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INTRODUCTION

Well-developed transport infrastructure is critical for the efficient functioning of an economy. It facilitates trade by reducing the cost and time of moving goods to where there is a market for it; it also makes it possible for people to travel, or to move to regions where there are jobs available. Good transport infrastructure and services have a massive impact on productivity and economic development. The lack of good transport infrastructure is, however, a key constraint to economic development in Africa. A perfect example of how a lack of transport infrastructure can affect economic growth can be found in the Tete province of Mozambique, where there are massive reserves of coal. The amount of coal that Mozambique can currently produce already exceeds railway and port capacity. Demand and investment are growing much faster than the economy’s current capacity can handle, which will inevitably result in production delays and supply constraints. Still, thanks to the government’s openness and willingness to work with foreign investors and the country’s massive natural resources, transport and energy infrastructure will improve over time. There are several projects in the pipeline, with the involvement of both the government and the private sector. There are many other such cases across the continent. For investors willing to take on risk, this offers potentially lucrative investment opportunities.

However, transport is one of the sectors that is most controlled by the state, especially in African countries. This has repressed innovation, and with the state having monopoly control, there is little incentive to increase efficiency in the sector, as it continues to operate with the help of subsidies, with taxpayers ultimately having to foot the bill. The consequence of this is that services are very poor. The allocation of resources by the state is usually also less effective than in the private sector.

Increasingly, though, the private sector has been given a larger role in transport services. For example, in the maritime sector, some countries’ governments have leased out port operations to private companies – and the results speak for themselves. According to the African Development Bank (AfDB), ports with private operators can handle loads about 75% faster than ports operated by the state. For example, congestion has long been a major problem in Lagos ports; however, within six months of awarding a concession to APM Terminals to manage, operate and develop the Apapa container terminal, capacity was increased, delays for berthing space was reduced substantially, and shipping lines reduced their congestion surcharge seven-fold, saving the economy $200m p.a. Elsewhere, in Senegal, due to a reduction of dwell times and increased traffic volumes at the Port of Dakar, costs have fallen significantly, and this has improved the financial viability of Senegal’s ports – the involvement of the private sector has been central in achieving this.

CURRENT STATE OF TRANSPORT INFRASTRUCTURE IN AFRICA

To have a thriving transport sector, a country needs good transport infrastructure. However, most of Africa remains underdeveloped in this regard. Figures from the World Economic Forum’s 2012/13 Global Competitiveness Report (GCR) show that only seven African countries’ transport infrastructure is above par on a global stage (see graph below). The African countries with better infrastructure are generally located in North and Southern Africa. This is not always the case, though: two North African countries, Algeria and Libya, both of which are flush with cash thanks to oil exports, have poor infrastructure (as graph below).
Africa’s performance is poor in terms of all parts of transport infrastructure: roads, rail, port, and air. Looking at these components separately, there are only three countries that have better infrastructure than the world average in each of the four components, namely Tunisia, South Africa, and Namibia. Mauritius and Seychelles perform well in three of the four components, but neither have railroad infrastructure because of the small size of the countries. That said, Mauritius has plans for a metro system to relieve traffic congestion. Meanwhile, Morocco performs well in terms of ports and air infrastructure, and has the best rail infrastructure in Africa, but its road infrastructure is slightly below the world average. Some countries perform surprisingly well in certain aspects, but have poor infrastructure otherwise. For example, Ethiopia has the fourth best air transport infrastructure in Africa and its roads are not too bad either, but its railways are very poor. In contrast, Rwanda has good roads, but no railways. Both Ethiopia and Rwanda are landlocked, making them dependent on other countries to ship goods.

ROADS

There are 11 African countries where the road infrastructure is better than the global average. The best ranked African countries are Namibia (35th), Rwanda (40th) and South Africa (42nd), while the worst-ranked are Guinea (140th), Gabon (138th) and Mozambique (135th). The strong performance by Namibia testifies to the value of quality roads over a focus on paved roads. The desertous country has a 29,000 km road network of which only 17% is paved; the remainder consists of gravel roads that are constantly maintained (as per graph below).

RAIL

There are only six African countries with better railroad infrastructure than the global average. Three of them (Morocco, Tunisia and Egypt) are in North Africa, while the remaining three (Namibia, South Africa and Swaziland) are from Southern Africa. Most of the main Southern African cities are connected via railway lines, thanks in part to the British Empire’s aim of constructing the Cape to Cairo Railway to connect all its African colonies. Further north, Tanzania also has a fairly extensive railway system consisting of 3,681 km of railway lines. In reality though, the situation is bleak due to underinvestment, underutilisation and losses for the railway operators. Kenya has 1,939 km of railway connecting most major towns. This is partially thanks to the Uganda Railway (a.k.a. the Lunatic Express), which was built by the British to link Lake Victoria to Mombasa. Some of the original line has fallen into disuse – it was never a commercially sound project; rather it was a show of strength by the British – but some of it is still used. Underinvestment and poor maintenance has left the railway in a poor state and utilisation of the railway is limited. This is actually a trend across East Africa: in March 2010, a conference was held in Dar es Salaam to discuss the state of East African railway infrastructure, and it was found that the following are the main challenges for East Africa’s railways:

• Underutilisation of existing railways;
• Shortcomings of the existing concession model; and
• The absence of a regulatory framework to ensure fair competition between road and rail transport.

![Quality of Road Infrastructure in Africa](chart)

Note: The WEF ranks 144 countries in total. The best- and worst-performing countries globally (France and Moldova) are also shown in the graph in addition to the African countries.
Some plans have emerged to improve the railway systems in East Africa in recent years. For instance, there is an East African Railway Master Plan – managed by countries in the East African Community (EAC) and Canada’s CPCS Transcom Limited – that attempts to improve railway infrastructure and services in their goal to deepen trade links and economic opportunities among member countries. In August 2012, the AfDB provided $500m to the EAC towards this project. Furthermore, Bloomberg reported in September 2011 that Southern and Eastern African nations were planning to invest a total of $10bn in infrastructure. As part of this, the Tanzania - Zambia railway corridor will be improved. The funds are seen coming from donors and private financiers. Meanwhile, in Ethiopia, the government aims to develop a 2,395 km railway network nationwide, out of which 1,808 km is planned to be completed by 2015. This forms part of the government’s five-year Growth and Transformation Plan. It remains to be seen, however, whether the government will have the financial strength to follow through with these plans. The government also plans to improve the Ethio-Djibouti Railway, which links landlocked Ethiopia to the Port of Djibouti. As opposed to other East African countries, Ethiopia does not allow foreign investors to invest in the transport sector. As shown in the graph below, rail infrastructure in East African countries is very poor at present, but we believe there is significant growth potential over the medium- to long-term (as per graph below).

Quality of Rail Infrastructure in Africa
(1 = extremely underdeveloped; 7 = extensive and efficient)

Source: WEF

Note: The WEF ranks 144 countries in total. The best- and worst-performing countries globally (Switzerland and Lebanon) are also shown in the graph in addition to the African countries.
Apart from Southern and North Africa, the rest of the continent is extremely poorly serviced in terms of rail infrastructure. Interestingly though, sub-Saharan Africa (SSA) is not the region with the worst railroads – according to the World Economic Forum (WEF), that indignity goes to South America.

### Quality of Infrastructure Across Regions

<table>
<thead>
<tr>
<th>Region</th>
<th>Roads</th>
<th>Railroads</th>
<th>Ports</th>
<th>Air</th>
<th>Available airline seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index: Worst = 1; Best = 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced Economies</td>
<td>5.4</td>
<td>4.9</td>
<td>5.4</td>
<td>5.8</td>
<td>2,415.5</td>
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<td>Central and Eastern Europe</td>
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<td>2.8</td>
<td>3.7</td>
<td>4.1</td>
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<td>Developing Asia</td>
<td>3.8</td>
<td>3.0</td>
<td>4.0</td>
<td>4.4</td>
<td>1,656.1</td>
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<tr>
<td>Latin America and the Caribbean</td>
<td>3.6</td>
<td>1.9</td>
<td>3.9</td>
<td>4.4</td>
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<td>Middle East and North Africa</td>
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<td>2.6</td>
<td>4.4</td>
<td>4.7</td>
<td>544.5</td>
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<tr>
<td>Sub-Saharan Africa</td>
<td>3.5</td>
<td>2.2</td>
<td>3.9</td>
<td>4.0</td>
<td>87.8</td>
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<tr>
<td>Rwanda</td>
<td>583</td>
<td>8.6</td>
<td>56</td>
<td>21</td>
<td>44</td>
</tr>
<tr>
<td>South Africa</td>
<td>8,090</td>
<td>3.1</td>
<td>649</td>
<td>12</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: WEF

Note: Number of available seats times the distance travelled – it is a measure of the airline’s passenger-carrying capacity.

**AIR**

Africa’s air transport is limited compared to the rest of the world. In 2010, 62.6 million passengers were carried in Africa, half of which was in North Africa, compared to 457 million in the euro area, a region with less than a third of Africa’s population. According to the African Union (AU), airport infrastructure – including tracks, lanes and taxeways, parking spaces, and passenger and freight terminals – as well as air navigation facilities are in need of upgrading. Furthermore, new technologies, which boost efficiency, are not used by African airline companies. Another disappointing fact is that African airlines experienced the weakest growth in the world in terms of adding new destinations during 2011.

Often, African airlines have old, poorly maintained and unsafe fleets. As at 2006, more than 20% of African aircraft were more than 30 years old while almost half of all aircraft were more than 20 years old. This makes operational costs high and presents a significant risk to those using the aircraft. Reflecting this fact, of the 25 countries with air carriers that are banned from entering EU airspace, 17 are from Africa. Even though Nigeria is not on this list, Reuters recently published an article on the poor state of air transport in Africa’s most populous country. It noted that various airlines are in “dire financial straits, which could soon have grave consequences for air safety in a country that already has one of the world’s worst records”. The news agency also noted that the Murtala Mohammed International Airport in Lagos looks more like a refugee camp than an airport and that airlines have had to use tents for makeshift service counters for more than a year while repairs are made to the main terminals. Mismanagement and corruption seem to be behind much of the sector’s financial chaos. Richard Branson’s Virgin Nigeria pulled out of the country after 10 years, citing interference by corrupt politicians and regulators. Because of the financial problems, airlines cannot afford new aircraft and continue to run on old, poorly maintained ones. Despite all the problems, nearly 200 domestic flights a day cross Nigeria per day, partly because poor road infrastructure makes it necessary to fly.

Although on average Africa’s air transport infrastructure is very poor, there are a few countries with very good facilities. In particular, South Africa is ranked 15th in the world by the WEF in terms of its air transport infrastructure, while Tunisia, Mauritius, Ethiopia, Morocco, Seychelles and Namibia are all in the top 60 globally.
According to the United Nations Conference on Trade and Development (UNCTAD) Maritime Review for 2012, the volume of goods loaded in African ports was 787.7 million tonnes in 2011, up by around 65.8 million tonnes from 2006. This represents 9% of the global total. In comparison, 371.3 million tonnes (only 4.2% of the global total) are unloaded at African ports, up by 21.5 million tonnes from 2006. According to the AfDB, the volume of general and containerised cargo moving through Africa’s ports has tripled over the last decade. Containerisation is not yet being fully utilised in Africa as road and rail links to ports are poorly equipped to handle containers. African ports also fall far short of international standards in terms of loading and unloading containers.

Most African ports continue to be operated fully by the state. However, this is gradually changing with the private sector becoming more involved in the provision of port services (while the government continues to provide the infrastructure). According to the AfDB, African port terminals that have been concessioned to private sector companies handle, on average, about 75% more containers per hour than state-run terminals. There is significant scope for the private sector to increase its role in port services.

Morocco was the country with the highest growth in container port throughput globally in 2010, with growth of 68.5% to 2.06 million twenty-foot equivalent units (TEUs), largely because of increasing activity at the Tanger Med port. The country with the highest container port throughput in Africa in 2010 was Egypt with 6.71 million TEUs, followed by South Africa (3.81 million TEUs), Morocco, and Kenya (0.62 million TEUs). These are the countries that are located along the main global shipping routes and therefore receive a lot of traffic compared to other African nations. Meanwhile, intra-African trade is limited, with only a few companies operating in the transit space.

In Liberia, APM Terminals signed a 25-year concession agreement to operate the Port of Monrovia and invest $125m to improve the port and rebuild damaged infrastructure. This should move Liberia’s port infrastructure to above the global average as measured by the WEF – see graph below for Liberia and other African countries’ port infrastructure compared to the global average.

Meanwhile, the Nigerian Ports Authority (NPA) plans to develop two deepwater ports at Lekki and Ibaka. According to the UNCTAD Maritime Review, the Port of Lagos will also benefit from a $124.4m redevelopment project, including an oil and gas facility. Moreover, APM Terminals has plans to develop a new mega-port and free trade zone at Badagry in Nigeria. The proposed port would be one of the largest in Africa with seven km of quay.

Note: The WEF ranks 144 countries in total. The best- and worst-performing countries globally (Singapore and Haiti) are also shown in the graph in addition to the African countries.
GROWTH AND INVESTMENT IN AFRICA’S TRANSPORT SECTOR

The transport sector can affect economic growth and development in numerous ways. For example, an expansion of the size of the road network increases the number of available markets and boosts the construction sector, while an improvement in the quality of roads reduces travel time. Therefore, in addition to impacting directly on the growth of the transport sector, an improvement in transport infrastructure also facilitates growth in other sectors, as more goods and people can be moved to more places in less time. In other words, a good transport sector boosts productivity in agriculture, manufacturing, and banking, and makes the country a more attractive tourist destination. For example, in Morocco a high-speed train is expected to link Tangier and Casablanca in just two hours’ travel time. In essence, a good transport sector facilitates an increase in productivity levels, and in general makes it easier to trade, invest, and do business.

The accompanying table presents some salient features of Africa’s transport infrastructure compared to some other regions in the world. From this, one can clearly deduce that SSA countries continue to lag the rest of the world. Less than 20% of roads in SSA are paved, compared to a global average of 64.9%. Due to weak infrastructure and low income levels, the number of cars per capita in SSA is also very low. In addition, air transport is still under-developed.

Note: The WEF ranks 144 countries in total. The best- and worst-performing countries globally (the Netherlands and Haiti) are also shown in the graph in addition to the African countries.
Africa might be the last to the finish line, but this does not mean that there are not lucrative investment opportunities. Indeed, international companies are falling over their feet to invest in Africa’s infrastructure. There is still massive scope for development (as is clear from the table); combining this fact with improvements in the business climate over the last few years makes a strong case for investing in Africa’s infrastructure. In turn, this will be beneficial for the development of other sectors. Multilateral organisations, especially the World Bank and the AfDB, have provided significant loans for investment in Africa’s infrastructure, and bilateral donors also prefer to route aid to specific projects rather than give it directly to (potentially corrupt) governments. Although these investments are important, the involvement of the private sector is a necessary condition to ensure that the projects remain viable in the long-term. For this to happen, private operators have to be certain that they will be able to make profits, which in turn requires that market forces be allowed to determine prices.

In countries with newfound mineral wealth, mining companies’ expansion plans are often hindered by a lack of sufficient infrastructure. The upside of this is that it gives the companies the incentive to invest in infrastructure, where it may otherwise have been lacking. Mozambique

<table>
<thead>
<tr>
<th>Region</th>
<th>Roads paved</th>
<th>Road density</th>
<th>Passenger cars</th>
<th>Air transport – registered carrier departures worldwide</th>
<th>Available airline seats</th>
<th>Air transport – freight</th>
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</thead>
<tbody>
<tr>
<td>% of total, 2009</td>
<td>km of road per 100 km² of land</td>
<td>Per 1,000 people</td>
<td>Million, 2010</td>
<td>Million, 2010</td>
<td>Million, 2010</td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>64.9</td>
<td>30.2</td>
<td>124.9</td>
<td>28.1</td>
<td>2,595</td>
<td>189,325</td>
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<tr>
<td>Euro area</td>
<td>87.3</td>
<td>140.0</td>
<td>418</td>
<td>4.7</td>
<td>457</td>
<td>30,754</td>
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<tr>
<td>Low and middle income</td>
<td>44.8</td>
<td>21.5</td>
<td>50.0</td>
<td>8.7</td>
<td>848</td>
<td>42,962</td>
</tr>
<tr>
<td>Middle income</td>
<td>55.2</td>
<td>23.1</td>
<td>54.2</td>
<td>8.5</td>
<td>835</td>
<td>41,819</td>
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<tr>
<td>Sub-Saharan Africa</td>
<td>18.8</td>
<td>-</td>
<td>22.7</td>
<td>0.4</td>
<td>33</td>
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<tr>
<td>Middle East and North Africa</td>
<td>78.7</td>
<td>10.3</td>
<td>91.7</td>
<td>1.3</td>
<td>149</td>
<td>17,094</td>
</tr>
<tr>
<td>Africa</td>
<td>-</td>
<td>-</td>
<td>28.4</td>
<td>0.8</td>
<td>63</td>
<td>2,675</td>
</tr>
<tr>
<td>SSA excluding SA</td>
<td>-</td>
<td>-</td>
<td>16.0</td>
<td>0.2</td>
<td>15</td>
<td>1,139</td>
</tr>
</tbody>
</table>

is a shining example of this: roads, bridges, and railways are being repaired and upgraded; this would arguably not have happened in the absence of the massive discoveries of coal reserves. Although the companies are investing in infrastructure to enable them to maximise profits, it also has important positive externalities.

A selection of current / proposed projects is listed below:

- The AfDB plans to issue bonds worth $22bn for investment in infrastructure projects on the continent.

- Brazilian company Vale is planning to refurbish an existing railway line that runs through Malawi (for some 237 km) to the Port of Nacala in Mozambique. The total distance of the line is estimated at 912 km. Despite the longer distance – with the railway line having to go through the south of Malawi and then north to Nacala – the Nacala transport option is seen as a better long-run solution for coal miners in the Tete region, due to the port in Nacala being deeper than the one in Beira. The project is estimated to cost in the region of $4.4bn.

- Eurasian Natural Resources Corporation (ENRC) has announced its plans to build a new railway and port in Mozambique, aimed at accommodating the large increase in coal production. This will allow for the transport of coal from the Tete province to the coast of Nacala. Construction is expected to commence in 2014 Q1, and the railway and port to be operational by 2016.

- The Nigerian government has secured a loan deal worth $600m from the China Export-Import Bank at favourable financing rates to build a railway that links Abuja with surrounding areas. In addition, the government has signed a $1.5bn contract with the China Civil Engineering Construction Corporation (CCECC) to build a railway between Lagos and Ibadan.

- Ghana’s government negotiated a $3bn Master Facility Agreement (MFA) on non-concessional terms from the China Development Bank (CDB) to finance a number of critical infrastructure investments, with disbursements expected to be stretched over four years. Total repayment costs are estimated at $4.2bn. The agreement covers various public investment projects, including railways, industrial zones in the western region, multi-modal transportation in the eastern region, and urban transport in Accra. The MFA stipulates that contractors from China must implement a minimum of projects equal to 60% of the loan amount.

- Citadel and the International Finance Corporation (IFC) invested $110m in Rift Valley Railways last year.

### TRADING ACROSS BORDERS

<table>
<thead>
<tr>
<th>Region</th>
<th>Documents to export</th>
<th>Time to export</th>
<th>Cost to export</th>
<th>Documents to import</th>
<th>Time to import</th>
<th>Cost to import</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Days</td>
<td>US$/ container</td>
<td>Number</td>
<td>Days</td>
<td>US$/container</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
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<td>21</td>
<td>923</td>
<td>7</td>
<td>22</td>
<td>958</td>
</tr>
<tr>
<td>Eastern Europe &amp; Central Asia</td>
<td>7</td>
<td>26</td>
<td>2,134</td>
<td>8</td>
<td>29</td>
<td>2,349</td>
</tr>
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<td>Latin America &amp; Caribbean</td>
<td>6</td>
<td>17</td>
<td>1,268</td>
<td>7</td>
<td>19</td>
<td>1,612</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
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<td>19</td>
<td>1,083</td>
<td>8</td>
<td>22</td>
<td>1,275</td>
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<td>OECD high income</td>
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<td>10</td>
<td>1,028</td>
<td>5</td>
<td>10</td>
<td>1,080</td>
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<td>1,603</td>
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<td>Sub-Saharan Africa</td>
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<td>1,990</td>
<td>9</td>
<td>37</td>
<td>2,567</td>
</tr>
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</table>


* excluding tariffs.
Trade

As noted in the previous section, a good transport system makes it easier to move people and goods from point A to point B. As a result, it is also an important factor to consider when looking at trade between countries. Unfortunately, even if a country has a good transport system, trading across borders is complicated by customs procedures and made more costly by government tariffs. In its Doing Business surveys, the World Bank measures how long it takes and how costly it is to import and export goods via sea transport. The quality of inland transport is an important factor determining the overall cost of exporting and importing, especially for landlocked countries. The World Bank looks at the documents required to import or export, procedures at customs and other regulatory agencies, as well as the state of inland transport infrastructure. “The more time-consuming and costly it is to export or import, the more difficult it is for local companies to be competitive and to reach international markets”, the World Bank states. The accompanying table outlines the time and cost of importing and exporting goods to and from different regions. SSA fares quite poorly, particularly with regard to the cost and time it takes to import goods.

The accompanying graph shows where in Africa it is the easiest and most difficult to trade across borders. The three top spots are taken by Mauritius, Tunisia, and Seychelles. This is not surprising, as these countries have among the highest GDP per capita on the continent, and hence one would assume that trade procedures are well developed and efficient. Djibouti comes in at number four, with the small country having access to a port, while it is well connected with neighbouring Ethiopia via railway and roads. The Port of Djibouti is connected with Addis Ababa via the Ethio-Djibouti Railway Enterprise, owned jointly by the Ethiopian and Djibouti governments. The Ethio-Djibouti Railway recently started to operate again after being closed for maintenance for a number of years. There are plans to expand the railway to connect it to 49 urban centres in Ethiopia by 2015. Ethiopia is ranked 161st out of 185 countries in the trading across borders index. All but nine countries in Africa are ranked worse than the median of 93rd (Guatemala). Conflict-ridden countries such as the DRC and Chad fare poorly, as do a number of countries in West and Central Africa.
Regional integration
On average, transport costs in Africa remain quite high. With the exception of a small number of countries in North Africa and Southern Africa, transport services are by and large inefficient and costly to operate. An improvement in the quality of transport is a crucial aspect of the African Union’s objective of increasing integration on the continent. In a 2008 report by the African Union, the following three factors were noted to be essential to “achieve adequate transport efficiency and growth that would lead to the region’s desired integration levels”: connectivity of the transport network; cost of transport; and the quality of transport services.

East Africa
The Common Market of the East African Community (EAC) was formally launched in July 2010, and will allow for the free movement of goods, services, capital, and labour. With a total population of 133.5 million people and a combined GDP of $74.6bn, the EAC brings together the markets of Kenya, Uganda, Tanzania, Rwanda, and Burundi. Further integrating these economies and boosting trade will require an improvement in transport infrastructure. In fact, according to the EAC website, “[i]nfranstrucutre is one the most critical enablers of a successful regional integration, taking into account its importance in facilitating activities such as trade, agriculture, tourism and the movement of labour and/or other resources.” Total intra-EAC trade increased from $1.9bn in 2005 to $3.5bn in 2009. Kenya is the biggest intra-regional exporter in the EAC. Kenya’s exports to other countries within the EAC grouping have increased more than five-fold in the period between 2001 and 2011, comprising over 75% of the intra-regional exports.

In a recent report released by Transparency International, it was revealed that Tanzanian transport companies on average pay close to $13,000 in bribes per month to the government. Their Kenyan counterparts pay on average $6,715 per month for the same purpose. Eight out of 10 respondents in the survey said they pay bribes in order to avoid unnecessary delays, harassment, and the payment of penalties. Naturally, the payments of bribes increase the cost of transporting goods between countries. This is also confirmed by the graph above (trading across borders), which reveals that the EAC still has a long way to go toward eliminating non-tariff barriers to trade in the region.


graph above (trading across borders)

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East Africa
The Common Market of the East African Community (EAC) was formally launched in July 2010, and will allow for the free movement of goods, services, capital, and labour. With a total population of 133.5 million people and a combined GDP of $74.6bn, the EAC brings together the markets of Kenya, Uganda, Tanzania, Rwanda, and Burundi. Further integrating these economies and boosting trade will require an improvement in transport infrastructure. In fact, according to the EAC website, “[i]nfranstrucutre is one the most critical enablers of a successful regional integration, taking into account its importance in facilitating activities such as trade, agriculture, tourism and the movement of labour and/or other resources.” Total intra-EAC trade increased from $1.9bn in 2005 to $3.5bn in 2009. Kenya is the biggest intra-regional exporter in the EAC. Kenya’s exports to other countries within the EAC grouping have increased more than five-fold in the period between 2001 and 2011, comprising over 75% of the intra-regional exports.

In a recent report released by Transparency International, it was revealed that Tanzanian transport companies on average pay close to $13,000 in bribes per month to the government. Their Kenyan counterparts pay on average $6,715 per month for the same purpose. Eight out of 10 respondents in the survey said they pay bribes in order to avoid unnecessary delays, harassment, and the payment of penalties. Naturally, the payments of bribes increase the cost of transporting goods between countries. This is also confirmed by the graph above (trading across borders), which reveals that the EAC still has a long way to go toward eliminating non-tariff barriers to trade in the region.

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<table>
<thead>
<tr>
<th>Region</th>
<th>Road network</th>
<th>Rail network</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>km</td>
<td>km</td>
</tr>
<tr>
<td>North Africa</td>
<td>347,451</td>
<td>19,931</td>
</tr>
<tr>
<td>West Africa</td>
<td>434,910</td>
<td>9,717</td>
</tr>
<tr>
<td>Central Africa</td>
<td>186,471</td>
<td>2,526</td>
</tr>
<tr>
<td>East Africa</td>
<td>476,558</td>
<td>6,687</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>574,484*</td>
<td>51,119</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>3.5</td>
<td>2.2</td>
</tr>
<tr>
<td>Rwanda</td>
<td>583</td>
<td>8.6</td>
</tr>
<tr>
<td>South Africa</td>
<td>8,090</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Source: African Union
* Excludes South Africa.
TRANSPORT SECTORS IN SELECTED AFRICAN COUNTRIES

This sub-section contains some more detail on the transport sectors of a selected number of countries in Africa. The countries were chosen on the basis of varying criteria, ranging from the quality of current transport infrastructure, the outlook for economic growth, prospects for FDI, and the conduciveness of government policies. These factors are outlined in the accompanying table. Some countries already have well-developed transport systems, which will allow for rapid growth in various sub-sectors of the transport sector. In others, it is precisely the prospect of large infrastructure investments that will act as a draw card and catalyst for investors. The overall quality and trend of government policies, including especially to what degree it is market-oriented, will determine whether investors can turn opportunities into sustainable profits.

Ghana

The Ghanaian economy has been one of the fastest growing economies in the world in recent years and prospects for the next few years are also very good. This growth has gone hand in hand with a large increase in trade, particularly petroleum exports which, in turn, have also facilitated a large increase in maritime transport services and port infrastructure. The country’s two main ports – one at Tema near Accra, and one at Takoradi in the southwest – are already important for regional trade, but prospects for further growth in the sector are strong. The World Bank states that Ghana has made significant progress in modernising its ports sector and is committed to making further improvements. At present, Ivory Coast’s port infrastructure is better than that of Ghana, making the former the natural leader in the region. However, thanks to Ghana’s political stability, better economic policies and strong economic growth, the country has the potential to become the regional gateway.

Ghana is also one of the few African countries in the process of adopting the landlord model, which has become the preferred institutional framework for the sector around the world. Under this model, the government acts as a landlord, regulating activity and providing infrastructure, while a private sector company carries out operations and services. At the national level, stevedoring operations have been privatised. The Port of Tema awarded a container terminal concession in 2006, and dry-bulk handling operations are fully privatised. Further concessions are envisaged at the Port of Takoradi, where major new terminal developments are planned.

Transit traffic has increased markedly in recent years. As a result of expanding demand, ports in Ghana – the Port of Tema in particular – have become heavily congested. The port has a container handling design capacity of around 375,000 TEUs per year but has been handling 420,000 TEUs in recent years. The congestion problem lies behind a number of shortcomings in the port’s performance, and these can be addressed only once the capacity increases. That said, the Ghana Ports and Harbours Authority (GPHA) has major expansion plans for the two harbours and aims to make them the most efficient in the region. Apart from capacity increases, the GPHA plans to refurbish and modernise dry docks and mineral loading systems, and building new facilities to handle Ghana’s oil exports. Railways and roads to the ports will also be improved to handle the increasing volumes of goods.

Ghana’s air transport market is still small and infrastructure is limited. However, with incomes growing and with more and more foreign companies establishing themselves in Ghana, prospects for the air transport industry are strong. Ghana’s political stability also makes it a candidate to become the regional air transport hub. However, in this regard Accra is still behind rivals Lagos, Dakar and Abidjan and requires significant investment to make it the regional leader. Slowly, though, this is happening: the Kotoka International Airport in Accra, the country’s main international airport, is currently being upgraded. According to the CEO of the Ghana Airports Company, new aircraft parking bays and aerobridges are being constructed and will be provided with new baggage handling equipment. The passenger terminal is also being refurbished and will include larger check-in, departure, arrival and shopping areas. Upgrades are scheduled to be completed by 2015. According to the Oxford

Transport Sector: Selected African Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>PPP GDP per capita 2011</th>
<th>Real GDP growth 2012-15F</th>
<th>Quality of transport infrastructure</th>
<th>Quality of railroad infrastructure</th>
<th>Trading across borders</th>
<th>Infrastructure spending in budget</th>
<th>Government policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>$</td>
<td>%</td>
<td>Rank out of 144 countries</td>
<td>Rank out of 144 countries</td>
<td>Rank out of 144 countries</td>
<td>Rank out of 185 countries</td>
<td>% of GDP</td>
</tr>
<tr>
<td>Kenya</td>
<td>3,113</td>
<td>7.2</td>
<td>99</td>
<td>85</td>
<td>104</td>
<td>99</td>
<td>0.5</td>
</tr>
<tr>
<td>Morocco</td>
<td>1,741</td>
<td>5.5</td>
<td>76</td>
<td>72</td>
<td>72</td>
<td>148</td>
<td>0.8</td>
</tr>
<tr>
<td>Mozambique</td>
<td>5,080</td>
<td>4.1</td>
<td>51</td>
<td>70</td>
<td>36</td>
<td>47</td>
<td>-</td>
</tr>
<tr>
<td>Rwanda</td>
<td>1,090</td>
<td>7.6</td>
<td>124</td>
<td>135</td>
<td>89</td>
<td>134</td>
<td>1.2</td>
</tr>
<tr>
<td>Tunisia</td>
<td>9,389</td>
<td>4.0</td>
<td>43*</td>
<td>46*</td>
<td>38*</td>
<td>30</td>
<td>-</td>
</tr>
</tbody>
</table>

Sources: IMF, NKC Research, World Economic Forum, World Economic Forum, World Bank, NKC Research

* Note: Tunisia was not included in the 2012/13 edition of the World Economic Forum’s Global Competitiveness Index. Its ranking from the 2011/12 report (out of 142 countries) was used instead.
Business Group, high airport taxes and lengthy security processes hinder growth in the sector.

Key sectors: Air transport; ports
Key risks: High operating costs in air travel

Kenya

We see great scope for an improvement in transport infrastructure in the EAC, and Kenya will play an important role in this regard. The quality of Kenya’s transport infrastructure is quite poor at present. Road and rail connections with neighbouring countries are still limited, but Kenya could be an important regional hub for air transport, railways, and ports in the years to come.

Kenya has a reasonably well developed road network, but the condition of most roads is poor and few roads have been tarred. Given the dire state of Kenya’s railways, most of the burden of freight transport falls upon roads, which leads to even further deteriorations in road quality.

The World Bank noted in a March 2010 report that “Kenya’s rail corridor is of strategic importance to the region. Linking the port of Mombasa to Nairobi and continuing onward into Uganda, it is a key corridor for bulk freight, easing pressure and providing additional capacity along the northern corridor.” The fact that the rail corridor is still poorly developed is a key constraint on transport costs in the region. According to the World Bank, the deterioration of rail infrastructure has resulted in a decline in freight traffic to less than one million tonnes p.a., handling less than 6% of cargo passing through the northern corridor linking Kenya with Uganda, Rwanda, Burundi, and the DRC. The East African Railway Master Plan aims to improve railway infrastructure, and is discussed elsewhere in the report.

Mombasa is an extremely important port in the East African region. It is in fact one of the largest and busiest on the continent, but the port of Mombasa has been marred by underinvestment, which has resulted in serious capacity constraints. In fact, the World Bank considers the port the major infrastructure constraint in Kenya, particularly given its potential to be a major link between the East African market and global shipping services. However, before performance at the port can be improved, institutional reforms would have to be implemented to increase the efficiency of port operations.

Air transport is a success story that other transport sectors – and countries – would do well to replicate. Kenya Airways is among the top three international carriers in Africa; it has an extensive network across the continent and a safety record that is on par with international standards. Much of the company’s success is attributed to an innovative public-private partnership with a key investor, KLM. KLM only has a minority stake in the company but is fully responsible for the management thereof. The Jomo Kenyatta International Airport in Nairobi is a major international gateway in SSA. Meanwhile, the domestic air transport sector in Kenya is also thriving, and is the fourth-largest in SSA according to the World Bank after South Africa, Nigeria, and Mozambique. Key concerns that need to be addressed at the Kenyatta airport include capacity constraints (especially terminals and taxiways), and security issues. Currently, the airport terminal has capacity to handle 2.5 million passengers annually, but the actual number rose above six million in 2006. Upgrades underway will see the addition of a second runway and a new terminal, raising annual passenger capacity to 9.3 million. An improvement in security that leads to US Category 1 security clearance will allow for direct flights to the US.

Low-cost carrier FastJet commenced with operations from its base in Dar es Salaam in November 2012. Operations will be limited to domestic (Tanzanian) flights at first, but the company aims to open a second operating base in Kenya once it receives regulatory approval. The company will therefore provide competition for Kenya Airways, who plans to launch its own low-cost airline, Jambo Jet. For now, FastJet’s destinations are limited to Dar es Salaam, Kilimanjaro, and Mwanza, but the company’s website already advertises that flights to Kenya and Uganda are “coming soon”, while it also plans to launch flights to Ghana...
In the aviation sector, Morocco liberalised the sector in 2004 and signed an ‘Open Skies’ agreement with the EU in 2006, which has boosted competition in the sector. The agreement has led to a reduction in airfares, an increase in passenger numbers, and higher employment. Furthermore, the agreement has also been great for the tourism sector, having spurred growth in low-cost flights to Marrakesh. Prior to the agreement, Morocco was connected to 24 European airports; this increased to 72 in just four years. In 2012, tourist arrivals declined due to the weak performance of the euro zone; however, the prospects for tourism in Morocco are strong over the medium- to long-run and this should spur further growth in the air transport sector.

Key sectors: Air transport; ports; railways
Key risks: Slow economic growth in Europe; austerity measures and cuts to state funding

**Mozambique**

Mozambique has very poor quality infrastructure. Much of the country’s transport networks were damaged / destroyed during the civil war. Although notable improvements have been made, the country still compares unfavourably to other countries in the world, and is ranked 124th out of 144 countries by the WEF in the ‘quality of transport infrastructure’ index. The country fares even worse when it comes to the quality of roads, where it is ranked 136th out of 144 countries. The quality of its railroads is deemed more adequate, with a ranking of 89th.

Despite the poor state of current transport infrastructure, we think Mozambique is a notable country for transport infrastructure growth and development for the following three reasons:

- The Mozambican economy is expected to continue expanding at robust levels over the outlook period. The country in fact has the highest real GDP growth forecast over the 2012-15 period in the table at the beginning of this section. This will ensure that the demand for transport services will gradually increase, in addition to providing the necessary incentive for the refurbishment and construction of transport networks.

- The country is home to a wealth of natural resources, including natural gas and coal. Already, the amount of coal that the country can produce exceeds the capacities on its railroads and ports. The government cannot afford to finance all the projects that are needed to set the situation straight, so the involvement of the private sector is crucial. So far, private sector companies have appeared more than willing to invest their own funds in order for them to be able to bring their minerals to the ports.

- Mozambique is strategically located on the East African coast, providing access to ports for a number of landlocked countries, namely Zimbabwe, Zambia, and Malawi. Mozambique’s southern transport network links the Port of Maputo with northern parts of South Africa, as well as Swaziland, and Zimbabwe, while the central transport network is linked from the Port of Beira to Zimbabwe, Malawi, and Zambia.
Notable projects that are underway or being planned include the following:

- Eurasian Natural Resources Corporation (ENRC) plans to build a new railway and port to boost coal exports.
- Brazilian mining company Vale wants to refurbish an existing railway line and boost capacity at the deep-water port at Nacala.
- Parastatal Portos e Caminhos de Ferro de Moçambique (CFM, or in English, Mozambique Ports and Railways) announced in November this year that it plans to solicit international bids for a $2bn railway and port development project by the end of 2012.
- South African logistics company Grindrod plans to increase capacity of its Matola coal terminal in Mozambique to 7.3 million tonnes p.a. by March 2013 from six million tonnes p.a. currently. The company could also decide to expand capacity further to 20 million tonnes annually.

Mozambique is ranked 116th for the quality of its port infrastructure by the WEF. Though this is not a particularly good ranking, improvements have been made over the past decade. Much of the success in improving the performance of Mozambique’s ports can be attributed to implementation of the World Bank-funded Railways and Ports Restructuring Project (2000-09). A key feature of this project was support provided to the government in concessioning the country’s major port-rail systems. This resulted in an increase in Mozambique’s share in international freight traffic. In 2009, Mozambique’s port traffic exceeded a targeted 10 million tonnes for the first time in decades. An increase in port traffic in recent years has enabled CMF to continue investing in the expansion of infrastructure services in the country.

Key sectors: Railways; ports
Key risks: Construction delays; lack of human capital

Rwanda

Rwanda’s transport infrastructure is well developed in an East African context. The quality of its road infrastructure is ranked 40th out of 144 countries by the WEF, while the rank for the quality of its overall infrastructure is 67th. In addition, its economic policies are also very good, and the country is ranked 52nd out of 185 countries in the 2013 World Bank Doing Business report, the third highest ranking in SSA. As a result, a number of companies choose to operate from Kigali and to use it as a base to expand to the rest of East Africa. This suggests the possibility of strong growth in the air transport sector, due to increased demand for business tourism. In addition, it could also boost the demand for shuttle services between the airport and offices and hotels and/or car-hire services. Rwanda will also benefit from the increasing integration of the EAC’s transport corridors.

Key sectors: Air transport; taxis
Key risks: Narrow export base; susceptible to donor aid cuts

Tunisia

Tunisia’s transport sector is highly reliant on tourism. With the country currently going through a political transition and with the euro zone experiencing very weak growth, the short-term outlook for the transport sector is fairly poor. That said, we believe the air transport sector offers significant potential over the medium- to long-term as the sector may be on the verge of being liberalised, which in turn will allow competition to soar. The government has been in negotiations with the European Union (EU) this year over an ‘Open Skies’ agreement that will hopefully be finalised by 2013. This would lift barriers to entry into the market and would allow any airline from the EU or Tunisia to fly to and from anywhere in either region, while also reducing state intervention in the industry. Generally, this type of agreement leads to an increase in competition in the aviation industry, resulting in lower prices and a surge in the number of passengers, as was seen in Morocco after signing a similar agreement in 2006.

According to the Tunisian civil aviation authority, there are nine international airports in the country, two of which were recently opened. In 2011, there were 2,040 weekly flights to and from Europe, according to the country’s Foreign Investment Promotion Agency. The main Tunis-Carthage airport has an annual passenger capacity of five million, while the second largest airport, Djerba-Zarzis, has a capacity of four million passengers p.a. The vast majority of flights are international. Very little freight is flown as 95% of Tunisia’s merchandise trade is conducted via maritime transport. According to the Oxford Business Group, Tunisia has a shortage of pilots as many qualified pilots move abroad for better-paying jobs. The Ministry of Transport has therefore set up a programme to train 500 new pilots over the 2010-17 period.

Tunisia allows foreign participation in the transport sector and the country has one of the best business environments in Africa.

Key sector: Air transport
Key risks: Slow economic growth in Europe; a move away from market-based economic reforms by new government; political risk
SOURCES OF INFORMATION

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Bloomberg
Business Daily Africa
International Air Transport Association
International Monetary Fund
NKC
Oxford Business Group
Reuters
United Nations Conference on Trade and Development
World Bank
World Economic Forum
CONTACT DETAILS

ANTHONY THUNSTROM
COO Africa
M: +27 83 700 8862
E: anthony.thunstrom@kpmg.co.za

KATHERINE MILES
Africa Industry Executive
M: +27 82 710 7408
E: katherine.miles@kpmg.co.za

SHELLEY ALBERTS
Manager
Africa High Growth Markets
M: +27 82 710 9807
E: shelley.alberts@kpmg.co.za

DE BUYS SCOTT
Partner, Africa Infrastructure
M: +27 82 551 3345
E: debuys.scott@kpmg.co.za

KLAUS FINDT
Partner, Africa Infrastructure
M: +27 83 289 9650
E: klaus.findt@kpmg.co.za