive industry⁹⁹.
- Another successful joint venture in China as mentioned earlier, is between General Motors and Wuling which has succeeded in producing affordable minivans and saloons at a cost below US \$ 10,000.
- Beginning 2013, joint venture between South African automotive parts supplier Feltex and Luxembourg-based International Automotive Components (IAC). IAC, which has similar joint ventures in Malaysia and Thailand, provides design, engineering and manufacturing expertise for vehicle interior components and Feltex provides product and process expertise¹⁰⁰. The joint venture has enhanced value supplies of products directly and indirectly to South African OEMs.
- Targeting niche markets can also work well for joint ventures as depicted by Brazilian bus bodybuilder company Marcopolo. The company started locally in Brazil in the 1950s, accepted foreign partners later in the 1990s and has grown to a top global bus body builder company, creating other joint ventures in other countries such as South Africa and Columbia with Scania and Volvo respectively in 2001; in Russia and India with 'Russian Buses' and Tata Motors respectively in 2006 and in Egypt with GB Auto in 2008 among other countries¹⁰¹.

⁹⁷https://www.google.com/url?sa=t&source=web&rct=j&url=https://projects.zawya.com/Algeria_spurs_on_local_auto_manufacturing/story/ZAWYA_20160407080609/%3Futm_source%3Dzawya%26utm_medium%3Dweb%26utm_term%3Dterm%26utm_campaign%3Dstory/&ved=0ahUKewibnqH-t-nRAhVIAAsAKHfQHCR44ChAWCCgwbG&usg=AFQjCNETdl5CfTp0-JoeoO9XjQJknPqIJA

⁹⁸<https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.state.gov/e/eb/rls/othr/ics/2016/nea/254433.htm&ved=0ahUKewiZgo3sv-nRAhUKI8AKHWQEAek4FBawCCawAw&usg=AFQjCNH49KzhJD1W9s2lyn8M8te-KAYqCA>

⁹⁹ <https://www.google.com/url?sa=t&source=web&rct=j&url=http://inside.volkswagen.com/Success-story-in-China.html&ved=0ahUKewiP796XqcnSAhUMIsAKHf2WDH4QFggIMAA&usg=AFQjCNGJsUJS7cZeJMrk1AiG6oitK65wkw>

¹⁰⁰ https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.brandsouthafrica.com/investments-immigration/business/investing/auto-100713&ved=0ahUKewjcuuKOrMnSAhUHCsAKHXzSCSg4ChAWCDMwBA&usg=AFQjCNGLcDxRgmuUyQMmla2fQrOCSw_cjA

¹⁰¹ https://www.google.com/url?sa=t&source=web&rct=j&url=http://repositorio.ipea.gov.br/bitstream/11058/5147/1/DiscussionPaper_196.pdf&ved=0ahUKewjtodiStMnSAhWIF8AKHVq9DDIQFgg_MAM&usg=AFQjCNEgst9fN-vb3yLG3AeweMN8ZvLuvQ

- Experience in Brazil has shown that though viable opportunities may exist for OEMs working independently, finding and working with the right local partners is often a key to success. This is because companies looking to enter local markets often need to understand both the culture and the way business is done locally¹⁰².

It is important however to craft joint venture requirements and agreements properly so as to give mutual benefits to the parties involved, with appropriate exit clauses

¹⁰² https://www.google.com/url?sa=t&source=web&rct=j&url=http://bernarsconsulting.com/assets/files/Berners-Consulting_Brochure_BR-US-implementation.pdf&ved=0ahUKEwjodiStMnSAhWIF8AKHVq9DDIQFgg9MAI&usg=AFQjCNE3Sh2L0a2nZRMsbNzPZInmWe7xdQ

7.0 RECOMMENDATIONS AND POLICY OPTIONS FOR A REGIONAL AUTOMOTIVE INDUSTRY DEVELOPMENT

In order to ensure development of automotive industry in EAC, realistic and achievable development path is needed. The study has established that it is vital to formulate a clear policy and strategy for the automotive sector early enough in the development path to provide clarity to governments and give a stable long-term view to investors. The study has identified the following issues that require strategic policy considerations.

(1) A Well-Designed Step-by-Step Strategy to Promote Vehicle Manufacturing in EAC

iv. Necessity for a Systematic Approach

EAC should have a well-designed systematic step by step strategy towards the promotion of automotive industry in accordance with international agreement such as WTO¹⁰³. Since automotive industry has a complex and multilayered structure, the strategy to promote it needs to be systematic.

v. Structure and Approach

The automotive industry has a multilayered structure which is composed of:

- **Products:** motorcycles, auto vehicles (commercial) and auto vehicles (passenger vehicles).
- **Process:** CBUs, parts for CBUs, replacement parts and other services
- **Market:** imported used, imported new, domestic used, and domestic new
- **Stakeholders:** citizens including users, government, OEMs, local capitals, importers, dealers

Each policy has both positive and negative impacts. Policies should be based on the step-by-step approach. For example, policy to promote higher local contents has benefits to local parts manufacturers but could also hurt the right of selection of OEMs. In an earlier stage when the local parts manufacturers' ability on QCD is very low, the local content policy could prove to be fatal to the OEMs, leading to closure of factories, which would also have negative affect on the local parts manufacturers as they would too lose their business. In the later stage when the local parts manufacturers' ability on QCD is developed the local contents policy stimulates OEMs to select the parts that are acceptable to them. From the easier parts OEMs start purchasing parts and gradually local contents rate will increase. It therefore important that the policy prescription be based on automotive development stage.

vi. Step-by-Step Approach

The systematic approach should have the sequence from premise to result and easy to difficult. The EAC approach should be to focus on development of motorcycles, followed by commercial vehicles and then passenger vehicles. **(NB: Informed by current scenario whereby (1) the motor cycle market is experiencing rapid growth – (see chapter 4 table 4.2), and (2) The ratio of vehicle sales over the last 5 years shown an average of 67% for passenger vehicles between, with the rest being commercial – see Chapter 4 table 4.1)**

- **From premise to result:**

This begins with market expansion to introduction of OEM and then to development of parts industry

- **From easy to difficult**

This begins from motorcycle through passenger vehicle to commercial vehicle. **(NB: For the EAC, this fits the current needs and market situation as seen above)**

¹⁰³ EAC as developing countries may seek remedies and exemptions from agreements.

- *From replacement parts to OEM parts*
- *From introduction of FDI of parts manufacturers to growing local parts manufactures.*
- *Manufacturing for EAC replacement market cannot grow without:*
 - ✓ *model rationalization policy*
 - ✓ *policy on spare parts imports (new and used)*

(2) Fostering Market Growth

Current development stage of EAC automotive industry is in the market expansion. The top priority policy direction should be geared toward expanding the market. In order to introduce major OEMs' CKD and to develop local parts industry, market size is the key point. Since each of EAC partner states has a smaller market in the aspects of population and GDP per capita, EAC should appear to be one unified market to the FDI investors.

i. Regional Approach to Develop the Sector and Leverage on the EAC, COMESA and SADC Tripartite

For the automotive industry to grow, there is need for high volumes that can lead to economies of scales. For EAC region, the volumes can easily be achieved if a regional approach is adopted focused on production for supply to the region. There is a need for uniform regional policy incentives for buying goods manufactured within the region. 'Buy EAC-build EAC' – which should support both purchases by private and public sectors. We also need Governments policy to support locally assembled automotive. [Ethiopia has a policy that requires the government to use only locally assembled cars as a way to boost local sales]. From this viewpoint, there is a need to define common approaches to promote the sector and pursue uniform regulation/policies at both the EAC regional level and at respective partner states to boost demand for the automotive products. The regional approach should however look beyond the EAC to exploit the opportunities presented by the tripartite arrangement between EAC, COMESA and SADC to provide for an expanded market.

ii. Strategic Approach to reduction of Importation of Used Automotives

The importation of used automotives has a positive and negative impact to the automotive manufacturing industry. Imported used automotives contribute to the expansion of the potential market of automotives. The users of used vehicles may finally graduate to purchase new vehicles. The initial cost of purchase is low for the user and therefore affordable, although maintenance cost could be high. The revenue from duty on the imported vehicles contributes to government revenues, which could be used in development of infrastructure such as the construction of roads.

In the short term, importation of used automotives takes the present market of the new cars and domestic used cars. Furthermore, regional analysis indicates that the EAC region currently loses more than US\$ 2.01 billion in foreign exchange for importation of motor vehicles per year. These resources are more than what is required to install motor vehicle manufacturing plants to produce enough vehicles for the EAC. If well-structured and supported, the local automotive manufacturing industry will provide jobs, technology transfer and support to industrialization, skills training to local youth, manufacture products suited for the region as well as support research and innovations. Other benefits include rationalization of models leading to lower overall cost of spares and maintenance, provision of employment up-stream and down-stream, encourage new foreign investment and foreign exchange savings.

It is projected that the over 200,000 units of used vehicles imported into the EAC annually can be covered by local production. However, this is only possible as a long term goal (within 15 years) projected to reduce from 262,000 units in 2017 to 58,000 in 2032 (see table 5.12). In the earlier stage when we need to expand the potential market, importation of used automotives is welcomed. However, in the later stage, it needs to be reduced, albeit gradually to avoid shocks and to ensure sufficient volumes are reached for the models set for local production. A strategic and harmonized policy for used vehicles of all categories i.e. commercial vehicles

and trucks, prime movers as well as passenger vehicles should be developed and implemented in consultation with the relevant stakeholders.

The policy instruments should clearly establish the maximum age of used vehicles to be imported into the region¹⁰⁴. Similar initiatives were used by Thailand, Vietnam, Malaysia and Indonesia. Harmonization should also be extended to associated regulations on Standard/Code of practice for motor cycles and vehicle inspection and air emissions. Similarly, it will be necessary to undertake a comprehensive review of taxation and tariff regime in EAC to provide an effective tool to grow the local automotive industry. The aim should be to gradually reduce on importation of the aged vehicles while growing local capacity for production, assembly and components/parts manufactures.

The following are recommended as some of the first wins of the Regional Automotive Development Council ;

- Harmonize Vehicle Age Limit for all imports to the EAC Partner States in a realistic manner (such as, to 8 years for used cars by 2018 and thereafter to shift to 5 years within 3 years¹⁰⁵)
- Harmonize Pre-Shipment Regional Inspection standards for automobiles
- Conduct regular Audits and sharing of information on Pre-shipment inspection to enhance credibility and performance of approved inspection companies.
- Enforce Road worthiness inspections within Partner States
- Introduce Automobile Purchase Scheme across the EAC Partner States to encourage citizens to buy new vehicles manufactured within the region. This fund can draw financing from an Automotive Development Levy, slapped on Automotive Imports (a percentage of FOB value of imported automotive)
- Set up a regional motor vehicle manufacturing plant and supply chains for automotive parts and components located in all Partner States.
- Harmonize driving rules/LHD vis-à-vis RHD for safety and market growth opportunities

iii. **EAC to Develop a Comprehensive Harmonized Tax Regime to Promote Investment of Automotive Industry**

This should include review of current tariff policy to enhance the rates and ensure differential between passenger vehicles and commercial vehicles of different tonnages. Frequent changes in policies should be avoided.

(3) Government procurement

In order to promote new vehicle market, EAC should also create a policy to encourage Government procurement of new locally produced vehicles for its use and disposal of vehicles done after a period of three (3) to five (5) years in order to support the local industry and generate a local market for used vehicles.

(4) Development Policy

i. National Investment Strategy

Comprehensive National Investment Strategies to Support Automotive Industry Comprehensive and clear investment strategies to attract FDI into the region should be introduced. It should also target Joint Ventures with locals. [From experiences of Malaysia and Vietnam, it is important to make full use of OEM's in the early stages of the industry development]. To this end, it is important to attract FDI guided by certainty and predictable business environment. More specifically, ensure stable incentives on locally assembled vehicles.

¹⁰⁴ Baba (2016)

¹⁰⁵ Need careful assessment of impact for the market, business and consumer before setting specific target

We need comprehensive policies and targeted incentive schemes to attract investments in automotive sector for both local and export markets. The development of automotive industry will lay the foundations for a globally competitive steel production industry, which in turn supports the establishment of a vibrant automotive industry, in East Africa.

EAC Partner states should purposively provide incentives for a new passenger car manufacturer that can bring to the market a car at a cap price not exceeding \$10,000 but with an agreed warranty period for quality purposes. Such incentives may include Tax exemptions on inputs like special steel, drills and gigs. Specifically, for Steel, such tax exemption can be tagged to only verifiable products and waste metal; allowing for tax to be assessed at product level. Any steel that was imported and unaccounted for faces applicable customs charges. Such a facilitative taxation policy gradually accommodates the growth of auto ancillary industries in the EAC. Deliberate incentives to local motor vehicle assembling companies to drastically reduce the cost of production and transform the used vehicle market to new vehicle market will go along with a steady but deliberate periodic tightening on entry conditions for used vehicles including tax increment and vehicle age reduction among others.

The capacity of institutions responsible for quality assurance needs to be strengthened to ensure that the proposed automotive products meet the quality and standards demanded by markets. The funding to the various EAC Bureau of Standards should be increased to enhance their capacity to set standards and offer quality assurance for products. To develop the market of EAC automotive manufactured products and gradually reduce the importation of the second hand vehicles, it will also critical for the EAC harmonize, implement and enforce pre-shipment inspection standards and road worthiness inspections across Partner States.

Specifically, Automotive Council partnering with relevant institutions in the region will harmonize age limit for all EAC Partner States. Preliminary recommendations indicate, starting with the age limit of 8 years by 2018 and further reducing it to 5 years within 3 years. In addition, harmonize the driving rules within EAC Partner States i.e. LHD vis-à-vis RHD to fully explore and benefit from potential market growth opportunities and also ensure safety of different road users.

ii. Policy Coherence

Fragmented policies on automotive sector should be harmonized at regional level, with a strict uniform implementation thereafter. Among the key areas include age limit; safety standards; emissions; driving orientation (Right hand/Left hand).

iii. Formation of a Regional Automotive Development Council (ADC)

The study recommends that an EAC Automotive Council should be created and supported to strengthen the active involvement of all stakeholders—including assemblers, OEMs, Finance and Revenue Authorities, representatives from automotive associations, Bureau of Standards etc to enable the coordination and consultations within the EAC governments, as well as to promote engagement between the governments and the private sector on automotive manufacturing issues of concern¹⁰⁶. The Council will be charged with reviewing uncoordinated policies and producing regional instruments including overseeing their strict implementation. To fund the EAC Automotive Council, it is proposed that every second hand vehicle imported, 2% will be collected as a development fund to support the Council.

(5) Collaboration among Institutions Developing the Automotive Industry

¹⁰⁶ The proposed ADC should be a Public and Private Sector member composition; whose mandate is established by a legal Act drawn by the East African Legislative Assembly (EALA). The ADC should be incorporated as a department under the Industry Sector in EAC Secretariat.

The EAC Partners States have several organizations that have been mandated to develop the automotive industry. It is prudent for these organizations to collaborate for the development of the sector. EAC should support development of a framework of collaboration between institutions mandated to develop the automotive industry in the region in order to exploit synergies and facilitate learning. This may be done for example through the Interuniversity Council for East Africa, institutes of science and technology and existing government sponsored entities such as Tanzania Automotive Technology Centre, Numerical Machining Complex in Kenya and Kiira Motors Cooperation in Uganda among others.

(6) Components and Parts Manufacturing¹⁰⁷

Local content is an area that EAC needs to explore and adopt appropriate measures that will spur the development of the automotive industry. It should be noted that the reason why OEMs do not use local products in earlier stage is not their fundamental reluctance of use of local parts and materials but the poor capacity of the local firms unable to meet the OEMs' requirements. In order to foster local industries, it is important to have initiatives of enhancing the local firms to meet the requirements of QCD (quality, cost and delivery) by OEMs. This could be fostered for example through introduction of supply side actions such as the Japanese "*Kaizen*" (continued improvement of productivity and quality from the bottom up) thereby improving capacity of in this situation, coercive policy actions cannot achieve the initially expectation. Just as vehicle model rationalization is important for local production of vehicles, it is equally important for parts and component manufacturing as this will also ensure availability of economically viable volumes. Alongside the development of local content, EAC should develop a policy requiring importers of used vehicle to ensure there is sufficient stock of the requisite spare parts in the market for the vehicles they import. A facilitative local content policy should be developed capping local content at acceptable lower percentages to allow exporting within the region and beyond under the common market protocol.

(7) Development of the Motorcycle Industry

The motorization of motorcycle occurs well ahead of that of auto vehicles, usually GDP per capita of US\$1,000, in Vietnam it happened at US\$500, compared to US\$3,000 for auto vehicles¹⁰⁸. Therefore, motorcycle sector is important for EAC.

In the recent past, the motorcycle sector in EAC region has experienced a rapid growth with the current market demand estimated at about 440,000 motorcycles annually. With the rise in numbers, the retail prices are expected to come down as a result of economies of scale. Further, along with the increase in production volumes, there is a potential to gradually initiate local production of parts to meet the demand for assemblers. In addition to the complete build-up unit (CBU) sales, there is increased demand for repair services and the associated downstream forward linkage activities. This sector therefore offers opportunity for rapid development and needs to be prioritized for rapid development.

This development needs to be taken hand in hand with a comprehensive regional consultation in order to also streamline the market, especially:

- Developing regulations for the motor cycle taxis (boda boda) riders.
- Educating boda boda riders on safety and observing other regulations.

(8) Training and Skill Needed for the Industry

¹⁰⁷ It is important that as EAC strives to develop local content to ensure adherence to WTO rules.

¹⁰⁸Mishima, presentation (2016)

Training of staff, in most of the motor assembly companies in EAC region on various disciplines of the automotive industry, is managed internally. There is a need for active involvement of public institutions in addressing capacity demands for the automotive industry. Further, there is a need to develop and rollout specific curriculum for the automotive industry, using regional institutions like the Inter-University Council of East Africa.

Education and training policies need to meet the specific human capital needs of labor markets, as well as to support the economy more widely by developing capabilities by increasing the level, diversity, and complexity of the skill needs (e.g., increasing training for multi-skilling, up-skilling, and re-skilling of the workforce) in various manufacturing sub-sectors across the automotive sector value chain. To improve productivity of EAC workforce for faster economic growth, EAC Governments, academia and industry should undertake initiatives to help develop the skill set of the current and potential employee base. One key initiative governments should undertake is the development of national/regional skills qualification framework, which should lay down the competency framework and standards with respect to competency levels for many trades in the industry. Specifically, this will require the following:

Strengthening and promoting the linkages and collaboration between the automotive industry and training institutions – for example, by reorienting the training curricula to include light and practical mid-level engineering and management skills for industrial development, upgrading selected polytechnic institutions into centers of excellence. Borrowing from Rwanda’s experience, intentional vocational training in mechanical engineering should be emphasized through supporting existing institutions, and or upgrading existing select institutions into automotive technology training centres of excellence. It will also be critical to promote automotive manufacturing skills in the informal sector—given that 80% of all the auto repairs is undertaken by the informal sector and they need to be skilled and retooled.

i.

Supporting the extension and technology transfer services to aid the manufacturing industry with research and development (R&D), testing, and evaluation. This could involve the development of science parks and incubation services to enable interface and collaboration between industry, academia, and technology parks by offering low-cost land and loans, extending tax breaks, and other targeted performance-based incentives to companies that invest in technology upgrading.

(9) Access to Finance

The high cost and difficult access to finance that can enhance development of the manufacturing sector remains a challenge, particularly among SMEs. Regional and National Development Banks need to be recapitalized and strengthened to provide improved access to affordable and long-term credit for the development of the automotive manufacturing sector. In addition, a credit fund and lines should be specifically created for SMEs manufacturing automotive spare parts and components, given that the formal banking system in the region tends to focus on larger manufacturing firms. To encourage citizens to buy new vehicles manufactured within the region, introduce Automobile Purchase Scheme across the EAC Partner States. This fund can also draw financing from an Automotive Development Levy on second hand Automotive Imports (a percentage of FOB value of imported automotive). Additionally, the box below presents other automotive financing options.

Automotive Financing Options

1. **Installment sale:** This finance facility allows a person to buy vehicles and other assets, and pay for them over an agreed period. The benefit is that ownership will pass to the consumer automatically once they have made the final payment. Owning a car also carries none of the economic penalties or mileage restrictions experienced with leasing and renting.
2. **Lease:** Leasing needs to be made available to companies, individuals and self-employed people. The lease agreement allows the customer uninterrupted use of the vehicle rather than ownership of it. You can choose to take ownership of the vehicle or return it to the bank at the end of the agreed period. Leasing allows one to drive a brand new car every two to four years and benefit from the safety, fuel economy and performance advancements found on newer models. For business owners who use the vehicle in an income-generating capacity, the repayments can be tax-deductible.
3. **Rental:** Rental agreements can be availed to individuals and offers varying repayment periods for example annual or quarterly. Like a lease agreement, a rental agreement allows the customer uninterrupted use of the vehicle rather than ownership of it. To reduce monthly payments, the customer can negotiate a residual value. Residual is normally the asset risk accepted by the bank as long as certain return conditions are met at termination of the rental.
4. **Flexible Deposit, Trade In, Retain and Return Option:** Flexible deposit - allows the customer and seller to work out an amount the customer is comfortable with. Between the seller and buyer, there is need to decide how many kilometers the customer will cover every year with the vehicle; and how many months the customer wishes to make fixed monthly payments. Based on these numbers, car vendors can come up with a guaranteed future value of the car and then structure a financing plan with monthly repayments. However, at the end of your contract; a customer has three options:
 - a. **Trade In** - can upgrade a vehicle at the end of the term by simply trading in the old vehicle for a brand new one under a Guaranteed Value program;
 - b. **Retain** - purchase the vehicle outright for the Guaranteed Future Value price locked in at the start of the contract;
 - c. **Return** - when the customer has kept to the agreed kilometers and taken good care of the vehicle, it can just be returned to the dealership.
5. **Subsidized Financing Scheme:** EAC governments can source for finance from Development Finance Institutions at single digit interest rates. Once EAC governments guarantee an interest rate at not more than 10%, the facility can be extended to people that have the capacity to purchase locally assembled cars.

(10) Infrastructure Development

Initiatives and reforms underway must be built upon, including, for example, transport and energy infrastructure developments. The EAC government need to prioritize and scale up budgetary resources to infrastructure development, particularly the railway network, to ease transport costs for imports and exports in accessing seaports. Given the nature of such investments (e.g., between states and the sheer amount of resources involved), infrastructure of a regional nature (roads, railways, ports, telecommunication, electricity generation, and transmission) is better designed, funded, and implemented at the regional level.

(11) Harnessing Technology, Innovation, Productivity, and Linkages

To ensure sustainable industrial transformation, there is a need to strengthen the national capacity in science and technology, incubation, and innovation. This calls for developing, enhancing, and strengthening the linkages and collaboration between industrial research institutions and industrial players. Funding and supporting the implementation and commercialization of outcomes from industrial research institutions is critically needed. In this regard, strengthening and streamlining existing initiatives like the EAC related Science Funds, Innovative Funds, and Technology Development Funds will go a long way in addressing the current gaps between stages of innovation and the commercialization of the outcomes.

(12) Development of an integrated motor vehicle e-register and production information system-

There is need for the EAC partner states to develop an integrated vehicle register similar to what Kenyan National Transport & Safety Authority (NTSA) has recently adopted. This can be improved to provide all relevant data captured/required by government agencies as well as automotive agencies and associations and be standardized across the entire EAC region, with a provision to filter required automotive information uniformly across the region.

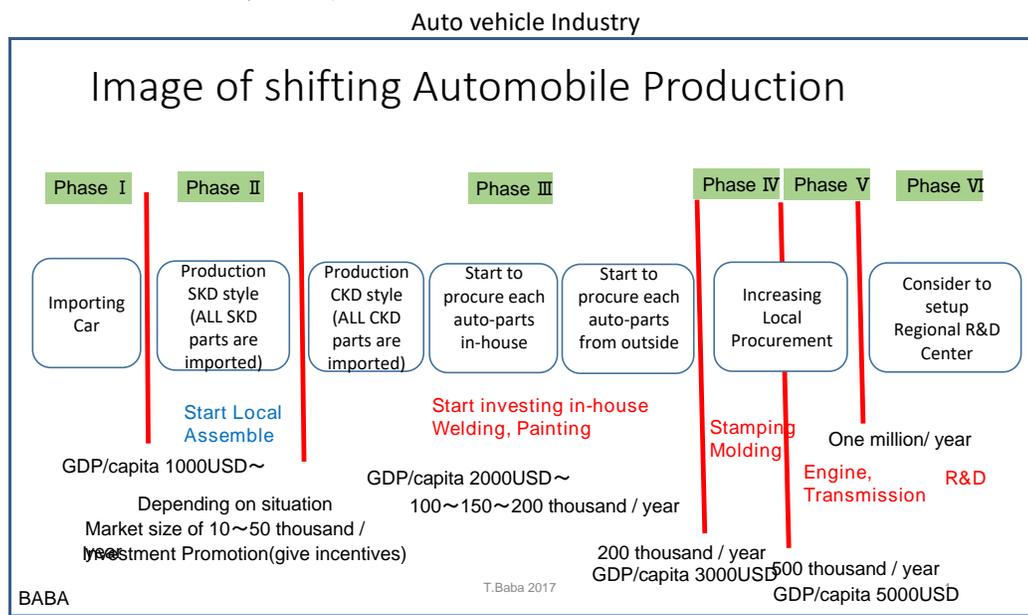
(13) Areas for Further Study

It is recommended that further studies be undertaken on areas that were beyond the scope of this study but very important in providing a clear path to the development of automotive industry in EAC. This should include but not limited to:

- a. EAC to conduct feasibility study for Setting up a regional motor vehicle manufacturing plant for manufacture and assembly of low cost utility vehicles to cater for rural transportation needs and urban mobility. This should be complemented by a search for global strategic investor to Partner with local entrepreneurs and set up assembly plans for the manufacturer of such vehicles-
- b. To conduct a comprehensive survey of the automotive industry players in EAC region. This should include all producers, assemblers, part manufacturers, and dealers, and a comprehensive documentation of existing capacities for part manufacturing.
- c. At study on all motor vehicles in use in EAC region and proposal for model rationalization.

8.0 EAC Automotive Industry Development Plan - 2017 to 2032 - 15 Year Draft Action Plan

As seen in the key findings of this study, it is important for EAC to develop a realistic, step-by-step strategy and plan, which follows the development path below in accordance with the development of the economy and the market. (more details are described in chapter 4.0)



(Source: Baba presentation (2017))

Motorcycle Industry

Stage	Major localization of products and process	Effective minimum production scale	Market size of finished motorcycles	international companies' capacity building activities	
				Finished motorcycle company	Supplier
1st	Parts that involve assembly of finished motorcycles and maintenance	Several ten thousand level	100,000 level	Building organizational capacity to conduct routine manufacturing (especially manufacturing capacity)	Building organizational capacity to conduct routine manufacturing (especially manufacturing capacity)
2nd	OEM parts that require casting, pressing, and machine processing	From around 200,000 to 300,000 level	500,000 level	Building organizational capacity to conduct routine manufacturing. Building capacity to build capacities partially started.	Building organizational capacity to conduct routine manufacturing (mainly manufacturing capacity and partially improving capacity)
3rd	OEM parts and OEM electronic components that require casting and forging process	From around 500,000 to 1,000,000 level	Not less than 1,000,000 level	Establishment of organizational capacity to carry out routines. Building capacity to build capacities partially started.	Building organizational capacity to conduct routine manufacturing (especially maintenance capacity)

Source: Based on Mishima (2010)

Gradual entry restriction on old vehicles and restricting competition with 'Made in EAC vehicles' will show commitment of EAC to develop Vehicle manufacturing industry. Incentives for achieving early localization can also help existing players to grow faster & if possible with Global OEM's. A clear roadmap on emissions & safety will help EAC follow through quality standards as the sector grows. It also helps OEM's to plan their product pipeline accordingly. Also identifying strategic located area for manufacturing will help mutually for development of infrastructure & automotive

industry in EAC partner states. This way, EAC become enabler for growth by deciding appropriate policies considering all stake holders- Customer, Industry & EAC can motivate OEM's to invest in this industry. This will lead to real automotive long term industrial growth of EAC.

The tables below are the draft action plan based on this study. The draft action plan below is to be carefully reviewed and finalized through the dialogue between public and private sector. It is also envisaged that the proposed Regional Automotive Development Council will play a significant role in refining and implementing the Action Plan¹⁰⁹.

A. Motor Vehicles

Phase	Characteristic	Years	State of Automotive Sector	Action Points	Supporting Policy Instruments	Responsibility Centre	Link to Policy Recommendation	Budget USD (Annual)
Phase 1	GDP per capita: under US \$1,000 and Market Size: under 10,000 units/year	Year 1 to 2 (2018 to 2019)	Importation of Cars with limited SKD and CKD assembly	<ul style="list-style-type: none"> Harmonize motor vehicle pre-shipment and regional inspection standards 	<ul style="list-style-type: none"> EAC Customs Management Act 	EAC Customs Unit (EAC Secretariat)	Policy Harmonization	235,333
				<ul style="list-style-type: none"> Undertake an EAC automotive sector census survey establishing production capacities, products & services Undertake automotive sector skills needs assessment for assemblers, manufacturers and training institutions 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EAC Secretariat (Industry)	Skills Development	
				<ul style="list-style-type: none"> Carry out regular audits and sharing information on pre-shipment inspection 	<ul style="list-style-type: none"> EAC Customs Management Act Approved Automotive Sector Report 	EAC Customs Unit (EAC Secretariat)	Policy Coherence	185,533
				<ul style="list-style-type: none"> Establish Automotive Development Council (ADC) Introduce Automotive Sector Development levy on imported used vehicles – pooled & remitted to ADC 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EAC (SCTIFI)	Institutional Collaboration	
Phase 2	GDP per capita: US \$1,000 and Market Size: 10,000-50,000 units/year	Year 3 to 5 (2020 to 2022)	Local Production – SKD and CKD assembly	<ul style="list-style-type: none"> Harmonize age limit for used car importation to 8 years Enforce quality standards inspection for imported used and new spare parts Enforce road worthiness inspection within partner states CKD definition 	<ul style="list-style-type: none"> Approved Automotive Sector Report EAC Automotive Development Council Establishment Act 	EAC (SCTIFI) EAC Automotive Development Council	Strategic approach to reduction of Importation of Used Automotives Policy harmonization	204,087

¹⁰⁹ The plan is also to be carefully reviewed by the experts and concerned authority in accordance with international agreement such as WTO, while EAC as developing countries may seek remedies and exemptions from agreements.

Phase	Characteristic	Years	State of Automotive Sector	Action Points	Supporting Policy Instruments	Responsibility Centre	Link to Policy Recommendation	Budget USD (Annual)
				<ul style="list-style-type: none"> Establish Automotive Industrial Parks with uninterrupted power supply and good transport infrastructure 	<ul style="list-style-type: none"> EAC Industrialization Strategy & Action Plan 	Respective EAC Governments EAC Secretariat (Industry)	Buy EAC – Build EAC	224,495
				<ul style="list-style-type: none"> Standardize and coordinate institutional skills development in foundries, precision machining, corrosion treatment, fibre technologies, electronics etc. Undertake model homologation survey, & develop model list for EAC 	<ul style="list-style-type: none"> Approved Automotive Sector Report EAC Automotive Development Council Establishment Act 	EAC (SCTIFI) EAC Automotive Development Council	Skills development	
				<ul style="list-style-type: none"> Introduce CKD Incentive Tier 5 – Increase used car import duty to 50% plus 20% excise duty Cap automotive sector expatriate staff composition at 20% of total staff Introduce Investment deduction allowance at 150% for capital expenditure above USD 2 million (industrial buildings & machinery) Craft a phased long term development plan for regional local content components 	<ul style="list-style-type: none"> Approved Automotive Sector Report EAC Automotive Development Council Establishment Act EAC Industrialization Strategy & Action Plan 	EAC (SCTIFI) EAC Automotive Development Council		246,945
Phase 3	GDP per capita: US \$2,000 and Market Size: 100,000-200,000 units/year	Year 6 to 10 (2023 to 2027)	Local Production – CKD with limited local content ratio	<ul style="list-style-type: none"> Harmonize driving rules (LHD vs RHD) 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EALA Respective EAC Governments	Traffic rules harmonization	271,639
				<ul style="list-style-type: none"> Introduce Automobile Purchase Schemes (APS) 	<ul style="list-style-type: none"> EAC Automotive Development Council Establishment Act 	EAC (SCTIFI) EAC Automotive Development Council	Fostering Market Growth Access to Finance	
				<ul style="list-style-type: none"> Introduce 4th Tier CKD Incentive – Harmonize SKD & CBU excise duty at 20% 	<ul style="list-style-type: none"> EAC Automotive Development Council Establishment Act 	EAC (SCTIFI) EAC Automotive Development Council	Fostering Market Growth	
				<ul style="list-style-type: none"> Undertake sourcing for FDIs in assembly of 	<ul style="list-style-type: none"> EAC Industrialization 	Investment Promotion	Development	

Phase	Characteristic	Years	State of Automotive Sector	Action Points	Supporting Policy Instruments	Responsibility Centre	Link to Policy Recommendation	Budget USD (Annual)	
				Pick-ups, Passenger Vehicles, Commercial vehicles, agricultural tractors, tippers and motorcycles	zation Strategy & Action Plan	Agencies EAC Automotive Development Council	Policy Fostering Market Growth	298,803	
				<ul style="list-style-type: none"> Zero rate primary and intermediate band inputs for local parts manufacturing 	<ul style="list-style-type: none"> EAC Customs Management Act Budget Statements 	Revenue Authorities EAC Automotive Development Council	Fostering Market Growth		
				<ul style="list-style-type: none"> Cap maximum expatriate staff composition to 15% of total staff Reduce and cap used car importation age limit to 5 years Develop a long term emission and safety roadmap 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EAC (SCTIFI) EAC Automotive Development Council			328,684
				<ul style="list-style-type: none"> Introduce 3rd Tier CKD Incentive – Reduce CKD (not absorbing local content) import duty to 15% 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EAC (SCTIFI) EAC Automotive Development Council			361,552
				<ul style="list-style-type: none"> Implement model homologation & introduce 50% additional excise duty on any other model Ensure the establishment & full functioning of Vehicle Inspection and Certification centres across all EAC Partner States 	<ul style="list-style-type: none"> EAC Automotive Development Council Establishment Act Approved Automotive Sector Report 	EAC (SCTIFI) EAC Automotive Development Council			397,707
Phase 4	GDP per capita: US \$3,000 and Market Size: 200,000 units/year	Year 11 to 12 (2028 to 2029)	Increased local production processes including stamping and molding	<ul style="list-style-type: none"> Introduce 2nd Tier CKD incentive – 10% import duty on full CKD, and zero excise duty Set up a regional motor vehicle manufacturing plant 	<ul style="list-style-type: none"> Approved Automotive Sector Report EAC Industrialization Strategy & Action Plan 	EAC (SCTIFI) EAC Automotive Development Council	Infrastructure Development	437,478	
				<ul style="list-style-type: none"> Harmonize local content law for automotive sector Cap maximum expatriate staff composition at 10% of total staff; and going forward 	Approved Automotive Sector Report	Automotive Manufacturer Associations EAC Automotive Development Council	Skills Development Harnessing Technology Transfer	481,226	
Phase	\$5,000 and Market	Year 13 to 15	Increased local	<ul style="list-style-type: none"> Introduce 1st Tier CKD incentive – 0% excise 	Approved Automotive	EAC (SCTIFI)		529,348	

Phase	Characteristic	Years	State of Automotive Sector	Action Points	Supporting Policy Instruments	Responsibility Centre	Link to Policy Recommendation	Budget USD (Annual)
		(2030 to 2032)	production processes including stamping and molding	and 0% import duty on CKD and aftersales fully supporting local content ratio	Sector Report	EAC Automotive Development Council		
				<ul style="list-style-type: none"> Ban importation of spare parts locally manufactured in EAC 	Approved Automotive Sector Report	EAC (SCTIFI) EAC Automotive Development Council	Local Industry Development	582,283
				<ul style="list-style-type: none"> Establish an Automotive R&D Centre 	Approved Automotive Sector Report	EAC (SCTIFI) EAC Automotive Development Council	Skills Development Harnessing Technology Transfer	640,511

Note:

Phases and actions taken;

Phase I: If average GDP per capita is under US\$1,000, and potential production volume is under 10 thousand units/year; EAC will continue to import cars.

Phase II: when GDP per capita reaches US\$1,000 and market size becomes 10-50 thousand units/year (current average GDP for EAC States is \$1,160); the action is to concentrate on attracting SKD/CKD assembly.

Phase III: GDP per capita reaches US\$2,000 and the production volume becomes between 100-200 thousand units/year; in-house welding and painting is possible

Phase IV: When GDP per capita reaches US\$3,000/year and production volume reaches 200,000; stamping and molding is possible

Phase V: When GDP per capita reaches US\$5,000 and production volume reaches 500,000 units/year; R&D can be embarked upon when production reaches one million/year; EAC can look forward to starting assembly of engine and transmission

B. Motorcycles

Phase	Characteristic	Years	State of Automotive Sector	Action Points	Supporting Policy Instruments	Responsibility Centre	Link to Policy Recommendation	Budget USD (Annual)
Phase 1	Market Size: under 100,000 thousand units/year	Year 1 to 2 (2018 to 2019)	Importation of Motorcycles with limited SKD and CKD assembly	<ul style="list-style-type: none"> Harmonize motorcycle pre-shipment and regional inspection standards 	<ul style="list-style-type: none"> EAC Customs Management Act 	EAC Customs Unit (EAC Secretariat)	Policy Harmonization	117,667
				<ul style="list-style-type: none"> Undertake an EAC automotive sector census survey establishing production capacities, products & services Undertake automotive sector skills needs assessment for assemblers, manufacturers and training institutions 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EAC Secretariat (Industry)	Skills Development	
				<ul style="list-style-type: none"> Establish Automotive Development Council (ADC) Introduce Automotive Sector Development levy on imported used motorcycles – pooled 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EAC (SCTIFI)	Institutional Collaboration	92,767

Phase	Characteristic	Years	State of Automotive Sector	Action Points	Supporting Policy Instruments	Responsibility Centre	Link to Policy Recommendation	Budget USD (Annual)
				& remitted to ADC				
Phase 2	Market Size: 100,000 thousand units/year	Year 3 to 5 (2020 to 2022)	Local Production – SKD and CKD assembly	<ul style="list-style-type: none"> Establish motorcycle age limit for used units importation Enforce motorcycle road worthiness inspection within partner states Motorcycle CKD definition Implement used parts quality certification process at market level 	<ul style="list-style-type: none"> Approved Automotive Sector Report EAC Automotive Development Council Establishment Act 	EAC (SCTIFI) EAC Automotive Development Council	Strategic approach to reduction of Importation of Used Automotives Policy harmonization	102,043
				<ul style="list-style-type: none"> Coordinate institutional skills development in foundries, precision machining, corrosion treatment, fibre technologies, electronics etc. 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EAC (SCTIFI) EAC Automotive Development Council	Skills development	112,248
				<ul style="list-style-type: none"> Establish Automotive Industrial Parks with gazetted parks for motorcycle assembly/manufacturing Undertake motorcycle model homologation survey, & develop model list for EAC 	<ul style="list-style-type: none"> EAC Industrialization Strategy & Action Plan 	Respective EAC Governments EAC Secretariat (Industry)	Buy EAC – Build EAC	
				<ul style="list-style-type: none"> Cap automotive sector expatriate staff composition at 20% of total staff Introduce Investment deduction allowance at 150% for capital expenditure above USD 1 million (industrial buildings & machinery) Develop a phased long term regional motorcycle local content component development plan 	<ul style="list-style-type: none"> Approved Automotive Sector Report EAC Automotive Development Council Establishment Act EAC Industrialization Strategy & Action Plan 	EAC (SCTIFI) EAC Automotive Development Council		123,472
Phase 3	Market Size: 500,000 thousand units/year	Year 6 to 10 (2023 to 2027)	Local Production – CKD with limited local content ratio	<ul style="list-style-type: none"> Zero rate primary and intermediate band inputs for motorcycle local parts manufacturing 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	Revenue Authorities EAC Automotive Development Council	Fostering Market Growth	135,820

Phase	Characteristic	Years	State of Automotive Sector	Action Points	Supporting Policy Instruments	Responsibility Centre	Link to Policy Recommendation	Budget USD (Annual)
				<ul style="list-style-type: none"> Cap maximum expatriate staff composition to 15% of total staff 	<ul style="list-style-type: none"> EAC Customs Management Act Budget Statements 	EAC (SCTIFI) EAC Automotive Development Council		149,402
				<ul style="list-style-type: none"> Develop a long term emission and safety roadmap 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EAC (SCTIFI) EAC Automotive Development Council		164,342
				<ul style="list-style-type: none"> Implement model homologation & introduce 50% additional excise duty on any other model 	<ul style="list-style-type: none"> Approved Automotive Sector Report 	EAC (SCTIFI) EAC Automotive Development Council		180,776
				<ul style="list-style-type: none"> Zero rate Motorcycle CKD that adopts full local content ratio 	<ul style="list-style-type: none"> EAC Automotive Development Council Establishment Act Approved Automotive Sector Report 	Revenue Authorities EAC Automotive Development Council	Fostering Market Growth	198,854
Phase 4	Market Size: 1,000,000 thousand units/year	Year 11 to 12 (2028 to 2029)	Increased local production processes including stamping and molding	<ul style="list-style-type: none"> Introduce 50% excise duty on aftersales parts similar to those produced in EAC 	<ul style="list-style-type: none"> Approved Automotive Sector Report EAC Industrialization Strategy & Action Plan 	EAC (SCTIFI) EAC Automotive Development Council	Infrastructure Development	218,739
				<ul style="list-style-type: none"> Cap maximum expatriate staff composition at 10% of total staff; and going forward 	Approved Automotive Sector Report	Automotive Manufacturer Associations EAC Automotive Development Council	Skills Development Harnessing Technology Transfer	240,613
Phase 5	Market Size: more than 1,000,000 thousand units/year	Year 13 to 15 (2030 to 2032)	Increased local production processes including stamping and molding	<ul style="list-style-type: none"> Ban importation of spare parts locally manufactured in EAC 	Approved Automotive Sector Report	Revenue Authorities EAC (SCTIFI) EAC Automotive Development Council		264,674
				<ul style="list-style-type: none"> Explore the assembly/manufacturing of Battery and Solar powered electric 	Approved Automotive Sector Report	EAC (SCTIFI) EAC Automotive	Local Industry Development	291,142

Phase	Characteristic	Years	State of Automotive Sector	Action Points	Supporting Policy Instruments	Responsibility Centre	Link to Policy Recommendation	Budget USD (Annual)
				motorcycles		Development Council		
				<ul style="list-style-type: none"> Establish an Automotive R&D Centre 	Approved Automotive Sector Report	EAC (SCTIFI) EAC Automotive Development Council	Skills Development Harnessing Technology Transfer	320,256

Note:

Considering market size; the motorcycle industry in EAC is between Phase 1 and Phase 2. In Phase 1, EAC can undertake assembly of finished goods and maintenance with gradual localization. When production and sales reach 500,000 units/year, parts manufacturing for OEM parts that require casting, pressing and machine processing can gradually be localized. When the market hits over 1,000,000/year, OEM parts and OEM electronic components that require casting and forging process can gradually be localized.

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