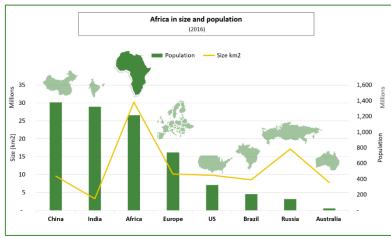
The East African Steel Industry

A continent of opportunities...

The public image of Africa today is still heavily biased through stereotypes. Africa is perceived as a continent ruined by poverty, where corruption preys on development funding, tyrannical governments and political stability undermine confidence. These images however hide a different, much more positive side of the continent.

The population in Africa has shown a constant growth of 2.5% yearly for the past 5 years, standing at about 1.2bn people in 2017. Despite also being a risk, this substantial growth represents major opportunities and lays positive signs that can lead the continent to potential social and economic benefits. After a period of inactivity, the substantial increase in economic growth of Foreign Direct Investments over the last 15 years creates optimism for the future of Africa.

Africa has been changing and developing on different levels over the past decades. It became a valuable consumption region for different industries, especially the steel industry.



Steel is the backbone of the economic activity of any region. Direct and indirect consumption of steel is projected to increase overall on the continent particularly in East Africa. The region has increased its infrastructure construction activity, driving the growth of its steel industry. Before going into further detail, one should understand the underlying trends boosting the economy, various steelrelated sectors, as well as the steel industry itself.

What is driving growth in Africa today?

... a demographic dividend

In Africa today, a growing working age population and fast-economic growth is starting to result in a demographic dividend. As more people enter the workforce, the share of the economically dependent in the population such as minors and elderly is

declining. This dividend affects worker productivity, family size, education and health. The movement towards a smaller sized family enables families and governments to provide more resources to invest in health and education per child.

The resulting demographic transition creates a supply side shock to the economy, potentially raising number of workers, human capital of the workforce and the level of domestic saving. On the other hand, the large young population generates the required demand for many consumer goods and services markets - as well for new housing and construction.

... a rising middle class

With the general economic growth, a growing middle class provides a stable consumer base that attracts productive foreign investment. Beyond that, it is a requirement for robust innovation and entrepreneurship. It is a foundation of trust that

promotes social interaction and reduces transition costs, a push towards better governance and a promoter of a better and equal education. Africa today is home to one of the fastest growing middle classes globally.

... a rapid urbanisation

More and more people are moving to cities in hope of securing better living conditions, higher quality education and better economic opportunities.

Similar to Europe, Africa has one of the highest urbanization rates in the world. About 40% (2017) of the population already lives in urban areas. The 20 largest African cities are expected to grow by 50% over the next 10 years. Apart from driving general growth, this trend also creates huge opportunities in urban infrastructure and property developments.

... a push towards manufacturing

Despite its immense natural resources, Africa's manufacturing sector remains its weakest link to the continent's growth and integration into the global unleash economy. To Africa's full potential, the African Development Bank has appointed Industrialization as a top priority in its "High 5 Agenda" by initiating the sixflagship programs accelerate industrialization

in the region. Likewise, the African Union emphasized the importance of industrialization to the continent in its "Agenda 2063". Partly as results of these programs, as well as other factors, manufacturing sectors of many African countries are expanding quickly.

... a rise in Foreign Direct Investments.

Over the past 1-2 decades, there has been a significant increase in the number of FDI projects in Africa. This increase has shifted the type of FDI from the primary sector (resources) towards the secondary and tertiary sectors (manufacturing, services and hi-tech). Foreign Direct Investments are key to Africa's growth potential since they do not only bring financial resources but also new technologies, knowledge and expertise. Investments promote employment, productivity and competition, which is what Africa needs to develop itself. The growth of FDI in Africa clearly proves that it's an emerging global FDI destination. European countries such as the UK, France and Italy are the largest investor in Africa, followed Asia by and Northern America. Yet, China became the single largest contributor of FDI in Africa 2 years ago. 293 diversified Chinese FDI projects worth a combined

\$66.4 billion (2005-2016) created around 130 000 jobs on the continent. China is already realising its opportunities despite the risks. Their willingness to further invest in these markets displays a strong believe in the potential of the region. On the other hand, Western countries' share of total FDIs in Africa is decreasing, especially due to perceived risk factors. China's readiness to manage the accruing risks and their trust in the potential of the region leverage them to lead the race. Western countries however are losing out on an opportunity to lead different markets in the future.

A spotlight on East Africa



Large parts of East Africa are a very promising operating territory in terms of growth and the least dependent on commodities such as gold or oil. Countries like Tanzania, Kenya, Rwanda and Ethiopia are the frontier growth of the continent. The region is projected to attain the highest regional economic growth at 6.3% over the 2018 period. Ethiopia is

projected to be the fastest growing economy in Africa at 8.5% according to the World Economic Forum.

Aside of the macroeconomic aspects, a mixture of factors can be attributed to East Africa's growth. Policies are promoting local production goods various investments are boosting different industrial sectors. Regional economic integration equally boosts growth. The East African Community (EAC), with member states such as Kenya, Rwanda and Tanzania, is largely seen as the most integrated economic block on the continent.

The vast infrastructure deficit is a constraint on the growth of the region. Yet, the desire to invest and develop infrastructure is an opportunity to leapfrog this constraint and sustain the growth with new and more efficient technologies.

Steel production in East Africa

The steel industry of East Africa is yet heavily dependent on imported raw materials and molten scrap metals. Even though local deposits of iron ore and coal have been identified in several locations, the region is yet to attract enough commercial interest exploit them. This interest however is expected to gradually increase with the growth of the local steel production.

Over the past few years, growth in production of steel was outpaced by growth in the demand of steel. The consequences are growing opportunities for new plants and expansion projects to cater to this gap in the market.

The largest two markets for steel in East Africa are Kenya and Ethiopia. In Kenya, the East African community's economic hub, demand of stands steel at approximately 1.8 million tons per year. This demand is a result of steel exports and multiple local construction projects such as the ambitious housing projects initiated by The National Housing Corporation (NHC) to construct 500,000 housing units across the country in only 5 years. However, the installed production capacity of steel in Kenya is only about 1.4 million tons, of which 57% is being utilised.

The local market is currently centred around long products due to the rise of construction and transport projects. The local companies Athi Steel, Apex, Dekvi and Tononoka are the largest producers in this segment.

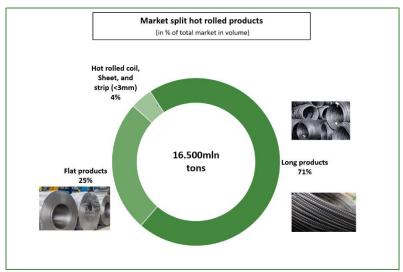
Ethiopia on the other side distinguishes itself with low electricity and labour cost. Multiple big construction projects present opportunities for the steel sector. Ethiopia's demand of steel is about 1.1 million tons per year with an installed production capacity of about 1.2 million tons per year and about 42% capacity utilisation - an of indication producers preparing for the rapidly growing demand.

The biggest companies in the steel market in Ethiopia are Habesha, Steel RMI, East steel and Aarti. Alem Steel, through their subsidiary Osaka steel, is the only organisation operating a rolling mill for flat products such as sheets.

In addition to national players, dominant regional groups in the East African steel industry are SAFAL group, who has the strongest presence in the region, followed by MMI Steel and Athi Steel.

Presently, the market in East Africa is mainly focused on long and flat products. This is however likely to change, as demand broad growth creates larger markets for other products as well. The imports of pipes and tubes into Kenya and Ethiopia are for example already rising at more than 9% (in weight) per year since 2008. In future, market demand and production - is likely to diversify in terms of the variety of products.

Previously, companies in the region tended to acquire low



medium price level equipment due to the risk factor of capital investments. This leads the markets to be mainly dominated by relatively cheap Indian and Chinese made equipment. more than Nevertheless, half of all companies in the East African steel industry seek to renew their equipment in the next 5 years, many targeting higher quality machinery. As the environment is becoming attractive, African steel managers presented their willingness to buy higher quality equipment with better technology and longer amortization periods. This indicates an increase in the quality of outputs, as well as in production efficiency.

Governments in East Africa are investing heavily in infrastructure and emphasize on improving their power supplies. Their infrastructure spending programs are driving economic growth. Based on expert interviews conducted

as part of various studies into the steel sector by africon, governments also offer incentive strong programs for steel projects especially in Kenya and Ethiopia to attract investors. However, government influence in the final decision taking is relatively high in Ethiopia compared to low governmental influence in Kenya.

What drives steel demand?

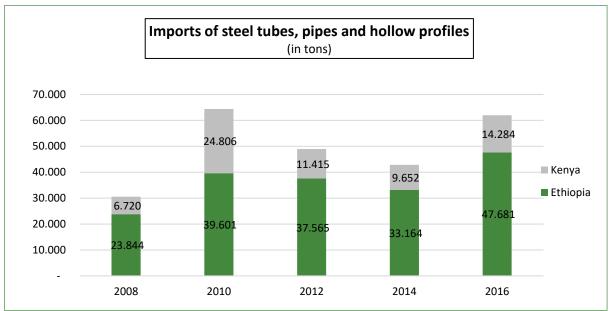
Despite growing rapidly, steel consumption per capita remains yet relatively low in East Africa, providing ample space for future growth. In the following, this article is going to highlight a few more and maybe less expected promising industries in East Africa driving demand for steel today - and tomorrow.

... infrastructure & construction

A major demand driver in the steel industry in East Africa today is the development of infrastructure and construction activities. These are partly reflected in the rise of mega construction projects. The region has registered an increase in these projects by about 65.5% for the period 2016-2017. Out of 71 projects, Kenya and Ethiopia have the largest share with 23 20 and projects respectively.

One of the core projects is the Central Corridor standard railway gauge project that links Rwanda, Burundi and Tanzania spanning across a 1.672 km distance. This project will offer both passenger and freight services between Kigali in Rwanda and Dar es Salam in Tanzania. Apart from potentially reducing transportation costs and linking markets, the rail tracks require huge amount of steel.

The LAPSSET Corridor program is another mega infrastructure project that connects South Sudan, Ethiopia and Kenya. seven consists of projects starting with 32 Berth port at Lamu, Kenya, an integrational Highway that connects South Sudan, Ethiopia and Kenya. The program also includes a crude and a product oil pipeline, in addition to three International Airports and



Resort Cities. This project requires steel for products from guardrails, pipeline tubes to steel structures for the airports and others.

The most valuable project in the region is the Grand Ethiopian Renaissance Dam, worth US\$4.1bn. Upon completion, the dam will deliver energy to both rural and urban areas. The government considers exports to neighbouring countries in case of a surplus With electricity. its gigantic scale, steel needed to reinforce cement, as well as for pipes and other segments.

Outside these mega projects, countless smaller construction projects are ongoing in the region. These range from infrastructure, to the construction of hotels, housing and industrial facilities. A large share of these requires steel, making up a major part of the overall steel demand.

East Africa lacks national resources compared other regions on the Ιt is soft continent. commodity orientated, the agriculture sector makes up 36% of the total GDP in the region. However, present deficiencies in infrastructure and climate change effects create the need for water treatment projects to maintain and boost the agricultural sector. On the manufacturing side. companies such as breweries, food & beverage manufacturers, textile mills and others require large amount of treated water in their production process. Governments are working to provide potable water to wider parts of the countries or private individuals as well.

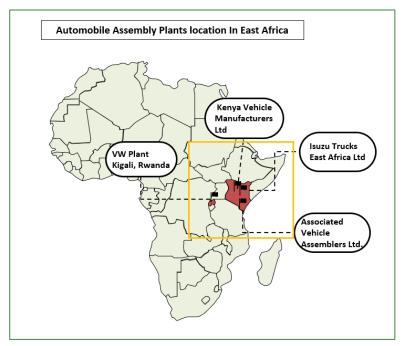
Despite a shift towards plastic use, water projects are a direct demand driver for the steel industry. This demand lays in the requirements of steel pipelines and steel tubes to

connect and distribute water to and from housing, farming and manufacturing entities.

Driving steel demand tomorrow: the automotive industry

of Because economic, political and demographic developments, the demand in the automotive industry is rapidly increasing in the region. Growing incomes and better infrastructure are easing hindrances to mobility, driving rates of car ownership. More attractive credit from financial institutions has equally helped to push demand for motor vehicles. Regionally the industry has its hotbeds Kenya, Rwanda Ethiopia, with Kenya being the leading country.

Presently, the automotive market in Kenya, as well as all other East African countries, still depends on



vehicle imports to meet domestic demand.

About 85% of imported vehicles are second hand. Kenya is one of the largest buyers of used private and commercial vehicles from Japan. However, more and more global OEMs have started to invest in local assembly plants across East Africa.

Earlier this year, the German manufacturer Volkswagen made headlines when it announced a new car assembly plant Rwanda - the first ever automotive investment in small East African country. The plant projected to produce up to 5,000 units per year across three different models for local sale.

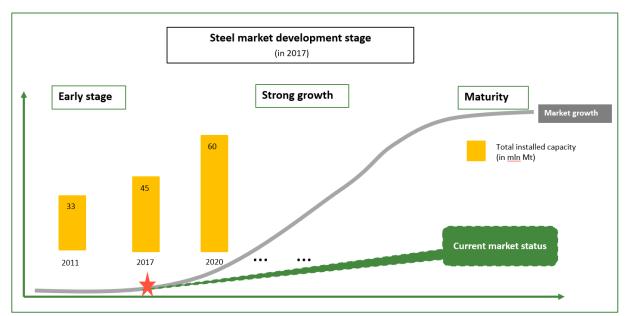
Kenya was already able to attract more diverse automotive assembly investments.

As buses are strongly in demand due to being commonly used as means of transport, they are already strongest affected by local production. Imports of fully built up buses have gone down to only 1% of overall vehicle imports due to operational plants. Local steel demand already exists as Kenyan companies weld metal sheets together to produce vehicle bodies.

In the new vehicle segment, Isuzu and Toyota make up 50% of the total market. This strong presence is equally a result of their fruitful operational assembly plants in the country. ISUZU Trucks Kenya is the biggest assembly plant in the country. It has a total capacity of 6,000 vehicles per year and presently assembles 60% trucks and 40% buses from completely knocked down (CKD) kits. Toyota is assembled by the company Associated Vehicle Assemblers (AVA) located in Mombasa. The plant assembles buses and trucks in CKD for brands also including Mitsubishi, Scania and Renault.

Kenya vehicle Manufacturers (KVM) is the third Kenyan plant. Located near Nairobi, the company assembles commercial and passenger vehicles with both completely knocked down and semi knocked down (SKD) kits for different automotive OEMs. In addition to Moebius Motors, the first Kenyan vehicle brand, these include MAN, VW, Ashok Leyland and Mercedes Benz. The famous VW polo is the most recent model to join the assembly line. Many of **KVMs** European partners only recently started announced their partnership to assemble vehicles locally. Over the medium to long term, this might increase the so far limited exposure of European brands in Kenya.

Overall, there is no doubt the local assembly industry is still in its infancy with a total output of approximately 10,000 units per year - a fraction of some single plants in Europe or Asia. Nevertheless, the local plants might well be the first steps for the region to become a major emerging automotive market. They also show that Kenya – and



East Africa - is an attractive market for the automotive industry. Over time, growing assembly volumes will additionally attract investment into the local production of parts and components, which will further push up demand for steel.

East Africa is becoming a major emerging market!

The East African region has the potential to become a major emerging market. Steel is going to play a major role in this process. Whether it is for infrastructure, urban construction or for the use in manufacturing industries: the demand for various steel products in East Africa is already increasing rapidly and will likely continue to do so.

Companies from all over the world have the chance to reap the benefits of these developments.

Opportunities range from the exports of finished steel products, the supply of machinery to the local production of various steel products.

As it once was the case with every emerging economy, East Africa is yet at an early stage of its economic takeoff. However, countries such as Kenya, Ethiopia, Rwanda or Tanzania already offer interesting opportunities which can be realized already today. Companies that act fast can position themselves to participate in the growth and development of a region and gain experience outperform later entrants for many years to come.

